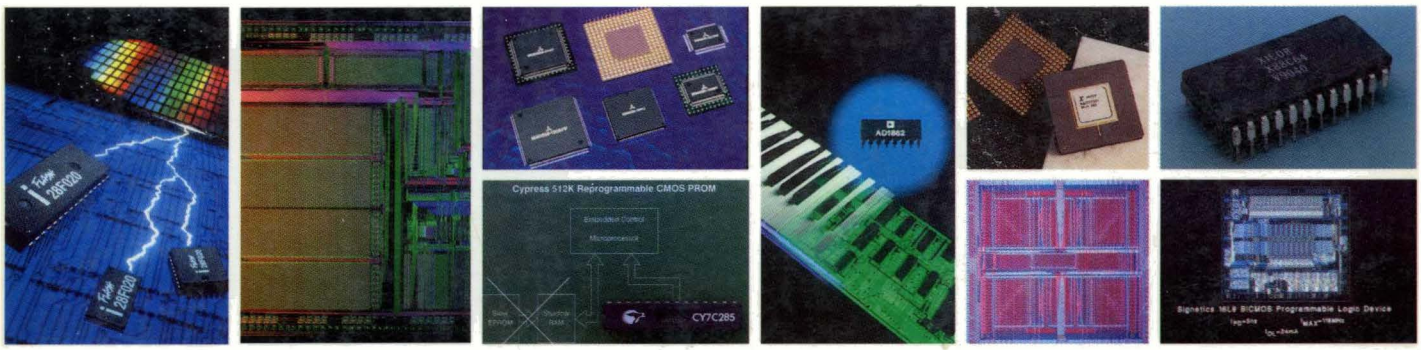
1991 IC MASTER



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- Master Selection Guide Function Index

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- Military
- Digital
- Microprocessor
- Microprocessor Development Systems
- Interface
- Linear
- Memory
- ASIC/Custom
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Hearst Business Communications, Inc.

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HOW TO USE THE IC MASTER

The 1991 edition of the IC MASTER is arranged in three volumes. Each volume serves a specific purpose to help you find the integrated circuit or related product you need. The table of contents on page 1 describes what is in each volume. The table also includes the starting page number for each advertiser.

The IC MASTER is a functional work. You know what you need. The MASTER helps you find it.

Here are typical problems.

Q. What kinds of functions does the MASTER cover?

A. Turn to page 10 in Volume One. Here is a complete list of the devices covered. The page and line numbers refer you to the exact Section in which a particular function appears.

Q. Who makes a 16384 x 1 static RAM with an access time of 70 ns or faster? What are my technology choices?

A. Pick up Volume 1. Turn to the MEMORY section. The first page of the section tells you where the listings of your device begin. See this under:

Static RAMs — General Purpose
Modules
Multiport
NOVRAMs
Cache RAMs

Turn to Static RAMs — General Purpose.
In the first column you see the Organization. Browse through the pages until you reach the 16384 x 1 listings. Now look through the listings until you find the access time and characteristics you need. Device numbers are shown by manufacturer. The device numbers of advertisers in the 1991 IC MASTER appear in bold face. The page number following the device number is where additional information may be found in Volume Two. At the extreme right you will see line numbers. These are the specific lines where a device appears.

Q. Which microprocessors are listed in the MASTER? How do I find the microprocessor I need?

A. All commercially available microprocessors are listed in the MASTER. Start with the **microprocessor** listing in the **Master Selection Guide Function Index** (starts on page 10). Here you will find the various kinds of products you will need listed according to function. Turn to the various pages shown and then to the advertisers' page where more detail may be available.

Q. Who makes a Dual, Low Offset Voltage Op Amp?

A. This is a **LINEAR** device. Turn to the LINEAR section in Volume One. The first page of the section shows the starting page for each type of device. Turn to the page where Dual Units appear. Look down the list for the device you need. Advertisers' devices are listed in bold face. Turn to the page in Volume Two where more information may be available.

Q. I need an IC with Music capability. Which Master Selection Guide should I use?

A. Turn to the **Master Selection Guide Function Index** starting on page 10. Look through the list until you find **Music.** The page numbers for each kind of device are shown.

Q. I plan to use a digital gate array or some other semicustom ASIC in my next project. Where do I find it in the MASTER? Who makes these things?

A. Turn to Volume One. Turn to the first page of **ASICs/Custom**. Find Gate Arrays and all of the other devices listed here. Now you can find the device you need. After you find the type of device you need, turn to the proper page and find the manufacturer. Advertisers' pages are in Volume Three.

Q. I know the digital IC I need is available. Is it available in a surface mount package?

A. There are two ways to solve this problem. If you know the manufacturer's device number, turn to the Part Number Index in Volume One. Find the basic number and the page number and line where that device is listed in the MASTER. Turn to that page. If the device is available for surface mounting, an open diamond symbol will appear. You can also turn directly to the digital section and turn to the function of the device you want. The symbol will indicate an SMD is available.

Q. I am looking for an application note on a specific device. Where can I find out if one is currently available?

A. Pick up Volume Two. Turn to the Application Note Directory. Here you will find app notes arranged by **function**. Find the function involved and turn to the page where the app note is listed.

Q. We need a device that meets MIL standards. Where do I look in the MASTER?

A. Turn to the MILITARY section in Volume One. The Military Device Testing table shows which manufacturers do what kinds of MIL work. Followed by the MIL-STD-1562R directories for microcircuits which contains numerous tables relating to various standards of classification. The next list is a QPL listing based on the latest Defense Electronics Supply Center (DESC) Qualified Product Listing. Additional information is often supplied by the advertisers' pages in Volume Three.

Q. I know the basic part number is 2502 and that's all I know. Where do I look?

A. That's easy in the MASTER. Turn to the Part Number Index. All prefixes and suffixes have been stripped away. Turn to the page where 2502 appears. All manufacturers with that kind of number appear in order along with the page and line number where the device is described.

Q. How many manufacturers claim to make a pin-for-pin and function-for-function equivalent to a Motorola MC68000?

A. Turn to the Alternate Source Directory in the back of Volume Two. Turn to Motorola's listings. Those manufacturers who claim to be equivalent are listed in order. If you have an IBM or Compatible computer with a hard drive, you can get the 1991 IC MASTER **Alternate Source Directory** on a disk. The disk is Clipper compiled from dBaseIII+ and is delivered compressed by PKARC. This is the complete list of alternate sources and allows you to add notes such as your own part numbers, prices, sources and the like. Call Hearst (516) 227-1300 and ask for Book Sales for further information.

Q. I looked in the Alternate Source Directory. The part I want an alternate source for isn't listed. Why not?

A. Are you sure you looked through the entire listing for the original manufacturer? Some devices may be listed in odd ways depending on how the MASTER's editors receive the information. Then there is the probability that no other manufacturer makes an exact replacement for your part. It is important for you to understand how the Alternate Source Directory is compiled. Manufacturers supply the information that **their** part is an exact replacement for **another** part. The original manufacturer does **not** tell us his part can be replaced by those listed.

Q. What do the manufacturers' part numbers mean? I have a Signetics N8X02N. What do all the letters and numbers mean?

A. Look in Volume Two for the Part Number Guide. Turn to the Signetics portion. Now you know the **N** prefix means, zero to plus seventy degrees Centigrade. The **N** suffix indicates the package style. The numbers and letters in the middle are the device type. Each manufacturer has a different code system. Understanding the systems is a great help in comparing devices.

Q. I found the device I want in the MASTER. What are the pinouts? Where can I get more details? Where can I get a price? What is the delivery time?

A. You have just defined exactly what the IC MASTER does. The MASTER is a guide to tell you which devices are available on a commercial basis. After you know this, the next step is to contact the manufacturer, a local sales office or a distributor.

Q. Where can I find the addresses and telephone numbers of manufacturers, local sales offices and distributors?

A. Pick up Volume Three. Turn to the Manufacturers and Distributors Directory. Read the first page. The information on this page will help you understand why the information in the Directory is so important. It will save time and aggravation.

Q. I just saw a new device advertised in Electronic Products magazine. It isn't listed in the MASTER. Why not? When will it be listed?

A. Preparing the information for the annual IC MASTER is a tremendous undertaking. It requires the cooperation of every single manufacturer. All of the material must be organized, cross referenced and placed in the data base. This data base must be closed off in November in order to meet the publishing date of late January. That is why some devices are not listed. They came on the market too late for the deadline. There are two updates to the annual MASTER. They are called the **IC MASTER UPDATE**. One is issued in the late Spring and the other in the early Fall. Be sure to sign up for copies when you get your new IC MASTER. If you are not sure whether or not you have requested the updates, please write to the Circulation Department at the address shown on page 2 of this MASTER. Be sure to indicate which edition of the MASTER you are using.

ABBREVIATIONS OF COMPANY NAMES

ABB HAFO	ABB HAFO Inc.
Acculin	Acculin, Inc.
Actel	Actel Corporation
Adams-Russell	Adams-Russell Electronics Co., Inc.
Adaptec	Adaptec
Adv Analog	Advanced Analog
AdvLinear	Advanced Linear Devices
AMD	Advanced Micro Devices, Inc.
AEG Corp	AEG Corporation-Telefunken
Allegro Micro	Allegro Micro Systems, Inc.
Altera	Altera Corporation
Am Automation	American Automation
AnalDesTools	Analog Design Tools, Inc.
AD	Analog Devices
AnalogSys	Analog Systems
Analogic	Analogic Corporation
Apex	Apex Microtechnology Corporation
AMCC	AMCC (Applied Micro Circuits Corporation)
AppMicroSys	Applied Microsystems Corporation
Aptek	Aptek Microsystems
Aspen	Aspen Semiconductor Corp.
AT&T	AT&T Microelectronics, 52AL330240
ATMEL	ATMEL Corporation
Avasem	Avasem Corporation
Benchmarq	Benchmarq
BinaryTech	Binary Technology, Inc.
Bipolar	Bipolar Integrated Technology
Brooktree	Brooktree Corporation
Burr-Brown	Burr-Brown Corporation
Cadam	CADAM Inc.
Cadence	Cadence Design Systems, Inc.
CaseTech	Case Technology
Catalyst Rsch	Catalyst Research
Catalyst Semi	Catalyst Semiconductor
Cermetek	Cermetek Microelectronics, Inc.
Cherry Semi	Cherry Semiconductor Corporation
Chips&Tech	Chips and Technologies, Incorporated
Cirrus	Cirrus Logic, Inc.
CMD Micro	California Micro Devices Corporation
Comlinear	Comlinear Corporation
Commodore	Commodore Semiconductor Group
CompDyn	Computer Dynamics Sales
CompVision	Computervision
ControlData	Control Data
Crystal	Crystal Semiconductor Corp.
CustomArrays	Custom Arrays Corp.
Cybernetic	Cybernetic Micro Systems
Cypress	Cypress Semiconductor Corp.
DAZIX	Daisy/Cadnetix, Inc. (DAZIX)
Dallas	Dallas Semiconductor
Data I/O	Data I/O Corporation
Datel	Datel, Inc.
Dense-Pac	Dense-Pac Microsystems, Inc.
Devtek	Devtek Systems
Digital RF	Digital RF Solutions Corp.
Dionics	Dionics Inc.
DSP Group	DSP Group, Inc.
ECI Semi	ECI Semiconductor
EdsunLabs	Edsun Laboratories, Inc.
EG&G-Reticon	EG&G Reticon Corporation
Elantec	Elantec, Inc.
EDI	Electronic Designs Inc.
Ericsson	Ericsson Components
Exar	Exar Corporation
EXEL	EXEL Microelectronics, Inc.
Force	Force Computers, Inc.
Fujitsu	Fujitsu Microelectronics, Inc.
FutureNet	FutureNet
Galil	Galil Motion Control
Gazelle	Gazelle Microcircuits, Inc.
Gennum	Gennum Corporation
GenRad	GenRad Inc.
GET Eng	GET Engineering Corp.
GigaBit	GigaBit Logic
GoldStar	GoldStar Technology, Inc.
Gould AMI	Gould AMI
Greenwich	Greenwich Instruments USA
Harris	Harris Semiconductor
HP	Hewlett-Packard-Logic Systems Division
HHB-Sys	Racal-Rebac
HiLevel	Hilevel Technology, Inc.
Hitachi	Hitachi America, Ltd.
Holt	Holt, Integrated Circuits, Inc.
Honeywell	Honeywell
Hughes	Hughes Aircraft Co.
Hyundai	Hyundai Electronics America
IBM	IBM
IC DESIGNS	IC DESIGNS
Ikos	IKOS Systems, Inc.
ILC-DDC	ILC Data Device Corp.
Inova	Inova Microelectronics Corp.
IntCirSys	Integrated Circuit Systems, Inc.
ICSI	Integrated CMOS Systems, Inc.
IDT	Integrated Device Technology, Inc.
iLSi	Integrated Logic Systems Inc.
ISSI	Integrated Silicon Solution Inc.
Intel	Intel Corporation
Intergraph	Intergraph
ICT	International CMOS Technology
IMI	International Microcircuits, Inc.
IMP	International Microelectronic Products
Interpoint	Interpoint Corporation
Intronics	Intronics, Inc.
IXYS	IXYS Corporation
Kontron	Kontron Electronics, Inc.
Krueger	Krueger Company
Lambda	Lambda Semiconductors
Lansdale	Lansdale Semiconductor
Lattice	Lattice Semiconductor Corp.
Lin Int Sys	Linear Integrated Systems
LinearTech	Linear Technology Corporation
LitMach	Little Machines Inc.
LogicDev	Logic Devices Inc.
LSTI	Logical Solutions Technology Inc.
LSI Comp	LSI Computer Systems, Inc.
LSI Logic	LSI Logic Corporation

Macrochip	Macrochip Research
Marconi	Marconi Circuit Technology
Maxim	Maxim Integrated Products
MCE	MCE Semiconductor
Mentor	Mentor Graphics Corporation
MetaSoft	Meta-Software, Inc.
Micrel	Micrel
MicroLinear	Micro Linear
MicroNet	Micro Networks Company
MicroPwr	Micro Power Systems, Inc.
MICRO-LINK	Micro-Link Products
Micro-Rel	Micro-Rel
MicroSys	MICRO/SYS
Microchip	Microchip Technology, Inc.
Microcosm	Microcosm Inc.
MicronTech	Micron Technology
Micropac	Micropac Industries, Inc.
Microsim	MicroSim Corporation
Mikros	Mikros Systems Corp.
Miller	Miller Technology Inc.
Mitel	Mitel Semiconductor
Mitsubishi	Mitsubishi Electronics America, Inc.
MonSys	Monolithic Systems Corporation
Mosaid	Mosaid Inc.
Mosel	Mosel
Motorola	Motorola Semiconductor Products
MX-COM	MX-COM, Inc.
National	National Semiconductor Corporation
NCM	NCM Corporation
NCR	NCR Corporation
NEC	NEC Electronics Inc.
Newbridge	Newbridge Microsystems
Nexel	Nexel Corporation
NJR	NJR Corporation
NMB	NMB Technologies
OKI	OKI Semiconductor, Inc.
Omnibyte	Omnibyte Corporation
OnChip Sys	OnChip Systems, Inc.
OEI	Optical Electronics Inc.
OrCAD	OrCAD
Orion	Orion Instruments, Inc.
Panasonic	Panasonic Industrial Company/Electronic Components Division
Paradigm	Paradigm Technology, Inc.
PCAD	Cadam Inc.
Peps	Performance Electronic Packaging Services
Performance	Performance Semiconductor Corp.
Plessey	Plessey Semiconductors
PLX Tech	PLX Technology, Inc.
Power Integ	Power Integrations, Inc.
Proximity	Proximity Technology Inc.
Qualcomm	Qualcomm Incorporated
RadstoneTech	Radstone Technology Corp.
Ramtron	Ramtron Corporation
Raytheon	Raytheon Company
Ricoh	Ricoh Corp.
Rockwell	Rockwell International
ROHM	ROHM Corporation
S-MOS	S-MOS Systems, Inc.
Samsung	Samsung Semiconductor, Inc.
Sanyo	Sanyo Semiconductor Corporation
Saratoga	Saratoga Semiconductor
SBE	SBE, Inc.
SeattleSi	Seattle Silicon Corporation
SEEQ	SEEQ Technology, Incorporated
Seiko Instr	Seiko Instruments USA, Inc.
SGS-Thomson	SGS-THOMSON Microelectronics, Inc.
Sharp	Sharp Electronics Corporation
Siemens	Siemens Components, Inc.
Sierra	Sierra Semiconductor Corporation
Signal Proc	Signal Processing Technologies
Signetics	Signetics Company
SiCompilers	Silicon Compiler Systems
SiliconG	Silicon General Semiconductors
SiliconSys	Silicon Systems Inc.
Siliconix	Siliconix Inc.
SilvarLisco	Silvar-Lisco
Simtek	Simtek Corporation
Simucad	SimuCad
Simulog	Simulog
SingleBoard	Single Board Solutions, Inc.
Sipex-HSD	Sipex Corporation
Solarise	Solarise Enterprises Inc.
Solitron	Solitron Devices, Inc.
Sony	Sony Corporation of America
Sophia	Sophia Systems
SpaceResearch	Space Research Technology, Inc.
Spancom	Spancom Corporation
Stac	Stac Electronics
SMC	Standard Microsystems Corporation
STEL	Stanford Telecommunications Inc.
STC	STC Semiconductors (Previously Stantel-STC)
Sunshine	Sunshine Semiconductor Inc.
Supertex	Supertex, Inc.
Synergy	Synergy Semiconductor Corporation
Tangent	Tangent Systems Corporation
Technitrol	Technitrol, Inc.
Tektronix	Tektronix, Inc.
TeledyneS	Teledyne Semiconductor
Teltone	Teltone Corporation
Teradyne	Teradyne, EDA Inc.
TI	Texas Instruments, Inc.
Thaler	Thaler Corp
ThirdDomain	Third Domain, Inc.
Toko	Toko America Inc.
Toshiba	Toshiba America Electronic Components, Inc.
TranSwitch	TranSwitch Corporation
TriQuint	Tri Quint Semiconductor
TRWLSI	TRWLSI Products Inc.
Ultra Analog	Ultra Analog, Inc.
UMC	Unicorn Microelectronics Corp.
United	United Silicon Structures, Inc.
UTMC	United Technologies Microelectronics Center
Unitrode	Unitrode Integrated Circuits Corp.
Universal	Universal Semiconductor Inc.
Vadem	Vadem
Valid	Valid Logic Systems
Vanguard Semi	Vanguard Semiconductor
ViewLogic	Viewlogic Systems Inc.
Vitelic	Vitelic
Vitesse	Vitesse Semiconductor Corp.
VLSI Tech	VLSI Technology Inc. (VLSI)
Votrax	Votrax
VTC	VTC Inc.
Waferscale	Waferscale Integration Inc.
Weitek	Weitek Corporation
WDC	The Western Design Center, Inc.
Western	Western Digital Corporation
White Tech	White Technology, Inc.
XECOM	XECOM, INC.
Xicor	Xicor, Inc.
Xilinx	Xilinx Corp.
Yamaha	Yamaha Systems Technology
ZAX	Zax Corp.
Zendex	Zendex Corporation
Ziatech	Ziatech Corporation
Zilog	Zilog, Inc.
ZyCAD	ZyCAD Corp.
ZyMOS	ZyMOS Inc.

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MASTER SELECTION GUIDE FUNCTION INDEX

(Guide to Product Categories)

When you know the desired function and need specific devices that perform this function, use this Index first. It is organized by functions and by key words. It leads to the page-line reference for that specific device and also related devices.

The Master Selection Guides that follow in volumes One and Three provide sufficient information to help you make an initial product selection, or to lead you to a group of device numbers and their manufacturers. They enable you to find the products most likely to satisfy your needs for a particular application.

All devices that appear in a selection guide are included in the **Part Number Index**. If you know the part number for a device, by referring to the Part Number Index, you can see the page and line number for data on that device. If the manufacturer of the device has included a data sheet in IC MASTER, the location of this data sheet is also shown in **boldface** type.

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MILITARY PARTS DIRECTORY

This section is divided into three parts: (1) Military Device Testing for manufacturers able to perform various levels of screening, (2) MIL-STD-1562R directories for microcircuits considered to be the most acceptable for military applications, and (3) Military Parts - QPL SELECTION GUIDE for MIL-M-38510 Qualified Parts listed by function.

Military Device Testing lists the manufacturers who screen devices to MIL-STD-883, as well as devices that are radiation hardened. It also shows companies currently qualified to supply devices on the Qualified Parts List (QPL).

MIL-STD-1562R contains five tables. To make the best part selection for a military application, begin by looking up the Generic Industry Number, the MIL-M-38510/, or the DESC/MIL Drawing Number in the CROSS REFERENCES. You will be directed to one of the preceding tables by Table Number and Section to the best possible selection candidate.

Table I — Preferred Devices. All devices in this table have a dated military specification and a QPL source (Part I or Part II). These devices have no known reliability or availability problems and are recommended and preferred.

Table II — Potential Standardization Candidates. Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military (DESC) Drawing. This able also includes devices that have dated military specifications but as yet have no QPL source. These devices should be considered for use in systems or equipment designs if a QPL source is anticipated.

Table III — Logistics or Continuous Replacement Only. This table contains devices that are not recommended for new designs because of diminished sources or obsolete technology, or because a preferred device listed in Tables I and II is now available which performs the same function.

Table IV — Inactive or Suspended MIlitary Activity. This table contains devices that are not recommended for a new design. It also includes devices with a QPL status that has been cancelled or expired and there is no indication that a device manufacturer intends to requalify.

Table V — Not recommended under any circumstances. Devices listed in this table will also have a preferred device for new design.

CROSS REFERENCES — (NATO status: NATO-P - NATO Preferred Device, NATO-G = NATO Guidance Device, NATO-F = NATO Future Device, NATO-L = NATO Logistic/Maintenance Device.

	MIL-M-38510 QPL					MIL-STD-883 SCREENING		OTHER SCREENING		
MANUFACTURER	MEMORY	LINEAR	TTL	OTHER BIPOLAR	CMOS	CLASS B	CLASS S	MILITARY	INDUSTRIAL	RADIATION HARDENED
Advanced Analog						x	x	x	x	x
Advanced Linear Devices						x		x	x	
Advanced Micro Devices	x	x	x	x	x	x	x	x	x	
Allegro Microsystems						x		x	x	
Altera						x		x	x	
Analog Devices		x		x	x	x	x	x	x	x
Analog Systems						x		x	x	
Apex Microtechnology						x		x	x	
Applied Micro Circuits						x	x	x	x	x
Aptek Microsystems						x		x	x	
Atmel Corp.						x	x	x	x	
Avasem Corp.								x	x	
Burr-Brown		x				x	x	x	x	x
Catalyst Semiconductor						x		x	x	
Cherry Semiconductor								x	x	
Comlinear Corp.						x	Limited	x	x	
Crystal Semiconductor						x		x	x	
Custom Arrays Corp.						x		x	x	
Cypress Semiconductor	x				x	x	x	x	x	Rad. Tol.
Datel						x	Limited	x	x	
Dense-Pac Microsystems						x		x	x	x
Digital RF Solutions						x	Limited	x	x	Rad. Tol.
Dionics Inc.				x		x		x	x	
EG&G Reticon						x		x	x	
Elantec						x	x	x	x	x
EXEL Microelectronics						x	Limited	x	x	
Fujitsu Microelectronics						x			x	
Gennum Corp.						x	x	x	x	
GigaBit Logic						x	x	x	x	x
Gould AMI						x	Limited	x	x	
Harris Semiconductor	x	x			Analog Switches	x		x	x	
Harris Microwave Semiconductor			x			x	x	x		
Holt Integrated Circuits Inc.						x	x	x	x	
Honeywell Solid State Elec.	x	x	x	x	x	x	x	x	x	x
Hughes Aircraft						x	x	x	x	x
Hybrid Systems						x	x	x	x	
Hycomp						x	x	x	x	
ILC Data Device Corp.						x	x	x	x	x
Inmos Corp.										
Inova Microelectronics	x					x		x	x	
Integrated Device Technology						x		x	x	x
Intel Corp.	x			µP		x		x	x	
Int'l CMOS Technology								x	x	
Int'l Microcircuits			x		x	x	Limited	x	x	
Int'l Microelectronic Products						x		x	x	
Intronics						x		x	x	
IXYS Corp.								x	x	
Lambda Semiconductor						x			x	
Lattice Semiconductor					x		x	x	x	Rad. Tol.
Linear Integrated Systems						x		x	x	x
Linear Technology Corp.		x				x	x	x	x	x
Logic Devices										
Logical Solutions					x	x		x	x	

MANUFACTURER	MIL-M-38510 QPL					MIL-STD-883 SCREENING		OTHER SCREENING		RADIATION HARDENED
	MEMORY	LINEAR	TTL	OTHER BIPOLAR	CMOS	CLASS B	CLASS S	MILITARY	INDUSTRIAL	
LSI Computer Systems						x	x	x	x	
LSI Logic						x	x	x	x	x
Marconi Electronic Devices						x	x			x
Maxim Integrated Products						x		x	x	
Micrel						x	x	x	x	x
Microchip Technology Inc.						x		x	x	
Micro Networks		x				x	x	x	x	
Micro Linear		x	x	x		x		x	x	x
Micro Power Systems						x	x	x	x	x
Micron Technology Inc.	x					x		x		
Mitel Semiconductor						x		x	x	
Motorola Semiconductor	x	x	x	x	x	x	x	x	x	
MX-COM						x		x	x	
National Semiconductor	x	x	x	x	x	x	x	x	x	x
NCM Corp.					x	x		x	x	x
NCR Microelectronics										
Newbridge Microsystems						x		x	x	
Optical Electronics Inc.		x		x		x		x	x	
Performance Semiconductor						x		x	x	
Precision Monolithics Inc.		x		x	x	x	x	x	x	x
Qualcomm				x	x	x	x	x	x	x
Raytheon Semiconductor	x	x	x	x	x	x	x	x	x	x
Rockwell International						x		x		
Saratoga Semiconductor						x		x	x	
Signetics	x	x	x			x	x	x	x	
Silicon General		x		x	x	x	x	x	x	x
Siliconix						x		x	x	
Sipex						x	x	x	x	x
Solitron						x	x	x	x	
Standard Microsystems Corp.						x	x	x	x	
STC Semiconductors						x	Limited	x	x	
Technitrol						x		x	x	
Teledyne Components						x	x	x	x	
Texas Instruments	x	x	x	x		x	x	x	x	
TriQuint						x	x	x	x	
TRW LSI						x		x	x	
Unitrode Corp.		x		x		x	x	x	x	
United Tech Micro Ctr.		x			x	x	x	x		x
Vitesse Semiconductor						x	x	x	x	
VLSI Technology Inc.						x		x	x	
Xicor		x			x	x	Limited	x	x	
Xilinx						x		x	x	

EXPLANATION:

The "MIL-M-38510" section indicates the IC manufacturers currently providing Q.P.L. ICs. More detailed information on the specific devices is given in the Qualified Products Listings which are at the end of this section.

The "MIL-STD-883 Screening" section lists those manufacturers who are both set up and actively want to screen devices to the levels indicated.

"Other Screening" shows those who report that they want business calling for special military and industrial environmental screening procedures.

MILITARY PARTS

TABLE I- Preferred Devices (MIL-STD-1562R)

Gates 1/

Generic/ industry number	MIL-M-38510/	Circuit description
10501	06001	OR/NOR GATE, QUAD 2-INPUT
10504	06201	AND/NAND GATE, QUAD 2-INPUT
54F00	33001	NAND GATE, QUAD 2-INPUT
54ALS00	37001	NAND GATE, QUAD 2-INPUT
54HC00	65001	NAND GATE, QUAD 2-INPUT
54LS00	30001	NAND GATE, QUAD 2-INPUT
54AC00	75001	NAND GATE, QUAD 2-INPUT
54LS02	30301	NOR GATE, QUAD 2-INPUT
54ALS02	37301	NOR GATE, QUAD 2-INPUT
54F02	33301	NOR GATE, QUAD 2-INPUT
54HC02	65101	NOR GATE, QUAD 2-INPUT
54LS03	30002	NAND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54ALS04	37006	HEX INVERTER
54HCT04	65751	HEX INVERTER, TTL-COMPATIBLE INPUTS
54F04	33002	HEX INVERTER
54LS04	30003	HEX INVERTER
54HC04	65701	HEX INVERTER
54LS05	30004	HEX INVERTER, WITH OPEN-COLLECTOR OUTPUTS
54F08	34001	AND GATE, QUAD 2-INPUT
54HC08	65203	AND GATE, QUAD 2-INPUT
54ALS08	37401	AND GATE, QUAD 2-INPUT
54LS08	31004	AND GATE, QUAD 2-INPUT
54LS09	31005	AND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54LS10	30005	NAND GATE, TRIPLE 3-INPUT
54HC10	65002	NAND GATE, TRIPLE 3-INPUT
54ALS10	37002	NAND GATE, TRIPLE 3-INPUT
54F10	33003	NAND GATE, TRIPLE 3-INPUT
54AC10	75002	NAND GATE, TRIPLE 3-INPUT
54ALS11	37402	AND GATE, TRIPLE 3-INPUT
54LS11	31001	AND GATE, TRIPLE 3-INPUT
54HC11	65204	AND GATE, TRIPLE 3-INPUT
54F11	34002	AND GATE, QUAD 2-INPUT
54LS12	30006	NAND GATE, TRIPLE 3-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54LS13	31301	NAND GATE, DUAL 4-INPUT, SCHMITT TRIGGER
54HC132	65005	NAND GATE, QUAD 2-INPUT, SCHMITT TRIGGER
54LS132	31303	NAND GATE, QUAD 2-INPUT, SCHMITT TRIGGER
54ALS133	37005	NAND GATE, 13-INPUT
54HC14	65702	HEX INVERTER, SCHMITT TRIGGER
54LS14	31302	HEX INVERTER, SCHMITT TRIGGER
54AC14	75702	HEX INVERTER, SCHMITT TRIGGER
54LS15	31002	AND GATE, TRIPLE 3-INPUT, WITH OPEN-COLLECTOR INPUTS
54LS20	30007	NAND GATE, DUAL 4-INPUT
54F20	33004	NAND GATE, DUAL 4-INPUT
54ALS20	37003	NAND GATE, DUAL 4-INPUT
54HC20	65003	NAND GATE, DUAL 4-INPUT
54AC20	75003	NAND GATE, DUAL 4-INPUT
54LS21	31003	AND GATE, DUAL 4-INPUT
54LS22	30008	NAND GATE, DUAL 4-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54LS26	32102	NAND GATE, QUAD 2-INPUT, HIGH-VOLTAGE, WITH OPEN-COLLECTOR OUTPUTS
54HC266	65103	EXCLUSIVE-NOR GATE, QUAD 2-INPUT (OPEN DRAIN OUTPUT)
54LS266	30303	EXCLUSIVE-NOR GATE, QUAD 2-INPUT
54LS27	30302	NOR GATE, TRIPLE 3-INPUT
54HC27	65102	NOR GATE, TRIPLE 3-INPUT
54ALS27	37302	NOR GATE, TRIPLE 3-INPUT
54HC30	65004	NAND GATE, 8-INPUT
54LS30	30009	NAND GATE, 8-INPUT
54ALS30	37004	NAND GATE, 8-INPUT
54ALS32	37501	OR GATE, QUAD 2-INPUT
54F32	33501	OR GATE, QUAD 2-INPUT
54LS32	30501	OR GATE, QUAD 2-INPUT
54HC32	65201	OR GATE, QUAD 2-INPUT
54AC32	75201	OR GATE, QUAD 2-INPUT
54HC4002	65104	NOR GATE, DUAL 4-INPUT
54LS51	30401	AND-OR-INVERT GATE, DUAL 2-WIDE
54LS54	30402	AND-OR-INVERT GATE
54F64	33401	AND-OR-INVERT GATE, 4-2-2-2 INPUT
54F86	34501	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54LS86	30502	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54HC86	65202	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54AC86	75202	EXCLUSIVE-OR GATE, QUAD 2-INPUT

Buffers 2/

Generic/ industry number	MIL-M-38510/	Circuit description
10524	06301	VOLT. LEVEL SHIFTER, TTL TO ECL, QUAD
10525	06302	VOLT. LEVEL SHIFTER, ECL TO TTL, QUAD
5406	00801	BUFFER/DRIVER, HEX, INVERTING, WITH OPEN-COLLECTOR OUTPUTS
5407	00803	BUFFER/DRIVER, HEX, NONINVERTING, WITH OPEN-COLLECTOR OUTPUTS
54ALS1000	38401	BUFFER/DRIVER, NAND, QUAD 2-INPUT
54ALS1002	38402	BUFFER/DRIVER, NOR, QUAD 2-INPUT
54ALS1020	38407	BUFFER/DRIVER, NAND, DUAL 4-INPUT
54ALS1034	38411	BUFFER/DRIVER, HEX, NONINVERTING
54LS125A	32301	BUFFER/DRIVER, QUAD, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS126	32302	BUFFER/DRIVER, QUAD, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS240	38301	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54LS240	32401	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54F240	33201	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54HCT240	65753	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54HC240	65703	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54AC240	75703	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54LS241	32402	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS241	38302	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC241	65704	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54F241	33202	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC244	65705	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HCT244	65755	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54F244	33203	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS244	32403	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS244	38303	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54AC244	75705	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS28	38402	BUFFER/DRIVER, NOR, QUAD 2-INPUT
54LS28	30204	BUFFER/DRIVER, NOR, QUAD 2-INPUT
54LS365	32201	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY PARTS
TABLE I- Preferred Devices (MIL-STD-1562R)(Cont'd)

Buffers 2/ (continued)

Generic/ industry number	MIL-M-38510/	Circuit description
54HC365	65706	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54F365	35101	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS366	32202	BUFFER/DRIVER, HEX, INVERTING, WITH THREE-STATE OUTPUTS
54LS367	32203	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC367	65708	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC368	65709	BUFFER/DRIVER, HEX, INVERTING, WITH THREE-STATE OUTPUTS
54ALS37	38401	BUFFER/DRIVER, NAND, QUAD 2-INPUT
54LS37	30202	BUFFER/DRIVER, NAND, QUAD 2-INPUT
54LS38	30203	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54F38	35202	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54LS40	30201	BUFFER/DRIVER, NAND, DUAL 4-INPUT
54ALS40	38407	BUFFER/DRIVER, NAND, DUAL 4-INPUT
54HC540	65710	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54LS540	32404	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54F540	33204	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54LS541	32405	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HCT541	65761	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC541	65711	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS

Flip-Flops 3/

Generic/ industry number	MIL-M-38510/	Circuit description
10531	06101	FLIP-FLOP, D-TYPE, DUAL
25LS175	33107	FLIP-FLOP, D-TYPE, QUAD
54F074	34101	FLIP-FLOP, D-TYPE, DUAL
54LS107	30108	FLIP-FLOP, JK, DUAL
54HC109	65304	FLIP-FLOP, JK, DUAL
54F109	34102	FLIP-FLOP, JK, DUAL
54LS109	30109	FLIP-FLOP, JK, DUAL
54ALS109	37102	FLIP-FLOP, JK, DUAL, WITH CLEAR AND PRESET (ACTIVE HIGH)
54ALS112	37103	FLIP-FLOP, JK, DUAL, WITH CLEAR AND PRESET (ACTIVE LOW)
54LS112	30103	FLIP-FLOP, JK, DUAL
54HC112	65305	FLIP-FLOP, JK, DUAL, WITH SET AND RESET
54F112	34103	FLIP-FLOP, JK, DUAL
54LS113	30104	FLIP-FLOP, JK, DUAL, WITH PRESET AND CLEAR
54LS114	30105	FLIP-FLOP, JK, DUAL, WITH PRESET
54LS122	31403	MULTIVIBRATOR, MONOSTABLE RETRIGGER ABLE WITH CLEAR
54LS123	31401	MULTIVIBRATOR, DUAL MONOSTABLE RETRIGGERABLE WITH CLEAR
54HC173	65306	FLIP-FLOP, D-TYPE, QUAD, WITH THREE-STATE OUTPUTS
54LS173A	36101	FLIP-FLOP, D-TYPE, QUAD
54F174	34107	FLIP-FLOP, D-TYPE, HEX
54ALS174	37201	FLIP-FLOP, D-TYPE, HEX, WITH CLEAR
54LS174	30106	FLIP-FLOP, D-TYPE, HEX
54HC174	65307	FLIP-FLOP, D-TYPE, HEX, WITH CLEAR
54LS175	30107	FLIP-FLOP, D-TYPE, QUAD
54HC175	65308	FLIP-FLOP, D-TYPE, QUAD
54ALS175	37202	FLIP-FLOP, D-TYPE, QUAD, WITH CLEAR
54F175	34104	FLIP-FLOP, D-TYPE, QUAD
54LS221	31402	MULTIVIBRATOR, DUAL MONOSTABLE, WITH SCHMITT-TRIGGER INPUTS AND CLEAR
54LS259B	31605	LATCH, 8-BIT ADDRESSABLE
54LS259	31603	LATCH, 8-BIT ADDRESSABLE
54HC259	65402	LATCH, 8-BIT ADDRESSABLE
54LS273	32501	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54HC273	65601	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54LS279	31602	LATCH, RS, 4-BIT
54HC373	65403	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54HCT373	65453	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH TTL-COMPATIBLE INPUTS AND 3-STATE OUTPUTS
54ALS373	37203	FLIP-FLOP, D-TYPE, OCTAL, WITH TRANSPAR ENT LATCH AND THREE-STATE OUTPUTS
54LS373	32502	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54F373	34601	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54AC373	75403	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54ALS374	37204	FLIP-FLOP, D-TYPE, OCTAL, EDGE-TRIG GERED, WITH THREE-STATE OUTPUTS
54F374	34105	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54HCT374	65652	FLIP-FLOP, D-TYPE, OCTAL, WITH NONIN VERTING THREE-STATE OUTPUTS
54HC374	65602	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54LS374	32503	FLIP-FLOP, D-TYPE, OCTAL, POSITIVE EDGE-TRIGGERED, WITH THREE-STATE OUTPUTS
54LS375	31604	LATCH, 4-BIT, BISTABLE
54LS377	32504	FLIP-FLOP, D-TYPE, OCTAL
54F379	34109	FLIP-FLOP, D-TYPE, QUAD
54F533	34602	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54F534	34106	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54F563	34603	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54HC573	65406	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54ALS573	38201	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54F573	34604	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54ALS574	37104	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54HC574	65604	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54LS73	30101	FLIP-FLOP, JK, DUAL
54HC74	65302	FLIP-FLOP, D-TYPE, DUAL, WITH PRESET AND CLEAR
54LS74A	30102	FLIP-FLOP, D-TYPE, DUAL
54ALS74	37101	FLIP-FLOP, D-TYPE, DUAL, POSITIVE EDGE-TRIGGERED
54HCT74	65352	FLIP-FLOP, D-TYPE, DUAL, WITH PRESET AND CLEAR WITH LSTTL-COMPATIBLE INPUTS
54LS75	31601	LATCH, 4-BIT, BISTABLE
54LS76	30110	FLIP-FLOP, JK, DUAL, NEGATIVE EDGE-TRIGGERED

Combinational gates 4/

Generic/ industry number	MIL-M-38510/	Circuit description
54F138	33701	DECODER, 3-TO-8-LINE
54HC138	65802	DECODER, 3-LINE-TO-8-LINE
54LS138	30701	DECODER, 3-LINE-TO-8-LINE
54ALS138	37701	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54HCT138	65852	DECODER, 3-LINE-TO-8-LINE

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY

MILITARY PARTS

TABLE I- Preferred Devices (MIL-STD-1562R) (Cont'd)

MILITARY

Combinational gates 4/ (Continued)

Generic/ industry number	MIL-M-38510/	Circuit description
54AC138	75802	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54HC139	65803	DECODER, DUAL 2-LINE-TO-4-LINE
54LS139	30702	DECODER, DUAL 2-LINE-TO-4-LINE
54F139	33702	DECODER, DUAL 2-LINE-TO-4-LINE
54LS148	36001	PRIORITY ENCODER, 8-LINE-TO-3-LINE
54LS151	30901	DATA SEL/MULTIPLEXER, 8-INPUT
54F151A	33901	DATA SEL/MULTIPLEXER, 8-INPUT
54LS153	30902	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54F153	33902	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54LS155	32601	DECODER, DUAL 2-LINE-TO-4-LINE
54LS156	32602	DECODER, DUAL 2-LINE-TO-4-LINE, WITH OPEN-COLLECTOR OUTPUTS
54LS157	30903	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54F157A	33903	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54LS158	30904	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH ENABLE
54F158A	33904	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54HC158	66204	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH INVERTED OUTPUTS
54HC158B	66204	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH INVERTED OUTPUTS
54F181	33801	ALU/FUNCTION GENERATOR, 4-BIT
54LS181	30801	ALU/FUNCTION GENERATOR, 4-BIT
54F182	33802	LOOK AHEAD CARRY GENERATOR
54LS251	30905	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54F251A	33905	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54LS253	30908	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54F253	33908	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54F257A	33906	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54LS257	30906	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH ENABLE AND THREE-STATE OUTPUTS
54LS258	30907	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS, WITH ENABLE
54F258A	33907	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54F280	34901	PARITY GENERATOR/CHECKER, 9-BIT
54LS280	32901	PARITY GENERATOR/CHECKER, 9-BIT
54LS283	31202	ADDER, 4-BIT FULL, WITH FAST CARRY
54F283	34201	ADDER, 4-BIT FULL
54LS298	30909	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH STORAGE
54LS348	36002	PRIORITY ENCODER, 8-LINE-TO-3-LINE, TS
54F352	33909	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54F353	33910	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54F381	33803	ARITHMETIC LOGIC UNIT, 4-BIT
54F382	33804	ALU/FUNCTION GENERATOR, 4-BIT
54F398	35001	MULTIPLEXER, QUAD 2-INPUT, W/STORAGE
54F399	35002	MULTIPLEXER, QUAD 2-INPUT, W/STORAGE
54LS42	30703	DECODER, BCD-TO-DECIMAL
54LS47	30704	DECODER, BCD-TO-7-SEGMENT, WITH OPEN-COLLECTOR OUTPUTS
54F521	34701	IDENTITY COMPARATOR, 8-BIT
54LS83	31201	ADDER, 4-BIT FULL WITH FAST CARRY
54LS85	31101	MAGNITUDE COMPARATOR, 4-BIT
54ALS857	37901	DATA SEL/MULTIPLEXER, HEX 2-INPUT, WITH THREE-STATE OUTPUTS

Sequential registers/counters 5/

Generic/ industry number	MIL-M-38510/	Circuit description
54LS160	31503	DECADE COUNTER, 4-BIT SYNCHRONOUS
54F160A	34401	DECADE COUNTER, 4-BIT SYNCHRONOUS BCD
54ALS161	38001	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNCHRONOUS CLEAR
54F161A	34301	BINARY COUNTER, 4-BIT SYNCHRONOUS
54LS161	31504	BINARY COUNTER, 4-BIT SYNCHRONOUS
54HC161	66302	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNCHRONOUS CLEAR
54LS162A	31511	DECADE COUNTER, 4-BIT SYNCHRONOUS
54F162A	34402	DECADE COUNTER, 4-BIT SYNCHRONOUS
54LS163	31512	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54ALS163	38002	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54F163A	34302	BINARY COUNTER, 4-BIT SYNCHRONOUS
54HC163	66304	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54LS164	30605	SHIFT REGISTER, 8-BIT PARALLEL-OUT
54HC164	66501	SHIFT REGISTER, 8-BIT, SERIAL-IN/PARALLEL-OUT
54LS165	30608	SHIFT REGISTER, 8-BIT PARALLEL LOAD
54HC165	66502	SHIFT REGISTER, 8-BIT PARALLEL-IN SERIAL-OUT
54LS166	30609	SHIFT REGISTER, 8-BIT PARALLEL-INPUT, WITH CLEAR
54LS169	31506	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54ALS169	38003	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54F190	34403	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS190	31513	BCD COUNTER, 4-BIT SYNCHRONOUS, WITH MODE CONTROL
54LS191	31509	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH DOWN/UP MODE CONTROL
54LS192	31507	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH CLEAR ENABLE
54F192	34404	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54F193	34304	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS193	31508	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS194A	30601	SHIFT REGISTER, 4-BIT BIDIRECTIONAL
54F194	33601	SHIFT REGISTER, 4-BIT BIDIRECTIONAL UNIVERSAL, CASCADABLE
54LS195A	30602	SHIFT REGISTER, 4-BIT PARALLEL ACCESS
54LS197	32002	DECADE/BINARY COUNTER, PRESETTABLE, 50/30-MHZ
54LS290	32003	DECADE COUNTER, 4-BIT
54LS293	32004	BINARY COUNTER, 4-BIT
54LS295B	30606	SHIFT REGISTER, 4-BIT BIDIRECTIONAL, TS
54LS390	32701	DECADE COUNTER, DUAL 4-BIT, WITH A AND B INPUTS
54LS393	32702	BINARY COUNTER, DUAL 4-BIT
54HC393	66309	BINARY COUNTER, DUAL 4-BIT
54LS395A	30607	SHIFT REGISTER, 4-BIT UNIVERSAL, TS
54LS490	32703	DECADE COUNTER, DUAL
54LS670	31901	REGISTER FILE, 4 X 4, THREE-STATE OUTPUTS
54LS90	31501	DECADE COUNTER, 4-BIT
54LS92	31510	COUNTER, DIVIDE-BY-12
54LS93	31502	DECADE COUNTER, 4-BIT
54LS95B	30603	SHIFT REGISTER, 4-BIT PARALLEL ACCESS
54LS96	30604	SHIFT REGISTER, 5-BIT

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY PARTS
TABLE I- Preferred Devices (MIL-STD-1562R)(Cont'd)

RAM 6/

Generic/ industry number	MIL-M-38510/	Circuit description
MT1257-12	24601	DYNAMIC RAM, 256K X 1
MT1257-15	24602	DYNAMIC RAM, 256K X 1
MT1259-12	24603	DYNAMIC RAM, 256K X 1
MT1259-15	24604	DYNAMIC RAM, 256K X 1
2117	24004	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
2117	24005	DYNAMIC RAM, 16K X 1, 250 NS ACCESS TIME
2147	28903	STATIC RAM, 4K X 1, WITH THREE-STATE OUTPUTS
2147	23801	STATIC RAM, 4K X 1, WITH THREE-STATE OUTPUTS
2147H	23803	STATIC RAM, 4K X 1
2147H-2	23807	STATIC RAM, 4K X 1
2147H-3	23805	STATIC RAM, 4K X 1
2148	28904	STATIC RAM, 1K X 4, WITH THREE-STATE OUTPUTS
2148H	23806	STATIC RAM, 1K X 4
2164	24401	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
2164	24402	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
2164	24403	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
4C1024-100	24902	DYNAMIC RAM, 1024K X 1
4C1024-120	24903	DYNAMIC RAM, 1024K X 1
4C1024-150	24904	DYNAMIC RAM, 1024K X 1
4C1024-80	24901	DYNAMIC RAM, 1024K X 1
411024-100	24902	DYNAMIC RAM, 1024K X 1
411024-120	24903	DYNAMIC RAM, 1024K X 1
411024-150	24904	DYNAMIC RAM, 1024K X 1
411024-80	24901	DYNAMIC RAM, 1024K X 1
4116	24005	DYNAMIC RAM, 16K X 1, 250 NS ACCESS TIME
4116	24004	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
M41256N-12	24603	DYNAMIC RAM, 256K X 1
M41256P-12	24601	DYNAMIC RAM, 256K X 1
M41256P-15	24602	DYNAMIC RAM, 256K X 1
M41256N-15	24604	DYNAMIC RAM, 256K X 1
45H16	24005	DYNAMIC RAM, 16K X 1, 250 NS ACCESS TIME
45H16	24004	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
4564	24402	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
4564	24401	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
4564	24403	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
MT5C2561	29302	STATIC RAM, 256K X 1, 35 NS ACCESS TIME
MT5C2561	29301	STATIC RAM, 256K X 1, 45 NS ACCESS TIME
MT5C2561	29310	STATIC RAM, 256K X 1, 25 NS ACCESS TIME
MT5C2568	29308	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 45 NS ACCESS TIME
MT5C2568	29309	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 35 NS ACCESS TIME
MT5C2568	29313	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 25 NS ACCESS TIME
MT5C2568	29307	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 55 NS ACCESS TIME
6116	29104	STATIC RAM, 2K X 8, 90 NS ACCESS TIME
6504	24501	STATIC RAM, 4K X 1
6504RH	R24503	STATIC RAM, 4K X 1
6514	24502	STATIC RAM, 1K X 4
6516	29102	STATIC RAM, 2K X 8, 200 NS ACCESS TIME
65162	29110	STATIC RAM, 2K X 8, 70 NS ACCESS TIME
65262	29103	STATIC RAM, 16K X 1, 85 NS ACCESS TIME
65262	29109	STATIC RAM, 16K X 1, WITH THREE-STATE OUTPUTS
65642	29205	STATIC RAM, 8K X 8, SELECTABLE MODE
6665	24403	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
6665	24401	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
6665	24402	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
7C147	28901	STATIC RAM, 4K X 1, 35 NS ACCESS TIME
7C148	28902	STATIC RAM, 1K X 4
7C197	29310	STATIC RAM, 256K X 1, 25 NS ACCESS TIME
7C197	29302	STATIC RAM, 256K X 1, 35 NS ACCESS TIME
7C197	29301	STATIC RAM, 256K X 1, 45 NS ACCESS TIME
7V198	29309	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 35 NS ACCESS TIME
7C198	29313	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 25 NS ACCESS TIME
7C198	29308	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 45 NS ACCESS TIME
7C198	29307	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 55 NS ACCESS TIME
7C198	29309	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 35 NS ACCESS TIME
7C199	29308	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 45 NS ACCESS TIME
7C199	29309	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 35 NS ACCESS TIME
7C199	29313	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 25 NS ACCESS TIME
7C199	29307	STATIC RAM, 32K X 8, WITH OUTPUT ENABLE, 55 NS ACCESS TIME
82S11	23108	STATIC RAM, 1K X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
8264	24402	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
8264	24403	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
8264	24401	DYNAMIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS
9147-45	23807	STATIC RAM, 4K X 1
9147-55	23805	STATIC RAM, 4K X 1
9147-70	23803	STATIC RAM, 4K X 1
9147-85	23801	STATIC RAM, 4K X 1, WITH THREE-STATE OUTPUTS
9148-70	23806	STATIC RAM, 1K X 4
93L415	23103	STATIC RAM, 1K X 1, LOW-POWER, WITH OPEN-COLLECTOR OUTPUTS, 70 NS ACCESS TIME
93422	23110	STATIC RAM, 256 X 4, WITH THREE-STATE OUTPUTS, 60 NS ACCESS TIME
93L422	23112	STATIC RAM, 256 X 4, LOW-POWER, WITH THREE-STATE OUTPUTS, 75 NS ACCESS TIME
93L422A	23115	STATIC RAM, 256 X 4, LOW-POWER, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
93422A	23114	STATIC RAM, 256 X 4, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
93L425	23104	STATIC RAM, 1K X 1, LOW-POWER, WITH THREE-STATE OUTPUTS, 70 NS ACCESS TIME
93425	23102	STATIC RAM, 1K X 1, WITH THREE-STATE OUTPUTS, 60 NS ACCESS TIME
93L425A	23113	STATIC RAM, 1K X 1, LOW-POWER, WITH THREE-STATE OUTPUTS, 50 NS ACCESS TIME
93425A	23108	STATIC RAM, 1K X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
93425	23106	STATIC RAM, 1K X 1, WITH THREE-STATE OUTPUTS, 60 NS ACCESS TIME

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MILITARY

MILITARY PARTS
TABLE I- Preferred Devices (MIL-STD-1562R) (Cont'd)

ROM/PROM/PAL 7

Generic/ industry number	MIL-M-38510/	Circuit description
PAL10L8	50306	PROG. ARRAY LOGIC, 10-INPUT 8-OUTPUT AND-OR-INVERT
PAL10H8	50301	PROG. ARRAY LOGIC, 10-INPUT 8-OUTPUT AND-OR
PAL12L6	50307	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR-INVERT
PAL12H6	50302	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPU AND-OR
PAL14H4	50303	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR
PAL14L4	50308	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR-INVERT
PAL16R4A	50404	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT AND-OR
PAL16R4B	50604	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4A2	50410	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4B2	50608	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R6A	50403	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT AND-OR
PAL16R6B	50603	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6A2	50409	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6B2	50607	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16L8A	50401	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8A	50402	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR
PAL16R8B	50602	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8B	50601	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16L8A2	50407	PROG. ARRAY LOGIC, 16-INPUT 8 OUTPUT AND-OR-INVERT
PAL16R8A2	50408	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8B2	50605	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8B2	50606	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL20R4A	50504	PROG. ARRAY LOGIC, 20-INPUT 4-OUTPUT REGISTERED AND-OR
PAL20R6A	50503	PROG. ARRAY LOGIC, 20-INPUT 6-OUTPUT
PAL20R8A	50502	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR
PAL20L8A	50501	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT AND-OR-INVERT
27S181	20904	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
27S191	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
27256-200	22402	PROM, UV ERASABLE, 32K X 8, 200 NS ACCESS TIME
27256-250	22401	PROM, UV ERASABLE, 32K X 8, 250 NS ACCESS TIME
X2816A-30	22703	PROM, ELECTR. ERASABLE, 2K X 8
X2816A-35	22702	PROM, ELECTR. ERASABLE, 2K X 8
X2816A-45	22701	PROM, ELECTR. ERASABLE, 2K X 8
28S166A	21004	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
28S166A	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
28C256-200	26104	PROM, ELECTR. ERASABLE, 32K X 8, 200 NS ACCESS TIME
28C256-250	26103	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
28C256-300	26102	PROM, ELECTR. ERASABLE, 32K X 8, 300 NS ACCESS TIME
28C256-350	26101	PROM, ELECTR. ERASABLE, 32K X 8, 350 NS ACCESS TIME
28C64-200	26004	PROM, ELECTR. ERASABLE, 8K X 8, 200 NS ACCESS TIME
2864-250	22808	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
28C64-250	26003	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
2864H-250	22809	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
28C64-300	26002	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
2864-350	22807	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
28C64-350	26001	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
28C65-250	26006	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
28C65-350	26007	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
29611	20402	PROM, 512 X 4, WITH THREE-STATE OUTPUTS
29631	20904	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
29651	20908	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
29651	20902	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 125 NS ACCESS TIME
29671	21102	PROM, 4K X 8, WITH THREE-STATE OUTPUTS, 95 NS ACCESS TIME
29681	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
3636	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
5300-1	20301	PROM, 256 X 4, WITH OPEN-COLLECTOR OUTPUTS
5301-1	20302	PROM, 256 X 4, WITH THREE-STATE OUTPUTS
5305-1	20401	PROM, 512 X 4, WITH OPEN-COLLECTOR OUTPUTS
5306-1	20402	PROM, 512 X 4, WITH THREE-STATE OUTPUTS
53S1681	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
5330	20701	PROM, 32 X 8, WITH OPEN-COLLECTOR OUTPUTS
5331	20702	PROM, 32 X 8, WITH THREE-STATE OUTPUTS
53S3281	21102	PROM, 4K X 8, WITH THREE-STATE OUTPUTS, 95 NS ACCESS TIME
5341-1	20802	PROM, 512 X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
53S441	20602	PROM, 1K X 4, WITH THREE-STATE OUTPUTS
53S841	20902	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 125 NS ACCESS TIME
54S287	20302	PROM, 256 X 4, WITH THREE-STATE OUTPUTS
DM54S288	20702	PROM, 32 X 8, WITH THREE-STATE OUTPUTS
54S474	20802	PROM, 512 X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
54S570	20401	PROM, 512 X 4, WITH OPEN-COLLECTOR OUTPUTS
54S571	20402	PROM, 512 X 4, WITH THREE-STATE OUTPUTS
54S573	20602	PROM, 1K X 4, WITH THREE-STATE OUTPUTS
7602	20701	PROM, 32 X 8, WITH OPEN-COLLECTOR OUTPUTS
7603	20702	PROM, 32 X 8, WITH THREE-STATE OUTPUTS
7610	20301	PROM, 256 X 4, WITH OPEN-COLLECTOR OUTPUTS
7611	20302	PROM, 256 X 4, WITH THREE-STATE OUTPUTS
76161	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
76165	21005	PROM, 4K X 4, WITH THREE-STATE OUTPUTS
7620	20401	PROM, 512 X 4, WITH OPEN-COLLECTOR OUTPUTS
7621	20402	PROM, 512 X 4, WITH THREE-STATE OUTPUTS

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY PARTS
TABLE I- Preferred Devices (MIL-STD-1562R)(Cont'd)

ROM/PROM/PAL 7/ (Continued)

Generic/ industry number	MIL-M-38510/	Circuit description
76321	21102	PROM, 4K X 8, WITH THREE-STATE OUTPUTS, 95 NS ACCESS TIME
7641	20802	PROM, 512 X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
7643	20602	PROM, 1K X 4, WITH THREE-STATE OUTPUTS
7681	20904	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
7685	20902	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 125 NS ACCESS TIME
77S181	20904	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
77S185	20902	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 125 NS ACCESS TIME
77S191	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
82S101	50201	PROG. ARRAY LOGIC, 16X48X8
82S115	20803	PROM, 512 X 8, WITH THREE-STATE OUTPUTS
82S123A	20704	PROM, 32 X 8, WITH THREE-STATE OUTPUTS
82S126A	20301	PROM, 256 X 4, WITH OPEN-COLLECTOR OUTPUTS
82S126A	20303	PROM, 256 X 4, WITH OPEN-COLLECTOR OUTPUTS
82S129A	20304	PROM, 256 X 4, WITH THREE-STATE OUTPUTS, 60 NS ACCESS TIME
82S129A	20302	PROM, 256 X 4, WITH THREE-STATE OUTPUTS
82S130A	20401	PROM, 512 X 4, WITH OPEN-COLLECTOR OUTPUTS
82S130A	20403	PROM, 512 X 4, WITH OPEN-COLLECTOR OUTPUTS
82S131A	20404	PROM, 512 X 4, WITH THREE-STATE OUTPUTS
82S131A	20402	PROM, 512 X 4, WITH THREE-STATE OUTPUTS
82S137A	20602	PROM, 1K X 4, WITH THREE-STATE OUTPUTS
82S137A	20604	PROM, 1K X 4, WITH THREE-STATE OUTPUTS
82S141	20802	PROM, 512 X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
82S181A	20909	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
82S181A	20904	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
82S185	20902	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 125 NS ACCESS TIME
82S185A	20910	PROM, 2K X 4, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
82S191A	21004	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
82S191A	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
82HS195	21005	PROM, 4K X 4, WITH THREE-STATE OUTPUTS
82S23A	20703	PROM, 32 X 8, WITH OPEN-COLLECTOR OUTPUTS
82S23A	20701	PROM, 32 X 8, WITH OPEN-COLLECTOR OUTPUTS
82HS321A	21101	PROM, 4K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
82HS641A-45	21204	PROM, 8K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
82HS641A-70	21201	PROM, 8K X 8, WITH THREE-STATE OUTPUTS
83S123A	20702	PROM, 32 X 8, WITH THREE-STATE OUTPUTS
93417	20301	PROM, 256 X 4, WITH OPEN-COLLECTOR OUTPUTS
93427	20302	PROM, 256 X 4, WITH THREE-STATE OUTPUTS
93436	20401	PROM, 512 X 4, WITH OPEN-COLLECTOR OUTPUTS
93446	20402	PROM, 512 X 4, WITH THREE-STATE OUTPUTS
93448	20802	PROM, 512 X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
93Z451	20904	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
93Z451	20909	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
93453	20602	PROM, 1K X 4, WITH THREE-STATE OUTPUTS
93458	50201	PROG. ARRAY LOGIC, 16X48X8
93Z511	21002	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
93Z511	21004	PROM, 2K X 8, WITH THREE-STATE OUTPUTS
93Z665-45	21204	PROM, 8K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
93Z665-50	21203	PROM, 8K X 8, WITH THREE-STATE OUTPUTS
93Z665-55	21202	PROM, 8K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
93Z665-70	21201	PROM, 8K X 8, WITH THREE-STATE OUTPUTS
93Z667-70	21201	PROM, 8K X 8, WITH THREE-STATE OUTPUTS

Microprocessors and interface peripherals/FIFO 8/

(SEE DWG)	5962-8869202	MULTIPLEXED TERMINAL, MIL-STD-1553, BC/RTU/MT
(SEE DWG)	5962-8869201	MULTIPLEXED TERMINAL, MIL-STD-1553, BC/RTU/MT
MKB4501-80	25002	FIFO MEMORY, 512 X 9
MKB4501-81	25001	FIFO MEMORY, 512 X 9
MKB4501-88	25003	FIFO MEMORY, 512 X 9 PARALLEL, 80 NS ACCESS TIME
532S	13903	ANALOG MULTIPLIER, 4-QUADRANT
534T	13901	ANALOG MULTIPLIER, 4-QUADRANT
534S	13902	ANALOG MULTIPLIER, 4-QUADRANT
BUS-66300II	5962-8858601	INTERFACE UNIT, BUS TO MICROPROCESSOR, MIL-STD-1553
68000-10	54003	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
68000-8	54002	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
Z-80ACPU	48001	MICROPROCESSOR, 8-BIT
Z-80CPU	48002	MICROPROCESSOR, 8-BIT
Z-80BCMOS	48501	MICROPROCESSOR, 8-BIT
Z8002A CPU	52004	MICROPROCESSOR, 16-BIT, 6.0 MHZ
Z8002CPU	52002	MICROPROCESSOR, 16-BIT, 4.0 MHZ
8086	53001	MICROPROCESSOR, 16-BIT
Z85C3006SCC	48601	COMMUNICATIONS CONTROLLER, SERIAL, 6.0 MHZ
85C3008SCC	48602	COMMUNICATIONS CONTROLLER, SERIAL, 8.0 MHZ

Operational amplifiers 9/

LH0002	7801301	CURRENT AMPLIFIER
LH0021	8508801	OP AMP, HIGH-POWER (1A OUTPUT), EXTERNALLY COMPENSATED
0032	8001301	OP AMP
LH0033	8001401	VOLTAGE FOLLOWER/BUFFER AMPLIFIER, WITH FET INPUTS
LH0041	8508701	OP AMP, HIGH-POWER (0.2A OUTPUT), EXTERNALLY COMPENSATED
HOS-050A	5962-8857901	OP AMP, FAST SETTLING VIDEO
HOS-060SH	5962-8857902	OP AMP, FAST SETTLING VIDEO
OP-07A	13501	OP AMP, PRECISION
071	11904	OP AMP, BI-FET, LOW POWER
072	11905	OP AMP, DUAL, BI-FET, LOW POWER
074	11906	OP AMP, QUAD, BI-FET, LOW POWER
LM101A	10103	OP AMP, GENERAL PURPOSE
LM108A	10104	OP AMP, GENERAL PURPOSE
LM118	10107	OP AMP, HIGH-SPEED
LM124A	11006	OP AMP, QUAD

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY

MILITARY PARTS

TABLE I- Preferred Devices (MIL-STD-1562R) (Cont'd)

Operational amplifiers 9/ (Continued)

Generic/ industry number	MIL-M-38510/	Circuit description
LM124	11005	OP AMP, QUAD
LF147	11906	OP AMP, QUAD, BI-FET, LOW POWER
LM148	11001	OP AMP, QUAD
LF151	11904	OP AMP, BI-FET, LOW POWER
LF153	11905	OP AMP, DUAL, BI-FET, LOW POWER
LF155	11401	OP AMP, JFET
LF155A	11404	OP AMP, JFET
1558	10108	OP AMP, DUAL
LF156	11402	OP AMP, JFET
LF156A	11405	OP AMP, JFET
LF157	11403	OP AMP, JFET
LF157A	11406	OP AMP, JFET
LH2101A	10105	OP AMP, DUAL
LH2108A	10106	OP AMP, DUAL
2500	12204	OP AMP, PRECISION
2510	12205	OP AMP, HIGH-SPEED
2520	12206	OP AMP, HIGH-SPEED
2600	12202	OP AMP, WIDEBAND
2620	12203	OP AMP, WIDEBAND
OP-27A	13503	OP AMP, PRECISION
4136	11004	OP AMP, QUAD
4156	11003	OP AMP, QUAD
4741	11003	OP AMP, QUAD
5532A	13102	OP AMP, DUAL LOW-NOISE
5534A	13101	OP AMP, LOW-NOISE
714	13502	OP AMP, LOW-OFFSET
OP-07	13502	OP AMP, LOW-OFFSET
741A	10101	OP AMP, GENERAL PURPOSE
747A	10102	OP AMP, GENERAL PURPOSE, DUAL
771	11904	OP AMP, BI-FET, LOW POWER
772	11905	OP AMP, DUAL, BI-FET, LOW POWER
774	11906	OP AMP, QUAD, BI-FET, LOW POWER

Comparators 10/

Generic/ industry number	MIL-M-38510/	Circuit description
LM111	10304	VOLT. COMPARATOR/BUFFER, PRECISION
LM119A	10307	VOLT. COMPARATOR, DUAL HIGH-SPEED
LM119	10306	VOLT. COMPARATOR, DUAL HIGH-SPEED
LM139	11201	VOLT. COMPARATOR, QUAD
LM193	11202	VOLT. COMPARATOR, DUAL
LH2111	10305	VOLT. COMPARATOR, DUAL

Regulators 12/

Generic/ industry number	MIL-M-38510/	Circuit description
LM109	10701	VOLT. REGULATOR, FIXED, POSITIVE, 5V
LM117K	11704	VOLT. REGULATOR, ADJ., POSITIVE
LM117H	11703	VOLT. REGULATOR, ADJ., POSITIVE
LM120K-05	11505	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120H-05	11501	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120K-12	11506	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120H-12	11502	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120K-15	11507	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120H-15	11503	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM137H	11803	VOLT. REGULATOR, ADJ., NEGATIVE
LM137K	11804	VOLT. REGULATOR, ADJ., NEGATIVE
LM138K	11706	VOLT. REGULATOR, ADJ., POSITIVE
LM140K-05	10706	VOLT. REGULATOR, FIXED, POSITIVE
LM140H-05	10702	VOLT. REGULATOR, FIXED, POSITIVE
LM140H-12	10703	VOLT. REGULATOR, FIXED, POSITIVE
LM140K-12	10707	VOLT. REGULATOR, FIXED, POSITIVE
LM140H-15	10704	VOLT. REGULATOR, FIXED, POSITIVE
LM140K-15	10708	VOLT. REGULATOR, FIXED, POSITIVE
LM140K-24	10709	VOLT. REGULATOR, FIXED, POSITIVE
LM150K	11705	VOLT. REGULATOR, ADJ., POSITIVE, 3.0A
1524	12601	PULSE WIDTH MODULATOR, REGULATING
1525A	12602	PULSE WIDTH MODULATOR, REGULATING
1526	12603	PULSE WIDTH MODULATOR, REGULATING
1527A	12604	PULSE WIDTH MODULATOR, REGULATING
1846	70201	PULSE WIDTH MODULATOR CONTROLLER, CURRENT-MODE
TL431	14801	VOLT. REFERENCE, PROGRAMMABLE
723	10201	VOLT. REGULATOR, ADJ., POSITIVE
78M05	10702	VOLT. REGULATOR, FIXED, POSITIVE
7805	10706	VOLT. REGULATOR, FIXED, POSITIVE
78M12	10703	VOLT. REGULATOR, FIXED, POSITIVE
7812	10707	VOLT. REGULATOR, FIXED, POSITIVE
78M15	10704	VOLT. REGULATOR, FIXED, POSITIVE
7815	10708	VOLT. REGULATOR, FIXED, POSITIVE
7824	10709	VOLT. REGULATOR, FIXED, POSITIVE
79M05	11501	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
7905	11505	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
79M12	11502	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
7912	11506	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
79M15	11503	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
7915	11507	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A

Drivers/receivers 13/

Generic/ industry number	MIL-M-38510/	Circuit description
0006	5962-8761701	DRIVER, HIGH VOLTAGE, 1.5A
0008	5962-8761702	DRIVER, HIGH VOLTAGE, HIGH CURRENT, 3.0A
2001	14101	TRANSISTOR ARRAY, DARLINGTON
2002	14102	TRANSISTOR ARRAY, DARLINGTON
2003	14103	TRANSISTOR ARRAY, DARLINGTON
2004	14104	TRANSISTOR ARRAY, DARLINGTON
2005	14105	TRANSISTOR ARRAY
2801	14106	TRANSISTOR ARRAY, DARLINGTON
2802	14107	TRANSISTOR ARRAY, DARLINGTON
2803	14108	TRANSISTOR ARRAY, DARLINGTON, EIGHT-GATE
2804	14109	TRANSISTOR ARRAY, DARLINGTON
2805	14110	TRANSISTOR ARRAY, DARLINGTON
3045	10802	TRANSISTOR ARRAY
54S140	08101	LINE DRIVER, DUAL 4-INPUT NAND
54LS242	32801	BUS TRANSCEIVER, QUAD INVERTING, WITH THREE-STATE OUTPUTS
54F243	34802	BUS TRANSCEIVER, QUAD NONINVERTING, WITH THREE-STATE OUTPUTS
54LS243	32802	BUS TRANSCEIVER, QUAD NONINVERTING, WITH THREE-STATE OUTPUTS
54F245	34803	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS245	32803	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54HCT245	65553	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC245	65503	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS368	32204	BUS DRIVER, HEX

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY PARTS
TABLE I- Preferred Devices (MIL-STD-1562R)(Cont'd)

Generic/ industry number	MIL-M-38510/	Circuit description
Drivers/receivers 13/ (Continued)		
54HCT540	65760	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54F545	34804	BUS TRANSCEIVER, OCTAL BIDIRECTIONAL, WITH THREE-STATE OUTPUTS
54ALS645A	38505	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
55107	10401	LINE RECEIVER, DUAL
55108	10402	LINE RECEIVER, DUAL OC
55113	10405	LINE DRIVER, DUAL DIFFERENTIAL, TS
55114	10403	LINE DRIVER, DUAL DIFFERENTIAL
55115	10404	LINE RECEIVER, DUAL DIFFERENTIAL
55451	12902	PERIPHERAL DRIVER, DUAL AND
55452	12903	PERIPHERAL DRIVER, DUAL NAND
55453	12904	PERIPHERAL DRIVER, DUAL OR
55454	12905	PERIPHERAL DRIVER, DUAL NOR
55461	12907	PERIPHERAL DRIVER, DUAL AND
55462	12908	PERIPHERAL DRIVER, DUAL NAND
55463	12909	PERIPHERAL DRIVER, DUAL OR
BUS-63105II	5962-8604902	DRIVER-RECEIVER, SINGLE CHANNEL, (INTERFACES WITH MANCHESTER ENCODER-DECODER)
BUS-63106II	5962-8604902	DRIVER-RECEIVER, SINGLE CHANNEL, (INTERFACES WITH MANCHESTER ENCODER-DECODER)
BUS-63125II	5962-8757902	BUS TRANSCEIVER, DUAL CHANNEL, LOW-POWER
BUS-63147	5962-8952201	BUS TRANSCEIVER, DUAL CHANNEL, MIL-STD-1553, 5V
BUS-65111	5962-8763201	REMOTE TERMINAL UNIT, LOW POWER, DUAL, REDUNDANT
BUS-65600	5962-8858501	BUS CONTROLLER, DUAL REDUNDANT, RTU
9614	10403	LINE DRIVER, DUAL DIFFERENTIAL
9615	10404	LINE RECEIVER, DUAL DIFFERENTIAL
Timers 14/		
555	10901	TIMER, PRECISION
556	10902	TIMER, DUAL PRECISION
Core drivers 15/		
55325	13001	MEMORY CORE DRIVER, DUAL
55326	13002	MEMORY CORE DRIVER, QUAD
D/A converters 16/		
DAC02310-112	5962-8851701	D/A CONVERTER, 14-BIT, DEGLITCHED, ±.012% FSR
DAC02310-113	5962-8851702	D/A CONVERTER, 14-BIT, DEGLITCHED, ±.006% FSR
DAC-08	11301	D/A CONVERTER, 8-BIT
DAC-08A	11302	D/A CONVERTER, 8-BIT
MN3008	5962-8768801	D/A CONVERTER, 8-BIT, 0V TO +4V OUTPUT
MN3009	5962-8768802	D/A CONVERTER, 8-BIT, -2V TO +2V OUTPUT
MN3020	5962-8971801	D/A CONVERTER, 8-BIT, WITH INPUT REGISTER
AD390T	5962-8850902	D/A CONVERTER, QUAD 12-BIT
AD390S	5962-8850901	D/A CONVERTER, QUAD 12-BIT
AD394S	5962-8851001	D/A CONVERTER, QUAD 12-BIT
AD394T	5962-8851002	D/A CONVERTER, QUAD 12-BIT
AD395T	5962-8851004	D/A CONVERTER, QUAD 12-BIT
AD395S	5962-8851003	D/A CONVERTER, QUAD 12-BIT
561	13301	D/A CONVERTER, 10-BIT
562	12101	D/A CONVERTER, 12-BIT, EXTERNAL REFERENCE, 2 MA, FS
565	12103	D/A CONVERTER, 12-BIT
7520	12702	D/A CONVERTER, 10-BIT
7521	12703	D/A CONVERTER, 12-BIT
DAC87	8300201	D/A CONVERTER, 12-BIT, RANGE-PROGRAMMABLE VOLTAGE OUTPUT
A/D converters 17/		
MN5200	5962-8958301	A/D CONVERTER, 12-BIT, 0V TO -10V INTERNAL REFERENCE
MN5201	5962-8958303	A/D CONVERTER, 12-BIT, -5V TO +5V INTERNAL REFERENCE
MN5202	5962-8958305	A/D CONVERTER, 12-BIT, -10V TO +10V INTERNAL REFERENCE
MN5203	5962-8958302	A/D CONVERTER, 12-BIT, 0V TO -10V EXTERNAL REFERENCE
MN5204	5962-8958304	A/D CONVERTER, 12-BIT, -5V TO +5V EXTERNAL REFERENCE
MN5205	5962-8958306	A/D CONVERTER, 12-BIT, -10V TO +10V EXTERNAL REFERENCE
MN5206	5962-8958307	A/D CONVERTER, 12-BIT, 0V TO 10V INTERNAL REFERENCE
MN5210	5962-8958401	A/D CONVERTER, 12-BIT, HIGH-SPEED, 0V TO -10V INTERNAL REFERENCE
MN5211	5962-8958403	A/D CONVERTER, 12-BIT, HIGH-SPEED, -5V TO +5V INTERNAL REFERENCE
MN5212	5962-8958405	A/D CONVERTER, 12-BIT, HIGH-SPEED, -10V TO +10V INTERNAL REFERENCE
MN5213	5962-8958402	A/D CONVERTER, 12-BIT, HIGH-SPEED, 0V TO -10V EXTERNAL REFERENCE
MN5214	5962-8958404	A/D CONVERTER, 12-BIT, HIGH-SPEED, -5V TO +5V EXTERNAL REFERENCE
MN5215	5962-8958406	A/D CONVERTER, 12-BIT, HIGH-SPEED, -10V TO +10V EXTERNAL REFERENCE
MN5216	5962-8958407	A/D CONVERTER, 12-BIT, HIGH-SPEED, 0V TO 10 INTERNAL REFERENCE
MN5245	5962-8959501	

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY

MILITARY PARTS

TABLE I- Preferred Devices (MIL-STD-1562R) (Cont'd)

Generic/ industry number	MIL-M-38510/	Circuit description
A/D Converters 17/ (Continued)		
		A/D CONVERTER, 12-BIT, 0 TO +5V
MN5245A	5962-8959502	
		A/D CONVERTER, 12-BIT, 0 TO +5V, WITH THREE-STATE OUTPUTS
MN5246	5962-8959503	
		A/D CONVERTER, 12-BIT, ±2.5V
MN5246A	5962-8959504	
		A/D CONVERTER, 12-BIT, ±2.5V, WITH THREE-STATE OUTPUTS
MN5295	5962-8956901H	
		A/D CONVERTER, 16-BIT
574AT	14002	A/D CONVERTER, 12-BIT, WITH MICROPROCESSOR INTERFACE
574AU	14001	A/D CONVERTER, 12-BIT, WITH MICROPORCESSOR INTERFACE
AD578ZSD	5962-8865803	
		A/D CONVERTER, 12-BIT, HIGH-SPEED
AD578TD	5962-8865802	
		A/D CONVERTER, 12-BIT, HIGH-SPEED
AD578ZTD	5962-8865804	
		A/D CONVERTER, 12-BIT, HIGH-SPEED
AD578SD	5962-8865801	
		A/D CONVERTER, 12-BIT, HIGH-SPEED
Analog switches/multiplexers 18/		
DG181A	11101	ANALOG SWITCH, SPST, 2-CHANNEL
DG182A	11102	ANALOG SWITCH, SPST, 2-CHANNEL
DG184A	11103	ANALOG SWITCH, DPST, 2-CHANNEL
DG185A	11104	ANALOG SWITCH, DPST, 2-CHANNEL
DG187A	11105	ANALOG SWITCH, SPDT
DG188A	11106	ANALOG SWITCH, SPDT
DG190A	11107	ANALOG SWITCH, SPDT, 2-CHANNEL
DG191A	11108	ANALOG SWITCH, SPDT, 2-CHANNEL
200	12301	ANALOG SWITCH, SPST, 2-CHANNEL
201	12302	ANALOG SWITCH, SPST, 4-CHANNEL
300	11601	ANALOG SWITCH, SPST, 2-CHANNEL
301	11602	ANALOG SWITCH, SPDT, 1-CHANNEL
302	11603	ANALOG SWITCH, DPST, 2-CHANNEL
303	11604	ANALOG SWITCH
304	11605	ANALOG SWITCH, SPST, 2-CHANNEL
305	11606	ANALOG SWITCH, SPDT, 2-CHANNEL
306	11607	ANALOG SWITCH, DPST, 2-CHANNEL
307	11608	ANALOG SWITCH, SPDT, 2-CHANNEL
5040	10501	ANALOG SWITCH, SPST, 1-CHANNEL, 75 OHMS
5041	10502	ANALOG SWITCH, SPST, 2-CHANNEL, 75 OHMS
5042	10503	ANALOG SWITCH, SPDT, 1-CHANNEL, 75 OHMS
5043	10504	ANALOG SWITCH, SPDT, 2-CHANNEL, 75 OHMS
5044	10505	ANALOG SWITCH, DPST, 1-CHANNEL, 75 OHMS
5045	10506	ANALOG SWITCH, DPST, 2-CHANNEL, 75 OHMS
506	19001	ANALOG MULTIPLEXER, 16-CHANNEL
506A	19002	ANALOG MULTIPLEXER/DEMULTIPLEXER, 16-CHANNEL, WITH OVERVOLTAGE PROTECTION
507	19003	ANALOG MULTIPLEXER, 8-CHANNEL DIFFERENTIAL
507A	19004	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL DIFFERENTIAL, W/ OVERVOLTAGE PROTECT
508A	19005	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL, WITH OVERVOLTAGE PROTECTION
508	19007	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL
509A	19006	ANALOG MULTIPLEXER/DEMULTIPLEXER, DIFFERENTIAL 4-CHANNEL, WITH OVERVOLTAGE PROTE
509	19008	ANALOG MULTIPLEXER, DUAL 4-CHANNEL
6108	19007	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL
6116	19001	ANALOG MULTIPLEXER, 16-CHANNEL
6208	19008	ANALOG MULTIPLEXER, DUAL 4-CHANNEL
6216	19003	ANALOG MULTIPLEXER, 8-CHANNEL DIFFERENTIAL
Voltage references 19/		
2700	8503001	VOLT. REFERENCE, PRECISION, +10.000V
584T	12802	VOLT. REFERENCE, PROGRAMMABLE
584S	12801	VOLT. REFERENCE, PROGRAMMABLE
Sample and hold 20/		
198	12501	SAMPLE AND HOLD AMPLIFIER
Hybrid 22/		
HCPL-5431	5962-8957101	
		OPTOCOUPLER, DUAL CHANNEL, WITH COMMON SUPPLY VOLTAGE AND GROUND CONNECTIONS
Other digital devices 23/		
HSDC-8920A	5962-8768701	
		S/D CONVERTER, 400 HZ
HSDC-8920	5962-8768702	
		S/D CONVERTER, 400 HZ
UT1553BRTI	55501	REMOTE TERMINAL INTERFACE, MIL-STD-1553B
WEDSP-16	5962-9070401Q	
		DIGITAL SIGNAL PROCESSOR, 16-BIT
SDC14560-114	5962-8949901	
		SYNCHRO-TO-DIGITAL CONVERTER, 11.8V, 400 HZ, 2.0 MINUTES ACCURACY
SDC14560-115	5962-8949902	
		SYNCHRO-TO-DIGITAL CONVERTER, 11.8V, 400 HZ, 1.0 MINUTE ACCURACY
SDC14560-605	5962-8949903	
		SYNCHRO-TO-DIGITAL CONVERTER, 11.8V, 400 HZ, 2.0 MINUTES ACCURACY
SDC14561-114	5962-8949801	
		SYNCHRO-TO-DIGITAL CONVERTER, 90 V, 400 HZ, 2.0 MINUTES ACCURACY
SDC14561-115	5962-8949802	
		SYNCHRO-TO-DIGITAL CONVERTER, 90 V, 400 HZ, 1.0 MINUTES ACCURACY
SDC14565-114	5962-8990801	
		R/D CONVERTER, 11.8 V, 400 HZ, 2.0 MINUTES ACCURACY
SDC14565-115	5962-8990802	
		R/D CONVERTER, 11.8 V, 400 HZ, 1.0 MINUTE ACCURACY
SDC14565-616	5962-8990803	
		R/D CONVERTER, 11.8 V, 400 HZ, 2.0 MINUTES ACCURACY

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY

MILITARY PARTS
TABLE I- Preferred Devices (MIL-STD-1562R)(Cont'd)

Generic/ industry number	MIL-M- 38510/	Circuit description
		R/D TO DIGITAL CONVERTER, 11.8 V, 400 HZ, 1.0 MINUTE ACCURACY
4N55	5962-8767901	OPTOCOUPLER, DUAL
HCPL-5201	5962-8876801	OPTOCOUPLER, SINGLE-CHANNEL
HCPL-5231	5962-8876901	OPTOCOUPLER, DUAL CHANNEL
Semicustom devices 25/		
(SEE SPEC)	70603	LINEAR ARRAY, 16 MACROCELL LOCATIONS
(SEE SPEC)	70602	LINEAR ARRAY, 12 MACROCELL LOCATIONS
SEE SPEC	60606	GATE ARRAY, SEMICUSTOM
SEE SPEC	60604	GATE ARRAY, SEMICUSTOM
SEE SPEC	60608	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60708	GATE ARRAY (_ 8,000 GATES)
SEE SPEC	60504	GATE ARRAY, <=4000 GATES
SEE SPEC	60611	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60711	GATE ARRAY (_ 11,000 GATES)
SEE SPEC	60603	GATE ARRAY, SEMICUSTOM

Generic/ industry number	MIL-M- 38510/	Circuit description

All devices in this table have a dated military specification and a QPL source (part I or part II). These devices have no known reliability or availability problems and are recommended and preferred.)

MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

MILITARY

Gates 1/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
10H501	5962-8750301	OR/NOR GATE, QUAD 2-INPUT
10502	06002	NOR-OR/NOR GATE
10H502	5962-8755701	NOR GATE, QUAD 2-INPUT
10H503	5962-8756501	OR GATE, QUAD 2-INPUT
10H504	5962-8750401	AND GATE, QUAD 2-INPUT
10505	06003	OR/NOR GATE, TRIPLE 2-3-2 INPUT
10H505	5962-8750701	OR/NOR GATE, TRIPLE 2-3-2 INPUT
10506	06004	NOR GATE, TRIPLE 3-4-3 INPUT
10H506	5962-8756401	NOR GATE, TRIPLE 4-3-3 INPUT
10507	06005	EXCLUSIVE-OR/NOR GATE, TRIPLE 2-INPUT
10H507	5962-8772701	EXCLUSIVE-OR/NOR GATE, TRIPLE 2-INPUT
10509	06006	OR/NOR GATE, DUAL 4-5 INPUT
10H509	5962-8985601	OR/NOR GATE, DUAL 4-5 INPUT
10H513	5962-8755801	EXCLUSIVE-OR GATE, QUAD
10H518	5962-8755901	OR-AND GATE, DUAL 2-WIDE 3-INPUT
10H519	5962-8772801	OR-AND GATE, 4-WIDE 4-3-3-3 INPUT
10521	5962-8857701	OR-AND/OR-AND-INVERT GATE, 3-INPUT
10H521	5962-8773001	OR-AND/OR-AND-INVERT GATE, 4-WIDE
10H589	5962-8751001	HEX INVERTER, WITH ENABLE
10597	06202	AND GATE, HEX
10H609	5962-8756901	OR/NOR GATE, DUAL 4-5 INPUT
10H610	5962-8754101	OR GATE, DUAL THREE-INPUT, THREE-OUTPUT
10612	5962-8775001	OR/NOR GATE, DUAL 3-INPUT
54HC00	8403701	NAND GATE, QUAD 2-INPUT
54ALS00A	5962-8683301	NAND GATE, QUAD 2-INPUT
54AC00	5962-8754901	NAND GATE, QUAD 2-INPUT
54HCT00	5962-8683101	NAND GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54ACT00	5962-8769901	NAND GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54HC02	8404101	NOR GATE, QUAD 2-INPUT
54ALS02	5962-8684401	NOR GATE, QUAD 2-INPUT
54AC02	5962-8761201	NOR GATE, QUAD 2-INPUT
54HCT02	5962-8975101	NOR GATE, QUAD 2-INPUT, TTL-COMPATIBLE INPUTS
54HC03	5962-8764701	NAND GATE, QUAD 2-INPUT, WITH OPEN DRAIN OUTPUTS
54AC04	75701	HEX INVERTER
54HCU04	8601001	HEX INVERTER, UNBUFFERED
54HC04	8409801	HEX INVERTER
54AC04	5962-8760901	HEX INVERTER
54ALS04B	5962-8684301	HEX INVERTER
54ACT04	5962-8973401	HEX INVERTER, TTL-COMPATIBLE INPUTS
54HCT04	5962-8974701	HEX INVERTER, TTL-COMPATIBLE INPUTS
54ALS05A	5962-8854001	HEX INVERTER, WITH OPEN-COLLECTOR OUTPUTS
54HC05	5962-8871801	HEX INVERTER, WITH OPEN-DRAIN OUTPUTS
54AC08	75203	AND GATE, QUAD 2-INPUT
54HC08	8404701	AND GATE, QUAD 2-INPUT
54HCT08	5962-8688301	AND GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54ALS08	5962-8684201	AND GATE, QUAD 2-INPUT
54AC08	5962-8761501	AND GATE, QUAD 2-INPUT
54ALS09	8414201	AND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54LS09	8001901	AND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54HC09	5962-8862001	AND GATE, QUAD 2-INPUT, WITH OPEN-DRAIN OUTPUTS
54F09	5962-8872301	AND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54HC10	8403801	NAND GATE, TRIPLE 3-INPUT
54ALS10A	5962-8686501	NAND GATE, TRIPLE 3-INPUT
54AC10	5962-8761001	NAND GATE, TRIPLE 3-INPUT
54HCT10	5962-8984301	NAND GATE, TRIPLE 3-INPUT, TTL-COMPATIBLE INPUTS
54AC11	75204	AND GATE, TRIPLE 3-INPUT
54HC11	8404801	AND GATE, TRIPLE 3-INPUT
54AC11	5962-8761101	AND GATE, TRIPLE 3-INPUT
54ALS11A	5962-8684101	AND GATE, TRIPLE 3-INPUT
54HCT11	5962-8970901	AND GATE, TRIPLE 3-INPUT, WITH TTL-COMPATIBLE INPUTS
54AC1100	75021	NAND GATE, QUAD 2-INPUT
54AC11010	75022	NAND GATE, TRIPLE 3-INPUT
54AC11020	75023	NAND GATE, DUAL 4-INPUT
54AC11030	75024	NAND GATE, 8-INPUT
54LS132	7600401	NAND GATE, QUAD 2-INPUT, SCHMITT TRIGGER
54HCT132	5962-8984501	NAND GATE, QUAD 2-INPUT, SCHMITT TRIGGER, TTL-COMPATIBLE INPUTS
54HC133	5962-8772301	NAND GATE, 13-INPUT
54ALS133	5962-8859001	NAND GATE, 13-INPUT
54HCT14	65752	HEX INVERTER, SCHMITT TRIGGER, WI TTL-COMPATIBLE INPUTS
54HC14	8409101	HEX INVERTER, SCHMITT TRIGGER
54HCT14	5962-8689001	HEX INVERTER, SCHMITT TRIGGER, WITH TTL-COMPATIBLE INPUTS
54AC14	5962-8762401	HEX INVERTER, SCHMITT TRIGGER
54F14	5962-8875201	HEX INVERTER, SCHMITT TRIGGER
54HC20	8403901	NAND GATE, DUAL 4-INPUT
54AC20	5962-8761301	NAND GATE, DUAL 4-INPUT
54ALS20A	5962-8858901	NAND GATE, DUAL 4-INPUT
54ALS21	8414301	AND GATE, DUAL 4-INPUT
54HC21	5962-8857601	AND GATE, DUAL 4-INPUT
54F21	5962-8955401	AND GATE, DUAL 4-INPUT
54LS26	7602001	NAND GATE, QUAD 2-INPUT, HIGH-VOLTAGE, WITH OPEN-COLLECTOR OUTPUTS
54HC266	8404301	EXCLUSIVE-NOR GATE, QUAD 2-INP (OPEN DRAIN OUTPUT)
54HC27	8404201	NOR GATE, TRIPLE 3-INPUT
54ALS27	5962-8683801	NOR GATE, TRIPLE 3-INPUT
54F27	5962-8951001	NOR GATE, TRIPLE 3-INPUT
54HCT27	5962-8970301	NOR GATE, TRIPLE 3-INPUT, TTL-COMPATIBLE INPUTS
54HC30	8404001	NAND GATE, 8-INPUT
54ALS30A	5962-8683701	NAND GATE, 8-INPUT
54F30	5962-8870801	NAND GATE, 8-INPUT
54HCT30	5962-8974601	NAND GATE, 8-INPUT, TTL-COMPATIBLE INPUTS
54HC32	8404501	OR GATE, QUAD 2-INPUT
54AC32	5962-8761401	OR GATE, QUAD 2-INPUT
54ALS32	5962-8683601	OR GATE, QUAD 2-INPUT
54HCT32	5962-8685201	OR GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54ACT32	5962-8973601	OR GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54F36	5962-8870901	NOR GATE, QUAD 2-INPUT
54HC4002	8404401	NOR GATE, DUAL 4-INPUT
54HC4075	5962-8772201	OR GATE, TRIPLE 3-INPUT
54HC4078	5962-8857401	NOR/OR GATE, 8-INPUT
54F51	5962-8877401	AND-OR-INVERT GATE, DUAL 2-WIDE 2-INPUT, 2-WIDE 3-INPUT
54HC7266	65105	EXCLUSIVE-NOR GATE, QUAD 2-INPUT
54HC7266	8404302	EXCLUSIVE-NOR GATE, QUAD 2-INPUT
54HC86	8404601	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54ALS86	5962-8862101	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54AC86	5962-8955001	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54HCT86	5962-8984401	EXCLUSIVE-OR GATE, QUAD 2-INPUT, TTL-COMPATIBLE INPUTS

Buffers 2/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
LT1010	5962-8856201	POWER BUFFER, FAST, ±150 MA
10H524	5962-8756001	LOGIC-LEVEL CONVERTER, TTL-TO-ECL, QUAD
10H525	5962-8750801	LOGIC-LEVEL CONVERTER, ECL-TO-TTL
10H588	5962-8750901	HEX BUFFER, WITH ENABLE

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Buffers 2/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
29C827	5962-8766701	BUS BUFFER, 10-BIT NONINVERTING, HIGH PERFORMANCE
29827A	5962-8860501	BUFFER, 10-BIT, HIGH PERFORMANCE, WITH THREE-STATE OUTPUTS
29C828	5962-8766702	BUS BUFFER, 10-BIT INVERTING, HIGH PERFORMANCE
29828A	5962-8860502	BUFFER, 10-BIT, HIGH PERFORMANCE, WITH THREE-STATE OUTPUTS
29C927	5962-8766703	BUS BUFFER, 10-BIT NONINVERTING, HIGH PERFORMANCE
29C928	5962-8766704	BUS BUFFER, 10-BIT INVERTING, HIGH PERFORMANCE
54ALS1000A	8405901	BUFFER/DRIVER, NAND, QUAD 2-INPUT
54ALS1003	38403	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54ALS1004	38409	BUFFER/DRIVER, HEX, INVERTING
54ALS1004	8406101	BUFFER/DRIVER, HEX, INVERTING
54ALS1005	38410	BUFFER/DRIVER, HEX, INVERTING, WITH OPEN-COLLECTOR OUTPUTS
54ALS1008A	38404	BUFFER/DRIVER, AND, QUAD 2-INPUT
54ALS1008A	8409701	BUFFER/DRIVER, AND, QUAD 2-INPUT
54ALS1010A	38405	BUFFER/DRIVER, NAND, TRIPLE 3-INPUT
54ALS1010A	8406001	BUFFER/DRIVER, NAND, TRIPLE 3-INPUT
54ALS1011	38406	BUFFER/DRIVER, AND, TRIPLE 3-INPUT
54ALS1032	38408	BUFFER/DRIVER, OR, QUAD 2-INPUT
54ALS1034	8403101	BUFFER/DRIVER, HEX, NONINVERTING
54AS1034A	5962-8873101	BUFFER/DRIVER, HEX, NONINVERTING
54ALS1035	38412	BUFFER/DRIVER, HEX, NONINVERTING, WITH OPEN-COLLECTOR OUTPUTS
54ALS1035	5962-8874201	BUFFER/DRIVER, HEX, NONINVERTING, WITH OPEN-COLLECTOR OUTPUTS
54ALS1244A	5962-8873801	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC125	5962-8772101	BUFFER/DRIVER, QUAD, NONINVERTING, WITH THREE-STATE OUTPUTS (LOW ENABLE)
54BCT125	5962-9093701M	BUS BUFFER GATE, QUAD, WITH THREE-STATE OUTPUTS
54HC126	5962-8684801	BUFFER/DRIVER, QUAD, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS240	7801201	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54HCT240	8550501	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54HC240	8407401	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54AC240	5962-8755001	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54FCT240	5962-8765501	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54ALS240A	5962-8859101	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54FCT240A	5962-8765502	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54HCT241	65754	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54AC241	75704	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54F241	5962-8687401	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54AC241	5962-8755101	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS241	5962-8859601	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54FCT241	5962-8973201	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54FCT241A	5962-8973202	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54ACT241	5962-8984701	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54HC244	8409601	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HCT244	8513001	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS244A	5962-8683901	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54AC244	5962-8755201	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS244	7705701	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54FCT244	5962-8763001	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54ACT244	5962-8776001	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54FCT244A	5962-8763002	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54F30244	5962-8872201	BUFFER/DRIVER, OCTAL, HIGH-CURRENT, WITH OPEN-COLLECTOR OUTPUTS
54LS33	8512601	BUFFER/DRIVER, NOR, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54HC365	8500101	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC367	8500201	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC368	5962-8681201	BUFFER/DRIVER, HEX, INVERTING, WITH THREE-STATE OUTPUTS
54F37	35201	BUFFER/DRIVER, NAND, QUAD 2-INPUT
54ALS38A	38403	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54ALS38A	5962-8687101	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54F38	5962-8687201	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54F40	35203	BUFFER/DRIVER, NAND, DUAL 4-INPUT
54HC4049	5962-8681901	BUFFER, HEX INVERTING LOGIC LEVEL CONVERTER
54HC4050	5962-8682001	CONVERTER, HEX LOGIC LEVEL DOWN
54LS540	8415501	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54FCT540	5962-8976701	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54FCT540A	5962-8976702	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AC541	75711	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS541	8415601	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54ALS541	5962-8960201	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54AC541	5962-8870601	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54FCT541A	5962-8976602	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Buffers 2/ (continued)		
54FCT541	5962-8976601	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AS756	5962-9056301	BUFFER/DRIVER, OCTAL, WITH OPEN-COLLECTOR OUTPUTS
Flip-Flops 3/		
10H531	5962-8756101	FLIP-FLOP, D-TYPE MASTER SLAVE, DUAL
10535	06104	FLIP-FLOP, JK, DUAL
10H535	5962-8750501	FLIP-FLOP, JK MASTER SLAVE, DUAL
10576	06103	FLIP-FLOP, D-TYPE, HEX
10H576	5962-8751201	FLIP-FLOP, D-TYPE MASTER SLAVE, HEX
10H586	5962-8756301	FLIP-FLOP, D-TYPE MASTER SLAVE, HEX, WITH RESET
10586	5962-8779301	FLIP-FLOP, D-TYPE, HEX, WITH COMMON RESET
10598	5962-8777301	MULTIVIBRATOR, MONOSTABLE
10631	06102	FLIP-FLOP, D-TYPE, DUAL
25LS174	33106	FLIP-FLOP, D-TYPE, HEX
54HC107	65303	FLIP-FLOP, JK, DUAL, WITH RESET
54HC107	5962-8515401	FLIP-FLOP, JK, DUAL, WITH RESET
54AC109	75304	FLIP-FLOP, JK, DUAL, POSITIVE EDGE-TRIGGERED, WITH CLEAR AND SET
54ALS109A	8400001	FLIP-FLOP, JK, DUAL, WITH CLEAR AND PRESET (ACTIVE HIGH)
54HC109	8415001	FLIP-FLOP, JK, DUAL
54ACT109	5962-8853401	FLIP-FLOP, JK, DUAL, POSITIVE EDGE-TRIGGERED, WITH TTL-COMPATIBLE INPUTS
54AC109	5962-8955101	FLIP-FLOP, JK, DUAL, POSITIVE EDGE-TRIGGERED, WITH CLEAR AND SET
54AC112	75305	FLIP-FLOP, JK, DUAL, NEGATIVE EDGE-TRIGGERED, WITH CLEAR AND SET
54HC112	8408801	FLIP-FLOP, JK, DUAL, WITH SET AND RESET
54ALS112A	8400002	FLIP-FLOP, JK, DUAL, WITH CLEAR AND PRESET (ACTIVE LOW)
54HCT112	5962-8970201	FLIP-FLOP, JK, DUAL, WITH SET AND RESET, TTL-COMPATIBLE INPUTS
54HC113	5962-8969501	FLIP-FLOP, JK, DUAL, NEGATIVE EDGE-TRIGGERED WITH ASYNCHRONOUS PRESET
54LS122	7600301	MULTIVIBRATOR, MONOSTABLE RETRIGGERABLE WITH CLEAR
54LS123	7603901	MULTIVIBRATOR, DUAL MONOSTABLE RETRIGGERABLE WITH CLEAR
54HC123A	5962-8684702	MULTIVIBRATOR, DUAL RETRIGGERABLE MONOSTABLE
54HC123	5962-8684701	MULTIVIBRATOR, DUAL RETRIGGERABLE MONOSTABLE
54HCT123	5962-8970001	MULTIVIBRATOR, DUAL RETRIGGERABLE MONOSTABLE, WITH RESETS, TTL-COMPATIBLE INPUTS
54HC173	5962-8682501	FLIP-FLOP, D-TYPE, QUAD, WITH THREE-STATE OUTPUTS
54HCT173	5962-8875901	FLIP-FLOP, D-TYPE, QUAD, TTL-COMPATIBLE INPUTS WITH THREE-STATE OUTPUTS
54AC174	75307	FLIP-FLOP, D-TYPE, HEX, WITH MASTER RESET
54HC174	8407301	FLIP-FLOP, D-TYPE, HEX, WITH CLEAR
54ALS174	8301901	FLIP-FLOP, D-TYPE, HEX, WITH CLEAR
54AC174	5962-8762601	FLIP-FLOP, D-TYPE, HEX, WITH MASTER RESET
54ACT174	5962-8775701	FLIP-FLOP, D-TYPE, HEX, WITH MASTER RESET AND TTL-COMPATIBLE INPUTS
54HCT174	5962-8974301	FLIP-FLOP, D-TYPE, HEX, WITH RESET, TTL COMPATIBLE-INPUTS
54AC175	75308	FLIP-FLOP, D-TYPE, QUAD, WITH MASTER RESET
54HC175	8408901	FLIP-FLOP, D-TYPE, QUAD
54ALS175	8301902	FLIP-FLOP, D-TYPE, QUAD, WITH CLEAR
54ACT175	5962-8969301	FLIP-FLOP, D-TYPE, QUAD, TTL-COMPATIBLE INPUTS
54AC175	5962-8955201	FLIP-FLOP, D-TYPE, QUAD, WITH MASTER RESET
54HCT175	5962-8970101	FLIP-FLOP, D-TYPE, QUAD, WITH RESET, TTL-COMPATIBLE INPUTS
54LS221	7604201	MULTIVIBRATOR, DUAL MONOSTABLE, WITH SCHMITT-TRIGGER INPUTS AND CLEAR
54HC221	5962-8780501	MULTIVIBRATOR, DUAL NON-RETRIGGERABLE MONOSTABLE, WITH RESET
54HC259	8551901	LATCH, 8-BIT ADDRESSABLE
54F259	5962-8972301	LATCH, 8-BIT ADDRESSABLE
54ALS259	5962-8874101	LATCH, 8-BIT ADDRESSABLE
54AC273	75601	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54LS273	7801001	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54HC273	8409901	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54ALS273	8413601	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54FCT273	5962-8765601	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR, TTL-COMPATIBLE
54HCT273	5962-8772501	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR AND TTL-COMPATIBLE INPUTS
54F273	5962-8855001	FLIP-FLOP, D-TYPE, OCTAL, EDGE-TRIGGERED, WITH ASYNCHRONOUS MASTER RESET
54AC273	5962-8775601	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR
54FCT273A	5962-8765602	FLIP-FLOP, D-TYPE, OCTAL, WITH CLEAR, TTL-COMPATIBLE
54ACT273	5962-8973501	FLIP-FLOP, D-TYPE, QUAD, WITH RESET, TTL-COMPATIBLE INPUTS
54LS279	7601801	LATCH, RS, 4-BIT
54ALS29821	5962-9061601	FLIP-FLOPS, 10-BIT BUS INTERFACE, WITH 3-STATE OUTPUTS
54ALS373	8302001	FLIP-FLOP, D-TYPE, OCTAL, WITH TRANSPARENT LATCH AND THREE-STATE OUTPUTS
54HC373	8407201	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54ACT373	5962-8755601	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH 3-STATE OUTPUTS AND TTL-COMPATIBLE INPUTS
54AC373	5962-8755501	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54HCT373	5962-8686701	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH TTL-COMPATIBLE INPUTS AND 3-STATE OUTPUTS
54FCT373	5962-8764401	LATCH, D-TYPE TRANSPARENT, OCTAL, W/NONINVERTING 3-STATE OUTPUTS, TTL-COMPATIBLE
54FCT373A	5962-8764402	LATCH, D-TYPE TRANSPARENT, OCTAL, W/NONINVERTING 3-STATE OUTPUTS, TTL-COMPATIBLE
54BCT373	5962-9074601M	LATCH, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54AC374	75602	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54ALS374	8302002	FLIP-FLOP, D-TYPE, OCTAL, EDGE-TRIGGERED, WITH THREE-STATE OUTPUTS
54HC374	8407101	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54LS374	7801101	FLIP-FLOP, D-TYPE, OCTAL, POSITIVE EDGE-TRIGGERED, WITH THREE-STATE OUTPUTS
54HCT374	8550701	FLIP-FLOP, D-TYPE, OCTAL, WITH NONINVERTING THREE-STATE OUTPUTS
54ACT374	5962-8763101	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Flip-Flops 3/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
54FCT374	5962-8762801	FLIP-FLOP, D-TYPE, OCTAL, WITH NONINVERTING THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AC374	5962-8769401	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54FCT374A	5962-8762802	FLIP-FLOP, D-TYPE, OCTAL, WITH NONINVERTING THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AC377	75603	FLIP-FLOP, D-TYPE, OCTAL, WITH CLOCK ENABLE
54HC377	65603	FLIP-FLOP, D-TYPE, OCTAL, WITH ENABLE
54HC377	5962-8780701	FLIP-FLOP, D-TYPE, OCTAL, WITH ENABLE
54AC377	5962-8870201	FLIP-FLOP, D-TYPE, OCTAL, WITH CLOCK ENABLE
54FCT377	5962-8762701	FLIP-FLOP, D-TYPE, OCTAL, WITH CLOCK ENABLE AND TTL-COMPATIBLE INPUTS
54ACT377	5962-8769701	FLIP-FLOP, D-TYPE, OCTAL, WITH CLOCK ENABLE, TTL-COMPATIBLE INPUTS
54FCT377A	5962-8762702	FLIP-FLOP, D-TYPE, OCTAL, WITH CLOCK ENABLE AND TTL-COMPTIBLE INPUTS
54HCT377	5962-8976901	FLIP-FLOP, D-TYPE, OCTAL, WITH DATA ENABLE AND TTL-COMPATIBLE INPUTS
54LS378	5962-8992501	FLIP-FLOP, D-TYPE, HEX, WITH ENABLE
54F432	5962-9058501	LATCH, MULTI-MODE BUFFERED, INV. (THREE-STATE)
54HC4538	5962-8688601	MULTIVIBRATOR, DUAL RETRIGGERABLE PRECISION MONOSTABLE
54AC533	75404	LATCH, OCTAL TRANSPARENT, WITH INVERTED THREE-STATE OUTPUTS
54HC533	65404	LATCH, D-TYPE, 8-BIT, WITH INVERTED THREE-STATE OUTPUTS
54HC533	5962-8681301	LATCH, D-TYPE, 8-BIT, WITH INVERTED THREE-STATE OUTPUTS
54FCT533	5962-8865101	LATCH, OCTAL TRANPARENT
54FCT533A	5962-8865102	LATCH, OCTAL TRANPARENT
54AC534	75605	FLIP-FLOP, D-TYPE, OCTAL, WITH INVERTING THREE-STATE OUTPUTS
54HC534	65605	FLIP-FLOP, D-TYPE, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
54HC534	5962-8681401	FLIP-FLOP, D-TYPE, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
54ALS534	5962-8866801	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54FCT534A	5962-8865502	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54FCT534	5962-8865501	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54ACT534	5962-8965801	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54HCT534	5962-8984901	FLIP-FLOP, D-TYPE, OCTAL INVERTING, POS. EDGE-TRIGGERED, WITH 3-STATE OUTPUTS
54HC563	65405	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54AC563	75405	LATCH, OCTAL D-TYPE WITH INVERTED THREE-STATE OUTPUTS
54HC563	5962-8606201	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54ALS563A	5962-8870001	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54ACT563	5962-8955601	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54AC564	75606	FLIP-FLOP, D-TYPE, OCTAL, WITH INVERTING THREE-STATE OUTPUTS
54F564	34111	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54HC564	65606	FLIP-FLOP, D-TYPE, OCTAL, EDGE-TRIGGERED, WITH INVERTED THREE-STATE OUTPUTS
54HC564	5962-8681501	FLIP-FLOP, D-TYPE, OCTAL, EDGE-TRIGGERED, WITH INVERTED THREE-STATE OUTPUTS
54ACT564	5962-8955701	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54AC573	75406	LATCH, OCTAL D-TYPE WITH THREE-STATE OUTPUTS
54ALS573	8401201	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54HC573	8512801	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS
54HCT573	5962-8685601	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS AND LSTTL-COMPATIBLE INPUTS
54FCT573	5962-8863901	LATCH, OCTAL TRANSPARENT, TTL-COMPATIBLE
54ACT573	5962-8766401	LATCH, D-TYPE, 8-BIT, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54F574	34110	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54AC574	75604	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54ALS574A	8400101	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54FCT574	5962-8951301	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54FCT574A	5962-8951302	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54ACT574	5962-8960101	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54F574	5962-8972401	FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS
54ALS576A	37105	FLIP-FLOP, D-TYPE, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
54ALS576A	8400102	FLIP-FLOP, D-TYPE, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
54ALS580	38202	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
54ALS580	8401202	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
54HC73	65301	FLIP-FLOP, JK, DUAL, WITH RESET
54HC73	5962-8515301	FLIP-FLOP, JK, DUAL, WITH RESET
54AC74	75302	FLIP-FLOP, D-TYPE, DUAL, POSITIVE EDGE-TRIGGERED, WITH CLEAR AND SET
54ALS74A	8401101	FLIP-FLOP, D-TYPE, DUAL, POSITIVE EDGE-TRIGGERED
54HC74	8405601	FLIP-FLOP, D-TYPE, DUAL, WITH PRESET AND CLEAR
54HCT74	5962-8685301	FLIP-FLOP, D-TYPE, DUAL, WITH PRESET AND CLEAR WITH LSTTL-COMPATIBLE INPUTS
54ACT74	5962-8752501	FLIP-FLOP, D-TYPE, DUAL, WITH PRESET AND CLEAR AND TTL-COMPATIBLE INPUTS
54AC74	5962-8852001	FLIP-FLOP, D-TYPE, DUAL, POSITIVE EDGE-TRIGGERED, WITH CLEAR AND SET
54HC75	65401	LATCH, TRANSPARENT, DUAL 2-BIT
54LS75	7601201	LATCH, 4-BIT, BISTABLE
54HC75	8407001	LATCH, TRANSPARENT, DUAL 2-BIT
54LS76A	7601301	FLIP-FLOP, JK, DUAL, NEGATIVE EDGE-TRIGGERED
54HC76	5962-8773201	FLIP-FLOP, JK, DUAL, WITH PRESET AND CLEAR
54ACT821	5962-8870501	FLIP-FLOP, D-TYPE, 10-BIT, WITH THREE-STATE OUTPUTS AND TTL-COMPATIBLE INPUTS
54FCT841A	5962-8857501	LATCH, BUS INTERFACE, 10-BIT NONINVERTING, WITH 3-STATE OUTPUTS, TTL-COMPATIBLE
54FCT841B	5962-8857502	LATCH, BUS INTERFACE, 10-BIT NONINVERTING, WITH 3-STATE OUTPUTS, TTL-COMPATIBLE

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Flip-Flops 3/ (continued)		
54ALS873	38203	LATCH, D-TYPE TRANSPARENT, DUAL 4-BIT, WITH THREE-STATE OUTPUTS
54ALS873	8403201	LATCH, D-TYPE TRANSPARENT, DUAL 4-BIT, WITH THREE-STATE OUTPUTS
54ALS874B	37106	FLIP-FLOP, D-TYPE, DUAL 4-BIT, WITH CLEAR AND THREE-STATE OUTPUTS
54ALS874B	8401001	FLIP-FLOP, D-TYPE, DUAL 4-BIT, WITH CLEAR AND THREE-STATE OUTPUTS
54ALS876	37107	FLIP-FLOP, D-TYPE, DUAL 4-BIT, WITH PRESET AND THREE-STATE INVERTED OUTPUTS
54ALS880	38204	LATCH, D-TYPE TRANSPARENT, DUAL 4-BIT, WITH INVERTED THREE-STATE OUTPUTS
54ALS996	5962-8994501	LATCH, D-TYPE, 8-BIT, EDGE-TRIGGERED READ BACK
8282	8417903	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE STATE OUTPUTS
8283	8417904	LATCH, D-TYPE TRANSPARENT, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
Combinational gates 4/		
10H558	5962-8756601	DATA SEL/MULTIPLEXER, QUAD 2-INPUT NONINVERTING
10558	5962-8779201	MULTIPLEXER, QUAD 2-INPUT, NONINVERTING
10H560	5962-8756201	PARITY GENERATOR/CHECKER, 12-BIT
10H561	5962-8756701	DECODER, BINARY TO 1-OF-8
10564	5962-8852701	MULTIPLEXER, 8-INPUT
10H564	5962-8772901	MULTIPLEXER, 8-INPUT
10H571	5962-8756801	DECODER, BINARY TO 1-4
10H574	5962-8750601	DATA SEL/MULTIPLEXER, DUAL 4-TO-1
15530	7802901	MANCHESTER ENCODER/DECODER
TMC208KB5V	5962-8873901	MULTIPLIER, 8 X 8 TWOS COMPLEMENT
TMC208KB5V1	5962-8873902	MULTIPLIER, 8 X 8 TWOS COMPLEMENT
25LS2513	5962-8754201	PRIORITY ENCODER, 8-LINE-TO-3-LINE
25LS2521	5962-8671301	IDENTITY COMPARATOR, 8-BIT
TMC28KUB5V	5962-8873903	MULTIPLIER, 8 X 8 UNSIGNED MAGNITUDE
TMC28KUB5V1	5962-8873904	MULTIPLIER, 8 X 8 UNSIGNED MAGNITUDE
54HC138	8406201	DECODER, 3-LINE-TO-8-LINE
54LS138	7600501	DECODER, 3-LINE-TO-8-LINE
54HCT138	8550401	DECODER, 3-LINE-TO-8-LINE
54AC138	5962-8762201	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54FCT138	5962-8765401	DECODER, 3-LINE-TO-8-LINE, TTL-COMPATIBLE
54ACT138	5962-8755401	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54ALS138	5962-8686601	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54FCT138A	5962-8765402	DECODER, 3-LINE-TO-8-LINE, TTL-COMPATIBLE
54HCT139	65853	DECODER, DUAL 2-LINE-TO-4-LINE
54AC139	75803	DECODER, DUAL 2-LINE-TO-4-LINE
54LS139	7600701	DECODER, DUAL 2-LINE-TO-4-LINE
54HC139	8409201	DECODER, DUAL 2-LINE-TO-4-LINE
54ALS139	5962-8768301	DECODER, DUAL 2-LINE-TO-4-LINE
54AC139	5962-8762301	DECODER, DUAL 2-LINE-TO-4-LINE
54ACT139	5962-8755301	DECODER/DEMULTIPLEXER, DUAL 2-TO-4-LINE
54FCT139A	5962-8950802	DECODER, DUAL 1-OF-4
54FCT139	5962-8950801	DECODER, DUAL 1-OF-4
54LS145	8508401	DECODER/DRIVER, BCD-TO-DECIMAL
54HC147	8406401	PRIORITY ENCODER, 10-TO-4-LINE
54LS148	7802701	PRIORITY ENCODER, 8-LINE-TO-3-LINE
54F148	5962-8607001	PRIORITY ENCODER, 8-LINE-TO-3-LINE
54HC151B	66201	DATA SEL/MULTIPLEXER, 8-INPUT, WITH ENABLE
54LS151	7601001	DATA SEL/MULTIPLEXER, 8-INPUT
54HC151	8412801	DATA SEL/MULTIPLEXER, 8-INPUT, WITH ENABLE
54ALS151	8414101	DATA SEL/MULTIPLEXER, 8-INPUT
54AC151	5962-8769101	DATA SEL/MULTIPLEXER, 8-INPUT
54ACT151	5962-8875601	DECODER/DEMULTIPLEXER, 8-INPUT, TTL-COMPATIBLE
54HC153B	66202	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54ALS153	8413401	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54HC153	8409301	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54LS153	7601101	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54AC153	5962-8762501	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54ACT153	5962-8769801	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, TTL-COMPATIBLE INPUTS
54HC154	65804	DECODER, 4-TO-16-LINE
54LS154	8301701	DECODER/DEMULTIPLEXER, 4-LINE-TO-16-LINE
54HCT154	5962-8670101	DECODER, 4-TO-16-LINE
54HC154	5962-8682201	DECODER, 4-TO-16-LINE
54HC157B	66203	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54LS157	7600201	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54HC157	5962-8606101	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54ALS157	5962-8686901	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54ACT157	5962-8968801	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, TTL-COMPATIBLE INPUTS
54AC157	5962-8953901	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54LS158	7603301	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH ENABLE
54HC158	5962-8682301	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH INVERTED OUTPUTS
54ALS158	5962-8862501	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54ACT158	5962-8875501	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54AC158	5962-8972901	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54FCT182A	5962-8865202	LOOKAHEAD CARRY GENERATOR, HIGH-SPEED
54FCT182	5962-8865201	LOOKAHEAD CARRY GENERATOR, HIGH-SPEED
54HC237	5962-8860601	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE, WITH ADDRESS LATCH
54HCT237	5962-9061301	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE, W/ ADDRESS LATCHES, TTL-COMPATIBLE
54HC238	5962-8688401	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54HCT238	5962-8974501	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE, TTL-COMPATIBLE INPUTS
54LS248	5962-8994401	DECODER/DRIVER, BCD-TO-SEVEN-SEGMENT
54HC251B	66205	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54HC251B	8512501	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54ALS251	8413501	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54LS251	7601601	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54AC251	5962-8769201	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54ACT251	5962-8959901	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54HC253B	66206	DATA SEL/MULTIPLEXER, DUAL 4-LINE TO 1-LINE, WITH THREE-STATE OUTPUTS
54ALS253	8509601	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54LS253	7601701	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54AC253	5962-8769301	DATA SEL/MULTIPLEXER, DUAL 4-INPUT,

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Combinational gates 4/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		WITH THREE-STATE OUTPUTS
54ACT253	5962-8776101	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54HC253B	5962-8868201	DATA SEL/MULTIPLEXER, DUAL 4-LINE TO 1-LINE, WITH THREE-STATE OUTPUTS
54HC257	66207	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54HC257	8512401	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54LS257B	7603701	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH ENABLE AND THREE-STATE OUTPUTS
54ALS257	8509701	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54AC257	5962-8870301	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54HCT257	5962-8970501	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE NONINVERTING OUTPUTS
54ACT257	5962-8968901	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH 3-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54LS258B	7603801	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS, WITH ENABLE
54ALS258	5962-8862601	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54ACT258	5962-8870401	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54HCT258	5962-8970801	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH 3-STATE INVERTING OUTPUTS, TTL-COMPATIBLE
54LS261	31801	MULTIPLIER, BINARY, 2-BIT-BY-4-BIT
54LS261	8002601	MULTIPLIER, BINARY, 2-BIT-BY-4-BIT
54HC280	8607701	PARITY GENERATOR/CHECKER, 9-BIT ODD/EVEN
54LS283	7604301	ADDER, 4-BIT FULL, WITH FAST CARRY
54HC283	5962-8976501	ADDER, 4-BIT BINARY FULL, WITH FAST CARRY
54AS286	5962-8966301	PARITY GENERATOR/CHECKER, 9-BIT, WITH BUS DRIVER PARITY I/O PORT
54LS298	7601901	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH STORAGE
54LS353	8550801	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54F381	5962-8671001	ARITHMETIC LOGIC UNIT, 4-BIT
54LS382	5962-8688101	ARITHMETIC LOGIC UNIT/FUNCTION GENERATOR
54HC42	65801	DECODER, BCD-TO-DECIMAL
54LS42	7603101	DECODER, BCD-TO-DECIMAL
54HC42	5962-8682101	DECODER, BCD-TO-DECIMAL
54HC4511	5962-8773301	DECODER/DRIVER, BCD-TO-7-SEGMENT
54LS47	7604501	DECODER, BCD-TO-7-SEGMENT, WITH OPEN-COLLECTOR OUTPUTS
54F518	5962-8871001	IDENTITY COMPARATOR, 8-BIT, WITH OPEN-COLLECTOR OUTPUTS
54F519	5962-8871101	IDENTITY COMPARATOR, 8-BIT, WITH OPEN-COLLECTOR OUTPUTS
54F520	5962-8871201	IDENTITY COMPARATOR, 8-BIT
54ALS520	5962-8869101	IDENTITY COMPARATOR, 8-BIT
54ACT520	5962-8979301	IDENTITY COMPARATOR, 8-BIT, TTL-COMPATIBLE INPUTS
54FCT521	5962-8854301	IDENTITY COMPARATOR, 8-BIT, TTL-COMPATIBLE INPUTS
54FCT521A	5962-8854302	IDENTITY COMPARATOR, 8-BIT, TTL-COMPATIBLE INPUTS
54FCT521B	5962-8854303	IDENTITY COMPARATOR, 8-BIT, TTL-COMPATIBLE INPUTS
54ACT521	5962-8979302	IDENTITY COMPARATOR, 8-BIT, TTL-COMPATIBLE INPUTS
54HC688	5962-8681801	MAGNITUDE COMPARATOR, 8-BIT
54HCT688	5962-8685701	MAGNITUDE COMPARATOR, 8-BIT, WITH LSTTL-COMPATIBLE INPUTS
54ALS688	5962-8857801	IDENTITY COMPARATOR, 8-BIT
54LS83A	7601401	ADDER, 4-BIT FULL WITH FAST CARRY
54HC85	8601301	MAGNITUDE COMPARATOR, 4-BIT
54HCT85	5962-8867201	MAGNITUDE COMPARATOR, 4-BIT
54ALS857A	5962-8753301	DATA SEL/MULTIPLEXER, HEX 2-INPUT, WITH THREE-STATE OUTPUTS
721055	5962-8873301	MULTIPLIER, 16-BIT PARALLEL
721065	5962-8873302	MULTIPLIER, 16-BIT PARALLEL
721075	5962-8873303	MULTIPLIER, 16-BIT PARALLEL
7217L-40	5962-8768601	MULTIPLIER, 16-BIT PARALLEL, 42 NS MULTIPLY TIME
7217L-55	5962-8768602	MULTIPLIER, 16-BIT PARALLEL, 55 NS MULTIPLY TIME
7217L-75	5962-8768603	MULTIPLIER, 16-BIT PARALLEL, 75 NS ACCESS TIME
82S105	5962-8671001	ARITHMETIC LOGIC UNIT, 4-BIT
93S48	5962-8672601	PARITY GENERATOR/CHECKER, 12-BIT

Sequential registers/counters 5/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
10H416	5962-8759001	BINARY COUNTER, 4-BIT
10H536	5962-8700101	UNIVERSAL COUNTER
10541	5962-8855701	SHIFT REGISTER, UNIVERSAL
10H541	5962-8751101	SHIFT REGISTER, 4-BIT UNIVERSAL
25LS2519	5962-8670201	REGISTER, D-TYPE, QUAD, WITH TO INDEPENDENTLY CONTROLLED THREE-STATE OUTPUTS
29LS18	5962-8671901	REGISTER, D-TYPE, QUAD, WITH STANDARD AND THREE-STATE OUTPUTS
29FCT520A	5962-8873601	PIPELINE REGISTER, MULTILEVEL
29FCT520B	5962-8873603	PIPELINE REGISTER, MULTILEVEL
29FCT521A	5962-8873602	PIPELINE REGISTER, MULTILEVEL
29FCT521B	5962-8873604	PIPELINE REGISTER, MULTILEVEL
29818A	5962-8954901	PIPELINE REGISTER, WITH SERIAL SHADOW REGISTER DIAGNOSTICS
AM29C818	5962-9051501	PIPELINE REGISTER
29C821	5962-8851601	REGISTER, BUS INTERFACE, 10-WIDE, HIGH PERFORMANCE
29821A	5962-8775501	BUS INTERFACE REGISTER, 10-WIDE
29C823	5962-8851602	REGISTER, BUS INTERFACE, 9-WIDE, HIGH PERFORMANCE
29823A	5962-8775502	BUS INTERFACE REGISTER, 9-WIDE
29825A	5962-8775503	BUS INTERFACE REGISTER, 8-WIDE
29921A	5962-8775504	BUS INTERFACE REGISTER, 10-WIDE
29923A	5962-8775505	BUS INTERFACE REGISTER, 9-WIDE
29925A	5962-8775506	BUS INTERFACE REGISTER, 8-WIDE
L4C381-45	5962-8995901	ARITHMETIC LOGIC UNIT, 16-BIT CASCADABLE
54ALS160	38101	DECADE COUNTER, 4-BIT SYNCHRONOUS BCD
54HC160	66301	DECADE COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNCHRONOUS RESET
54HC160	5962-8682401	DECADE COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNCHRONOUS RESET
54LS160A	7700901	DECADE COUNTER, 4-BIT SYNCHRONOUS
54LS161	7600801	BINARY COUNTER, 4-BIT SYNCHRONOUS
54HC161	8407501	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNCHRONOUS CLEAR
54HCT161	5962-8685401	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNC. CLEAR AND LSTTL-COMPATIBLE INPUTS
54ALS161B	8302201	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH ASYNCHRONOUS CLEAR
54FCT161	5962-8864001	BINARY COUNTER, 4-BIT SYNCHRONOUS, PRESETTABLE, TTL-COMPATIBLE
54AC161	5962-8956101	BINARY COUNTER, 4-BIT SYNCHRONOUS

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MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Sequential registers/counters 5/ (continued)		
		PRESETTABLE
54ALS162A	38102	DECADE COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54HC162	66303	BCD COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS RESET
54ALS162A	8407901	DECADE COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54HC162	8409401	BCD COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS RESET
54HCT162	5962-8970701	BCD DECADE COUNTER, 4-BIT SYNCHRONOUS RESET, TTL-COMPATIBLE INPUTS
54LS163A	7603401	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54HC163	8607601	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54ALS163B	8302202	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH SYNCHRONOUS CLEAR
54FCT163	5962-8865701	BINARY COUNTER, 4-BIT SYNCHRONOUS PRESETTABLE, TTL-COMPATIBLE
54FCT163A	5962-8865702	BINARY COUNTER, 4-BIT SYNCHRONOUS PRESETTABLE
54AC163	5962-8958201	BINARY COUNTER, 4-BIT SYNCHRONOUS PRESETTABLE
54HC164	8416201	SHIFT REGISTER, 8-BIT, SERIAL-IN/ PARALLEL-OUT
54F164	5962-8607101	SHIFT REGISTER, 8-BIT SERIAL-IN PARALLEL-OUT
54HCT164	5962-8970401	SHIFT REGISTER, 8-BIT SERIAL-IN/PARALLEL-OUT, TTL-COMPATIBLE INPUTS
54ALS164	5962-8687001	SHIFT REGISTER, 8-BIT PARALLEL-OUT SERIAL
54LS165A	7700601	SHIFT REGISTER, 8-BIT PARALLEL LOAD
54HC165	8409501	SHIFT REGISTER, 8-BIT PARALLEL-IN SERIAL-OUT
54HCT165	5962-8685501	SHIFT REGISTER, 8-BIT PARALLEL-IN SERIAL-OUT, WITH LSTTL-COMPATIBLE INPUTS
54ALS165	5962-8957401	SHIFT REGISTER, 8-BIT PARALLEL LOAD
54HC166	66503	SHIFT REGISTER, 8-BIT PARALLEL/SERIAL INPUT
54LS166	8001701	SHIFT REGISTER, 8-BIT PARALLEL-INPUT, WITH CLEAR
54ALS168	38103	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS168	31505	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS168	8001801	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54ALS569A	38005	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH THREE-STATE OUTPUTS
54ALS169B	8302501	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54ALS569A	8302502	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH THREE-STATE OUTPUTS
54LS169	8001802	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54F169	5962-8607201	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS170	31902	REGISTER FILE. 4 X 4, WITH OPEN COLLECTOR OUTPUTS
54LS170	8002501	REGISTER FILE, 4 X 4, WITH OPEN COLLECTOR OUTPUTS
54LS190	7603501	BCD COUNTER, 4-BIT SYNCHRONOUS, WITH MODE CONTROL
54HC190	5962-8994601	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54F191	34303	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54HC191	66305	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH PRESET
54LS191	7600901	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH DOWN/UP MODE CONTROL
54ALS191	5962-8684001	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54HC191	5962-8689101	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH PRESET
54HCT191	5962-8867101	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, PRESETTABLE, TTL-COMPATIBLE INPUTS
54FCT191A	5962-8973302	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH PRESET AND RIPPLE CLOCK
54FCT191	5962-8973301	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH PRESET AND RIPPLE CLOCK
54AC191	5962-8974901	BINARY COUNTER, UP/DOWN, WITH PRESET AND RIPPLE CLOCK
54HC192	66306	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH ASYNCHRONOUS RESET
54LS192	7603601	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH CLEAR ENABLE
54HC192	5962-8780801	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH ASYNCHRONOUS RESET
54HC193	66307	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH ASYNCHRONOUS RESET
54LS193	7600601	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54HC193	5962-8772401	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN, WITH ASYNCHRONOUS RESET
54ALS193	5962-8869801	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54HC194	66504	SHIFT REGISTER, 4-BIT BIDIRECTIONAL UNIVERSAL
54HC194	5962-8682601	SHIFT REGISTER, 4-BIT BIDIRECTIONAL UNIVERSAL
54F194	5962-8685001	SHIFT REGISTER, 4-BIT BIDIRECTIONAL UNIVERSAL, CASCADABLE
54HC195	66505	SHIFT REGISTER, 4-BIT PARALLEL
54HC195	5962-8682701	SHIFT REGISTER, 4-BIT PARALLEL
54LS196	32001	DECADE/BINARY COUNTER, 4-BIT PRESETTABLE, 30 MHZ
54LS196	7701001	DECADE/BINARY COUNTER, 4-BIT PRESETTABLE, 30 MHZ
54LS197	7601501	DECADE/BINARY COUNTER, PRESETTABLE, 50/30-MHZ
54F269	5962-8862701	BINARY COUNTER, 8-BIT BIDIRECTIONAL
54ALS299	37601	SHIFT/STORAGE REGISTER, 8-BIT BIDIRECTIONAL UNIVERSAL, WITH THREE-STATE OUTPUTS
54HC299	66506	SHIFT REGISTER, 8-BIT UNIVERSAL, WITH THREE-STATE OUTPUTS
54LS299	7802401	SHIFT/STORAGE REGISTER, 8-BIT UNIVERSAL
54ALS299	8302101	SHIFT/STORAGE REGISTER, 8-BIT BIDIRECTIONAL UNIVERSAL, WITH THREE-STATE OUTPUTS
54HC299	5962-8780601	SHIFT REGISTER, 8-BIT UNIVERSAL, WITH THREE-STATE OUTPUTS
54FCT299	5962-8686201	SHIFT REGISTER, 8-BIT UNIVERSAL, TTL-COMPATIBLE WITH THREE-STATE OUTPUTS
54F299	5962-8957301	SHIFT/STORAGE REGISTER, 8-BIT UNIVERSAL, WITH THREE-STATE OUTPUTS
54AC299	5962-8875401	SHIFT/STORAGE REGISTER, 8-BIT UNIVERSAL, WITH COMMON PARALLEL I/O PINS
54ACT299	5962-8877101	SHIFT/STORAGE REGISTER, 8-BIT UNIVERSAL, WITH COMMON PARALLEL I/O

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Sequential registers/counters 5/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		PINS, TTL-COMP
54FCT299A	5962-8686202	SHIFT REGISTER, 8-BIT UNIVERSAL, TTL-COMPATIBLE WITH THREE-STATE OUTPUTS
54F322	5962-8607401	SHIFT REGISTER, 8-BIT SERIAL/PARALLEL WITH SIGN EXTEND AND THREE-STATE OUTPUTS
54ALS323	37602	SHIFT/STORAGE REGISTER, 8-BIT BIDIRECTIONAL UNIVERSAL, WITH THREE-STATE OUTPUTS
54ALS323	8302102	SHIFT/STORAGE REGISTER, 8-BIT BIDIRECTIONAL UNIVERSAL, WITH THREE-STATE OUTPUTS
54F350	5962-8607501	SHIFT REGISTER, 4-BIT, WITH THREE-STATE OUTPUTS
54F378	34108	REGISTER, D-TYPE, HEX PARALLEL
54F378	5962-8855501	REGISTER, D-TYPE, HEX PARALLEL
54HC390	66308	BINARY COUNTER, DUAL, WITH DIVIDE BY 2 AND DIVIDE BY 5 SECTIONS
54LS390	7802601	DECADE COUNTER, DUAL 4-BIT, WITH A AND B INPUTS
54HC390	8600901	BINARY COUNTER, DUAL, WITH DIVIDE BY 2 AND DIVIDE BY 5 SECTIONS
54HC393	8410001	BINARY COUNTER, DUAL 4-BIT
54HCT393	5962-8989001	BINARY COUNTER, DUAL 4-STAGE, TTL COMPATIBLE INPUTS
54LS396	5962-9050301	STORAGE REGISTER, OCTAL, LOW-POWER
54LS399	8415401	REGISTER, QUAD 2-PORT
54FCT399	5962-8965201	REGISTER, QUAD DUAL-PORT, TTL-COMPATIBLE
54FCT399A	5962-8965202	REGISTER, QUAD DUAL-PORT, TTL-COMPATIBLE
54HCT40102	5962-9057401	BCD COUNTER, 8-BIT SYNCHRONOUS DOWN, TTL-COMPATIBLE INPUTS
54HC40103	5962-9055301	BINARY COUNTER, 8-BIT SYNCHRONOUS
54HC4017	66310	DECADE COUNTER/DIVIDER
54HC4017	8601101	DECADE COUNTER/DIVIDER
54HC4020	66311	BINARY COUNTER, 14-STAGE RIPPLE
54HC4020	8500301	BINARY COUNTER, 14-STAGE RIPPLE
54HCT4020	5962-8945801	BINARY COUNTER, 14-STAGE RIPPLE, TTL COMPATIBLE INPUTS
54HC4024	66312	BINARY COUNTER, 7-STAGE RIPPLE
54HC4024	8601201	BINARY COUNTER, 7-STAGE RIPPLE
54HC4040	66313	BINARY COUNTER, 12-STAGE RIPPLE
54HC4040	8500401	BINARY COUNTER, 12-STAGE RIPPLE
54HCT4059	5962-8862401	COUNTER, PROGRAMMABLE DIVIDE-BY-N, WITH TTL-COMPATIBLE INPUTS
54HC4059	5962-8944501	COUNTER, PROGRAMMABLE DIVIDE-BY-N
54HC4060	5962-8768001	BINARY COUNTER, 14-STAGE
54HCT4060	5962-8977101	BINARY COUNTER, 14-STAGE, WITH OSCILLATOR AND TTL COMPATIBLE INPUTS
54ALS560	38104	DECADE COUNTER, 4-BIT SYNCHRONOUS
54ALS561A	38004	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH THREE-STATE OUTPUTS
54ALS561A	8302203	BINARY COUNTER, 4-BIT SYNCHRONOUS, WITH THREE-STATE OUTPUTS
54ALS568	38105	DECADE COUNTER, 4-BIT SYNCHRONOUS
54F579	5962-8954501	BINARY COUNTER, 8-BIT BIDIRECTIONAL, WITH THREE-STATE OUTPUTS
54LS590	5962-8751701	BINARY COUNTER, 8-BIT, WITH THREE-STATE OUTPUT REGISTERS
54HC590	5962-8960301	BINARY COUNTER, 8-BIT, WITH THREE-STATE OUTPUT REGISTERS
54LS592	5962-8762101	BINARY COUNTER, 8-BIT, WITH INPUT REGISTERS
54HC595	66507	SHIFT REGISTER, 8-BIT, WITH OUTPUT LATCHES
54LS595	5962-8671701	SHIFT REGISTER, 8-BIT, WITH THREE-STATE OUTPUTS
54HC595	5962-8681601	SHIFT REGISTER, 8-BIT, WITH OUTPUT LATCHES
54HC597	5962-8681701	SHIFT REGISTER, 8-BIT, WITH INPUT LATCHES
54HCT597	5962-8974101	SHIFT REGISTER, 8-BIT, WITH I/P LATCH, TTL-COMPATIBLE INPUTS
54LS668	5962-8687601	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54LS670	7704201	REGISTER FILE, 4 X 4, THREE-STATE OUTPUTS
54LS673	5962-8860201	SHIFT REGISTER, 16-BIT, SERIAL-IN SERIAL-OUT WITH 16-BIT PARALLEL-OUT STORAGE
54LS674	5962-8860701	SHIFT REGISTER, 16-BIT PAR. TO SER.
54F676	5962-8854601	SHIFT REGISTER, 16-BIT, SERIAL/PARALLEL-IN, SERIAL-OUT
54FCT821A	5962-8860801	REGISTER, 10-BIT, NONINVERTING
54FCT821B	5962-8860802	REGISTER, 10-BIT, NONINVERTING
54FCT823B	5962-8865602	REGISTER, 9-BIT NONINVERTING
54FCT823A	5962-8865601	REGISTER, 9-BIT NONINVERTING
54FCT824B	5962-8966502	REGISTER, 9-BIT WIDE BUFFERED, TTL-COMPATIBLE, WITH INVERTED 3-STATE OUTPUTS
54FCT824A	5962-8966501	REGISTER, 9-BIT WIDE BUFFERED, TTL-COMPATIBLE, WITH INVERTED 3-STATE OUTPUTS
54FCT825B	5962-8867402	BUS INTERFACE REGISTER, 8-BIT, NONINVERTING, TTL-COMPATIBLE
54FCT825A	5962-8867401	BUS INTERFACE REGISTER, 8-BIT, NONINVERTING, TTL-COMPATIBLE
54ALS870	5962-8988901	REGISTER FILE, DUAL 16-WORD BY 4-BIT
54LS90	7603201	DECADE COUNTER, 4-BIT
54LS93	7700101	DECADE COUNTER, 4-BIT
54F198	5962-9050201	SHIFT REGISTER, 8-BIT BIDIRECTIONAL UNIVERSAL

RAM 6/

(SEE DWG)	5962-8552502	STATIC RAM, 8K X 8, 120 NS ACCESS TIME
(SEE DWG)	5962-8552505	STATIC RAM, 8K X 8, 55 NS ACCESS TIME
(SEE DWG)	5962-8552504	STATIC RAM, 8K X 8, 70 NS ACCESS TIME
(SEE DWG)	8102402	STATIC RAM, 1K X 4
(SEE DWG)	8413201	STATIC RAM, 16K X 1, 85 NS ACCESS TIME
(SEE DWG)	5962-8552501	STATIC RAM, 8K X 8, 150 NS ACCESS TIME
(SEE DWG)	5962-8770302	STATIC RAM, 256 X 9, WITH THREE-STATE OUTPUTS, 60 NS ACCESS TIME
(SEE DWG)	5962-8552503	STATIC RAM, 8K X 8, 100 NS ACCESS TIME
(SEE DWG)	8413202	STATIC RAM, 16K X 1, 45 NS ACCESS TIME
(SEE DWG)	8102401	STATIC RAM, 4K X 1
(SEE DWG)	8201002	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 150 NS ACCESS TIME
(SEE DWG)	8201003	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 200 NS ACCESS TIME
(SEE DWG)	8403603	STATIC RAM, 2K X 8, 90 NS ACCESS TIME
(SEE DWG)	8201004	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 150 NS ACCESS TIME
(SEE DWG)	8403601	STATIC RAM, 2K X 8, 200 NS ACCESS TIME
(SEE DWG)	8201005	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 200 NS ACCESS TIME
(SEE DWG)	8103907	STATIC RAM, 2K X 8, 120 NS ACCESS TIME
(SEE DWG)	8201006	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 150 NS ACCESS TIME
(SEE DWG)	8201007	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 200 NS ACCESS TIME
(SEE DWG)	8515201	DYNAMIC RAM, 256K X 1, 150 NS ACCESS TIME
(SEE DWG)	8201008	DYNAMIC RAM, 64K X 1, THREE-STATE

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MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
(SEE DWG)	5962-8687514	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 70 NS ACCESS TIME
(SEE DWG)	5962-8859401	STATIC RAM, 256 X 4, 15 NS ACCESS TIME
(SEE DWG)	5962-8687515	STATIC RAM, 1K X 8, DUAL PORT (SLAVE),

RAM 6/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		55 NS ACCESS TIME
(SEE DWG)	5962-8855202	STATIC RAM, 32K X 8, LOW-POWER, 70 NS ACCESS TIME
(SEE DWG)	5962-8687516	STATIC RAM, 1K X 8, DUAL PORT (SLAVE) , 45 NS ACCESS TIME
(SEE DWG)	5962-8685920	STATIC RAM, 16K X 4, 55 NS ACCESS TIME
(SEE DWG)	5962-8687517	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 35 NS ACCESS TIME
(SEE DWG)	5962-8685917	STATIC RAM, 16K X 4, 35 NS ACCESS TIME
(SEE DWG)	5962-8687518	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 35 NS ACCESS TIME
(SEE DWG)	5962-8866201	STATIC RAM, 32K X 8, 100 NS ACCESS TIME
(SEE DWG)	5962-8685908	STATIC RAM, 16K X 4, 45 NS ACCESS TIME
(SEE DWG)	5962-8601508	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 70 NS ACCESS TIME
(SEE DWG)	5962-8685907	STATIC RAM, 16K X 4, 45 NS ACCESS TIME
(SEE DWG)	5962-8854504	STATIC RAM, 64K X 4, LOW-POWER, 70 NS ACCESS TIME
(SEE DWG)	5962-8685906	STATIC RAM, 16K X 4, 55 NS ACCESS TIME
(SEE DWG)	8413204	STATIC RAM, 16K X 1, 35 NS ACCESS TIME
(SEE DWG)	5962-8685905	STATIC RAM, 16K X 4, 55 NS ACCESS TIME
(SEE DWG)	8413203	STATIC RAM, 16K X 1, 70 NS ACCESS TIME
(SEE DWG)	5962-8685904	STATIC RAM, 16K X 4, 70 NS ACCESS TIME
(SEE DWG)	5962-8552507	STATIC RAM, 8K X 8, 35 NS ACCESS TIME
(SEE DWG)	5962-8859403	STATIC RAM, 256 X 4, 25 NS ACCESS TIME
(SEE DWG)	5962-8685922	STATIC RAM, 16K X 4, 45 NS ACCESS TIME
(SEE DWG)	5962-8751301	STATIC RAM, 4K X 1, 25 NS ACCESS TIME
(SEE DWG)	5962-8858802	STATIC RAM, 1K X 4, WITH RESET , 25 NS ACCESS TIME
(SEE DWG)	5962-8685903	STATIC RAM, 16K X 4, 70 NS ACCESS TIME
(SEE DWG)	5962-8685902	STATIC RAM, 16K X 4, 85 NS ACCESS TIME
(SEE DWG)	5962-8751306	STATIC RAM, 1K X 4, 45 NS ACCESS TIME
(SEE DWG)	5962-8685901	STATIC RAM, 16K X 4, 85 NS ACCESS TIME
(SEE DWG)	5962-8858801	STATIC RAM, 1K X 4, WITH RESET, 35 NS ACCESS TIME
(SEE DWG)	5962-8872502	STATIC RAM, 256K X 1, 45 NS ACCESS TIME
(SEE DWG)	5962-8872501	STATIC RAM, 256K X 1, 35 NS ACCESS TIME
(SEE DWG)	5962-8959804	STATIC RAM, 128K X 8, LOW-POWER, 70 NS ACCESS TIME
(SEE DWG)	5962-8872505	STATIC RAM, 256K X 1, 25 NS ACCESS TIME
(SEE DWG)	5962-8872504	STATIC RAM, 256K X 1, 70 NS ACCESS TIME
(SEE DWG)	5962-8872503	STATIC RAM, 256K X 1, 55 NS ACCESS TIME
(SEE DWG)	5962-8959801	STATIC RAM, 128K X 8, LOW-POWER, 120 NS ACCESS TIME
(SEE DWG)	5962-8959802	STATIC RAM, 128K X 8, LOW-POWER, 100 NS
(SEE DWG)	8413209	STATIC RAM, 16K X 1, 45 NS ACCESS TIME
(SEE DWG)	5962-8861001	STATIC RAM, 2K X 16, DUAL PORT (MASTER), 90 NS ACCESS TIME
(SEE DWG)	5962-8959803	STATIC RAM, 128K X 8, LOW-POWER, 85 NS ACCESS TIME
(SEE DWG)	5962-8861002	STATIC RAM, 2K X 16, DUAL PORT (SLAVE), 90 NS ACCESS TIME
(SEE DWG)	5962-8868104	STATIC RAM, 64K X 4, 70 NS ACCESS TIME
(SEE DWG)	5962-8861105	STATIC RAM, 4K X 4, WITH SEPARATE I/O, 25 NS ACCESS TIME
(SEE DWG)	5962-8861101	STATIC RAM, 4K X 4, WITH SEPARATE I/O, 70 NS ACCESS TIME
(SEE DWG)	5962-8861103	STATIC RAM, 4K X 4, WITH SEPARATE I/O, 45 NS ACCESS TIME
(SEE DWG)	5962-8868103	STATIC RAM, 64K X 4, 55 NS ACCESS TIME
(SEE DWG)	5962-8861102	STATIC RAM, 4K X 4, WITH SEPARATE I/O, 55 NS ACCESS TIME
(SEE DWG)	5962-8868102	STATIC RAM, 64K X 4, 45 NS ACCESS TIME
(SEE DWG)	5962-8868301	STATIC RAM, 8K X 9, 45 NS ACCESS TIME
(SEE DWG)	5962-8861004	STATIC RAM, 2K X 16, DUAL PORT (SLAVE), 70 NS ACCESS TIME
(SEE DWG)	5962-8874001	STATIC RAM, 2K X 8, LOW-POWER, 35 NS ACCESS TIME
(SEE DWG)	5962-8868303	STATIC RAM, 8K X 9, 25 NS ACCESS TIME
(SEE DWG)	5962-8861104	STATIC RAM, 4K X 4, WITH SEPARATE I/O, 35 NS ACCESS TIME
(SEE DWG)	5962-8874002	STATIC RAM, 2K X 8, LOW-POWER, 25 NS ACCESS TIME
(SEE DWG)	5962-8868101	STATIC RAM, 64K X 4, 35 NS ACCESS TIME
(SEE DWG)	5962-8868302	STATIC RAM, 8K X 9, 35 NS ACCESS TIME
(SEE DWG)	5962-8866501	STATIC RAM, 2K X 16, DUAL PORT (MASTER), 90 NS ACCESS TIME
(SEE DWG)	5962-8866502	STATIC RAM, 2K X 16, DUAL PORT (SLAVE), 90 NS ACCESS TIME
(SEE DWG)	5962-8866503	STATIC RAM, 2K X 16, DUAL PORT (MASTER), 70 NS ACCESS TIME
(SEE DWG)	5962-8866504	STATIC RAM, 2K X 16, DUAL PORT (SLAVE), 70 NS ACCESS TIME
(SEE DWG)	5962-8861003	STATIC RAM, 2K X 16, DUAL PORT (MASTER), 70 NS ACCESS TIME
(SEE DWG)	5962-8969202	STATIC RAM, 16K X 4, 25 NS ACCESS TIME
(SEE DWG)	5962-8969102	STATIC RAM, 8K X 8, 25 NS ACCESS TIME
(SEE DWG)	5962-8989206	STATIC RAM, 16K X 4, WITH OE, 15 NS ACCESS TIME
(SEE DWG)	5962-8952404	STATIC RAM, 64K X 4, 35 NS ACCESS TIME
(SEE DWG)	5962-8969106	STATIC RAM, 8K X 8
(SEE DWG)	5962-8989103	STATIC RAM, 16K X 4, WITH OE AND CE, 20 NS ACCESS TIME
(SEE DWG)	5962-8969201	STATIC RAM, 16K X 4, 25 NS ACCESS TIME
(SEE DWG)	5962-8969106	STATIC RAM, 8K X 8, 15 NS ACCESS TIME
(SEE DWG)	5962-8989105	STATIC RAM, 16K X 4, WITH OE AND DUAL CE, 15 NS ACCESS TIME
(SEE DWG)	5962-8969204	STATIC RAM, 16K X 4, 20 NS ACCESS TIME
(SEE DWG)	5962-8989104	STATIC RAM, 16K X 4, WITH OE AND DUAL CE, 20 NS ACCESS TIME
(SEE DWG)	5962-8969203	STATIC RAM, 16K X 4, 20 NS ACCESS TIME
(SEE DWG)	5962-8969605	STATIC RAM, 64K X 1, 15 NS ACCESS TIME
(SEE DWG)	5962-8989106	STATIC RAM, 16K X 4, WITH OE AND DUAL CE, 15 NS ACCESS TIME
(SEE DWG)	5962-8969104	STATIC RAM, 8K X 8, 15 NS ACCESS TIME
(SEE DWG)	5962-8969603	STATIC RAM, 64K X 1, 20 NS ACCESS TIME
(SEE DWG)	5962-8969601	STATIC RAM, 64K X 1, 25 NS ACCESS TIME
(SEE DWG)	5962-8969101	STATIC RAM, 8K X 8, 25 NS ACCESS TIME
(SEE DWG)	5962-8952401	STATIC RAM, 64K X 4, 70 NS ACCESS TIME
(SEE DWG)	5962-8989201	STATIC RAM, 16K X 4, WITH OE, 25 NS ACCESS TIME
(SEE DWG)	5962-8952402	STATIC RAM, 64K X 4, 55 NS ACCESS TIME
(SEE DWG)	5962-8989203	STATIC RAM, 16K X 4, WITH OE, 20 NS ACCESS TIME
(SEE DWG)	5962-8952405	STATIC RAM, 64K X 4, 25 NS ACCESS TIME
(SEE DWG)	5962-8988301	STATIC RAM, 8K X 9
(SEE DWG)	5962-8989204	STATIC RAM, 16K X 4, WITH OE, 20 NS ACCESS TIME
(SEE DWG)	5962-8969604	STATIC RAM, 64K X 1, 20 NS ACCESS TIME
(SEE DWG)	5962-8969606	STATIC RAM, 64K X 1, 15 NS ACCESS TIME
(SEE DWG)	5962-8988303	STATIC RAM, 8K X 9
(SEE DWG)	5962-8988302	STATIC RAM, 8K X 9
(SEE DWG)	5962-8969602	STATIC RAM, 64K X 1, 25 NS ACCESS TIME
(SEE DWG)	5962-8969001	STATIC RAM, 2K X 8, 25 NS ACCESS TIME
(SEE DWG)	5962-8989202	STATIC RAM, 16K X 4, WITH OE, 25 NS ACCESS TIME
(SEE DWG)	5962-8952403	STATIC RAM, 64K X 4, 45 NS ACCESS TIME
(SEE DWG)	5962-8989102	STATIC RAM, 16K X 4, WITH OE AND DUAL CE, 25 NS ACCESS TIME
(SEE DWG)	5962-8989101	STATIC RAM, 16K X 4, WITH OE AND DUAL CE, 25 NS DATA RETENTION
(SEE DWG)	5962-8969002	STATIC RAM, 2K X 8, 20 NS ACCESS TIME
(SEE DWG)	5962-8989205	STATIC RAM, 16K X 4, WITH OE, 15 NS ACCESS TIME
10545	5962-8856001	STATIC RAM, 16 X 4, 15 NS ACCESS TIME
1HC34-15	61503	STATIC RAM, 1K X 4, 67 NS ACCESS TIME

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

RAM 6/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		OUTPUTS, 120 NS ACCESS TIME
	(SEE DWG) 8201001	DYNAMIC RAM, 64K X 1, THREE-STATE OUTPUTS, 150 NS ACCESS TIME
	(SEE DWG) 8403604	STATIC RAM, 2K X 8, 150 NS ACCESS TIME
	(SEE DWG) 8515202	DYNAMIC RAM, 256K X 1, 200 NS ACCESS TIME
	(SEE DWG) 8103908	STATIC RAM, 2K X 8, 200 NS ACCESS TIME
	(SEE DWG) 8103906	STATIC RAM, 2K X 8, 90 NS ACCESS TIME
	(SEE DWG) 8403602	STATIC RAM, 2K X 8, 90 NS ACCESS TIME
	(SEE DWG) 5962-8670503	STATIC RAM, 4K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8670510	STATIC RAM, 4K X 4, 70 NS ACCESS TIME
	(SEE DWG) 5962-8670508	STATIC RAM, 4K X 4, 55 NS ACCESS TIME
	(SEE DWG) 5962-8670506	STATIC RAM, 4K X 4, 45 NS ACCESS TIME
	(SEE DWG) 8403606	STATIC RAM, 2K X 8, 70 NS ACCESS TIME
	(SEE DWG) 8515203	DYNAMIC RAM, 256K X 1, 120 NS ACCESS TIME
	(SEE DWG) 5962-8670504	STATIC RAM, 4K X 4, 35 NS ACCESS TIME
	(SEE DWG) 8403613	STATIC RAM, 2K X 8, 70 NS ACCESS TIME
	(SEE DWG) 5962-8670509	STATIC RAM, 4K X 4, 70 NS ACCESS TIME
	(SEE DWG) 8403607	STATIC RAM, 2K X 8, 120 NS ACCESS TIME
	(SEE DWG) 8403614	STATIC RAM, 2K X 8, 35 NS ACCESS TIME
	(SEE DWG) 5962-8670502	STATIC RAM, 4K X 4, 25 NS ACCESS TIME
	(SEE DWG) 5962-8670507	STATIC RAM, 4K X 4, 55 NS ACCESS TIME
	(SEE DWG) 8403609	STATIC RAM, 2K X 8, 45 NS ACCESS TIME
	(SEE DWG) 8403616	STATIC RAM, 2K X 8, 90 NS ACCESS TIME
	(SEE DWG) 8403612	STATIC RAM, 2K X 8, 70 NS ACCESS TIME
	(SEE DWG) 5962-8770301	STATIC RAM, 256 X 9, WITH THREE-STATE OUTPUTS, 70 NS ACCESS TIME
	(SEE DWG) 8403610	STATIC RAM, 2K X 8, 55 NS ACCESS TIME
	(SEE DWG) 8403611	STATIC RAM, 2K X 8, 55 NS ACCESS TIME
	(SEE DWG) 8403608	STATIC RAM, 2K X 8, 45 NS ACCESS TIME
	(SEE DWG) 5962-8670501	STATIC RAM, 4K X 4, 25 NS ACCESS TIME
	(SEE DWG) 8102403	STATIC RAM, 4K X 1
	(SEE DWG) 5962-8770303	STATIC RAM, 256 X 9, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
	(SEE DWG) 8403615	STATIC RAM, 2K X 8, 120 NS ACCESS TIME
	(SEE DWG) 8102404	STATIC RAM, 1K X 4
	(SEE DWG) 8102406	STATIC RAM, 1K X 4
	(SEE DWG) 8102405	STATIC RAM, 4K X 1
	(SEE DWG) 5962-8866203	STATIC RAM, 32K X 8, 55 NS ACCESS TIME
	(SEE DWG) 5962-8855201	STATIC RAM, 32K X 8, LOW-POWER, 100 NS ACCESS TIME
	(SEE DWG) 5962-8685913	STATIC RAM, 16K X 4, 55 NS ACCESS TIME
	(SEE DWG) 5962-8685912	STATIC RAM, 16K X 4, 70 NS ACCESS TIME
	(SEE DWG) 5962-8670512	STATIC RAM, 4K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8670513	STATIC RAM, 4K X 4, 45 NS ACCESS TIME
	(SEE DWG) 5962-8866204	STATIC RAM, 32K X 8, 45 NS ACCESS TIME
	(SEE DWG) 5962-8670514	STATIC RAM, 4K X 4, 55 NS ACCESS TIME
	(SEE DWG) 5962-8858702	STATIC RAM, 4K X 1, 35 NS ACCESS TIME
	(SEE DWG) 5962-8670515	STATIC RAM, 4K X 4, 70 NS ACCESS TIME
	(SEE DWG) 5962-8854402	STATIC RAM, 256K X 1, LOW-POWER, 45 NS ACCESS TIME
	(SEE DWG) 5962-8855203	STATIC RAM, 32K X 8, LOW-POWER, 55 NS ACCESS TIME
	(SEE DWG) 5962-8854403	STATIC RAM, 256K X 1, LOW-POWER, 55 NS ACCESS TIME
	(SEE DWG) 5962-8685916	STATIC RAM, 16K X 4, 45 NS ACCESS TIME
	(SEE DWG) 5962-8751304	STATIC RAM, 1K X 4, 25 NS ACCESS TIME
	(SEE DWG) 5962-8601504	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
	(SEE DWG) 5962-8854404	STATIC RAM, 256K X 1, LOW-POWER, 70 NS ACCESS TIME
	(SEE DWG) 8413208	STATIC RAM, 16K X 1, 55 NS ACCESS TIME
	(SEE DWG) 5962-8601506	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
	(SEE DWG) 5962-8751305	STATIC RAM, 1K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8552506	STATIC RAM, 8K X 8, 45 NS ACCESS TIME
	(SEE DWG) 5962-8858803	STATIC RAM, 1K X 4, WITH RESET, 15 NS ACCESS TIME
	(SEE DWG) 5962-8552508	STATIC RAM, 8K X 8, 35 NS ACCESS TIME
	(SEE DWG) 5962-8601505	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
	(SEE DWG) 5962-8552510	STATIC RAM, 8K X 8, 55 NS ACCESS TIME
	(SEE DWG) 5962-8685915	STATIC RAM, 16K X 4, 45 NS ACCESS TIME
	(SEE DWG) 5962-8552512	STATIC RAM, 8K X 8, 100 NS ACCESS TIME
	(SEE DWG) 5962-8685914	STATIC RAM, 16K X 4, 55 NS ACCESS TIME
	(SEE DWG) 5962-8552511	STATIC RAM, 8K X 8, 70 NS ACCESS TIME
	(SEE DWG) 5962-8601507	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 70 NS ACCESS TIME
	(SEE DWG) 5962-8552513	STATIC RAM, 8K X 8, 120 NS ACCESS TIME
	(SEE DWG) 5962-8855204	STATIC RAM, 32K X 8, LOW-POWER, 45 NS ACCESS TIME
	(SEE DWG) 5962-8601502	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 35 NS ACCESS TIME
	(SEE DWG) 5962-8859501	STATIC RAM, 256 X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8751302	STATIC RAM, 4K X 1, 35 NS ACCESS TIME
	(SEE DWG) 8413207	STATIC RAM, 16K X 1, 25 NS ACCESS TIME
	(SEE DWG) 5962-8854401	STATIC RAM, 256K X 1, LOW-POWER, 35 NS ACCESS TIME
	(SEE DWG) 5962-8866202	STATIC RAM, 32K X 8, 70 NS ACCESS TIME
	(SEE DWG) 5962-8685911	STATIC RAM, 16K X 4, 70 NS ACCESS TIME
	(SEE DWG) 5962-8854503	STATIC RAM, 64K X 4, LOW-POWER, 55 NS ACCESS TIME
	(SEE DWG) 5962-8685910	STATIC RAM, 16K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8854501	STATIC RAM, 64K X 4, LOW-POWER, 35 NS ACCESS TIME
	(SEE DWG) 5962-8685909	STATIC RAM, 16K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8859402	STATIC RAM, 256 X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8687501	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 90 NS ACCESS TIME
	(SEE DWG) 8413205	STATIC RAM, 16K X 1, 35 NS ACCESS TIME
	(SEE DWG) 5962-8687502	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 70 NS ACCESS TIME
	(SEE DWG) 5962-8685924	STATIC RAM, 16K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8687503	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 55 NS ACCESS TIME
	(SEE DWG) 5962-8685923	STATIC RAM, 16K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8687504	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 45 NS ACCESS TIME
	(SEE DWG) 5962-8685921	STATIC RAM, 16K X 4, 45 NS ACCESS TIME
	(SEE DWG) 5962-8687505	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 90 NS ACCESS TIME
	(SEE DWG) 5962-8685919	STATIC RAM, 16K X 4, 55 NS ACCESS TIME
	(SEE DWG) 5962-8687506	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 70 NS ACCESS TIME
	(SEE DWG) 5962-8685918	STATIC RAM, 16K X 4, 35 NS ACCESS TIME
	(SEE DWG) 5962-8687507	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 55 NS ACCESS TIME
	(SEE DWG) 5962-8670511	STATIC RAM, 4K X 4, 25 NS ACCESS TIME
	(SEE DWG) 5962-8687508	STATIC RAM, 1K X 8, DUAL PORT (MASTER), 45 NS ACCESS TIME
	(SEE DWG) 5962-8751303	STATIC RAM, 4K X 1, 45 NS ACCESS TIME
	(SEE DWG) 5962-8687509	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 90 NS ACCESS TIME
	(SEE DWG) 5962-8601503	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
	(SEE DWG) 5962-8687510	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 70 NS ACCESS TIME
	(SEE DWG) 5962-8552509	STATIC RAM, 8K X 8, 45 NS ACCESS TIME
	(SEE DWG) 5962-8687511	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 55 NS ACCESS TIME
	(SEE DWG) 5962-8601501	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 35 NS ACCESS TIME
	(SEE DWG) 5962-8687512	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 45 NS ACCESS TIME
	(SEE DWG) 8413206	STATIC RAM, 16K X 1, 25 NS ACCESS TIME
	(SEE DWG) 5962-8687513	STATIC RAM, 1K X 8, DUAL PORT (SLAVE), 90 NS ACCESS TIME
	(SEE DWG) 5962-8854502	STATIC RAM, 64K X 4, LOW-POWER, 45 NS ACCESS TIME

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

RAM 6/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
1HC34-15	61506	STATIC RAM, 1K X 4, 67 NS ACCESS TIME
1HC34-20	61502	STATIC RAM, 1K X 4, 50 NS ACCESS TIME
1HC34-20	61505	STATIC RAM, 1K X 4, 50 NS ACCESS TIME
1HC34-25	61501	STATIC RAM, 1K X 4, 40 NS ACCESS TIME
1HC34-25	61504	STATIC RAM, 1K X 4, 40 NS ACCESS TIME
2004	5962-8771202	STATIC RAM, 512 X 8, NONVOLATILE, 300 NS ACCESS TIME
2004-25	5962-8771201	STATIC RAM, NON-VOLATILE, 512 X 8, 250 NS ACCESS TIME
2114A	23804	STATIC RAM, 1K X 4
2114	23802	STATIC RAM, 1K X 4, WITH THREE-STATE OUTPUTS
2117	24002	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
2117	24001	DYNAMIC RAM, 16K X 1, WITH THREE-STATE OUTPUTS
2167-40	8200704	STATIC RAM, 16K X 1, 40 NS ACCESS TIME
2167-55	8200703	STATIC RAM, 16K X 1, 55 NS ACCESS TIME
2167-70	8200702	STATIC RAM, 16K X 1, 70 NS ACCESS TIME
2168-45	5962-8608105	STATIC RAM, 4K X 4, 45 NS ACCESS TIME
2168-55	5962-8608101	STATIC RAM, 4K X 4, 55 NS ACCESS TIME
2168-70	5962-8608102	STATIC RAM, 4K X 4, 70 NS ACCESS TIME
2169-40	5962-8608106	STATIC RAM, 4K X 4, 40 NS ACCESS TIME
2169-50	5962-8608103	STATIC RAM, 4K X 4, 50 NS ACCESS TIME
2169-70	5962-8608104	STATIC RAM, 4K X 4, 70 NS ACCESS TIME
27LS00A	8602002	STATIC RAM, 256 X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
27LS00	8602001	STATIC RAM, 256 X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
27LS01A	8602004	STATIC RAM, 256 X 1, WITH OPEN-COLLECTOR OUTPUTS, 45 NS ACCESS TIME
27LS01	8602003	STATIC RAM, 256 X 1, WITH OPEN-COLLECTOR OUTPUTS, 55 NS ACCESS TIME
27LS02	8605103	STATIC RAM, 16 X 4, LOW-POWER, WITH OPEN COLLECTOR OUTPUTS, 65 NS ACCESS TIME
27S02A	8605102	STATIC RAM, 16 X 4, WITH OPEN COLLECTOR OUTPUTS, 30 NS ACCESS TIME
27S02	8605101	STATIC RAM, 16 X 4, WITH OPEN COLLECTOR OUTPUTS, 50 NS ACCESS TIME
27S02-20	8605107	STATIC RAM, 16 X 4, WITH OPEN COLLECTOR OUTPUTS, 20 NS ACCESS TIME
27S03A	8605105	STATIC RAM, 16 X 4, WITH THREE-STATE OUTPUTS, 30 NS ACCESS TIME
27LS03	8605106	STATIC RAM, 16 X 4, LOW-POWER, WITH THREE-STATE OUTPUTS, 5 NS ACCESS TIME
27S03	8605104	STATIC RAM, 16 X 4, WITH THREE-STATE OUTPUTS, 50 NS ACCESS TIME
27S03-20	8605108	STATIC RAM, 16 X 4, WITH THREE-STATE OUTPUTS, 20 NS ACCESS TIME
27LS03-30	8605109	STATIC RAM, 16 X 4, LOW-POWER, WITH THREE-STATE OUTPUTS, 30 NS ACCESS TIME
27S07A	7801501	STATIC RAM, 16 X 4, NONINVERTING, THREE-STATE
27S07	7801503	STATIC RAM, 16 X 4, NONINVERTING, THREE-STATE
27LS07	7801504	STATIC RAM, 16 X 4, LOW-POWER NONINVERTING, THREE-STATE
27S07-20	7801505	STATIC RAM, 16 X 4, NONINVERTING, THREE-STATE
27LS07-30	7801506	STATIC RAM, 16 X 4, LOW-POWER NONINVERTING, THREE-STATE
29705A	8602501	STATIC RAM, 16 X 4, 2-PORT
MT4067-10	5962-8767604	DYNAMIC RAM, 64K X 4, 100 NS ACCESS TIME
MT4067-12	5962-8767601	DYNAMIC RAM, 64K X 4, 120 NS ACCESS TIME
MT4067-15	5962-8767602	DYNAMIC RAM, 64K X 4, 150 NS ACCESS TIME
MT4067-20	5962-8767603	DYNAMIC RAM, 64K X 4, 200 NS ACCESS TIME
4116	24001	DYNAMIC RAM, 16K X 1, WITH THREE-STATE OUTPUTS
4116	24002	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
4116	24003	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
4167	8200701	STATIC RAM, 16K X 1, 100 NS ACCESS TIME
SMJ4461	5962-8956001	RAM, 64K X 4, MULTIPORT VIDEO
45H16	24002	DYNAMIC RAM, 16K X 1, 200 NS ACCESS TIME
45H16	24001	DYNAMIC RAM, 16K X 1, WITH THREE-STATE OUTPUTS
CMM5104	24505	STATIC RAM, 4K X 1
CMM5114	24506	STATIC RAM, 1K X 4
51C67	29106	STATIC RAM, 16K X 1, 45 NS ACCESS TIME
51C98-35	61301	STATIC RAM, 16K X 4
51C98-45	61302	STATIC RAM, 16K X 4
51C98-55	61303	STATIC RAM, 16K X 4
MT5C2564	29303	STATIC RAM, 64K X 4, 45 NS ACCESS TIME
MT5C2564	29304	STATIC RAM, 64K X 4, 35 NS ACCESS TIME
MT5C2564	29311	STATIC RAM, 64K X 4, 25 NS ACCESS TIME
MT5C2565	29315	STATIC RAM, 64K X 4, WITH OUTPUT ENABLE, 35 NS ACCESS TIME
MT5C2565	29312	STATIC RAM, 64K X 4, WITH OUTPUT ENABLE, 25 NS ACCESS TIME
MT5C2565	29314	STATIC RAM, 64K X 4, WITH OUTPUT ENABLE, 45 NS ACCESS TIME
54S189	7801502	STATIC RAM, 16 X 4, INVERTING, THREE-STATE
6116	29105	STATIC RAM, 2K X 8, 200 NS ACCESS TIME
6116	29101	STATIC RAM, 2K X 8, 150 NS ACCESS TIME
6504RH	24503	STATIC RAM, 4K X 1
6514RH	24504	STATIC RAM, 1K X 4
6516-1	61001	STATIC RAM, 8K X 8, SELECTABLE MODE, 35 NS ACCESS TIME
65162	29101	STATIC RAM, 2K X 8, 150 NS ACCESS TIME
6516-2	61002	STATIC RAM, 8K X 8, SELECTABLE MODE, 45 NS ACCESS TIME
6516-3	61003	STATIC RAM, 8K X 8, SELECTABLE MODE, 55 NS ACCESS TIME
65T262RH	29108	STATIC RAM, RAD-HARD, 16K X 1, WITH THREE-STATE OUTPUTS
65C262RH	29107	STATIC RAM, RAD-HARD, 16K X 1, WITH THREE-STATE OUTPUTS
65643	29206	STATIC RAM, 8K X 8, SELECTABLE MODE
7132SA-45	5962-8700201	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 45 NS ACCESS TIME
7132LA-45	5962-8700205	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 45 NS ACCESS TIME
7132SA-55	5962-8700204	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 55 NS ACCESS TIME
7132LA-55	5962-8700208	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 55 NS ACCESS TIME
7132SA-70	5962-8700203	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 70 NS ACCESS TIME
7132LA-70	5962-8700207	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 70 NS ACCESS TIME
7132SA-90	5962-8700202	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 90 NS ACCESS TIME
7132LA-90	5962-8700206	STATIC RAM, 2K X 8, DUAL PORT (MASTER), 90 NS ACCESS TIME
7142LA-45	5962-8700213	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 45 NS ACCESS TIME
7142SA-45	5962-8700209	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 45 NS ACCESS TIME
7142SA-55	5962-8700212	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 55 NS ACCESS TIME

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

RAM 6/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
7142LA-55	5962-8700216	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 55 NS ACCESS TIME
7142LA-70	5962-8700215	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 70 NS ACCESS TIME
7142SA-70	5962-8700211	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 70 NS ACCESS TIME
7142LA-90	5962-8700214	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 90 NS ACCESS TIME
7142SA-90	5962-8700210	STATIC RAM, 2K X 8, DUAL PORT (SLAVE), 90 NS ACCESS TIME
7187S45	29202	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
7187L55	29203	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
7187S55	29201	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
7187L70	29204	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 70 NS ACCESS TIME
7C190	5962-8969401	STATIC RAM, 16 X 4, 25 NS ACCESS TIME
7C194	29304	STATIC RAM, 64K X 4, 35 NS ACCESS TIME
7C194	29303	STATIC RAM, 64K X 4, 45 NS ACCESS TIME
7C194	29311	STATIC RAM, 64K X 4, 25 NS ACCESS TIME
7C196	29316	STATIC RAM, 64K X 4, WITH OUTPUT ENABLE, 25 NS ACCESS TIME
7C196	29305	STATIC RAM, 64K X 4, WITH OUTPUT ENABLE, 45 NS ACCESS TIME
7C196	29306	STATIC RAM, 64K X 4, WITH OUTPUT ENABLE, 35 NS ACCESS TIME
8155	5962-8759301	STATIC RAM, 256 X 8, WITH I/O PORTS AND TIMER
8156	5962-8759302	STATIC RAM, 256 X 8, WITH I/O PORTS AND TIME
82S10	23107	STATIC RAM, 1K X 1, WITH OPEN-COLLECTOR OUTPUTS, 45 NS ACCESS TIME
8X350	5962-8605201	STATIC RAM, 256 X 8
9114B	23802	STATIC RAM, 1K X 4, WITH THREE-STATE OUTPUTS
9114D	23804	STATIC RAM, 1K X 4
9150-25	5962-8759201	STATIC RAM, 1K X 4, 25 NS ACCESS TIME
9150-35	5962-8759202	STATIC RAM, 1K X 4, 35 NS ACCESS TIME
9150-45	5962-8759203	STATIC RAM, 1K X 4, 45 NS ACCESS TIME
93L412	23111	STATIC RAM, 256 X 4, LOW-POWER, WITH OPEN-COLLECTOR OUTPUTS, 75 NS ACCESS TIME
93412	23109	STATIC RAM, 256 X 4, WITH OPEN-COLLECTOR OUTPUTS, 60 NS ACCESS TIME
93415	23107	STATIC RAM, 1K X 1, WITH OPEN-COLLECTOR OUTPUTS, 45 NS ACCESS TIME
93415	23105	STATIC RAM, 1K X 1, WITH OPEN-COLLECTOR OUTPUTS, 60 NS ACCESS TIME
93419	23201	STATIC RAM, 64 X 9, WITH OPEN-COLLECTOR OUTPUTS
99C641-45	29202	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
99CL641-55	29203	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
99C641-55	29201	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
99CL641-70	29204	STATIC RAM, 64K X 1, WITH THREE-STATE OUTPUTS, 70 NS ACCESS TIME

ROM/PROM/PAL 7/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
(SEE SPEC)	26506	PROM, ELECTR. ERASABLE, 64K X 8, 200 NS ACCESS TIME
(SEE SPEC)	26509	PROM, ELECTR. ERASABLE, 64K X 8, 120 NS ACCESS TIME
(SEE SPEC)	26507	PROM, ELECTR. ERASABLE, 64K X 8, 150 NS ACCESS TIME
(SEE SPEC)	26504	PROM, ELECTR. ERASABLE, 64K X 8, 250 NS ACCESS TIME
(SEE SPEC)	26503	PROM, ELECTR. ERASABLE, 64K X 8, 250 NS ACCESS TIME
(SEE SPEC)	26508	PROM, ELECTR. ERASABLE, 64K X 8, 150 NS ACCESS TIME
(SEE SPEC)	26510	PROM, ELECTR. ERASABLE, 64K X 8, 120 NS ACCESS TIME
(SEE SPEC)	26505	PROM, ELECTR. ERASABLE, 64K X 8, 200 NS ACCESS TIME
(SEE SPEC)	26501	PROM, ELECTR. ERASABLE, 64K X 8, 300 NS ACCESS TIME
(SEE SPEC)		. ERASABLE, 64K X 8, 300 NS ACCESS TIME
(SEE DWG)	8200901	PROM, 8K X 8, TS, 100 NS ACCESS TIME
(SEE DWG)	8200902	PROM, 8K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
(SEE DWG)	8001204	PROM, UV ERASABLE, 4K X 8, 450 NS ACCESS TIME
(SEE DWG)	8202507	PROM, UV ERASABLE, 16K X 8, 100 NS ACCESS TIME
(SEE DWG)	7801601	PROM, 512 X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
(SEE DWG)	8200801	PROM, 4K X 8, WITH THREE-STATE OUTPUTS, 95 NS ACCESS TIME
(SEE DWG)	8202504	PROM, UV ERASABLE, 16K X 8, 300 NS ACCESS TIME
(SEE DWG)	8202503	PROM, UV ERASABLE, 16K X 8, 200 NS ACCESS TIME
(SEE DWG)	8202505	PROM, UV ERASABLE, 16K X 8, 250 NS ACCESS TIME
(SEE DWG)	8001201	PROM, UV ERASABLE, 4K X 8, 450 NS ACCESS TIME
(SEE DWG)	8001203	PROM, UV ERASABLE, 4K X 8, 250 NS ACCESS TIME
(SEE DWG)	8202506	PROM, UV ERASABLE, 16K X 8, TS, 150 NS ACCESS TIME
(SEE DWG)	5962-8683007	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
(SEE DWG)	7802201	PROM, UV ERASABLE, 2K X 8, 450 NS ACCESS TIME
(SEE DWG)	5962-8683006	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8765002	PROM, UV ERASABLE, 2K X 8, 55 NS ACCESS TIME
(SEE DWG)	5962-8683002	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
(SEE DWG)	5962-8683001	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8766103	PROM, UV ERASABLE, 16K X 8, 150 NS ACCESS TIME
(SEE DWG)	5962-8766104	PROM, UV ERASABLE, 16K X 8, 170 NS ACCESS TIME
(SEE DWG)	5962-8766106	PROM, UV ERASABLE, 16K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8766102	PROM, UV ERASABLE, 16K X 8, 120 NS ACCESS TIME
(SEE DWG)	5962-8764901	PROM, ELECTR. ERASABLE, 32K X 8, 350 NS ACCESS TIME
(SEE DWG)	5962-8764902	PROM, ELECTR. ERASABLE, 32K X 8, 300 NS ACCESS TIME

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MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
ROM/PROM/PAL 7 (continued)		
	(SEE DWG) 5962-8606301	PROM, UV ERASABLE, 32K X 8, 200 NS ACCESS TIME
	(SEE DWG) 5962-8606302	PROM, UV ERASABLE, 32K X 8, 250 NS ACCESS TIME
	(SEE DWG) 5962-8606303	PROM, UV ERASABLE, 32K X 8, 300 NS ACCESS TIME
	(SEE DWG) 5962-8766101	PROM, UV ERASABLE, 16K X 8, 90 NS ACCESS TIME
	(SEE DWG) 5962-8774401	PROM, UV ERASABLE, 64K X 16, 200 NS ACCESS TIME
	(SEE DWG) 5962-8774402	PROM, UV ERASABLE, 64K X 16, 250 NS ACCESS TIME
	(SEE DWG) 5962-8766105	PROM, UV ERASABLE, 16K X 8, 200 NS ACCESS TIME
	(SEE DWG) 5962-8683005	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
	(SEE DWG) 5962-8766107	PROM, UV ERASABLE, 16K X 8, 300 NS ACCESS TIME
	(SEE DWG) 7802206	PROM, UV ERASABLE, 2K X 8, 200 NS ACCESS TIME
	(SEE DWG) 7802207	PROM, UV ERASABLE, 2K X 8, 250 NS ACCESS TIME
	(SEE DWG) 8001208	PROM, UV ERASABLE, 4K X 8, 200 NS ACCESS TIME
	(SEE DWG) 8200803	PROM, 4K X 8, TS, 40 NS ACCESS TIME
	(SEE DWG) 7802209	PROM, UV ERASABLE, 2K X 8, 450 NS ACCESS TIME
	(SEE DWG) 7802208	PROM, UV ERASABLE, 2K X 8, 300 NS ACCESS TIME
	(SEE DWG) 8001209	PROM, UV ERASABLE, 4K X 8, 250 NS ACCESS TIME
	(SEE DWG) 8200802	PROM, 4K X 8, WITH THREE-STATE OUTPUTS, 55 NS ACCESS TIME
	(SEE DWG) 7802205	PROM, UV ERASABLE, 2K X 8, 150 NS ACCESS TIME
	(SEE DWG) 8200903	PROM, 8K X 8, TS, 45 NS ACCESS TIME
	(SEE DWG) 8001211	PROM, UV ERASABLE, 4K X 8, 450 NS ACCESS TIME
	(SEE DWG) 8202509	PROM, UV ERASABLE, 16K X 8, 300 NS ACCESS TIME
	(SEE DWG) 8001210	PROM, UV ERASABLE, 4K X 8, 300 NS ACCESS TIME
	(SEE DWG) 5962-8852505	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
	(SEE DWG) 5962-8753002	PROG. ARRAY LOGIC, 20-INPUT 10-OUTPUT REGISTERED AND-OR, W/ PRODUCT TERM SHARING
	(SEE DWG) 5962-8852506	PROM, ELECTR. ERASABLE, 32K X 8, 150 NS ACCESS TIME
	(SEE DWG) 5962-8753003	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR, W/PRODUCT TERM SHARING
	(SEE DWG) 5962-8686401	LOGIC DEVICE, ERASABLE PROGRAMMABLE, 600-GATE
	(SEE DWG) 5962-8753004	PROG. ARRAY LOGIC, 20-INPUT 4-OUTPUT REGISTERED AND-OR, W/PRODUCT TERM SHARING
	(SEE DWG) 5962-8764903	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
	(SEE DWG) 5962-8753001	PROG. ARRAY LOGIC, 20-INPUT 10-OUTPUT AND-OR, WITH PRODUCT TERM SHARING
	(SEE DWG) 5962-8852507	PROM, ELECTR. ERASABLE, 32K X 8, 150 NS ACCESS TIME
	(SEE DWG) 5962-8765001	PROM, UV ERASABLE, 2K X 8, 50 NS ACCESS TIME
	(SEE DWG) 7902402	PROM, 1K X 8, POWER SWITCHED, 75 NS ACCESS TIME
	(SEE DWG) 5962-8606307	PROM, UV ERASABLE, 32K X 8, 90 NS ACCESS TIME
	(SEE DWG) 5962-8606306	PROM, UV ERASABLE, 32K X 8, 120 NS ACCESS TIME
	(SEE DWG) 5962-8606305	PROM, UV ERASABLE, 32K X 8, 150 NS ACCESS TIME
	(SEE DWG) 5962-8606304	PROM, UV ERASABLE, 32K X 8, 170 NS ACCESS TIME
	(SEE DWG) 5962-8852504	PROM, ELECTR. ERASABLE, 32K X 8, 200 NS ACCESS TIME
	(SEE DWG) 5962-8765101	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 45 NS ACCESS TIME
	(SEE DWG) 7801602	PROM, 512 X 8, THREE-STATE, 45 NS ACCESS TIME
	(SEE DWG) 5962-8852503	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
	(SEE DWG) 5962-8852501	PROM, ELECTR. ERASABLE, 32K X 8, 350 NS ACCESS TIME
	(SEE DWG) 5962-8851802	PROM, 512 X 8, REGISTERED, 35 NS ACCESS TIME
	(SEE DWG) 5962-8851801	PROM, 512 X 8 REGISTERED, 30 NS ACCESS TIME
	(SEE DWG) 5962-8751505	PROM, UV ERASABLE, 8K X 8, 45 NS ACCESS TIME
	(SEE DWG) 5962-8851803	PROM, 512 X 8, REGISTERED, 40 NS ACCESS TIME
	(SEE DWG) 5962-8852502	PROM, ELECTR. ERASABLE, 32K X 8, 300 NS ACCESS TIME
	(SEE DWG) 5962-8751506	PROM, UV ERASABLE, 8K X 8, 55 NS ACCESS TIME
	(SEE DWG) 5962-8751501	PROM, UV ERASABLE, 8K X 8, 45 NS ACCESS TIME
	(SEE DWG) 5962-8751502	PROM, UV ERASABLE, 8K X 8, 55 NS ACCESS TIME
	(SEE DWG) 5962-8751503	PROM, UV ERASABLE, 8K X 8, 70 NS ACCESS TIME
	(SEE DWG) 5962-8751504	PROM, UV ERASABLE, 8K X 8, 90 NS ACCESS TIME
	(SEE DWG) 5962-8954601	PROGRAMMABLE SYNCHRONOUS STATE MACHINE, 28 MHZ
	(SEE DWG) 8200804	PROM, 4K X 8, TS, 70 NS ACCESS TIME
	(SEE DWG) 5962-8851504	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT 4-REGISTER AND-OR-INVERT
	(SEE DWG) 5962-8851503	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT 6-REGISTER AND-OR-INVERT
	(SEE DWG) 5962-8851502	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT 8-REGISTER AND-OR-INVERT
	(SEE DWG) 5962-8954602	PROGRAMMABLE SYNCHRONOUS STATE MACHING, 40 MHZ
	(SEE DWG) 5962-8751421	PROM, ELECTR. ERASABLE, 8K X 8, 200 NS ACCESS TIME
	(SEE DWG) 5962-8867603	PROM, ELECTR. ERASABLE, 2K X 8, 55 NS ACCESS TIME
	(SEE DWG) 5962-8863401	PROM, ELECTR. ERASABLE, 32K X 8, 120 NS ACCESS TIME
	(SEE DWG) 5962-8751427	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
	(SEE DWG) 5962-8751413	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
	(SEE DWG) 5962-8751412	PROM, ELECTR. ERASABLE, 8K X 8, 70 NS ACCESS TIME
	(SEE DWG) 5962-8873403	PROM, 2K X 8, 35 NS ACCESS TIME
	(SEE DWG) 5962-8751411	PROM, ELECTR. ERASABLE, 8K X 8, 90 NS ACCESS TIME
	(SEE DWG) 5962-8873401	PROM, 2K X 8, 55 NS ACCESS TIME
	(SEE DWG) 5962-8751410	PROM, ELECTR. ERASABLE, 8K X 8, 120 NS ACCESS TIME
	(SEE DWG) 5962-8854902	PROG. LOGIC DEVICE, UV ERASABLE, 75 NS ACCESS TIME
	(SEE DWG) 5962-8751409	PROM, ELECTR. ERASABLE, 8K X 8, 200 NS ACCESS TIME
	(SEE DWG) 5962-8751425	PROM, ELECTR. ERASABLE, 8K X 8,

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

ROM/PROM/PAL 7/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		250 NS ACCESS TIME
(SEE DWG)	5962-8751408	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8954603	PROGRAMMABLE SYNCHRONOUS STATE MACHINE, 50 MHZ
(SEE DWG)	5962-8751424	PROM, ELECTR. ERASABLE, 8K X 8 , 300 NS ACCESS TIME
(SEE DWG)	5962-8863501	PROG. ARRAY LOGIC, UV ERASABLE, 300 GATE
(SEE DWG)	5962-8867601	PROM, ELECTR. ERASABLE, 2K X 8, 90 NS ACCESS TIME
(SEE DWG)	5962-8751422	PROM, ELECTR. ERASABLE, 8K X 8, 150 NS ACCESS TIME
(SEE DWG)	5962-8867602	PROM, ELECTR. ERASABLE, 2K X 8, 70 NS ACCESS TIME
(SEE DWG)	5962-8873502	PROM, UV ERASABLE, 2K X 8 REGISTERED, 35 NS ACCESS TIME
(SEE DWG)	5962-8765003	PROM, UV ERASABLE, 2K X 8, 35 NS ACCESS TIME
(SEE DWG)	5962-8873504	PROM, UV ERASABLE, 2K X 8, REGISTERED, 25 NS ACCESS TIME
(SEE DWG)	5962-8873404	PROM, 2K X 8, 25 NS ACCESS TIME
(SEE DWG)	5962-8851501	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT COMBINATORIAL AND-OR-INVERT
(SEE DWG)	5962-8863402	PROM, ELECTR. ERASABLE, 32K X 8, 120 NS ACCESS TIME
(SEE DWG)	5962-8751420	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8863403	PROM, ELECTR. ERASABLE, 32K X 8, 90 NS ACCESS TIME
(SEE DWG)	5962-8751419	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
(SEE DWG)	5962-8863404	PROM, ELECTR. ERASABLE, 32K X 8, 90 NS ACCESS TIME
(SEE DWG)	5962-8751417	PROM, ELECTR. ERASABLE, 8K X 8, 150 NS ACCESS TIME
(SEE DWG)	5962-8954001	PROM, 2K X 8, 140 NS ACCESS TIME
(SEE DWG)	5962-8751415	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8954002	PROM, 2K X 8, 105 NS ACCESS TIME
(SEE DWG)	5962-8873402	PROM, 2K X 8, 45 NS ACCESS TIME
(SEE DWG)	5962-8751403	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8953801	PROM, UV ERASABLE, 16K X 8, 65 NS ACCESS TIME
(SEE DWG)	5962-8854901	LOGIC DEVICE, ERASABLE PROGRAM MABLE, 1800-GATE, 90 NS ACCESS TIME
(SEE DWG)	5962-8953802	PROM, UV ERASABLE, 16K X 8, 55 NS ACCESS TIME
(SEE DWG)	5962-8751423	PROM, ELECTR. ERASABL 350 NS ACCESS TIME
(SEE DWG)	5962-8953701	PROM, UV ERASABLE, 16K X 8, 65 NS ACCESS TIME
(SEE DWG)	5962-8873503	PROM, UV ERASABLE, 2K X 8, REGISTERED, 35 NS ACCESS TIME
(SEE DWG)	5962-8953702	PROM, UV ERASABLE, 16K X 8, 55 NS ACCESS TIME
(SEE DWG)	5962-8752901	PROM, REGISTERED UV ERASABLE, 2K X 8, 45 NS SETUP TIME
(SEE DWG)	5962-8869001	PROM, 512 X 8, 220 NS ACCESS TIME
(SEE DWG)	5962-8751418	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
(SEE DWG)	5962-8869002	PROM, 512 X 8, 140 NS ACCESS TIME
(SEE DWG)	5962-8751414	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
(SEE DWG)	5962-8606308	PROM, UV ERASABLE, 32K X 8, 70 NS ACCESS TIME
(SEE DWG)	5962-8751401	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
(SEE DWG)	5962-8751407	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
(SEE DWG)	5962-8854801	PROGRAMMABLE LOGIC DEVICE, ERASABLE, 900-GATE
(SEE DWG)	5962-8751416	PROM, ELECTR. ERASABLE, 8K X 8, 200 NS ACCESS TIME
(SEE DWG)	5962-8751426	PROM, ELECTR. ERASABLE, 8K X 8, 200 NS ACCESS TIME
(SEE DWG)	5962-8873501	PROM, UV ERASABLE, 2K X 8 REGISTERED, 45 NS ACCESS TIME
(SEE DWG)	5962-8752902	PROM, REGISTERED UV ERASABLE, 2K X 8, 35 NS SETUP TIME
(SEE DWG)	5962-8751406	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
(SEE DWG)	5962-8751402	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
(SEE DWG)	5962-8765004	PROM, UV ERASABLE, 2K X 8, 45 NS ACCESS TIME
(SEE DWG)	5962-8751405	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8751404	PROM, ELECTR. ERASABLE, 8K X 8, 200 NS ACCESS TIME
(SEE DWG)	5962-9075401M	PROGRAMMABLE LOGIC DEVICE, UV ERASABLE, ASYNCHRONOUS REGISTERED, 40 NS ACCESS
(SEE DWG)	5962-9075403M	PROGRAMMABLE LOGIC DEVICE, UV ERASABLE, ASYNCHRONOUS REGISTERED, 25 NS ACCESS
(SEE DWG)	5962-8766108	PROM, UV ERASABLE, 16K X 8, 70 NS ACCESS TIME
(SEE DWG)	5962-9075402M	PROGRAMMABLE LOGIC DEVICE ERASABLE, ASYNCHRONOUS REGISTERED, 30 NS ACCESS
(SEE DWG)	5962-8961403	PROM, UV ERASABLE, 128K X 8, 200 NS ACCESS TIME
(SEE DWG)	5962-8961402	PROM, UV ERASABLE, 128K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8961406	PROM, UV ERASABLE, 128K X 8, 120 NS ACCESS TIME
(SEE DWG)	5962-8961401	PROM, UV ERASABLE, 128K X 8, 300 NS ACCESS TIME
(SEE DWG)	5962-8961405	PROM, UV ERASABLE, 128K X 8, 150 NS ACCESS TIME
(SEE DWG)	5962-8961404	PROM, UV ERASABLE, 128K X 8, 170 NS ACCESS TIME
(SEE DWG)	5962-8959001	PROM, ELECTR. ERASABLE, 512 X 8
(SEE DWG)	5962-8966701	PROM, ELECTR. ERASABLE, 2K X 8
PAL10L8A	50315	PROG. ARRAY LOGIC, 10-INPUT 8-OUTPUT AND-OR-INVERT
PAL10H8A	50310	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUT AND-OR
PAL10H8	8103501	PROG. ARRAY LOGIC, 10-INPUT 8-OUTPUT AND-OR
PAL10L8	8103506	PROG. ARRAY LOGIC, 10-INPUT 8-OUTPUT AND-OR-INVERT
PAL10H8A	8103510	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUT AND-OR
PAL10L8A	8103514	PROG. ARRAY LOGIC, 10-INPUT 8-OUTPUT AND-OR-INVERT
PAL10H8A2	50319	PROG. ARRAY LOGIC, AND-OR
PAL10L8A2	50324	PROG. ARRAY LOGIC, AND-OR-INVERT
PAL12L10	5962-8680402	PROG. ARRAY LOGIC, 12-INPUT 10-OUTPUT AND-OR-INVERT
PAL12L6A	50316	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR-INVERT
PAL12H6A	50311	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
ROM/PROM/PAL 7/ (continued)		
PAL12L6	8103507	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR-INVERT
PAL12H6	8103502	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR
PAL12L6A	8103515	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR-INVERT
PAL12H6A	8103511	PROG. ARRAY LOGIC, 12-INPUT 6-OUTPUT AND-OR
PAL12H6A2	50320	PROG. ARRAY LOGIC, AND-OR
PAL12L6A2	50325	PROG. ARRAY LOGIC, AND-OR-INVERT
PAL14H4A	50312	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR
PAL14L4A	50317	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR-INVERT
PAL14L4	8103508	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR-INVERT
PAL14H4	8103503	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR
PAL14L4A	8103516	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR-INVERT
PAL14H4A	8103512	PROG. ARRAY LOGIC, 14-INPUT 4-OUTPUT AND-OR
PAL14H4A2	50321	PROG. ARRAY LOGIC, AND-OR
PAL14L4A2	50326	PROG. ARRAY LOGIC, AND-OR-INVERT
PAL14L8	5962-8680403	PROG. ARRAY LOGIC, 14-INPUT 8-OUTPUT AND-OR-INVERT
PAL16C1A	50314	PROG. ARRAY LOGIC, AND-OR/AND-OR-INVERT
PAL16C1	50305	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUTAND-OR/AND-OR-INVERT
PAL16C1	8103505	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUTAND-OR/AND-OR-INVERT
PLS161	5962-8850401	PROG. ARRAY LOGIC, 12 X 48 X 8
PAL16C1A2	50323	PROG. ARRAY LOGIC, AND-OR/AND-OR INVERT
PAL16H2A	50313	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUT AND-OR
PAL16L2A	50318	PROG. ARRAY LOGIC, 16-INPUT 2 OUTPUT AND-OR-INVERT
PAL16L2	50309	PROG. ARRAY LOGIC, AND-OR-INVERT
PAL16H2	50304	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUT AND-OR
PAL16L2	8103509	PROG. ARRAY LOGIC, AND-OR-INVERT
PAL16H2	8103504	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUT AND-OR
PAL16L2A	8103517	PROG. ARRAY LOGIC, 16-INPUT 2 OUTPUT AND-OR-INVERT
PAL16H2A	8103513	PROG. ARRAY LOGIC, 16-INPUT 2-OUTPUT AND-OR
PAL16H2A2	50322	PROG. ARRAY LOGIC, AND-OR
PAL16L2A2	50327	PROG. ARRAY LOGIC, AND-OR-INVERT
PAL16R4A	8103610	PROG. ARRAY LOGIC, 16-INPUT 4-OUT AND-OR
PAL16R4-15	50612	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4-15	5962-8515512	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4A-2	8103614	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4-20	5962-8515504	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
C16R4-20	5962-8871312	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
C16R4-20	5962-8867812	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4-30	5962-8515508	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
C16R4-30	5962-8867808	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 4-OUTPUT REGISTERED AND-OR
C16R4-30	5962-8871308	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R4A-4	8506504	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
C16R4-40	5962-8867804	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 4-OUTPUT REGISTERED AND-OR
C16R4-40	5962-8871304	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16R6A	8103609	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT AND-OR
PAL16R6	8103603	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16L6	5962-8680404	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT AND-OR-INVERT
PAL16R6-15	50611	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6-15	5962-8515511	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6A-2	8103613	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6-20	5962-8515503	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
C16R6-20	5962-8871311	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
C16R6-20	5962-8867811	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6-30	5962-8515507	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
C16R6-30	5962-8867807	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 6-OUTPUT REGISTERED AND-OR
C16R6-30	5962-8871307	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16R6A-4	8506503	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
C16R6-40	5962-8867803	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 6-OUTPUT REGISTERED AND-OR
C16R6-40	5962-8871303	PROG. ARRAY LOGIC, 16-INPUT 6-OUTPUT REGISTERED AND-OR
PAL16L8	8103601	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8	8103602	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8A	8103607	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8A	8103608	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR
16V8A	5962-8983902	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 16-INPUT 8-OUTPUT AND-OR, 20 NS ACCESS TIME
16V8A	5962-8983903	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 16-INPUT 8-OUTPUT AND-OR, 15 NS ACCESS TIME
16V8A	5962-8983901	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 16-INPUT 8-OUTPUT AND-OR, 30 NS ACCESS TIME
PAL16L8-15	50609	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8-15		

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

ROM/PROM/PAL 7/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
	50610	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8-15	5962-8515509	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8-15	5962-8515510	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8A-2	8103611	PROG. ARRAY LOGIC, 16-INPUT 8 OUTPUT AND-OR-INVERT
PAL16R8A-2	8103612	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16R8-20	5962-8515502	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8-20	5962-8515501	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
C16L8-20	5962-8867809	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 8-OUTPUT AND-OR INVERTED
C16R8-20	5962-8867810	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 8-OUTPUT REGISTERED AND-OR
C16R8-20	5962-8871310	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTEPED AND-OR
C16L8-20	5962-8871309	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16L8-30	5962-8515505	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PAL16R8-30	5962-8515506	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
C16L8-30	5962-8867805	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 8-OUTPUT AND-OR INVERTED
C16L8-30	5962-8871305	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
C16R8-30	5962-8871306	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
C16R8-30	5962-8867806	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16R8A-4	8506502	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
PAL16L8A-4	8506501	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
C16L8-40	5962-8867801	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 8-OUTPUT AND-OR INVERTED
C16R8-40	5962-8867802	PROG. ARRAY LOGIC, UV ERASABLE, 16-INPUT 8-OUTPUT REGISTERED AND-OR
C16R8-40	5962-8871302	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT REGISTERED AND-OR
C16L8-40	5962-8871301	PROG. ARRAY LOGIC, 16-INPUT 8-OUTPUT AND-OR-INVERT
PLS173	5962-8850402	PROG. ARRAY LOGIC, 22 X 42 X 10
PLS179	5962-8850701	LOGIC SEQUENCER, FIELD PROGRAMMABLE (20 X 45 X 12)
PAL18L4	5962-8680401	PROG. ARRAY LOGIC, 18-INPUT 4-OUTPUT AND-OR
PAL18P8A	5962-8752801	PROG. ARRAY LOGIC, 18-INPUT 8-OUTPUT AND-OR
PAL18P8B	5962-8752802	PROG. ARRAY LOGIC, 18-INPUT 8-OUTPUT AND-OR
PAL18P8Q	5962-8752805	PROG. ARRAY LOGIC, 18-INPUT 8-OUTPUT AND-OR
PAL20C1	5962-8680406	PROG. ARRAY LOGIC, 20-INPUT 2-OUTPUT AND-OR-INVERT
PAL20L10A	8412905	PROG. ARRAY LOGIC, 20-INPUT 10-OUTPUT AND-OR-INVERT
PAL20X10A	8412907	PROG. ARRAY LOGIC, 20-INPUT 10-OUTPUT REGISTERED AND-OR-XOR
PAL20RA10	5962-8680301	PROG. ARRAY LOGIC, 20-INPUT 10-OUTPUT REGISTERED AND-OR
20G10-30	5962-8863702	PROG. LOGIC DEVICE, 30 NS PROP. DELAY
20G10-40	5962-8863701	PROG. LOGIC DEVICE, 40 NS PROP. DELAY
2018	5962-8863802	PROG. ARRAY LOGIC, 10 X 10, 1800-GATE
2018	5962-8863803	PROG. ARRAY LOGIC, 10 X 10, 1800 GATE
PAL20L2	5962-8680405	PROG. ARRAY LOGIC, 20-INPUT 2-OUTPUT AND-OR-INVERT
PAL20R4A	8412904	PROG. ARRAY LOGIC, 20-INPUT 4-OUTPUT REGISTERED AND-OR
PAL20X4A	8412908	PROG. ARRAY LOGIC, 20-INPUT 4-OUTPUT REGISTERED AND-OR-XOR
PAL20R4B	5962-8767104	PROG. ARRAY LOGIC, 2-INPUT 4-OUTPUT REGISTERED AND-OR
PAL20R4-15	5962-8767110	PROG. ARRAY LOGIC, 20-INPUT 4-OUTPUT REGISTERED AND-OR
PAL20R4A-2	8412912	PROG. ARRAY LOGIC, 20-INPUT 4-OUTPUT REGISTERED AND-OR
PAL20R6A	8412903	PROG. ARRAY LOGIC, 20-INPUT 6-OUTPUT REGISTERED AND-OR
PAL20R6B	5962-8767103	PROG. ARRAY LOGIC, 20-INPUT 6-OUTPUT REGISTERED AND-OR
PAL20R6-15	5962-8767109	PROG. ARRAY LOGIC, 20-INPUT 6-OUTPUT REGISTERED AND-OR
PAL20R6A-2	8412911	PROG. ARRAY LOGIC, 20-INPUT 6-OU REGISTERED AND-OR
PAL20X8A	8412906	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR-XOR
PAL20L8A	8412901	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT AND-OR-INVERT
PAL20R8B	5962-8767102	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR
PAL20L8B	5962-8767101	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT AND-OR-INVERT
20V8	5962-8984001	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 20-INPUT 8-OUTPUT AND-OR, 30 NS ACCESS TIME
20V8	5962-8984003	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 20-INPUT 8-OUTPUT AND-OR, 15 NS ACCESS TIME
20V8	5962-8984002	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 20-INPUT 8-OUTPUT AND-OR, 20 NS ACCESS TIME
PLUS20L8	5962-8767105	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT AND-OR-INVERT
PLUS20R8	5962-8767106	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR
PAL20R8-15	5962-8767108	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR
PAL20L8-15	5962-8767107	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT AND-OR-INVERT
PAL20R8A-2	8412910	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT REGISTERED AND-OR
PAL20L8A-2	8412909	PROG. ARRAY LOGIC, 20-INPUT 8-OUTPUT AND-OR-INVERT
C22V10	50702	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 25 NS ACCESS TIME
C22V10	50701	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 30 NS ACCESS TIME
C22V10	50703	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 20 NS ACCESS TIME
C22V10	5962-8753901	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
C22V10	5962-8753902	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR

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MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
ROM/PROM/PAL 7/ (continued)		
C22V10	5962-8753903	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
PAL22V10A	5962-8605301	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT REGISTERED AND-OR
PAL22V10	5962-8605302	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT REGISTERED AND-OR
C22V10	5962-8867003	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 40 NS ACCESS TIME
C22V10	5962-8867002	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 30 NS ACCESS TIME
C22V10	5962-8867001	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 25 NS ACCESS TIME
C22V10L	5962-8975501	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR
C22V10L	5962-8975503	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR
22V10	5962-8984101	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 22-INPUT 10-OUTPUT AND-OR, 30 NS ACCESS TIM
C22V10	5962-8867004	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR, 20 NS ACCESS TIME
C22V10L	5962-8872404	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT, AND-OR
22V10	5962-8984102	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 22-INPUT 10-OUTPUT AND-OR, 20 NS ACCESS TIM
C22V10L	5962-8975502	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT AND-OR
C22V10	5962-8753904	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
22V10	5962-8984103	PROG. ARRAY LOGIC, ELECTR. ERASABLE, 22-INPUT 10-OUTPUT AND-OR, 15 NS ACCESS TIM
PAL22V10-20	5962-8605304	PROG. ARRAY LOGIC, 22-INPUT 10-OUTPUT REGISTERED AND-OR
C22V10L-25	5962-8872401	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10 OUTPUT AND-OR
PAL22VP10-25	5962-8605303	PROG. ARRAY LOGIC, 22-INPUT 10 OUTPUT REGISTERED AND-OR
C22V10L-30	5962-8872402	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
C22V10L-40	5962-8872403	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
27C1024	5962-8680504	PROM, UV ERASABLE, 64K X 16, 170 NS ACCESS TIME
27C1024	5962-8680503	PROM, UV ERASABLE, 64K X 16, 200 NS ACCESS TIME
27C1024	5962-8680502	PROM, UV ERASABLE, 64K X 16, 250 NS ACCESS TIME
27C1024	5962-8680501	PROM, UV ERASABLE, 64K X 16, 300 NS ACCESS TIME
27S13	5962-8854102	PROM, 512 X 4, THREE-STATE, 60 NS ACCESS TIME
27S13A	5962-8854101	PROM, 512 X 4, THREE-STATE, 40 NS ACCESS TIME
27S180	20903	PROM, 1K X 8, WITH OPEN-COLLECTOR OUTPUTS, 90 NS ACCESS TIME
27S19A	5962-8670302	PROM, 32 X 8, WITH THREE-STATE OUT PUTS, 35 NS ACCESS TIME
27S19	5962-8670301	PROM, 32 X 8, WITH THREE-STATE OUT PUTS, 50 NS ACCESS TIME
27PS191	5962-8552601	PROM, POWER-SWITCHED, 2K X 8, (THREE-STATE), 75 NS ACCESS TIME
27PS191A	5962-8552602	PROM, POWER-SWITCHED, 2K X 8, (THREE-STATE), 65 NS ACCESS TIME
27256-170	22403	PROM, UV ERASABLE, 32K X 8, 170 NS ACCESS TIME
27256-170	8411104	PROM, UV ERASABLE, 32K X 8, 170 NS ACCESS TIME
27256-200	8411103	PROM, UV ERASABLE, 32K X 8, 200 NS ACCESS TIME
27256-250	8411102	PROM, UV ERASABLE, 32K X 8, 250 NS ACCESS TIME
27S29A	5962-8769002	PROM, 512 X 8, WITH THREE-STATE OUT PUTS, 45 NS ACCESS TIME
27S29	5962-8769001	PROM, 512 X 8, WITH THREE-STATE OUT PUTS, 70 NS ACCESS TIME
27PS291	5962-8552603	PROM, POWER-SWITCHED, 2K X 8, (THREE-STATE), 75 NS ACCESS TIME
27PS291A	5962-8552604	PROM, POWER-SWITCHED, 2K X 8, (THREE-STATE), 65 NS ACCESS TIME
27S35	5962-8670601	PROM, REGISTERED, 1K X 8, WITHPRO GRAMMABLE INITIALIZE (ASYNCHRONOUS)
27S35A	5962-8670602	PROM, REGISTERED, 1K X 8, WITH PRO GRAMMABLE INITIALIZE ((ASYNCHRONOUS)
27S37	5962-8670603	PROM, REGISTERED, 1K X 8, WITH PRO GRAMMABLE INITIALIZE (SYNCHRONOUS)
27S37A	5962-8670604	PROM, REGISTERED, 1K X 8, WITH PRO GRAMMABLE INITIALIZE (SYNCHRONOUS)
27S45A	5962-8552702	PROM, REGISTERED, 2K X 8, WITH PRO GRAMMABLE INITIALIZE (ASYNCHRONOUS)
27S45	5962-8552701	PROM, REGISTERED, 2K X 8, WITH PRO GRAMMABLE INITIALIZE (ASYNCHRONOUS)
27S47A	5962-8552704	PROM, REGISTERED, 2K X 8, WITH PRO GRAMMABLE INITIALIZE (SYNCHRONOUS)
27S47	5962-8552703	PROM, REGISTERED, 2K X 8, WITH PRO GRAMMABLE INITIALIZE (SYNCHRONOUS)
27C512	5962-8764802	PROM, UV ERASABLE, 64K X 8, 200 NS ACCESS TIME
27C512	5962-8764803	PROM, UV ERASABLE, 64K X 8, 250 NS ACCESS TIME
27C512	5962-8764801	PROM, UV ERASABLE, 64K X 8, 150 NS ACCESS TIME
27C512	5962-8764804	PROM, UV ERASABLE, 64K X 8, 120 NS ACCESS TIME
27512-20	5962-8513505	PROM, UV ERASABLE, 64K X 8, 200 NS ACCESS TIME
27512-25	5962-8513501	PROM, UV ERASABLE, 64K X 8, 250 NS ACCESS TIME
27512-30	5962-8513503	PROM, UV ERASABLE, 64K X 8, 300 NS ACCESS TIME
27512-35	5962-8513502	PROM, UV ERASABLE, 64K X 8, 350 NS ACCESS TIME
27512-45	5962-8513504	PROM, UV ERASABLE, 64K X 8, 450 NS ACCESS TIME
2764-150	8200506	PROM, UV ERASABLE, 8K X 8, 150 NS ACCESS TIME
2764A-20	8200505	PROM, UV ERASABLE, 8K X 8, 200 NS ACCESS TIME
27C64-200	27503	PROM, UV ERASABLE, 8K X 8, 200 NS ACCESS TIME
2764-200	8200507	PROM, UV ERASABLE, 8K X 8, 200 NS ACCESS TIME
2764A-25	8200504	PROM, UV ERASABLE, 8K X 8, 250 NS ACCESS TIME
27C64-250	27502	PROM, UV ERASABLE, 8K X 8, 250 NS ACCESS TIME
2764-250	8200502	PROM, UV ERASABLE, 8K X 8, 250 NS ACCESS TIME
2764A-35	8200503	PROM, UV ERASABLE, 8K X 8, 350 NS ACCESS TIME
27C64-350	27501	PROM, UV ERASABLE, 8K X 8, 350 NS ACCESS TIME
2764-450	8200501	PROM, UV ERASABLE, 8K X 8, 450 NS ACCESS TIME
27C64-90	8510204	PROM, UV ERASABLE, 8K X 8, 90 NS ACCESS TIME

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

ROM/PROM/PAL 7/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
X2816A-25	22704	PROM, ELECTR. ERASABLE, 2K X 8
28C256-150	26111	PROM, ELECTR. ERASABLE, 32K X 8, 150 NS ACCESS TIME
28C256-150	26105	PROM, ELECTR. ERASABLE, 32K X 8, 150 NS ACCESS TIME
28C256-200	26110	PROM, ELECTR. ERASABLE, 32K X 8, 200 NS ACCESS TIME
28C256-250	26106	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
28C256-250	26112	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
28C256-250	26109	PROM, ELECTR. ERASABLE, 32K X 8, 250 NS ACCESS TIME
28C256-300	26108	PROM, ELECTR. ERASABLE, 32K X 8, 300 NS ACCESS TIME
28C256-350	26107	PROM, ELECTR. ERASABLE, 32K X 8, 350 NS ACCESS TIME
X2864A-25	22804	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
X2864A-25	22806	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
X2864A-30	22803	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
X2864A-35	22802	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
X2864A-35	22805	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
X2864A-45	22801	PROM, ELECTR. ERASABLE, 8K X 8, 450 NS ACCESS TIME
29621	20805	PROM, 512 X 8, WITH THREE-STATE OUTPUTS
29671	21103	PROM, 4K X 8, TS, 70 NS ACCESS TIME
53S1680	21001	PROM, 2K X 8, WITH OPEN-COLLECTOR OUTPUTS
5348-1	20804	PROM, 512 X 8, WITH OPEN-COLLECTOR OUTPUTS
5349-1	20805	PROM, 512 X 8, WITH THREE-STATE OUTPUTS
54S472	20805	PROM, 512 X 8, WITH THREE-STATE OUTPUTS
54S473	20804	PROM, 512 X 8, WITH OPEN-COLLECTOR OUTPUTS
54S572	20601	PROM, 1K X 4, WITH OPEN-COLLECTOR OUTPUTS
5564-250	22810	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
5564-250	22811	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
55C64-250	26005	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
57C64-70	8510207	PROM, UV ERASABLE, 8K X 8, 70 NS ACCESS TIME
7C235-30	5962-8863602	PROM, REGISTERED, 1K X 8, 30 NS ACCESS TIME
7C235-40	5962-8863601	PROM, REGISTERED, 1K X 8 , 40 NS ACCESS TIME
CY7C331-25	5962-8985503M	PROGRAMMABLE LOGIC DEVICE, ONE-TIME PROGRAMMABLE, ASYNCHRONOUS REGISTERED, 25 NS
CY7C331-30	5962-8985502M	PROGRAMMABLE LOGIC DEVICE, ONE-TIME PROGRAMMABLE, ASYNCHRONOUS REGISTERED, 30 NS
CY7C331-40	5962-8985501M	PROGRAMMABLE LOGIC DEVICE, ONE-TIME PROGRAMMABLE, ASYNCHRONOUS REGISTERED, 40 NS
V750-35	5962-8872602	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
V750-40	5962-8872601	PROG. ARRAY LOGIC, UV ERASABLE, 22-INPUT 10-OUTPUT AND-OR
76160	21001	PROM, 2K X 8, WITH OPEN-COLLECTOR OUTPUTS
7644	20603	PROM, 1K X 4
7680	20903	PROM, 1K X 8, WITH OPEN-COLLECTOR OUTPUTS, 90 NS ACCESS TIME
7684	20901	PROM, 2K X 4, WITH OPEN-COLLECTOR OUTPUTS, 125 NS ACCESS TIME
77S180	20903	PROM, 1K X 8, WITH OPEN-COLLECTOR OUTPUTS, 90 NS ACCESS TIME
77S184	20901	PROM, 2K X 4, WITH OPEN-COLLECTOR OUTPUTS, 125 NS ACCESS TIME
77S190	21001	PROM, 2K X 8, WITH OPEN-COLLECTOR OUTPUTS
82S100	50202	PROG. ARRAY LOGIC, 16X48X8
82S105	5962-8670901	LOGIC SEQUENCER, FIELD PROGRAMMABLE, 16 X 48 X 8
82S105	5962-8670902	LOGIC SEQUENCER, FIELD PROGRAMMABLE, 16 X 48 X 8
82S129A	5962-8778801	PROM, 256 X 4, WITH THREE-STATE OUTPUTS, 60 NS ACCESS TIME
82S129A	5962-8778802	PROM, 256 X 4, WITH THREE-STATE OUTPUTS, 40 NS ACCESS TIME
82S153A	5962-8768201	LOGIC ARRAY, 18 X 42 X 10 FIELD-PROGRAMMABLE
82S180	20903	PROM, 1K X 8, WITH OPEN-COLLECTOR OUTPUTS, 90 NS ACCESS TIME
82S184	20901	PROM, 2K X 4, WITH OPEN-COLLECTOR OUTPUTS, 125 NS ACCESS TIME
82S190	21001	PROM, 2K X 8, WITH OPEN-COLLECTOR OUTPUTS
82S2708	20905	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
93Z450	20903	PROM, 1K X 8, WITH OPEN-COLLECTOR OUTPUTS, 90 NS ACCESS TIME
93459	50202	PROG. ARRAY LOGIC, 16X48X8
93Z460	20906	PROM, 1K X 8, WITH OPEN-COLLECTOR OUTPUTS, 90 NS ACCESS TIME
93Z461	20905	PROM, 1K X 8, WITH THREE-STATE OUTPUTS, 90 NS ACCESS TIME
93Z510	21003	PROM, 2K X 8, WITH OPEN-COLLECTOR OUTPUTS

Microprocessors and interface peripherals/FIFO 8/

SPE	62001	SIGNAL PROCESSING ELEMENT
SPE	62002	SIGNAL PROCESSING ELEMENT
(SEE DWG)	5962-8966102	FIFO MEMORY, 64 X 9, 25 MHZ
(SEE DWG)	5962-8956803	FIFO MEMORY, 4K X 9 PARALLEL, 65 NS ACCESS TIME
(SEE DWG)	5962-8956804	FIFO MEMORY, 4K X 9 PARALLEL, 50 NS ACCESS TIME
(SEE DWG)	5962-8994201	FIFO MEMORY, 2K X 9
(SEE DWG)	5962-8986303	FIFO MEMORY, 512 X 9, 50 NS ACCESS TIME
(SEE DWG)	5962-8986305	FIFO MEMORY, 512 X 9, 30 NS ACCESS TIME
(SEE DWG)	5962-8994202	FIFO MEMORY, 2K X 9
(SEE DWG)	5962-8986304	FIFO MEMORY, 512 X 9, 40 NS ACCESS TIME
(SEE DWG)	5962-8956805	FIFO MEMORY, 4K X 9 PARALLEL, 40 NS ACCESS TIME
(SEE DWG)	5962-8956801	FIFO MEMORY, 4K X 9 PARALLEL, 120 NS ACCESS TIME
(SEE DWG)	5962-8953602	FIFO MEMORY, 1K X 9 PARALLEL, 80 NS ACCESS TIME

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Microprocessors and interface peripherals/FIFO 8/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
(SEE DWG)	5962-8953601	FIFO MEMORY, 1K X 9 PARALLEL, 120 NS ACCESS TIME
(SEE DWG)	5962-8994203	FIFO MEMORY, 2K X 9
(SEE DWG)	5962-8953603	FIFO MEMORY, 1K X 9 PARALLEL, 65 NS ACCESS TIME
(SEE DWG)	5962-8966101	FIFO MEMORY, 64 X 9, 15 MHZ
(SEE DWG)	5962-8953604	FIFO MEMORY, 1K X 9 PARALLEL, 40 NS ACCESS TIME
(SEE DWG)	5962-8994204	FIFO MEMORY, 2K X 9
(SEE DWG)	5962-8953605	FIFO MEMORY, 1K X 9 PARALLEL, 30 NS ACCESS TIME
(SEE DWG)	5962-8994304	FIFO MEMORY, 4K X 9 PARALLEL SERIAL, 50 NS ACCESS TIME
(SEE DWG)	5962-8994303	FIFO MEMORY, 4K X 9 PARALLEL SERIAL, 65 NS ACCESS TIME
(SEE DWG)	5962-8986302	FIFO MEMORY, 512 X 9, 65 NS ACCESS TIME
(SEE DWG)	5962-8986301	FIFO MEMORY, 512 X 9, 80 NS ACCESS TIME
(SEE DWG)	5962-8956802	FIFO MEMORY, 4K X 9 PARALLEL, 80 NS ACCESS TIME
(SEE DWG)	5962-8966402	FIFO MEMORY, 64 X 8, 25 MHZ
(SEE DWG)	5962-8956701	FIFO MEMORY, 2K X 9 PARALLEL, 120 NS ACCESS TIME
(SEE DWG)	5962-8952301	FIFO MEMORY, 64 X 4, 10 MHZ
(SEE DWG)	5962-8952303	FIFO MEMORY, 64 X 4, 25 MHZ
(SEE DWG)	5962-8956705	FIFO MEMORY, 2K X 9 PARALLEL, 40 NS ACCESS TIME
(SEE DWG)	5962-8986306	FIFO MEMORY, 512 X 9, 25 NS ACCESS TIME
(SEE DWG)	5962-8994302	FIFO MEMORY, 4K X 9 PARALLEL SERIAL, 80 NS ACCESS TIME
(SEE DWG)	5962-8956702	FIFO MEMORY, 2K X 9 PARALLEL, 80 NS ACCESS TIME
(SEE DWG)	5962-8952302	FIFO MEMORY, 64 X 4, 15 MHZ
(SEE DWG)	5962-8956704	FIFO MEMORY, 2K X 9 PARALLEL, 50 NS ACCESS TIME
(SEE DWG)	5962-8956703	FIFO MEMORY, 2K X 9 PARALLEL, 65 NS ACCESS TIME
(SEE DWG)	5962-8952304	FIFO MEMORY, 64 X 4, 35 MHZ
(SEE DWG)	5962-8966401	FIFO MEMORY, 64 X 8, 15 MHZ
(SEE DWG)	5962-8994301	FIFO MEMORY, 4K X 9 PARALLEL SERIAL, 120 NS ACCESS TIME
(SEE DWG)	5962-8966605	FIFO MEMORY, 256 X 9 PARALLEL, 40 NS ACCESS TIME
(SSE DWG)	5962-8966601	FIFO MEMORY, 256 X 9 PARALLEL, 120 NS ACCESS TIME
(SEE DWG)	5962-8869204	MULTIPLEXED TERMINAL, MIL-STD-1553, BC/RTU/MT, TRANSCEIVERLESS
(SEE DWG)	5962-8966601	FIFO MEMORY, 256 X 9 PARALLEL, 120 NS ACCESS TIME
(SEE DWG)	5962-8869203	MULTIPLEXED TERMINAL, MIL-STD-1553, BC/RTU/MT, TRANSCEIVER
(SEE DWG)	5962-8966602	FIFO MEMORY, 256 X 9 PARALLEL, 80 NS ACCESS TIME
(SEE DWG)	5962-8966603	FIFO MEMORY, 256 X 9 PARALLEL, 65 NS ACCESS TIME
(SEE DWG)	5962-8966604	FIFO MEMORY, 256 X 9 PARALLEL, 50 NS ACCESS TIME
(SEE DWG)	5962-8966606	FIFO MEMORY, 256 X 9 PARALLEL, 30 NS ACCESS TIME
Z0853004	5962-8752702	COMMUNICATIONS CONTROLLER, SERIAL, 4.0 MHZ
Z0853006	5962-8752701	COMMUNICATIONS CONTROLLER, SERIAL, 6.0 MHZ
Z0858106	5962-8752602	CLOCK GENERATOR AND CONTROLLER, 6.0 MHZ
Z0858110	5962-8752601	CLOCK GENERATOR AND CONTROLLER, 10 MHZ
LTC1090	5962-8983001	DATA ACQUISITION SYSTEM, 10-BIT
UT1553BB	5962-8862801	BUS CONTROLLER, REMOTE TERMINAL
1553RTMP	5962-8864501	REMOTE TERMINAL MULTI-PROTOCOL
UT1553BBCRTM	5962-8957701	BUS CONTROLLER, REMOTE TERMINAL AND MONITOR
BX1750A	5962-8951901	MICROPROCESSOR, 16-BIT, WITH MIL-STD-1750A INSTRUCTION SET ARCHITECTURE
BX1750A	5962-8951991	MICROPROCESSOR, 16-BIT, WITH MIL-STD-1750 INSTRUCTION SET ARCHITECTURE
1750A-15	5962-8766501	MICROPROCESSOR, 16-BIT, 15 MHZ
1750A-20	5962-8766502	MICROPROCESSOR, 16-BIT, 20 MHZ
1750A-30	5962-8766503	MICROPROCESSOR, 16-BIT, 30 MHZ
2100TG	5962-8773502	MICROPROCESSOR, SIGNAL PROCESSING, 8 MHZ
2100SG	5962-8773501	MICROPROCESSOR, SIGNAL PROCESSING, 6 MHZ
2100ATG	5962-8773504	MICROPROCESSOR, SIGNAL PROCESSING, 10 MHZ
2100ASG	5962-8773503	MICROPROCESSOR, SIGNAL PROCESSING, 8 MHZ
2901C	8405701	MICROPROCESSOR SLICE, 4-BIT
2903A	5962-8867701	MICROPROCESSOR, 4-BIT
2904	8601701	CONTROL UNIT, STATUS AND SHIFT, 4-BIT
2909A	8602701	MICROPROGRAM SEQUENCER, 4-BIT
2910A	7801702	CONTROLLER, MICROPROGRAM
2910	7801701	CONTROLLER, MICROPROGRAM
29C10A	5962-8770801	CONTROLLER, MICROPROGRAM (9 DEEP STACK)
2911A	8602801	MICROPROGRAM SEQUENCER, 4-BIT
29116	5962-8686301	MICROPROCESSOR, 16-BIT
29C116	5962-8861201	MICROPROCESSOR, 16-BIT
29C116-1	5962-8861202	MICROPROCESSOR, 16-BIT
29C116-2	5962-8861203	MICROPROCESSOR, 16-BIT
2914	8602901	INTERRUPT CONTROLLER, VECTORED PRIORITY
2925A	5962-8859802	CLOCK GENERATOR, 50 MHZ
2925	5962-8859801	CLOCK GENERATOR, 31 MHZ
2930	5962-8757301	PROGRAM CONTROL UNIT, 4-BIT
2940	8603001	DMA ADDRESS GENERATOR
2942	5962-8680101	PROGRAMMABLE TIMER/COUNTER DMA ADDRESS GENERATOR
2960	5962-8760201	ERROR DETECTION/CORRECTION UNIT, 16-BIT
29C60A	5962-8861303	ERROR DETECTION/CORRECTION CKT, 16-BIT, 24 NS DETECT TIME, 35 NS CORRECT TIME
2964B	5962-8757401	DYNAMIC MEMORY CONTROLLER
29C660B	5962-8853304	ERROR DETECTION AND CORRECTION UNIT, 32-BIT, 28 NS DETECT TIME
29C660C	5962-8853305	ERROR DETECTION AND CORRECTION UNIT, 32-BIT, 21 NS DETECT TIME
29C660A	5962-8853303	ERROR DETECTION AND CORRECTION UNIT, 32-BIT, 33 NS DETECT TIME
2968A	5962-8869602	DYNAMIC MEMORY CONTROLLER, WITH OUTPUT ENABLE
2968A	5962-8869601	DYNAMIC MEMORY CONTROLLER
29C841	5962-8760301	LATCH, BUS INTERFACE, 10-WIDE
29C843	5962-8760302	LATCH, BUS INTERFACE, 9-WIDE
29C941	5962-8760303	LATCH, BUS INTERFACE, 10-WIDE
29C943	5962-8760304	LATCH, BUS INTERFACE, 9-WIDE
32010	8405301	SIGNAL PROCESSOR, DIGITAL
320C10	5962-8763301	SIGNAL PROCESSOR, DIGITAL, 20 MHZ
320CM10	5962-8763303	SIGNAL PROCESSOR, DIGITAL, WITH MASK PROGRAMMABLE ROM, 25 MHZ
320C10-25	5962-8763302	SIGNAL PROCESSOR, DIGITAL, 25 MHZ
320CF10-25 320CM10-25	5962-8763305	SIGNAL PROCESSOR, DIGITAL, 6.7 - 25 MHZ
	5962-8763304	SIGNAL PROCESSOR, DIGITAL, WITH MASK PROGRAMMABLE ROM, 25 MHZ
320E15	5962-8763306	SIGNAL PROCESSOR, DIGITAL, WITH

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Microprocessors and interface peripherals/FIFO 8/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		EPROM, 20 MHZ
320C15	5962-8763307	SIGNAL PROCESSOR, DIGITAL, 6.7 - 20 MHZ
320C15-25	5962-8763308	SIGNAL PROCESSOR, DIGITAL, 6.7 - 25 MHZ
320C25	5962-8861901	SIGNAL PROCESSOR, DIGITAL
32C201-10	55201	TIMING CONTROL UNIT, 10 MHZ
32C201-10	5962-8859901	TIMING CONTROL UNIT, 10 MHZ
TVB382	61601	ADDRESS GENERATOR
39C10B	5962-8770802	CONTROLLER, MICROPROGRAM (33 DEEP STACK)
39C10C	5962-8770803	CONTROLLER, MICROPROGRAM (33 DEEP STACK)
39C60	5962-8861302	ERROR DETECTION/CORRECTION CKT, 16-BIT, 36 NS DETECT TIME, 73 NS CORRECT TIME
39C60A	5962-8861301	ERROR DETECTION/CORRECTION CKT, 16-BIT, 24 NS DETECT TIME, 35 NS CORRECT TIME
49C410A	5962-8864302	MICROPROGRAM SEQUENCER, 16-BIT, WITH 33-DEEP STACK
49C410	5962-8864301	MICROPROGRAM SEQUENCER, 16-BIT, WITH 33-DEEP STACK
49C460A	5962-8853301	ERROR DETECTION AND CORRECTION UNIT, 32-BIT, 33 NS DETECT TIME
49C460B	5962-8853302	ERROR DETECTION AND CORRECTION UNIT, 32-BIT, 28 NS DETECT TIME
49C460C	5962-8853306	ERROR DETECTION AND CORRECTION UNIT, 32-BIT, 21 NS ACCESS TIME
54FCT845A	5962-8867501	BUS INTERFACE LATCH, 8-BIT, NONINVERTING, TTL-COMPATIBLE
54FCT845B	5962-8867502	BUS INTERFACE LATCH, 8-BIT, NONINVERTING, TTL-COMPATIBLE
56001-20	5962-8951201	DIGITAL SIGNAL PROCESSOR, 56-BIT GENERAL PURPOSE
57L401D	5962-8779109	FIFO MEMORY, 64 X 4 STAND-ALONE, 12 MHZ
C57401	5962-8779105	FIFO MEMORY, 64 X 4 CASCADABLE , 7 MHZ
C57401A	5962-8779107	FIFO MEMORY, 64 X 4 CASCADABLE, 10 MHZ
57401	5962-8779101	FIFO MEMORY, 64 X 4 STAND-ALONE, 7 MHZ
57401A	5962-8779103	FIFO MEMORY, 64 X 4 STAND-ALONE, 10 MHZ
57L4013D	5962-8779111	FIFO MEMORY, 64 X 4 STAND-ALONE THREE-STATE, 12 MHZ
57402	5962-8779102	FIFO MEMORY, 64 X 5 STAND-ALONE, 7 MHZ
57402A	5962-8779104	FIFO MEMORY, 64 X 5 STAND-ALONE, 10 MHZ
57L402D	5962-8779110	FIFO MEMORY, 64 X 4, STAND-ALONE, 12 MHZ
C57402	5962-8779106	FIFO MEMORY, 64 X 5 CASCADABLE, 7 MHZ
C57402A	5962-8779108	FIFO MEMORY, 64 X 5 CASCADABLE, 10 MHZ
WS5910A	5962-8770801	CONTROLLER, MICROPROGRAM (9 DEEP STACK)
68000-10	8202103	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
68000-12	8202104	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
68000-6	54001	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
MKB68000-8	8202102	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
68020-16	5962-8603202	MICROPROCESSOR, 32-BIT
68020-20	5962-8603203	MICROPROCESSOR, 32-BIT
68172	5962-8770501	CONTROLLER, VMEBUS
68562	5962-8681001	COMMUNICATIONS CONTROLLER, UNIVERSAL SERIAL, DUAL
68HC811E2	5962-8952701	MICROCONTROLLER, 8-BIT, EEPROM 2K BYTES, RAM 256 BYTES
68881-16	5962-8602102	COPROCESSOR, FLOATING-POINT
68881-20	5962-8602103	COPROCESSOR, FLOATING-POINT
68901-4	5962-8850601	PERIPHERAL, MULTIFUNCTION, 4 MHZ
68901-5	5962-8850602	PERIPHERAL, MULTIFUNCTION, 5 MHZ
ICM7170	5962-8765301	CLOCK, REAL-TIME, MICROPROCESSOR-COMPATIBLE
7201LA30	5962-8753101	FIFO MEMORY, 512 X 9 PARALLEL, 30 NS ACCESS TIME
7201LA50	5962-8753102	FIFO MEMORY, 512 X 9 PARALLEL, 50 NS ACCESS TIME
7201LA80	5962-8753103	FIFO MEMORY, 512 X 9 PARALLEL, 80 NS ACCESS TIME
7203S40	5962-8866904	FIFO MEMORY, 2K X 9, 40 NS ACCESS TIME
7203S50	5962-8866903	FIFO MEMORY, 2K X 9, 50 NS ACCESS TIME
7203S65	5962-8866902	FIFO MEMORY, 2K X 9, 65 NS ACCESS TIME
7203S80	5962-8866901	FIFO MEMORY, 2K X 9, 80 NS ACCESS TIME
7216L-40	5962-8687301	MULTIPLIER, 16-BIT PARALLEL, 42 NS MULTIPLY TIME
7216L-55	5962-8687302	MULTIPLIER, 16-BIT PARALLEL, 55 NS MULTIPLY TIME
7216L-75	5962-8687303	MULTIPLIER, 16-BIT PARALLEL, 75 NS MULTIPLY TIME
72404L10	5962-8684601	FIFO MEMORY, 64 X 5 PARALLEL, 10 MHZ
72404L15	5962-8684602	FIFO MEMORY, 64 X 5 PARALLEL, 15 MHZ
72404L25	5962-8684603	FIFO MEMORY, 64 X 5 PARALLEL, 25 MHZ
72404L35	5962-8684604	FIFO MEMORY, 64 X 5 PARALLEL, 35 MHZ
7C429-30	5962-8866905	FIFO MEMORY, 2K X 9, 30 NS ACCESS TIME
7C901-27	5962-8853502	MICROPROCESSOR, 4-BIT SLICE, 27 NS CYCLE TIME
7C901-32	5962-8853501	MICROPROCESSOR, 4-BIT SLICE, 32 NS CYCLE TIME
7C9101-35	5962-8951702	MICROPROCESSOR SLICE, 16-BIT
7C9101-45	5962-8951701	MICROPROCESSOR SLICE, 16-BIT
7C910-46	5962-8770805	CONTROLLER, MICROPROGRAM (17 DEEP STACK)
7C910-51	5962-8770804	CONTROLLER, MICROPROGRAM (17 DEEP STACK)
7C9116-40	5962-8861204	MICROPROCESSOR, 16-BIT
7C9116-65	5962-8861203	MICROPROCESSOR, 16-BIT
7C9116-75	5962-8861202	MICROPROCESSOR, 16-BIT
7C9116-99	5962-8861201	MICROPROCESSOR, 16-BIT
Z-80BCPU	48003	MICROPROCESSOR, 8-BIT
NSC800	8301301	MICROPROCESSOR, 8-BIT, 2.5 MHZ
Z8001ACPU	52003	MICROPROCESSOR, 16-BIT, 6.0 MHZ
Z8001CPU	52001	MICROPROCESSOR, 16-BIT, 4.0 MHZ
Z8001ACPU	8000303	MICROPROCESSOR, 16-BIT, 6.0 MHZ
Z8001B	8000304	MICROPROCESSOR, 16-BIT, 10 MHZ
Z8001CPU	8000301	MICROPROCESSOR, 16-BIT, 4.0 MHZ
Z8002B	8000305	MICROPROCESSOR, 16-BIT, 10 MHZ
Z8002CPU	8000302	MICROPROCESSOR, 16-BIT, 4.0 MHZ
Z8002ACPU	8000306	MICROPROCESSOR, 16-BIT, 6.0 MHZ
NSC800-4	8301302	MICROPROCESSOR, 8-BIT, 3.5 MHZ
80C186-10	5962-8850101	MICROPROCESSOR, 16-BIT, 10 MHZ
80C186-12	5962-8850102	MICROPROCESSOR, 16-BIT, 12.5 MHZ
M80186-6	8501002	MICROPROCESSOR, 16-BIT, 6 MHZ
M80186-8	8501001	MICROPROCESSOR, 16-BIT, 8 MHZ
80C196KB	5962-8998201	MICROCONTROLLER, 16-BIT, 12 MHZ
80286-10	5962-8514803	MICROPROCESSOR, 16-BIT, 10 MHZ
80286-6	5962-8514802	MICROPROCESSOR, 16-BIT, 6 MHZ
80286-8	5962-8514801	MICROPROCESSOR, 16-BIT, 8 MHZ
80287-10	5962-8513301	MICROPROCESSOR, NUMERIC, 80-BIT, 10 MHZ
80287-5	5962-8513303	MICROPROCESSOR, NUMERIC, 80-BIT, 6 MHZ
80287-8	5962-8513302	MICROPROCESSOR, NUMERIC, 80-BIT, 8 MHZ
Z8030	5962-8551802	COMMUNICATIONS CONTROLLER, SERIAL,

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Microprocessors and interface peripheral/FIFO 8/ (continued)		
		4.0 MHZ
Z8030A	5962-8551801	COMMUNICATIONS CONTROLLER, SERIAL, 6.0 MHZ
80C31	8506401	MICROCONTROLLER, 8-BIT (3.5 TO 12 MHZ)
80C31BH-16	8506403	MICROCONTROLLER, 8-BIT (3.5 TO 16 MHZ)
8035AHL	5962-8856801	MICROCOMPUTER, 8-BIT, WITH 64 X 8 RAM DATA MEMORY
Z8036A	8551701	COUNTER/TIMER AND PARALLEL I/O UNIT, 6.0 MHZ
Z8036	8551702	COUNTER/TIMER AND PARALLEL I/O UNIT, 4.0 MHZ
80386-12	5962-8766802	MICROPROCESSOR, 32-BIT, 12.5 MHZ
80386-16	5962-8766801	MICROPROCESSOR, 32-BIT, 16 MHZ
80386-20	5962-8766803	MICROPROCESSOR, 32-BIT, 20 MHZ
80386-25	5962-8766804	MICROPROCESSOR, 32-BIT, 25 MHZ
80387-16	5962-8953401	NUMERIC PROCESSOR EXTENSION, 80-BIT
80387-20	5962-8953402	NUMERIC PROCESSOR EXTENSION, 80-BIT
80387-25	5962-8953403	NUMERIC PROCESSOR EXTENSION, 80-BIT
8048AH	5962-8856802	MICROCOMPUTER, 8-BIT, WITH 1K X 8 PROGRAM MEMORY AND 64 X 8 RAM DATA MEMORY
80C51	8506402	MICROCONTROLLER, 8-BIT, WITH A MASK PROGRAMMABLE ROM (3.5 TO 12 MHZ)
80C51BH-16	8506404	MICROCONTROLLER, 8-BIT, WITH A MASK PROGRAMMABLE ROM (3.5 TO 16 MHZ)
80C86	8405201	MICROPROCESSOR, 16-BIT, 5 MHZ
80C86-2	8405202	MICROPROCESSOR, 16-BIT, 8 MHZ
8087	5962-8854702	DATA PROCESSOR, NUMERIC, 5 MHZ
8087-2	5962-8854701	DATA PROCESSOR, NUMERIC, 8 MHZ
8088	5962-8768501	MICROPROCESSOR, 8-BIT
8097	8506301	MICROCONTROLLER, 16-BIT
8097BH	5962-8959601	MICROCONTROLLER, 16-BIT, 12 MHZ
82188	5962-8767201	BUS CONTROLLER, INTEGRATED
82C284-10	5962-8773401	CLOCK GENERATOR AND READY INTERFACE, 10 MHZ
82C284-6	5962-8773403	CLOCK GENERATOR AND READY INTERFACE, 6 MHZ
82C284-8	5962-8773402	CLOCK GENERATOR AND READY INTERFACE, 8 MHZ
82288-6	5962-8514901	BUS CONTROLLER, 6 MHZ
82288-8	5962-8514902	BUS CONTROLLER, 8 MHZ
82380	5962-8959301	DMA CONTROLLER, 32-BIT
82384-12	5962-8766902	CLOCK GENERATOR AND RESET INTERFACE, 12.5 MHZ
82384-16	5962-8766901	CLOCK GENERATOR AND RESET INTERFACE, 16 MHZ
8251A	5962-8754801	COMMUNICATION INTERFACE, PROGRAMMABLE
82510	5962-8972501	CONTROLLER, ASYNCHRONOUS SERIAL
82C52	8501501	CONTROLLER INTERFACE, SERIAL, 16 MHZ
8253	5962-8752002	INTERVAL TIMER, PROGRAMMABLE
8253	5962-8752001	INTERVAL TIMER, PROGRAMMABLE
8253-5	5962-8752003	INTERVAL TIMER, PROGRAMMABLE
82C54	8406501	INTERVAL TIMER, PROGRAMMABLE
82C55A	8406602	PERIPHERAL INTERFACE, PROGRAMMABLE, 8.0 MHZ
8255A	5962-8757001	PERIPHERAL INTERFACE, PROGRAMMABLE
82C55A-5	8406601	PERIPHERAL INTERFACE, PROGRAMMABLE, 5.0 MHZ
8255A-5	5962-8757002	PERIPHERAL INTERFACE, PROGRAMMABLE
82C59A	5962-8501602	INTERRUPT CONTROLLER, PROGRAMMABLE, 8 MHZ
8259A	5962-8751801	INTERRUPT CONTROLLER, PROGRAMMABLE
82C59A-5	5962-8501601	INTERRUPT CONTROLLER, PROGRAMMABLE, 5 MHZ
82720	5962-8608801	DISPLAY CONTROLLER, GRAPHICS
8274	5962-8771301	CONTROLLER, MULTI-PROTOCOL SERIAL
82C88	8406901	BUS CONTROLLER, 8 MHZ
82C89	5962-8552801	BUS ARBITER, 8 MHZ
8X305	8550201	MICROCONTROLLER, 16-BIT
8X305-10	8550202	MICROCONTROLLER, 16-BIT
8X320	5962-8550301	MICROCONTROLLER, 16-BIT
83C451	5962-8972602	MICROCONTROLLER, I/O EXPANDED, WITH MASK-PROGRAMMABLE ROM
8X371	5962-8757601	I/O PORT, 8-BIT BIDIRECTIONAL LATCHED
8X376	5962-8685101	I/O PORT, PROGRAMMABLE ADDRESSABLE BIDIRECTIONAL ASYNCHRONOUS
8397	8552001	MICROCONTROLLER, 16-BIT, WITH MASK-PROGRAMMABLE ROM
Z8420A	8418601	I/O CONTROLLER, PARALLEL, 4.0 MHZ
Z8420	8418602	I/O CONTROLLER, PARALLEL, 2.5 MHZ
Z84C2006	5962-8951401	I/O CONTROLLER, PARALLEL, 6.17 MHZ
Z8430A	8301601	COUNTER/TIMER UNIT, 4.0 MHZ
Z8430	8301602	COUNTER/TIMER UNIT, 2.5 MHZ
Z84C3006	5962-8951501	COUNTER/TIMER UNIT, 6.17 MHZ
Z8442A	8301501	CONTROLLER, DUAL SERIAL INPUT/OUTPUT, 4.0 MHZ
Z8442	8301502	CONTROLLER, DUAL SERIAL INPUT/OUTPUT, 2.5 MHZ
Z84C4206	5962-8951601	I/O CONTROLLER, DUAL SERIAL, 6.17 MHZ
Z85C3006	5962-8868901	COMMUNICATIONS CONTROLLER, SERIAL, 6.0 MHZ
Z85C3008	5962-8868902	COMMUNICATIONS CONTROLLER, SERIAL, 8.0 MHZ
AM85C30-10	5962-8868903	COMMUNICATIONS CONTROLLER, SERIAL, WITH SDLC ENHANCEMENTS, 10.0 MHZ
AM85C30-12	5962-8868904	COMMUNICATIONS CONTROLLER, SERIAL, WITH SDLC ENHANCEMENTS, 12.0 MHZ
AM85C30-16	5962-8868905	COMMUNICATIONS CONTROLLER, SERIAL, WITH SDLC ENHANCEMENTS, 16.0 MHZ
AM85C30-8	5962-8868906	COMMUNICATION CONTROLLER, SERIAL, WITH SDLC ENHANCEMENTS, 8.0 MHZ
Z8536	8300101	COUNTER/TIMER AND PARALLEL I/O PERIPHERAL UNIT
Z8536A	8300102	COUNTER/TIMER AND PARALLEL I/O PERIPHERAL UNIT
87C51	5962-8768401	MICROCONTROLLER, 8-BIT, WITH 4K-BYTES EPROM MEMORY (3.5 TO 12 MHZ)
8751H	8419002	MICROCOMPUTER, 8-BIT, WITH 32K-BIT UVEPROM, 12.0 MHZ MAX
87C51-16	5962-8768402	MICROCONTROLLER, 8-BIT, WITH 4K-BYTES EPROM MEMORY (3.5 TO 16 MHZ)
8751H-8	8419001	MICROCOMPUTER, 8-BIT, WITH 32K-BIT UVEPROM, 8.0 MHZ MAX
8797BH	5962-8680901	MICROCONTROLLER, 16-BIT, WITH EPROM
F9450-15	8416901	MICROPROCESSOR, 16-BIT, WITH MIL-STD-1750 INSTRUCTION SET ARCHITECTURE, 15.0 MHZ
F9450-F15	8416904	MICROPROCESSOR, 16-BIT, WITH MIL-STD-1750 INSTRUCTION SET ARCHITECTURE, 15.0 MHZ
F9450-F18	8416902	MICROPROCESSOR, 16-BIT, WITH MIL-STD-1750 INSTRUCTION SET ARCHITECTURE, 18.0 MHZ
F9450-F20	8416903	MICROPROCESSOR, 16-BIT, WITH MIL-STD-1750 INSTRUCTION SET ARCHITECTURE, 20.0 MHZ
9513A	5962-8552301	INTERVAL TIMER, PROGRAMMABLE
9517A	5962-8757501	DMA CONTROLLER, MULTIMODE
9517A-4	5962-8757502	DMA CONTROLLER, MULTIMODE
9519A	5962-8759701	INTERRUPT CONTROLLER, UNIVERSAL

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Operational amplifiers 9/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
LH0002	7801301	CURRENT AMPLIFIER
LH0021	8508801	OP AMP, HIGH-POWER (1A OUTPUT), EXTERNALLY COMPENSATED
0032	8001301	OP AMP
LH0033	8001401	VOLTAGE FOLLOWER/BUFFER AMPLIFIER, WITH FET INPUTS
LH0041	8508701	OP AMP, HIGH-POWER (0.2A OUTPUT), EXTERNALLY COMPENSATED
AMP-01A	5962-8863001	INSTRUMENTATION AMPLIFIER, LOW-NOISE, PRECISION
AMP-01B	5962-8863002	INSTRUMENTATION AMPLIFIER, LOW-NOISE, PRECISION
LH0101A	8508901	OP AMP, POWER
LH0101	8508902	OP AMP, POWER
061	11901	OP AMP, BI-FET, LOW POWER
061	8102301	OP AMP, BI-FET, LOW POWER
062	11902	OP AMP, DUAL, BI-FET, LOW POWER
062	8102302	OP AMP, DUAL, BI-FET, LOW POWER
064	11903	OP AMP, QUAD, BI-FET, LOW POWER
064	8102303	OP AMP, QUAD, BI-FET, LOW POWER
OP-07A	8203601	OP AMP, PRECISION
OP-07	8203602	OP AMP, LOW-OFFSET
071	8102304	OP AMP, BI-FET, LOW POWER
072	8102305	OP AMP, DUAL, BI-FET, LOW POWER
074	8102306	OP AMP, QUAD, BI-FET, LOW POWER
LM10	5962-8760401	OP AMP/VOLT. REFERENCE
LT1007A	5962-8757801	OP AMP, LOW-NOISE, HIGH-SPEED PRECISION
INA101	5962-8778002	INSTRUMENTATION AMPLIFIER
INA101	5962-8778001	INSTRUMENTATION AMPLIFIER, WITH GAIN SENSE
LT1013A	5962-8876001	OP AMP, DUAL MATCHED, HIGH PERFORMANCE
LT1013	5962-8876002	OP AMP, DUAL MATCHED, HIGH PERFORMANCE
LT1014	5962-8967702	OP AMP, QUAD PRECISION
LT1014A	5962-8967701	OP AMP, QUAD PRECISION
LM102	10601	VOLT. FOLLOWER
LT1022	5962-8962202	OP AMP, HIGH-SPEED, PRECISION JFET-INPUT
LT1022A	5962-8962201	OP AMP, HIGH-SPEED, PRECISION JFET-INPUT
LT1028AM	5962-8862202	OP AMP, LOW-NOISE, HIGH-SPEED, PRECISION
LT1028M	5962-8862201	OP AMP, LOW-NOISE, HIGH-SPEED, PRECISION
LT1037A	5962-8856701	OP AMP, LOW-NOISE, HIGH-SPEED, PRECISION
LTC1052	5962-8978201	OP AMP, CHOPPER-STABILIZED
LM107	5962-8958901	OP AMP
LM110	10602	VOLT. FOLLOWER, HIGH-SPEED
LM110	5962-8760601	VOLT. FOLLOWER, HIGH-SPEED
LM124	7704301	OP AMP, QUAD
LM124A	7704302	OP AMP, QUAD
OP14B	5962-8771402	OP AMP, DUAL MATCHED, HIGH PERFORMANCE
OP14A	5962-8771401	OP AMP, DUAL MATCHED, HIGH PERFORMANCE
LM143	7800303	OP AMP, HIGH-VOLTAGE
1437	5962-8981301	OP AMP, WIDEBAND
LM144	7800301	OP AMP, HIGH-VOLTAGE
LM149	11002	OP AMP, QUAD
1536	7800304	OP AMP, HIGH-VOLTAGE
1545	5962-8671201	WIDEBAND AMPLIFIER, TWO-CHANNEL INPUT
LM158	5962-8771001	OP AMP, DUAL, LOW-POWER
LM158A	5962-8771002	OP AMP, DUAL, LOW-POWER
1590	5962-8765701	WIDEBAND AMPLIFIER, WIT AGC
OP-17A	5962-8770601	OP AMP, JFET-INPUT (INTERNALLY COMPENSATED)
OP-17B	5962-8770602	OP AMP, JFET-INPUT (INTERNALLY COMPENSATED)
OP-200A	5962-8859301	OP AMP, DUAL, LOW-OFFSET, LOW-POWER
TLE2027M	5962-9089601M	OP AMP, LOW-NOISE, HIGH-SPEED PRECISION
TLE2037M	5962-9089602M	OP AMP, LOW-NOISE, HIGH-SPEED PRECISION, UNCOMPENSATED
EL-2041	5962-8778502	OP AMP, WIDEBAND, FAST SETTLING, UNITY GAIN STABLE
TLE2061M	5962-9080701M	OP AMP, JFET-INPUT HIGH-OUTPUT-DRIVE MICROPOWER
TLE2062M	5962-9080801M	OP AMP, DUAL, JFET-INPUT HIGH-OUTPUT-DRIVE MICROPOWER
TLE2064	5962-9080901M	OP AMP, QUAD, JFET-INPUT HIGH-OUTPUT-DRIVE MICROPOWER
OP207	5962-8771501	OP AMP, DUAL, ULTRA-LOW OFFSET, MATCHED
TLE2072M	5962-9089601M	OP AMP, LOW-NOISE, HIGH-SPEED PRECISION
OP215B	5962-8853802	OP AMP, DUAL PRECISION JFET-INPUT
OP215BR	5962-8853803	OP AMP, DUAL PRECISION JFET-INPUT, WITH BALANCE ADJUST
OP215A	5962-8853801	OP AMP, DUAL PRECISION JFET-INPUT
OP-227A	13504	OP AMP, DUAL, LOW-OFFSET, LOW-NOISE
OP-227A	5962-8688701	OP AMP, DUAL, LOW-OFFSET, LOW-NOISE
CLC231A	5962-8959401	OP AMP, HIGH-SPEED, WIDEBAND
OP-237A	5962-9056801	OP AMP, DUAL, LOW-OFFSET, LOW-NOISE, HIGH-SPEED
OP-237C	5962-9056802	OP AMP, DUAL, LOW-OFFSET, LOW-NOISE, HIGH-SPEED
HA-2400	5962-8778301	OP AMP, 4-CHANNEL PROGRAMMABLE
HA-2541	5962-8778501	OP AMP, WIDEBAND, FAST SETTLING, UNITY GAIN STABLE
OP-260A	5962-9053601	OP AMP, DUAL, HIGH-SPEED CURRENT-FEEDBACK
2640	7800302	OP AMP, HIGH-VOLTAGE
TLC2652M	5962-9089501M	OP AMP, PRECISION CHOPPER-STABILIZED
TLC2654M	5962-9089502M	OP AMP, LOW-NOISE CHOPPER-STABILIZED
OP-270A	5962-8872101	OP AMP, DUAL, LOW-NOISE, PRECISION
OP-271A	5962-8872102	OP AMP, DUAL, LOW-NOISE, HIGH-SPEED
TLC274	5962-9060401	OP AMP, QUAD, PRECISION
TLC279	5962-9060402	OP AMP, QUAD, PRECISION
OP-290	5962-8978301	OP AMP, DUAL, PRECISION LOW-VOLTAGE MICROPOWER
OP-37A	13505	OP AMP, LOW-NOISE, PRECISION, HIGH-SPEED
OP-37A	5962-8853701	OP AMP, LOW-NOISE, PRECISION, HIGH-SPEED
OP-400A	5962-8777101	OP AMP, QUAD, LOW-OFFSET LOW POWER
OP-42	12208	OP AMP, HIGH-SPEED, FAST SETTLING PRECISION
OP-42A	5962-8851301	OP AMP, HIGH-SPEED, FAST SETTLING PRECISION
OP421B	5962-8855901	OP AMP, QUAD, LOW-POWER
OP421C	5962-8855902	OP AMP, QUAD, LOW-POWER
4250	7703901	OP AMP
OP44A	12207	OP AMP, HIGH-SPEED, PRECISION, JFET
OP-470A	5962-8856501	OP AMP, QUAD, VERY LOW NOISE
OP-471A	5962-8856502	OP AMP, QUAD, HIGH-SPEED, LOW NOISE
OP490A	5962-8967001	OP AMP, QUAD, LOW-VOLTAGE, MICROPOWER

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MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Operational amplifiers 9/ (continued)		
OP-50B	5962-8967302	OP AMP, HIGH-OUTPUT-CURRENT
OP-50A	5962-8967301	OP AMP, HIGH-OUTPUT-CURRENT
OPA501	5962-8762001	OP AMP, HIGH-POWER
HA-5101	5962-8963501	OP AMP, LOW-NOISE
HA-5102	5962-8954801	OP AMP, DUAL, LOW-NOISE
HA-5104	5962-8850201	OP AMP, QUAD, LOW-NOISE
AD524S	14301	INSTRUMENTATION AMPLIFIER, PRECISION
AD524	5962-8853901	INSTRUMENTATION AMPLIFIER, PRECISION
OPA541	5962-8870101	OP AMP, HIGH-POWER
5539	5962-8606401	OP AMP, ULTRA-HIGH FREQUENCY, EXTERNAL COMPENSATION
592	8418502	VIDEO AMPLIFIER, TWO-STAGE, DIFFEREN TIAL INPUT, DIFFERENTIAL OUTPUT
LM6161	5962-8962101	OP AMP, HIGH-SPEED
LM6164	5962-8962401	OP AMP, HIGH-SPEED
LM6165	5962-8962501	OP AMP, HIGH-SPEED
AD625	5962-8771901	INSTRUMENTATION AMPLIFIER, PROGRAMMABLE GAIN
OP64A	5962-9053501	OP AMP, HIGH-SPEED, WIDE-BANDWITH
733	8418501	VIDEO AMPLIFIER, TWO-STAGE, DIFFEREN TIAL INPUT, DIFFERENTIAL OUTPUT
OP-77B	5962-8773801	OP AMP, LOW-OFFSET
OP-77A	5962-8773802	OP AMP, LOW-OFFSET
OP-97	5962-8954401	OP AMP, LOW-POWER, HIGH PRECISION
Comparators 10/		
CMP-01	5962-8987101	VOLT. COMPARATOR, FAST PRECISION
CMP04B	5962-8990403	VOLT. COMPARATOR, QUAD, LOW-POWER PRECISION
LT1016	5962-8684501	VOLT. COMPARATOR, HIGH-SPEED
LT1017	5962-8950401	VOLT. COMPARATOR, DUAL
LT1018	5962-8950402	VOLT. COMPARATOR, DUAL
LM111	5962-8687701	VOLT. COMPARATOR/BUFFER, PRECISION
LM119	8601401	VOLT. COMPARATOR, DUAL HIGH-SPEED
LT119A	8601402	VOLT. COMPARATOR, DUAL HIGH-SPEED
LM139	7700801	VOLT. COMPARATOR, QUAD
LM139A	5962-8773901	VOLT. COMPARATOR, QUAD
LM160	5962-8767401	VOLT. COMPARATOR, DIFFERENTIAL, HIGH-SPEED
LM161	5962-8757203	VOLT. COMPARATOR, DIFFERENTIAL, HIGH-SPEED
TLC372	5962-8765801	VOLT. COMPARATOR, DUAL DIFFERENTIAL
TLC374	5962-8765901	VOLT. COMPARATOR, QUAD DIFFERENTIAL
CMP404B	5962-8990402	VOLT. COMPARATOR, QUAD, LOW-POWER PRECISION
CMP404A	5962-8990401	VOLT. COMPARATOR, QUAD, LOW-POWER PRECISION
TL514	5962-8687801	VOLT. COMPARATOR, DUAL DIFFERENTIAL
521	5962-8751601	VOLT. COMPARATOR, DUAL DIFFERENTIAL
527	5962-8757201	VOLT. COMPARATOR, DIFFERENTIAL, HIGH-SPEED, WITH EMITTER-FOLLOWER INPUT
529	5962-8757202	VOLT. COMPARATOR, DIFFERENTIAL, HIGH-SPEED
54LS682	8415101	MAGNITUDE COMPARATOR, 8-BIT
54LS684	8415201	MAGNITUDE COMPARATOR, 8-BIT
54LS688	8415301	MAGNITUDE COMPARATOR, 8-BIT, WITH OUTPUT ENABLE
6685	8600803	VOLT. COMPARATOR, HIGH-SPEED, OPEN-EMITTER OUTPUT
AM6687	7801902	VOLT. COMPARATOR, DUAL
685	8600801	VOLT. COMPARATOR, HIGH-SPEED, OPEN-EMITTER OUTPUT
685	8600802	VOLT. COMPARATOR, HIGH-SPEED, OPEN-EMITTER OUTPUT
AM686	7801801	VOLT. COMPARATOR, HIGH-SPEED
AM687	7801901	VOLT. COMPARATOR, DUAL
760	5962-8754501	VOLT. COMPARATOR, DIFFERENTIAL, HIGH-SPEED
96685	8600804	VOLT. COMPARATOR, HIGH-SPEED, OPEN-EMITTER OUTPUT
AD96687	7801903	VOLT. COMPARATOR, DUAL
Regulators 12/		
(SEE DWG)	5962-8864601	VOLT. REGULATOR, ADJ., POSITIVE, 2.0A
(SEE DWG)	5962-8952101	VOLT. REGULATOR, ADJ., POSITIVE, 5.0A
(SEE DWG)	5962-8952001	VOLTAGE REGULATOR, ADJ., POSITIVE
(SEE DWG)	5962-8998101	VOLT. REGULATOR, ADJ., POSITIVE, 1.0A
LT1033	5962-8774101	VOLT. REGULATOR, ADJ., NEGATIVE, 3.0A
LM104	5962-8760501	VOLT. REGULATOR, ADJ., NEGATIVE
LM109	5962-8777401	VOLT. REGULATOR, FIXED, POSITIVE, 5V
LM117H	7703401	VOLT. REGULATOR, ADJ., POSITIVE
LM117HV	7703402	VOLT. REGULATOR, ADJ., POSITIVE, HIGH VOLTAGE
LT117AHV	7703407	VOLT. REGULATOR, ADJ., POSITIVE, HIGH VOLTAGE
LT117A	7703405	VOLT. REGULATOR, ADJ., POSITIVE
LM120H-05	7704001	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120H-12	7704003	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120H-24	11504	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120K-24	11508	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
LM120H-24	7704005	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
SG123	5962-8777501	VOLT. REGULATOR, FIXED, POSITIVE, 5V
LM137HV	7703404	VOLT. REGULATOR, ADJ., NEGATIVE, HIGH VOLTAGE
LM137H	7703403	VOLT. REGULATOR, ADJ., NEGATIVE
LT137AHV	7703408	VOLT. REGULATOR, ADJ., NEGATIVE, HIGH VOLTAGE
LT137A	7703406	VOLT. REGULATOR, ADJ., NEGATIVE
LM140H-24	10705	VOLT. REGULATOR, FIXED, POSITIVE
LM150A	5962-8767502	VOLT. REGULATOR, ADJ., POSITIVE, 3.0A
LM150	5962-8767501	VOLT. REGULATOR, ADJ., POSITIVE, 3.0A
1524	7802801	PULSE WIDTH MODULATOR, REGULATING
1524A	5962-8764502	PULSE WIDTH MODULATOR, REGULATING
1524B	5962-8764501	PULSE WIDTH MODULATOR, REGULATING
1525A	5962-8951101	PULSE WIDTH MODULATOR, REGULATING
UC1525A	5962-8951103	PULSE WIDTH MODULATOR, REGULATING
1526	8551501	PULSE WIDTH MODULATOR, REGULATING
1526A	8551502	PULSE WIDTH MODULATOR, REGULATING
1527A	5962-8951102	PULSE WIDTH MODULATOR, REGULATING
UC1527A	5962-8951104	PULSE WIDTH MODULATOR, REGULATING
1532	5962-8777001	VOLT. REGULATOR
1568	5962-8876301	VOLT. REGULATOR, DUAL, POLARITY TRACKING
1568	5962-8876302	VOLT. REGULATOR, DUAL, POLARITY TRACKING, WITH BALANCE ADJUST
LM1578	5962-8958601	VOLT. REGULATOR, SWITCHING
1825	5962-8768101	PULSE WIDTH MODULATOR CONTROLLER, HIGH SPEED
1834	5962-8774201	VOLT. REGULATOR, HIGH EFFICIENCY
1842	5962-8670401	PULSE WIDTH MODULATOR CONTROLLER, OFF-LINE CURRENT MODE
1843	5962-8670402	PULSE WIDTH MODULATOR CONTROLLER, OFF-LINE CURRENT MODE
1844	5962-8670403	PULSE WIDTH MODULATOR CONTROLLER, OFF-LINE CURRENT MODE
1845	5962-8670404	PULSE WIDTH MODULATOR CONTROLLER, OFF-LINE CURRENT MODE
UC1846	5962-8680601	PULSE WIDTH MODULATOR CONTROLLER,

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Regulators 12/ (continued)		
		CURRENT-MODE
1847	70202	PULSE WIDTH MODULATOR, CURRENT MODE
1847	5962-8680602	PULSE WIDTH MODULATOR, CURRENT MODE
LM2940-5.0	5962-8958701	VOLT. REGULATOR, FIXED, POSITIVE, LOW DROPOUT, 5V, 1.0A
3517	5962-8764301	MODULATOR/DEMODULATOR, CONTINOUSLY VARIABLE SLOPE DELTA
4194	7705401	VOLT. REGULATOR, DUAL TRACKING
431	8410901	VOLT. REFERENCE, PROGRAMMABLE
5560	5962-8672201	POWER SUPPLY CONTROL CIRCUIT, SWITCHED-MODE
7805A	5962-8778201	VOLT. REGULATOR, FIXED, POSITIVE, 1.0A
7806A	5962-8962601	VOLT. REGULATOR, FIXED, POSITIVE, 6V, 1.0A
7808A	5962-8962801	VOLT. REGULATOR, FIXED, POSITIVE, 8V, 1.0A
7812A	5962-8777601	VOLT. REGULATOR, FIXED, POSITIVE, 1.0A
7815A	5962-8855301	VOLT. REGULATOR, FIXED, POSITIVE, 15V, 1.0A
78M24	10705	VOLT. REGULATOR, FIXED, POSITIVE
7824A	5962-8855401	VOLT. REGULATOR, FIXED, POSITIVE, 24V, 1.0 A
78S40	5962-8876101	VOLTAGE REGULATOR, SWITCHING SUBSYSTEM
79M24	11504	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
7924	11508	VOLT. REGULATOR, FIXED, NEGATIVE, 0.5A, 1.0A
7924A	5962-8874901	VOLT. REGULATOR, FIXED, NEGATIVE, 24V, 1.0A
Drivers/receivers 13/		
MOH0268D	5962-8858101	BUS DRIVER, HEX NTDS
MOH0272C	5962-8858201	LINE RECEIVER, HEX NTDS
10H515	5962-8750101	LINE RECEIVER, QUAD DIFFERENTIAL
10516	7800901	LINE RECEIVER, TRIPLE DIFFERENTIAL, WITH COMMON RESET
10H516	5962-8750201	LINE RECEIVER, TRIPLE
LT1080	5962-8766601	BUS TRANSCEIVER, DUAL RS232, WITH SHUTDOWN
LT1081	5962-8766602	BUS TRANSCEIVER, DUAL RS232
MOF1305D	5962-8858301	NTDS FAST DRIVER, HEX
NHI-1500	5962-8757905	BUS TRANSCEIVER, DUAL CHANNEL, LOW-POWER
NHI-1529	5962-8952203	BUS TRANSCEIVER, DUAL CHANNEL, MIL-STD-1553, 5V
FC1553623	5962-8757906	BUS TRANSCEIVER, DUAL CHANNEL, LOW-POWER
MOR1623K	5962-8858401	RECEIVER, QUAD NTDS FAST/ANEW
SG1626	5962-8871601	DRIVER, DUAL HIGH-SPEED INVERTING
DS1631	5962-8863101	PERIPHERAL DRIVER, DUAL AND, CMOS COMPATIBLE, WITH OPEN COLLECTOR OUTPUTS
DS1634	5962-8982101	PERIPHERAL DRIVER, DUAL NOR, CMOS-COMPATIBLE, OPEN-COLLECTOR OUTPUTS
DS16F95	5962-8961501	BUS TRANSCEIVER, DIFFERENTIAL RS-485
UC1706	5962-8961101	OUTPUT DRIVER, DUAL
UC1707	5962-8761901	POWER DRIVER, DUAL-CHANNEL
ARX2411	5962-8757903	BUS TRANSCEIVER, DUAL CHANNEL, LOW-POWER
2453	5962-8952202	BUS TRANSCEIVER, DUAL CHANNEL, MIL-STD-1553, 5V
26LS29	5962-8767001	LINE DRIVER, QUAD RS423, WITH THREE-STATE OUTPUTS
26LS30	5962-8672101	LINE DRIVER, DUAL DIFFERENTIAL RS-422 PARTY LINE/QUAD SINGLE ENDED RS-423
26LS31	7802301	LINE DRIVER, QUAD DIFFERENTIAL, HIGH SPEED
26LS32	7802001	LINE RECEIVER, QUAD DIFFERENTIAL
26LS32B	5962-8761601	LINE RECEIVER, QUAD DIFFERENTIAL
26LS33	7802002	LINE RECEIVER, QUAD DIFFERENTIAL
26LS34	5962-8759601	LINE RECEIVER, QUAD DIFFERENTIAL
2681	5962-8856602	RECEIVER/TRANSMITTER, DUAL ASYNCHRO NOUS, WITH 7-BIT INPUT AND 8-BIT OUTPUT PORTS
2681	5962-8856601	RECEIVER/TRANSMITTER, DUAL ASYNCHRONOUS
2803	5962-8605801	TRANSISTOR ARRAY, DARLINGTON, EIGHT-GATE
2907	5962-8770701	BUS TRANSCEIVER, QUAD, WITH INTERFACE LOGIC AND 2.0V INPUT RECEIVER THRESHOLD
2917A	5962-8671401	BUS TRANSCEIVER, QUAD, WITH INTERFACE LOGIC AND THREE-STATE OUTPUTS
2947	5962-8672301	BUS TRANSCEIVER, OCTAL BIDIRECTIONAL, WITH NONINVERTING THREE-STATE OUTPUTS
2952A	5962-8777201	REGISTERED TRANSCEIVER, BIDIRECTIONAL I/O PORTS, NONINVERTING, 8-BIT
2953A	5962-8777202	REGISTERED TRANSCEIVER, BIDIREC TIONAL I/O PORTS, NONINVERTING, 8-BIT
2965	5962-8670701	DYNAMIC MEMORY DRIVER, OCTAL, WITH THREE-STATE OUTPUTS AND INVERTING DRIVERS
2966	5962-8670702	DYNAMIC MEMORY DRIVER, OCTAL, WITH THREE-STATE OUTPUTS AND NONINVERTING DRIVERS
UDS2981	5962-8851901	SOURCE DRIVER, HIGH CURRENT
UDS2983	5962-8851902	SOURCE DRIVER, HIGH CURRENT
AM29833A	5962-9051301	BUS TRANSCEIVER, PARITY, WITH REGISTER OPTION
29C853	5962-8857301	BUS TRANSCEIVER, HIGH PERFORMANCE CMOS PARITY, WITH PARITY LOGIC DEFAULT
AM29853A	5962-9051302	BUS TRANSCEIVER, PARITY, WITH LATCH OPTION
29C855	5962-8857302	BUS TRANSCEIVER, HIGH PERFORMANCE CMOS PARITY
AM29855A	5962-9051303	BUS TRANSCEIVER, PARITY
29C861	5962-8770401	BUS TRANSCEIVER, 10-BIT, HIGH PERFORMANCE
29861A	5962-8860401	BUS TRANSCEIVER, 10-BIT BIDIRECTIONAL, WITH THREE-STATE OUTPUTS
29C863	5962-8770402	BUS TRANSCEIVER, 9-BIT, HIGH PERFORMANCE
29863A	5962-8860402	BUS TRANSCEIVER, 9-BIT BIDIRECTIONAL, WITH THREE-STATE OUTPUTS
29C961	5962-8770403	BUS TRANSCEIVER, 10-BIT, HIGH PERFORMANCE
29C963	5962-8770404	BUS TRANSCEIVER, 9-BIT, HIGH PERFORMANCE
RM3182	5962-8687901	LINE DRIVER, ARINC BUS INTERFACE
3231	5962-8959201	DRIVER-RECEIVER, SINGLE CHANNEL
3231	5962-8959203	DRIVER-RECEIVER, SINGLE CHANNEL
3232	5962-8959202	DRIVER-RECEIVER, SINGLE CHANNEL
3232	5962-8959204	DRIVER-RECEIVER, SINGLE CHANNEL
ARX3411	5962-8757904	BUS TRANSCEIVER, DUAL CHANNEL, LOW-POWER
TSC426	5962-8850301	DRIVER, DUAL POWER MOSFET
TSC427	5962-8850302	DRIVER, DUAL POWER MOSFET
TSC428	5962-8850303	DRIVER, DUAL POWER MOSFET
TSC429	5962-8877001	DRIVER, INVERTING POWER MOSFET
UH-432	5962-8960401	POWER DRIVER, NOR, QUAD 2-INPUT, 40V

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MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Drivers/receivers 13/		
UH-432-1	5962-8960402	POWER DRIVER, NOR, QUAD 2-INPUT, 70V
TSC4420	5962-8877003	DRIVER, NONINVERTING POWER MOSFET
TSC4423	5962-8850304	DRIVER, DUAL HIGH-POWER MOSFET
TSC4424	5962-8850305	DRIVER, DUAL HIGH-POWER MOSFET
TSC4425	5962-8850306	DRIVER, DUAL HIGH-POWER MOSFET
TSC4426	5962-8850307	DRIVER, DUAL POWER MOSFET, WITH LATCH PROOF OUTPUTS FOR INDUCTIVE LOADS
TSC4427	5962-8850308	DRIVER, DUAL POWER MOSFET, WITH LATCH PROOF OUTPUTS FOR INDUCTIVE LOADS
TSC4428	5962-8850309	DRIVER, DUAL POWER MOSFET, WITH LATCH PROOF OUTPUTS FOR INDUCTIVE LOADS
TSC4429	5962-8877002	DRIVER, INVERTING POWER MOSFET
UH502	5962-8856401	OR DRIVER, QUAD 2-INPUT, HIGH-OUTPUT VOLTAGE AND CURRENT
UH503	5962-8855101	POWER DRIVER, OR, QUAD 2-INPUT
UH-507	5962-8986701	NAND DRIVER, QUAD, HIGH-OUTPUT VOLTAGE AND CURRENT
UH-508	8550001	POWER DRIVER, AND, QUAD 2-INPUT
UH-532	5962-8960403	POWER DRIVER, NOR, QUAD 2-INPUT, 100V
54ALS1245A	5962-8873701	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54ACT240	5962-8775901	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54F242	34801	BUS TRANSCEIVER, QUAD INVERTING, WITH THREE-STATE OUTPUTS
54ALS242B	38506	BUS TRANSCEIVER, QUAD, WITH THREE-STATE OUTPUTS
54HC242	65501	BUS TRANSCEIVER, QUAD INVERTING, WITH THREE-STATE OUTPUTS
54LS242	8002001	BUS TRANSCEIVER, QUAD INVERTING, WITH THREE-STATE OUTPUTS
54ALS242B	8401301	BUS TRANSCEIVER, QUAD, WITH THREE-STATE OUTPUTS
54ALS243A	38507	BUS TRANSCEIVER, QUAD, WITH THREE-STATE OUTPUTS
54HC243	65502	BUS TRANSCEIVER, QUAD BIDIRECTIONAL, WITH THREE-STATE OUTPUTS
54ALS243A	8401302	BUS TRANSCEIVER, QUAD, WITH THREE-STATE OUTPUTS
54HC243	8409001	BUS TRANSCEIVER, QUAD BIDIRECTIONAL, WITH THREE-STATE OUTPUTS
54LS243	8002002	BUS TRANSCEIVER, QUAD NONINVERTING, WITH THREE-STATE OUTPUTS
54F243	5962-8683401	BUS TRANSCEIVER, QUAD NONINVERTING, WITH THREE-STATE OUTPUTS
54BCT244	5962-9062501M	LINE DRIVER, OCTAL, WITH THREE-STATE OUTPUTS
54ALS245A	8403001	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54HCT245	8550601	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54HC245	8408501	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54F245	8551101	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54LS245	8002101	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54FCT245	5962-8762901	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54ACT245	5962-8766301	BUS TRANSCEIVER, OCTAL BIDIRECTIONAL, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AC245	5962-8775801	BUS TRANSCEIVER, OCTAL BIDIRECTIONAL, WITH THREE-STATE INPUTS/OUTPUTS
54FCT245A	5962-8762902	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54BCT245	5962-9051401M	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54F30245	5962-8972201	TRANSMISSION LINE/BACKPLANE TRANSCEIVER, OCTAL 30-OHM, NONINVERTING
54HC366	65707	BUFFER/DRIVER, HEX, INVERTING, WITH COMMON ENABLES AND THREE-STATE OUTPUTS
54HC366	5962-8682801	BUFFER/DRIVER, HEX, INVERTING, WITH COMMON ENABLES AND THREE-STATE OUTPUTS
54BCT520A	5962-9075001M	BUS TRANSCEIVER, OCTAL, WITH INVERTING OUTPUTS
54AC540	75710	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54AC540	5962-8769501	BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54BCT540	5962-9074801M	LINE DRIVER, OCTAL, WITH INVERTING THREE-STATE OUTPUTS
54BCT541	5962-9074901M	LINE DRIVER, OCTAL WITH NONINVERTING THREE-STATE OUTPUTS
54FCT543A	5962-8973002	TRANSCEIVER, 8-BIT OCTAL LATCHED, NONINVERTING, WITH TS OUTPUTS, TTL-COMPATIBLE
54FCT543	5962-8973001	TRANSCEIVER, 8-BIT OCTAL LATCHED, NONINVERTING, WITH TS OUTPUTS, TTL-COMPATIBLE
54F544	5962-8955501	BUS TRANSCEIVER, OCTAL, WITH REGISTERS
54BCT620A	5962-9075001M	BUS TRANSCEIVER, OCTAL, WITH INVERTING OUTPUTS
54HC623	5962-8998901	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54BCT623	5962-9094001M	BUS TRANCEIVER, OCTAL
54ALS640A	38501	BUS TRANSCEIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54HC640	65506	BUS TRANSCEIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54LS640	8416101	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54HC640	5962-8780901	BUS TRANSCEIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54ALS640A	5962-8872701	BUS TRANSCEIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54FCT640A	5962-8865402	BUS TRANSCEIVER, OCTAL, BIDIRECTIONAL INVERTING, TTL-COMPATIBLE
54FCT640	5962-8865401	BUS TRANSCEIVER, OCTAL, BIDIRECTIONAL INVERTING, TTL-COMPATIBLE
54HCT640	5962-8974001	BUS TRANSCEIVER, OCTAL, INVERTING, 3-STATE TTL COMPATIBLE INPUTS
54FCT640	5962-9075201M	BUS TRANSCEIVER, OCTAL, INVERTING OUTPUTS
54BCT640	5962-9075201M	BUS TRANSCEIVER, OCTAL, INVERTING OUTPUTS
54ALS641	38502	BUS TRANSCEIVER, OCTAL, WITH OPEN-COLLECTOR OUTPUTS
54ALS642	38503	BUS TRANSCEIVER, OCTAL,

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Drivers/receivers 13/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		WITH OPEN-COLLECTOR OUTPUTS
54LS642	5962-8974801	BUS TRANSCEIVER, OCTAL, INVERTING, WITH OPEN-COLLECTOR OUTPUTS
54ALS643	38504	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54HC643	65507	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54ALS645A	8403301	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54FCT645A	5962-8865302	BUS TRANSCEIVER, OCTAL, NONINVERTING
54FCT645	5962-8865301	BUS TRANSCEIVER, 8-BIT NONINVERTING
54LS646	32804	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54HC646	65508	BUS TRANSCEIVER/REGISTER, OCTAL, WITH THREE-STATE OUTPUTS
54HC646	5962-8688501	BUS TRANSCEIVER/REGISTER, OCTAL, WITH THREE-STATE OUTPUTS
54FCT646	5962-8877501	BUS TRANSCEIVER/RECEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54AC646	5962-8968201	TRANSCEIVER/REGISTER, OCTAL, WITH THREE-STATE OUTPUTS
54F646	5962-8975401	BUS TRANSCEIVER/REGISTER
54ALS646	5962-8995601	BUS TRANSCEIVER/REGISTER, OCTAL NONINVERTING, WITH THREE-STATE OUTPUTS
54HC648	65509	BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54LS648	32805	BUS TRANSCEIVER, OCTAL, WITH REGISTERS
54ALS648	5962-9052301	BUS TRANSCEIVER/REGISTER, OCTAL INVERTING, WITH THREE-STATE OUTPUTS
54F648	5962-8975402	BUS TRANSCEIVER/REGISTER, INVERTED
54ALS652	5962-8867301	BUS TRANSCEIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54F652	5962-8955801	TRANSCEIVER/REGISTER, OCTAL, WITH THREE-STATE OUTPUTS
54ALS653	5962-8968701	BUS TRANSCEIVER/REGISTER, OCTAL INVERTING, WITH 3-STATE AND OPEN-COLLECTOR OUTPU
54F657	5962-8953501	BUS TRANSCEIVER, OCTAL BIDIRECTIONAL, WITH 8-BIT PARITY GENERATOR/CHECKER
54F776	5962-8870701	PI-BUS TRANSCEIVER, OCTAL, BIDIRECTIONAL LATCHED
54ALS804	5962-8869301	BUFFER/DRIVER, NAND, HEX 2-INPUT
54ALS805A	5962-8869401	BUFFER/DRIVER, NOR, HEX 2-INPUT
54ALS808	5962-8869501	BUFFER/DRIVER, AND, HEX 2-INPUT
54FCT827A	5962-8950601	BUS DRIVER, 10-BIT, NONINVERTING
54FCT827B	5962-8950602	BUS DRIVER, 10-BIT, NONINVERTING
54ALS832	8414501	BUFFER/DRIVER, OR, HEX 2-INPUT
54FCT833A	5962-8973101	BUS TRANSCEIVER, 8-BIT, WITH PARITY, TTL-COMPATIBLE
54FCT833B	5962-8973102	BUS TRANSCEIVER, 8-BIT, WITH PARITY, TTL-COMPATIBLE
54FCT861B	5962-8953302	BUS TRANSCEIVER, 10-BIT NONINVERTING, TTL-COMPATIBLE
54FCT861A	5962-8953301	BUS TRANSCEIVER, 10-BIT NONINVERTING, TTL-COMPATIBLE
54FCT863A	5962-8866101	BUS TRANSCEIVER, 9-BIT, NONINVERTING
54FCT863B	5962-8866102	BUS TRANSCEIVER, 9-BIT, NONINVERTING
55110A	5962-8754701	LINE DRIVER, DUAL
55116	5962-8851101	LINE TRANSCEIVER, DIFFERENTIAL, WITH THREE-STATE RECEIVER OUTPUT CIRCUITRY
55117	5962-8851102	LINE TRANSCEIVER, DIFFERENTIAL, WITH THREE-STATE RECEIVER OUTPUT CIRCUITRY
55118	5962-8851103	LINE TRANSCEIVER, DIFFERENTIAL, WITH THREE-STATE RECEIVER OUTPUT CIRCUITRY
55119	5962-8851104	LINE TRANSCEIVER, DIFFERENTIAL, WITH THREE-STATE RECEIVER OUTPUT CIRCUITRY
55121	5962-8776901	LINE DRIVER, DUAL
55ALS160	5962-8968001	BUS TRANSCEIVER, OCTAL, GENERAL PURPOSE INTERFACE
55ALS161	5962-8968101	BUS TRANSCEIVER, OCTAL GENERAL PURPOSE INTERFACE
55188	5962-8688901	LINE DRIVER, QUAD
55189A	5962-8688802	LINE RECEIVER, QUAD
55ALS194	5962-8864801	LINE DRIVER, QUAD DIFFERENTIAL, WITH THREE-STATE OUTPUTS
55ALS195	5962-8864901	LINE RECEIVER, QUAD DIFFERENTIAL, WITH THREE-STATE OUTPUTS
55452	7704901	PERIPHERAL DRIVER, DUAL NAND
55454	5962-8871501	PERIPHERAL DRIVER, DUAL NOR
55464	12910	PERIPHERAL DRIVER, DUAL NOR
55464	5962-8871502	PERIPHERAL DRIVER, DUAL NOR
55474	5962-8871503	PERIPHERAL DRIVER, DUAL NOR
55500	8601801	DISPLAY DRIVER, AC PLASMA (LINE SELECT)
55501	8601802	DISPLAY DRIVER, AC PLASMA (MATRIX-ADDRESSABLE)
UCS-5800	5962-8764002	DRIVER, 4-BIT LATCHED
UCS-5801	5962-8764001	DRIVER, 8-BIT LATCHED
UCS5822	5962-8764101	LATCHED DRIVER, 8-BIT, SERIAL-INPUT, 100V OUTPUT
UT63M105	5962-8864401	BUS TRANSCEIVER
UT63M107	5962-8864402	BUS TRANSCEIVER
UT63M115	5962-8864403	BUS TRANSCEIVER
UT63M117	5962-8864404	BUS TRANSCEIVER
UT63M125	5962-8864405	BUS TRANSCEIVER, DUAL
UT63M127	5962-8864406	BUS TRANSCEIVER, DUAL
UT63M135	5962-8864407	BUS TRANSCEIVER, DUAL
UT63M137	5962-8864408	BUS TRANSCEIVER, DUAL
68681	5962-8856603	RECEIVER/TRANSMITTER, DUAL ASYNCHRONOUS
68C681	5962-8953203	RECEIVER/TRANSMITTER, DUAL ASYNCHRONOUS
ICL7667	5962-8766001	DRIVER, MOSFET, DUAL POWER
78C120	5962-8963001	LINE DRIVER, DUAL DIFFERENTIAL, CMOS-COMPATIBLE
7831	10406	LINE DRIVER/RECEIVER, DUAL DIFFERENTIAL, W/OUTPUT DIODE CLAMPING
7832	10407	LINE DRIVER/RECEIVER, DUAL DIFFERENTIAL
82C82	8406701	BUS DRIVER, LATCHING, OCTAL
82C83	8406702	BUS DRIVER, LATCHING INVERTING, OCTAL
82C84A	8406801	CLOCK GENERATOR/DRIVER, 25 MHZ
8286	5962-8686801	BUS TRANSCEIVER, OCTAL, NONINVERTING
82C86H-5	5962-8757701	BUS TRANSCEIVER, OCTAL
8287	5962-8686802	BUS TRANSCEIVER, OCTAL, INVERTING
82C87H-5	5962-8757702	BUS TRANSCEIVER, OCTAL, INVERTING
88C681	5962-8953201	BUS TRANSCEIVER, DUAL ASYNCHRONOUS
88C681	5962-8953202	BUS TRANSCEIVER, DUAL ASYNCHRONOUS
96F173	5962-9076602M	LINE RECEIVER, QUAD DIFFERENTIAL, RS-485
96F175	5962-9076601M	LINE RECEIVER, QUAD DIFFERENTIAL, RS-485
9636A	5962-8752301	LINE RECEIVER, DUAL DIFFERENTIAL, PROGRAMMABLE SLEW RATE
9637A	5962-8752401	LINE RECEIVER, DUAL DIFFERENTIAL
9638	5962-8754601	LINE DRIVER, DUAL DIFFERENTIAL, HIGH-SPEED

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Timers 14/		
555LV	14905	TIMER, LOW-POWER PRECISION
TLC555	14901	TIMER, PRECISION
TLC555	5962-8950301	TIMER, PRECISION
TLC556	14902	TIMER, DUAL PRECISION
TLC556	5962-8950302	TIMER, DUAL PRECISION
7555	14903	TIMER, LOW-POWER PRECISION
7555	5962-8950303	TIMER, LOW-POWER PRECISION
7556	14904	TIMER, DUAL, LOW-POWER PRECISION
7556	5962-8950304	TIMER, DUAL, LOW-POWER PRECISION
55327	13003	MEMORY CORE DRIVER, QUAD
D/A converters 16/		
(SEE DWG)	5962-8877801	D/A CONVERTER, 12-BIT BUFFERED MULTIPLYING
(SEE DWG)	5962-8877802	D/A CONVERTER, 12-BIT BUFFERED MULTIPLYING
DAC-HPB-1	5962-8953102H	D/A CONVERTER, 16-BIT, ±10V OUTPUT
DAC-HPB	5962-8953101H	D/A CONVERTER, 16-BIT, 0 TO +10V AND ±5V OUTPUT
DAC-HKB	5962-8952801	D/A CONVERTER, 12-BIT BINARY INPUT CODE
DAC08	5962-8993201	D/A CONVERTER, 8-BIT, HIGH-SPEED MULTIPLYING
BT102	5962-8965301	D/A CONVERTER, 8-BIT VIDEO
DAC-HKB-2	5962-8952802	D/A CONVERTER, 12-BIT TWOS COMPLEMENT
RGBDAC3808H	5962-8950901	D/A CONVERTER, 8-BIT, TRIPLE, COLOR-MAPPED VIDEO
BT458	5962-8992801	D/A CONVERTER, TRIPLE 8-BIT, WITH 256X24 COLOR PALETTE
AD558T	14401	D/A CONVERTER, 8-BIT, WITH FULL MICROPROCESSOR INTERFACE
AD558T	5962-8778902	D/A CONVERTER, 8-BIT, WITH FULL MICROPROCESSOR INTERFACE
562	8100801	D/A CONVERTER, 12-BIT, EXTERNAL REFERENCE, 2 MA, FS
563	12102	D/A CONVERTER, 12-BIT, INTERNAL REFERENCE, 2 MA FS
563	8100802	D/A CONVERTER, 12-BIT, INTERNAL REFERENCE, 2 MA FS
566	12104	D/A CONVERTER, 12-BIT
AD567S	5962-8780101	D/A CONVERTER, 12-BIT CURRENT OUTPUT, MICROPROCESSOR-COMPATIBLE
AD667S	5962-8865901	D/A CONVERTER, 12-BIT, VOLTAGE OUTPUT, MICROPROCESSOR COMPATIBLE
DAC703	5962-8856301	D/A CONVERTER, 16-BIT
7226	5962-8780201	D/A CONVERTER, QUAD 8-BIT, WITH OUTPUT AMPLIFIERS
7228T	5962-8866301	D/A CONVERTER, 8-BIT, VOLTAGE-MODE
7228U	5962-8866302	D/A CONVERTER, 8-BIT, VOLTAGE-MODE
7523	12701	D/A CONVERTER, 8-BIT
7524	5962-8770001	D/A CONVERTER, 8-BIT MULTIPLYING BUFFERED, WITH .5 LSB
7524	5962-8770003	D/A CONVERTER, 8-BIT MULTIPLYING BUFFERED, WITH .125 LSB
7524	5962-8770002	D/A CONVERTER, 8-BIT, MULTIPLYING BUFFERED, WITH .25 LSB
7528	5962-8770101	D/A CONVERTER, DUAL 8-BIT BUFFERED, ±4 LSBS OF GAIN ERROR
7528	5962-8770102	D/A CONVERTER, DUAL 8-BIT BUFFERED, ±2 LSBS OF GAIN ERROR
7528	5962-8770103	D/A CONVERTER, DUAL 8-BIT BUFFERED, ±1 LSBS OF GAIN ERROR
7537S	5962-8776301	D/A CONVERTER, DUAL 12-BIT , 8 + 4 LOADING STRUCTURE, 11-BIT LINEARITY
7537T	5962-8776302	D/A CONVERTER, DUAL 12-BIT, 8 + 4 LOADING STRUCTURE, 12-BIT LINEARITY
7537U	5962-8776303	D/A CONVERTER, DUAL 12-BIT, 8 + 4 LOADING STRUCTURE, 12-BIT LINEARITY
7541	12704	D/A CONVERTER, 12-BIT MULTIPLYING
AD7541AS	5962-8948101	D/A CONVERTER, 12-BIT MULTIPLYING
AD7541AT	5962-8948102	D/A CONVERTER, 12-BIT MULTIPLYING
PM7541AB	5962-8948103	D/A CONVERTER, 12-BIT MULTIPLYING
PM7541AA	5962-8948104	D/A CONVERTER, 12-BIT MULTIPLYING
7545S	5962-8770201	D/A CONVERTER, 12-BIT BUFFERED
7545G	5962-8770204	D/A CONVERTER, 12-BIT BUFFERED
7545A	5962-8770206	D/A CONVERTER, 12-BIT BUFFERED
7545T	5962-8770202	D/A CONVERTER, 12-BIT BUFFERED
7545B	5962-8770205	D/A CONVERTER, 12-BIT BUFFERED
7545U	5962-8770203	D/A CONVERTER, 12-BIT BUFFERED
7547U	5962-8965703	D/A CONVERTER, 12-BIT DUAL
7547S	5962-8965701	D/A CONVERTER, 12-BIT DUAL
7549T	5962-8876502	D/A CONVERTER, DUAL 12-BIT, ±0.5 LSB
7549S	5962-8876501	D/A CONVERTER, DUAL 12-BIT, ±1.0 LSB
AD767	5962-8961701	D/A CONVERTER, 12-BIT
AD7846	5962-8969701	D/A CONVERTER, 16-BIT VOLTAGE OUTPUT
DAC8221A	5962-8967101	D/A CONVERTER, DUAL 12-BIT BUFFERED MULTIPLYING
DAC8222A	5962-8967201	D/A CONVERTER, DUAL 12-BIT DOUBLE-BUFFERED MULTIPLYING
DAC-8408B	5962-8967802	D/A CONVERTER, QUAD 8-BIT MULTIPLYING, WITH MEMORY
DAC-8408A	5962-8967801	D/A CONVERTER, QUAD 8-BIT MULTIPLYING, WITH MEMORY
DAC87	13703	D/A CONVERTER, 12-BIT, RANGE-PROGRAM MABLE VOLTAGE OUTPUT
DAC87	13701	D/A CONVERTER, 12-BIT, RANGE-PROGRAM MABLE VOLTAGE OUTPUT
DAC87	8300201	D/A CONVERTER, 12-BIT, RANGE-PROGRAM MABLE VOLTAGE OUTPUT
HS9324	5962-8862901	D/A CONVERTER, QUAD 12-BIT
A/D converters 17/		
ADC-HZ	5962-8850802	A/D CONVERTER, 12-BIT
ADC-HX	5962-8850801	A/D CONVERTER, 12-BIT
ADC00300	5962-8854201	A/D CONVERTER, 12-BIT, TRACK/HOLD
TDC1046	5962-8778601	A/D CONVERTER, 6-BIT FLASH
TDC1048	5962-8760001	A/D CONVERTER, 8-BIT
TDC1049	5962-8853201	A/D CONVERTER, 9-BIT
HS1068	5962-8877601	A/D CONVERTER, 8-BIT FLASH
CS5012	5962-8967901	A/D CONVERTER, 12-BIT
CS5014-S	5962-8967401	A/D CONVERTER, 14-BIT, 14.25 µS
CS5014-T	5962-8967402	A/D CONVERTER, 14-BIT, 14.25 µS
CS5016-S	5962-8967601	A/D CONVERTER, 16-BIT, 16.25 µS
CS5016-T	5962-8967602	A/D CONVERTER, 16-BIT, 16.25 µs
5200	12001	A/D CONVERTER, 12-BIT, 0V TO -10V INTERNAL REFERENCE
5201	12003	A/D CONVERTER, 12-BIT, -5V TO +5V INTERNAL REFERENCE
5202	12005	A/D CONVERTER, 12-BIT, -10V TO +10V INTERNAL REFERENCE
5203	12002	A/D CONVERTER, 12-BIT, 0V TO -10V EXTERNAL REFERENCE
5204	12004	A/D CONVERTER, 12-BIT, -5V TO +5V EXTERNAL REFERENCE
5205	12006	A/D CONVERTER, 12-BIT, -10V TO +10V EXTERNAL REFERENCE
5206	12007	A/D CONVERTER, 12-BIT, 0V TO 10V INTERNAL REFERENCE
5207	12008	A/D CONVERTER, 12-BIT
5210	12009	A/D CONVERTER, 12-BIT, HIGH-SPEED, 0V TO -10V INTERNAL REFERENCE
5211	12011	A/D CONVERTER, 12-BIT, HIGH-SPEED,

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

A/D converters 17/ (continued)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
		-5V TO +5V INTERNAL REFERENCE
5212	12013	A/D CONVERTER, 12-BIT, HIGH-SPEED, -10V TO +10V INTERNAL REFERENCE
5213	12010	A/D CONVERTER, 12-BIT, HIGH-SPEED, 0V TO -10V EXTERNAL REFERENCE
5214	12012	A/D CONVERTER, 12-BIT, HIGH-SPEED, -5V TO +5V EXTERNAL REFERENCE
5215	12014	A/D CONVERTER, 12-BIT, HIGH-SPEED, -10V TO +10V EXTERNAL REFERENCE
5216	12015	A/D CONVERTER, 12-BIT, HIGH-SPEED, 0V TO 10 INTERNAL REFERENCE
5217	12016	A/D CONVERTER, 12-BIT
MN5245	5962-8959501	A/D CONVERTER, 12-BIT, 0 TO +5V
MN5245A	5962-8959502	A/D CONVERTER, 12-BIT, 0 TO +5V, WITH THREE-STATE OUTPUTS
MN5246	5962-8959503	A/D CONVERTER, 12-BIT, ±2.5V
MN5246A	5962-8959504	A/D CONVERTER, 12-BIT, ±2.5V, WITH THREE-STATE OUTPUTS
MN5290	5962-8956301H	A/D CONVERTER, 16-BIT RESOLUTION
MN5291	5962-8956302H	A/D CONVERTER, 16-BIT RESOLUTION
AD570	5962-8680201	A/D CONVERTER, 8-BIT, WITH THREE-STATE BUFFERED OUTPUTS
AD571	13401	A/D CONVERTER, 10-BIT, WITH THREE-STATE BUFFERED OUTPUTS
AD571	5962-8680202	A/D CONVERTER, 10-BIT, WITH THREE-STATE BUFFERED OUTPUTS
AD573S	5962-8850501	A/D CONVERTER, 10-BIT, WITH MICROPRO CESSOR INTERFACE
574AT	14004	A/D CONVERTER, 12-BIT, WITH MICROPRO CESSOR INTERFACE
574AU	14003	A/D CONVERTER, 12-BIT, WITH MICROPORC ESSOR INTERFACE
574AU	5962-8512701	A/D CONVERTER, 12-BIT, WITH MICROPORC ESSOR INTERFACE
574AT	5962-8512702	A/D CONVERTER, 12-BIT, WITH MICROPRO CESSOR INTERFACE
AD650	13803	VOLT.-TO-FREQUENCY CONVERTER
670S	5962-8763501	A/D CONVERTER, 8-BIT, WITH INPUT AMPLIFIER
AD673S	5962-8850502	A/D CONVERTER, 8-BIT, WITH MICROPRO CESSOR INTERFACE
674AU	14005	A/D CONVERTER, 12-BIT
674AT	14006	A/D CONVERTER, 12-BIT
75C48S20	5962-8874301	A/D CONVERTER, 8-BIT FLASH
AD7572U05	5962-8759106	A/D CONVERTER, HIGH-SPEED
AD7572T05	5962-8759105	A/D CONVERTER, HIGH-SPEED
AD7572S05	5962-8759104	A/D CONVERTER, HIGH-SPEED
AD7572U05	5962-8759105	A/D CONVERTER, HIGH-SPEED
AD7572T12	5962-8759102	A/D CONVERTER, HIGH-SPEED
AD7572S12	5962-8759101	A/D CONVERTER, HIGH-SPEED
AD7572U12	5962-8759103	A/D CONVERTER, HIGH-SPEED
PM-7574A	5962-8961603	A/D CONVERTER, 8-BIT, MICROPROCESSOR-COMPATIBLE
PM-7574B	5962-8961604	A/D CONVERTER, 8-BIT, MICROPROCESSOR-COMPATIBLE
7575S	5962-8776201	A/D CONVERTER, 8-BIT, WITH TRACK/HOLD AMPLIFIER
7575T	5962-8776202	A/D CONVERTER, 8-BIT, WITH TRACK/HOLD AMPLIFIER
AD7579	5962-8969801	A/D CONVERTER, 10-BIT SAMPLING, WITH (8+2) READ INTERFACING STRUCTURE
AD7580	5962-8969802	A/D CONVERTER, 10-BIT SAMPLING, WITH A 10-BIT PARALLEL WORD
AD7672TQ05	5962-8965503	A/D CONVERTER, 12-BIT, 11-BIT LINEARITY
AD7672UQ05	5962-8965504	A/D CONVERTER, 12-BIT, 12-BIT LINEARITY
AD7672TQ10	5962-8965501	A/D CONVERTER, 12-BIT, 11-BIT LINEARITY
AD7672UQ10	5962-8965502	A/D CONVERTER, 12-BIT, 12-BIT LINEARITY
7684S	5962-8977702	A/D CONVERTER, 8-BIT FLASH
7684T	5962-8977701	A/D CONVERTER, 8-BIT FLASH
AD7820T	5962-8865002	A/D CONVERTER, 8-BIT, WITH TRACK/HOLD, ±1.0 LSB
AD7820U	5962-8865001	A/D CONVERTER, 8-BIT, WITH TRACK/HOLD, ±0.5 LSB
7824T	5962-8876401	A/D CONVERTER, 8-BIT, 4-CHANNEL, ±1.0 LSB
7824U	5962-8876402	A/D CONVERTER, 8-BIT, 4-CHANNEL, ±0.5 LSB
7828T	5962-8876403	A/D CONVERTER, 8-BIT, 8-CHANNEL, ±1.0 LSB
7828U	5962-8876404	A/D CONVERTER, 8-BIT, 8-CHANNEL, ±0.5 LSB
78C48SC30	5962-8874302	A/D CONVERTER, 8-BIT FLASH
DAC87	13702	A/D CONVERTER, 12-BIT, RANGE PROGRAMMABLE, VOLTAGE OUTPUT
DAC87	8300301	A/D CONVERTER, 12-BIT, RANGE PROGRAMMABLE, VOLTAGE OUTPUT
AD9012S	5962-8965401	A/D CONVERTER, 8-BIT
AD9012T	5962-8965402	A/D CONVERTER, 8-BIT
ADC-908A	5962-8961601	A/D CONVERTER, 8-BIT, MICROPROCESSOR-COMPATIBLE
ADC-908B	5962-8961602	A/D CONVERTER, 8-BIT, MICROPROCESSOR-COMPATIBLE

Analog switches/multiplexers 18/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
(SEE DWG)	5962-8671601	ANALOG SWITCH, QUAD SPST, HIGH-SPEED
(SEE DWG)	5962-8671602	ANALOG SWITCH, QUAD SPST, HIGH-SPEED
SW-06B	5962-8966901	ANALOG SWITCH, QUAD SPST JFET
MUX-08B	5962-8771602	ANALOG MULTIPLEXER, 8-CHANNEL
MUX-08A	5962-8771601	ANALOG MULTIPLEXER, 8-CHANNEL
DG129A	7801401	ANALOG SWITCH, DUAL DPST
1549	5962-8684901	ANALOG LATCH, CURRENT SENSING, WITH DIGITAL RESET
MUX-16B	5962-8771702	ANALOG MULTIPLEXER, 16-CHANNEL (OVERVOLTAGE PROTECTED)
MUX-16A	5962-8771701	ANALOG MULTIPLEXER, 16-CHANNEL (OVERVOLTAGE PROTECTED)
HS-1840RH	5962D8753801	ANALOG MULTIPLEXER/DEMULTIPLEXER, 16-CHANNEL, WITH OVERVOLTAGE PROTECTION
201	7705301	ANALOG SWITCH, SPST, 4-CHANNEL
2069	5962-8753201	DARLINGTON SWITCH, QUAD, WITH PRE-DRIVER STAGES
2070	5962-8753202	DARLINGTON SWITCH, QUAD, WITH PRE-DRIVER STAGES
MUX-24B	5962-8771802	ANALOG MULTIPLEXER, 4-CHANNEL DIFFERENTIAL
MUX-24A	5962-8771801	ANALOG MULTIPLEXER, 4-CHANNEL DIFFERENTIAL
HS362	5962-8956501	MULTIPLEXER, DUAL 8-CHANNEL, WITH SAMPLE AND HOLD
DG401	5962-9056901	ANALOG SWITCH, DUAL SPST
DG403	5962-8976301	ANALOG SWITCH, DUAL SPDT
DG405	5962-8996101	ANALOG SWITCH, DUAL DPST
AH5010	5962-9087801M	ANALOG SWITCH, 4-CHANNEL
AH5012	5962-9088001M	ANALOG SWITCH, 4-CHANNEL
HI5040	8100601	ANALOG SWITCH, SPST, 1-CHANNEL, 75 OHMS
IH5041	8100602	ANALOG SWITCH, SPST, 2-CHANNEL, 75 OHMS
IH5042	8100603	ANALOG SWITCH, SPDT, 1-CHANNEL,

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MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Analog switches/multiplexers 18/ (continued)		
		75 OHMS
IH5043	8100604	ANALOG SWITCH, SPDT, 2-CHANNEL, 75 OHMS
HI5043	8100612	ANALOG SWITCH, SPDT, 2-CHANNEL, 30 OHMS
IH5044	8100605	ANALOG SWITCH, DPST, 1-CHANNEL, 75 OHMS
IH5045	8100606	ANALOG SWITCH, DPST, 2-CHANNEL, 75 OHMS
HI5045	8100614	ANALOG SWITCH, DPST, 2-CHANNEL, 75 OHMS
IH5046	10507	ANALOG SWITCH, DPDT, 1-CHANNEL, 75 OHMS
IH5046	8100607	ANALOG SWITCH, DPDT, 1-CHANNEL, 75 OHMS
HI5046A	8100617	ANALOG SWITCH, DPDT, 1-CHANNEL, 30 OHMS
HI5046	8100615	ANALOG SWITCH, DPDT, 1-CHANNEL, 75 OHMS
IH5047	10508	ANALOG SWITCH, 4PST, 1-CHANNEL, 75 OHMS
IH5047	8100608	ANALOG SWITCH, 4PST, 1-CHANNEL, 75 OHMS
HI5047A	8100618	ANALOG SWITCH, 4PST, 1-CHANNEL, 30 OHMS
HI5047	8100616	ANALOG SWITCH, 4PST, 1-CHANNEL, 75 OHMS
HI5049	8100620	ANALOG SWITCH, DPST, 2-CHANNEL, 30 OHMS
HI5050	8100621	ANALOG SWITCH, SPDT, 1-CHANNEL, 30 OHMS
HI5051	8100622	ANALOG SWITCH, SPDT, 2-CHANNEL, 30 OHMS
506A	5962-8513101	ANALOG MULTIPLEXER/DEMULTIPLEXER, 16-CHANNEL, WITH OVERVOLTAGE PROTECTION
507A	5962-8513102	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL DIFFERENTIAL, W/ OVERVOLTAGE PROTECT
508A	7705202	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL, WITH OVERVOLTAGE PROTECTION
508	7705201	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL
509A	5962-8513103	ANALOG MULTIPLEXER/DEMULTIPLEXER, DIFFERENTIAL 4-CHANNEL, WITH OVERVOLTAGE PROTE
IH5108	7705203	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL, WITH OVERVOLTAGE PROTECTION
IH5116	5962-8513104	ANALOG MULTIPLEXER/DEMULTIPLEXER, 16-CHANNEL, WITH OVERVOLTAGE PROTECTION
DG5140	8100609	ANALOG SWITCH, SPST, 1-CHANNEL, 75 OHMS
DG5141	8100610	ANALOG SWITCH, SPDT, 2-CHANNEL, 75 OHMS
DG5142	8100611	ANALOG SWITCH, SPDT, 1-CHANNEL, 75 OHMS
DG5144	8100613	ANALOG SWITCH, DPST, 1-CHANNEL, 30 OHMS
IH5148	8100619	ANALOG SWITCH, SPST, 2-CHANNEL, 30 OHMS
HI-516	5962-8869901	ANALOG MULTIPLEXER, 16-CHANNEL /8-CHANNEL DIFFERENTIAL
IH5208	5962-8513106	ANALOG MULTIPLEXER/DEMULTIPLEXER, DIFFERENTIAL 4-CHANNEL, WITH OVERVOLTAGE PROTE
IH5216	5962-8513105	ANALOG MULTIPLEXER/DEMULTIPLEXER, 8-CHANNEL DIFFERENTIAL, WITH OVERVOLTAGE PROTE
HI524	5962-8761801	ANALOG MULTIPLEXER, 4-CHANNEL WIDEBAND VIDEO
ADG526A	5962-8971001	ANALOG MULTIPLEXER, 16-CHANNEL, LATCHED
ADG527A	5962-8971002	ANALOG MULTIPLEXER, 8-CHANNEL, LATCHED
DG528	5962-8768901	ANALOG MULTIPLEXER, 8-CHANNEL LATCHABLE
54HC4052	5962-8855601	ANALOG MULTIPLEXER/DEMULTIPLEXER, DOUBLE-POLE, FOUR-POSITION
54HC4053	5962-8775401	ANALOG MULTIPLEXER
54HC4066	5962-8950701	ANALOG SWITCH, SPST, 4-CHANNEL
Voltage references 19/		
(SEE DWG)	5962-8688201	VOLT. REFERENCE, PRECISION, 10V
(SEE DWG)	5962-8688202	VOLT. REFERENCE, PRECISION, 10V
(SEE DWG)	5962-8688203	VOLT. REFERENCE, PRECISION, 10V
REF01A	5962-8958101	VOLT. REFERENCE, ADJUSTABLE OUTPUT, +10V
REF01	5962-8958102	VOLT. REFERENCE, ADJUSTABLE OUTPUT, +10V
REF02A	8551401	VOLT. REFERENCE, PRECISION, +5V ADJUSTABLE OUTPUT
REF10A	12403	VOLT. REFERENCE, PRECISION, +10V ADJUSTABLE OUTPUT
REF10B	5962-8947902	VOLT. REFERENCE, PRECISION, +10V ADJUSTABLE OUTPUT
REF10A	5962-8947901	VOLT. REFERENCE, PRECISION, +10V ADJUSTABLE OUTPUT
LT1004-1.2	5962-8859701	VOLT. REFERENCE DIODE
LT1004-2.5	5962-8859702	VOLT. REFERENCE DIODE
LT1009	5962-8961001	VOLT. REFERENCE DIODE, 2.5V
102110	12409	VOLT. REFERENCE
LT1021CM-10	5962-8860002	VOLT. REFERENCE, 10V
LT1021DM-10	5962-8860003	VOLT. REFERENCE, 10V
LT1021BM-10	5962-8860001	VOLT. REFERENCE, 10V
10215	12407	VOLT. REFERENCE
LT1021BM-5	5962-8876201	VOLT. REFERENCE, PRECISION, 5.0V
LT1021DM-5	5962-8876203	VOLT. REFERENCE, PRECISION, 5.0V
LT1021CM-5	5962-8876202	VOLT. REFERENCE, PRECISION, 5.0V
10217	12408	VOLT. REFERENCE
LT1021BM-7	5962-8864701	VOLT. REFERENCE, 7.0V
LT1021DM-7	5962-8864702	VOLT. REFERENCE, 7.0V
LM103H-3.3	7702807	VOLT. REFERENCE, 3.3V
LM103H-3.6	7702808	VOLT. REFERENCE, 3.6V
LM103H-3.9	7702809	VOLT. REFERENCE, 3.9V
LM103H-4.3	7702810	VOLT. REFERENCE, 4.3V
LM113	5962-8671101	VOLT. REFERENCE DIODE
LM113-1	5962-8671102	VOLT. REFERENCE DIODE
LM113-2	5962-8671103	VOLT. REFERENCE DIODE
LM129B	12406	VOLT. REFERENCE, 6.9V PRECISION
LM129A	12402	VOLT. REFERENCE, 6.9V PRECISION
LM129A	5962-8992101	VOLT. REFERENCE, 6.9V PRECISION
LM129B	5962-8992102	VOLT. REFERENCE, 6.9V PRECISION
LM129C	5962-8992103	VOLT. REFERENCE, 6.9V PRECISION

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MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Voltage references 19/

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
LM136A-2.5	8418001	VOLT. REFERENCE, PRECISION, 2.5V
LM136A-5.0	8418002	VOLT. REFERENCE, PRECISION, 5.0V
1503A	5962-8686102	VOLT. REFERENCE, PRECISION 2.5V (.4%)
SG1503	5962-8686101	VOLT. REFERENCE, PRECISION 2.5V (1%)
LM185-1.2	5962-8759401	VOLT. REFERENCE DIODE
LM185BX1.2	5962-8759403	VOLT. REFERENCE DIODE
LM185BY1.2	5962-8759405	VOLT. REFERENCE DIODE
LM185BX2.5	5962-8759404	VOLT. REFERENCE DIODE
LM185-2.5	5962-8759402	VOLT. REFERENCE DIODE
LM185BY2.5	5962-8759406	VOLT. REFERENCE DIODE
LM199	12404	VOLT. REFERENCE, PRECISION
LM199A	12401	VOLT. REFERENCE, PRECISION
LM199A	5962-8856101	VOLT. REFERENCE, PRECISION
LM199	5962-8856102	VOLT. REFERENCE, PRECISION
LM199A-20	12405	VOLT. REFERENCE
2700	13601	VOLT. REFERENCE
2700U	8503002	VOLT. REFERENCE, PRECISION, +10.000V
2700	8503001	VOLT. REFERENCE, PRECISION, +10.000V
2701	8503005	VOLT. REFERENCE, PRECISION, -10.000V
2701	8503006	VOLT. REFERENCE, PRECISION, -10.000V
2702	13602	VOLT. REFERENCE
2702U	8503004	VOLT. REFERENCE, PRECISION, ±10.000V
2702S	8503003	VOLT. REFERENCE, PRECISION, ±10.000V
REF-43	5962-9060301	VOLT. REFERENCE, LOW-POWER PRECISION, + 2.5V
580S	5962-8686101	VOLT. REFERENCE, PRECISION 2.5V (1%)
AD586S	5962-8982401	VOLT. REFERENCE, 5.0V
AD586T	5962-8982402	VOLT. REFERENCE, 5.0V
AD587TQ	5962-8982502	VOLT. REFERENCE, 10V
AD587SQ	5962-8982501	VOLT. REFERENCE, 10V
AD588T	5962-8972802	VOLT. REFERENCE, PIN-PROGRAMMABLE
AD588S	5962-8972801	VOLT. REFERENCE, PIN-PROGRAMMABLE
R675B-3	13602	VOLT. REFERENCE
R675B-4	13601	VOLT. REFERENCE

Sample and hold 20/

HTC-0300	14201	SAMPLE AND HOLD AMPLIFIER
THA-05203-1	14201	SAMPLE AND HOLD AMPLIFIER
198	5962-8760801	SAMPLE AND HOLD AMPLIFIER
2420	8001601	SAMPLE AND HOLD AMPLIFIER
MN376H	14201	SAMPLE AND HOLD AMPLIFIER
SHM-4860MM	14201	SAMPLE AND HOLD AMPLIFIER
4860-83	14201	SAMPLE AND HOLD AMPLIFIER
HA-5330	5962-8767701	SAMPLE AND HOLD AMPLIFIER
5537	12502	SAMPLE AND HOLD AMPLIFIER
AD585	5962-8754001	SAMPLE AND HOLD AMPLIFIER, HIGH-SPEED
HS9716	5962-8956601H	SAMPLE AND HOLD AMPLIFIER, 16-BIT

Hybrid 22/

SDC14500-635	5962-9070701H	SYNCHRO-TO-DIGITAL CONVERTER, 400 HZ, 11.8V
SDC14500-636	5962-9070702H	SYNCHRO-TO-DIGITAL CONVERTER, 400 HZ, 11.8V
SDC14502-605	5962-9070703H	SYNCHRO-TO DIGITAL CONVERTER, 60 HZ, 90V
SDC14502-606	5962-9070704H	SYNCHRO-TO-DIGITAL CONVERTER, 60 HZ, 90V
2452	5962-8753502	REMOTE TERMINAL UNIT, DUAL REDUNDANT
6N140A	8302401	OPTOCOUPLER, 4-CHANNEL
HS9403-16	5962-8851402	DATA ACQUISITION SYSTEM, 12-BIT
HS9403-8	5962-8851401	DATA ACQUISITION SYSTEM, 12-BIT

Other digital devices 23/

BFRP10	63001	FFT PROCESSOR, 20 MHZ
12540	5962-8775201	PHASE/FREQUENCY DETECTOR
14490A	5962-8764601	CONTACT BOUNCE ELIMINATOR, HEX
UT1553BCRTMP	5962-8950101	REMOTE TERMINAL INTERFACE, MIL-STD-1553B
UT1553BRTR	5962-8957601	REMOTE TERMINAL INTERFACE, WITH 1K X 16 RAM
UT1760RTS	5962-8957501	REMOTE TERMINAL FOR STORES WITH 1K X 16 RAM
UT1760ARTS	5962-8957501	REMOTE TERMINAL FOR STORES WITH 1K X 16 RAM
TMC2023V	5962-8971101	OUTPUT CORRELATOR, DIGITAL, 64-BIT, 25 MHZ
TMC2023V1	5962-8971102	OUTPUT CORRELATOR, DIGITAL, 64-BIT, 30 MHZ
HCPL-5501	5962-9085401H	OPTOCOUPLER, SINGLE CHANNEL, TRANSISTOR OUTPUT
68154	5962-8857201	INTERRUPT GENERATOR
68155	5962-8866601	INTERRUPT HANDLER

Analog circuit functions 24/

LT1054M	5962-8956201	VOLTAGE CONVERTER, SWITCHED CAPACITOR, WITH REGULATOR
LTC1060A	5962-8864101	FILTER, UNIVERSAL DUAL
HSD1066-341H	5962-8949901	SYNCHRO-TO-DIGITAL CONVERTER, 11.8V, 400 HZ, 2.0 MINUTES ACCURACY
HSD1066-341V	5962-8949902	SYNCHRO-TO-DIGITAL CONVERTER, 11.8V, 400 HZ, 1.0 MINUTE ACCURACY
HSD1066-381H	5962-8949903	SYNCHRO-TO-DIGITAL CONVERTER, 11.8V, 400 HZ, 2.0 MINUTES ACCURACY
LM131A	5962-8760701	VOLT.-TO-FREQUENCY CONVERTER
1543	5962-8774001	POWER SUPPLY OUTPUT SUPERVISORY CIRCUIT
1544	5962-8774002	POWER SUPPLY OUTPUT SUPERVISORY CIRCUIT
1596	5962-8857101	MODULATOR/DEMODULATOR, BALANCED
UC1637	5962-8995701	CONTROLLER, SWITCHED-MODE, FOR DC MOTOR DRIVE
TSC170	5962-8963801	CURRENT MODE CONTROLLER, CMOS
TSC171	5962-8963802	CURRENT MODE CONTROLLER, CMOS
UC1901	5962-8944101	FEEDBACK GENERATOR, ISOLATED
UC1903	5962-8869701	SUPPLY AND LINE MONITOR, QUAD
LM194	5962-8777701	TRANSISTOR ARRAY, MATCHED PAIR
LM195	5962-8777801	TRANSISTOR ARRAY, POWER
EL2003	5962-8962301	LINE DRIVER, VIDEO
EL2004	5962-8965901	BUFFER, FET
EL2020	5962-8962001	CURRENT FEEDBACK AMPLIFIER
EL2030	5962-9081801M	AMPLIFIER, CURRENT FEEDBACK
EL2033	5962-8962302	LINE DRIVER, VIDEO
XR2211M	7705001	PHASE-LOCKED LOOP SYSTEM
2821	5962-8968401	TRANSISTOR ARRAY, DARLINGTON,

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY

MILITARY PARTS

TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Analog circuit functions 24/ (continued)		
		EIGHT-GATE
2823	5962-8968501	TRANSISTOR ARRAY, DARLINGTON, EIGHT-GATE
2824	5962-8968601	TRANSISTOR ARRAY, DARLINGTON, EIGHT-GATE
SG3081	5962-8866401	TRANSISTOR ARRAY, HIGH-CURRENT NPN
3183A	5962-8759801	TRANSISTOR ARRAY, HIGH-CURRENT NPN
VFC32	13801	VOLT.-TO-FREQUENCY CONVERTER
VFC320	13802	VOLT.-TO-FREQUENCY CONVERTER
HS3282	5962-8688001	BUS INTERFACE CIRCUIT, ARINC
3523	5962-8978001	SENSING CIRCUIT, OVERVOLTAGE
4213	13904	ANALOG MULTIPLIER, 4-QUADRANT
MC4344	5962-8780301	PHASE/FREQUENCY DETECTOR
HA-5002	5962-8963601	CURRENT BUFFER, WIDEBAND, HIGH OUTPUT
HA-5033	5962-8963301	BUFFER AMPLIFIER, HIGH-SPEED VIDEO
SL523AC	5962-8980301	AMPLIFIER, LOGARITHMIC, WIDEBAND, 120 MHZ
IH5352	5962-8875001	ANALOG SWITCH, SPST, 4-CHANNEL, RF/VIDEO
AD539	5962-8980901	MULTIPLIER/DIVIDER, DUAL-CHANNEL, WIDEBAND
54HCT4046A	5962-8875701	PHASE-LOCKED LOOP WITH VOLTAGE-CONTROLLED OSCILLATOR
54HC4046A	5962-8960901	PHASE-LOCKED LOOP, WITH VOLTAGE-CONTROLLED OSCILLATOR
54LS629	8102101	OSCILLATOR, VOLTAGE-CONTROLLED, DUAL
567	5962-8700301	TONE DECODER/PHASE-LOCKED LOOP
AD590J	5962-8757101	TEMPERATURE TRANSDUCER
AD590K	5962-8757102	TEMPERATURE TRANSDUCER
AD590L	5962-8757103	TEMPERATURE TRANSDUCER
AD590M	5962-8757104	TEMPERATURE TRANSDUCER
604A	5962-8956401	FM IF SYSTEM, HIGH PERFORMANCE, LOW-POWER
AD630	5962-8980701	BALANCED MODULATOR/DEMODULATOR
AD637	5962-8963701	RMS-TO-DC CONVERTER, WIDEBAND
TL7702AM	5962-8868502	SUPPLY VOLTAGE SUPERVISOR
TL7705AM	5962-8868501	SUPPLY VOLTAGE SUPERVISOR
ICL8038	5962-8877201	WAVEFORM GENERATOR/VOLTAGE-CONTROLLED OSCILLATOR, PRECISION
ICL8211	5962-8984201	VOLT. DETECTOR, PROGRAMMABLE
ICL8212	5962-8984202	VOLTAGE DETECTOR, PROGRAMMABLE, HIGH OUTPUT CURRENT
HI8282	5962-8688002	BUS INTERFACE CIRCUIT, ARINC
HSDC-8915A	5962-9055401	VOLT. FOLLOWER, BUFFER INPUT, 400 HZ
HSDC-8915	5962-9055402	VOLT. FOLLOWER, BUFFER INPUT, 400 HZ
Semicustom devices 25/		
(SEE SPEC)	60803	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60802	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60801	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60812	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60804	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60813	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60805	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60003	GATE ARRAY, _ 5000 GATES
(SEE SPEC)	60002	GATE ARRAY, _ 3500 GATES
(SEE SPEC)	70601	LINEAR ARRAY, 8 MACROCELL LOCATIONS
(SEE SPEC)	70604	LINEAR ARRAY, 4 MACROCELL LOCATIONS
(SEE SPEC)	60807	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60808	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60814	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60809	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60811	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60001	GATE ARRAY, _ 1000 GATES
(SEE SPEC)	60607	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60806	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60605	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60615	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60602	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60613	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60601	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60610	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60616	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60810	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60612	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60609	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60517	GATE ARRAY, <=55000 GATES
(SEE SPEC)	60516	GATE ARRAY, <=45000 GATES
(SEE SPEC)	60515	GATE ARRAY, <=35000 GATES
(SEE SPEC)	60514	GATE ARRAY, <=25000 GATES
(SEE SPEC)	60513	GATE ARRAY, <=15000 GATES
(SEE SPEC)	60817	GATE ARRAY, SEMICUSTOM
(SEE SPEC)	60506	GATE ARRAY, <=6000 GATES
(SEE SPEC)	60512	GATE ARRAY, <=12000 GATES
(SEE SPEC)	60505	GATE ARRAY, <=5000 GATES
(SEE SPEC)	60510	GATE ARRAY, <=10000 GATES
(SEE SPEC)	60508	GATE ARRAY, <=8000 GATES
(SEE SPEC)	60507	GATE ARRAY, <=7000 GATES
(SEE SPEC)	60511	GATE ARRAY, <=11000 GATES
(SEE SPEC)	60509	GATE ARRAY, <=9000 GATES

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS
TABLE II- Potential Standardization Candidates (MIL-STD-1562R) (Cont'd)

Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description	Generic/ industry number	Military Dwg/ DESC Dwg number	Circuit description
Semicustom devices 25/ (continued)					
(SEE SPEC)	60503	GATE ARRAY, <=3000 GATES			
(SEE SPEC)	60502	GATE ARRAY, <=2000 GATES			
(SEE SPEC)	60501	GATE ARRAY, <=1000 GATES			
(SEE SPEC)	60815	GATE ARRAY, SEMICUSTOM			
(SEE SPEC)	60816	GATE ARRAY, SEMICUSTOM			
(SEE SPEC)	60617	GATE ARRAY, SEMICUSTOM			
(SEE SPEC)	60614	GATE ARRAY, SEMICUSTOM			
(SEE SPEC)	60701	GATE ARRAY (_1,000 GATES)			
(SEE SPEC)	60702	GATE ARRAY (_2,000 GATES)			
(SEE SPEC)	60703	GATE ARRAY (_3,000 GATES)			
(SEE SPEC)	60704	GATE ARRAY (_ 4,000 GATES)			
(SEE SPEC)	60705	GATE ARRAY (_ 5,000 GATES)			
(SEE SPEC)	60706	GATE ARRAY (_ 6,000 GATES)			
(SEE SPEC)	60707	GATE ARRAY (_ 7,000 GATES)			
(SEE SPEC)	60709	GATE ARRAY (_ 9,000 GATES)			
(SEE SPEC)	60710	GATE ARRAY (_ 10,000 GATES)			
(SEE SPEC)	60713	GATE ARRAY (_ 15,000 GATES)			
(SEE SPEC)	60717	GATE ARRAY (_ 55,000 GATES)			
(SEE SPEC)	60716	GATE ARRAY (_ 45,000 GATES)			
(SEE SPEC)	60714	GATE ARRAY (_ 25,000 GATES)			
(SEE SPEC)	60715	GATE ARRAY (_ 35,000 GATES)			
(SEE SPEC)	60712	GATE ARRAY (_ 12,000 GATES)			
(SEE SPEC)	60812	GATE ARRAY, SEMICUSTOM			

Devices listed in this table are those that have been selected for electrical characterization and are potential candidates for MIL-M-38510 specification or that have an active Military drawing (DESC).This table also includes devices that have dated military specifications but as yet have no QPL source. These devices shall be considered for use in systems or equipment designs if a QPL source is anticipated.

MILITARY PARTS

TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
Gates 1/			
4000A	/05201		NOR GATE, DUAL 3-INPUT
4000B	/05251		NOR GATE, DUAL 3-INPUT
4001A	/05202		NOR GATE, QUAD 2-INPUT
4001B	/05252		NOR GATE, QUAD 2-INPUT
4002B	/05253		NOR GATE, DUAL 4-INPUT
4002A	/05203		NOR GATE, DUAL 4-INPUT
4007UB	/05351		COMPLIMENTARY PAIR, DUAL
4007A	/05301		COMPLIMENTARY PAIR, DUAL
40106B	/17702	8409301	HEX INVERTER, SCHMITT TRIGGER
4011B	/05051		NAND GATE, QUAD 2-INPUT
4011A	/05001		NAND GATE, QUAD 2-INPUT
4012A	/05002		NAND GATE, DUAL 4-INPUT
4012B	/05052		NAND GATE, DUAL 4-INPUT
4019B	/05352		AND/OR SELECT GATE, QUAD
4019A	/05302		AND/OR SELECT GATE, QUAD
4023A	/05003	7901401	NAND GATE, TRIPLE 3-INPUT
4023B	7901301	8403901	NAND GATE, TRIPLE 3-INPUT
4023B	/05053	8403901	NAND GATE, TRIPLE 3-INPUT
4025B	/05254		NOR GATE, TRIPLE 3-INPUT
4025A	/05204		NOR GATE, TRIPLE 3-INPUT
4030B	/05353		EXCLUSIVE-OR GATE, QUAD 2-INPUT
4030A	/05303		EXCLUSIVE-OR GATE, QUAD 2-INPUT
4048B	/05354		MULTIFUNCTION GATE, 8-INPUT
4048A	/05304		MULTIFUNCTION GATE, 8-INPUT
4069UB	/17401		HEX INVERTER
4069UB	7702701		HEX INVERTER
4070B	/17203		EXCLUSIVE-OR GATE, QUAD
4071B	/17101	8404601	OR GATE, QUAD 2-INPUT
4072B	/17102		OR GATE, DUAL 4-INPUT
4072B	7706001		OR GATE, DUAL 4-INPUT
4073B	7705101		AND GATE, TRIPLE 3-INPUT
4075B	/17103		OR GATE, TRIPLE 3-INPUT
4077B	/17204		EXCLUSIVE-NOR GATE, QUAD
4078B	7704401		NOR GATE, 8-INPUT
4081B	/17001	8404801	AND GATE, QUAD 2-INPUT
4081B	7702401	8404801	AND GATE, QUAD 2-INPUT
4082B	/17002		AND GATE, DUAL 4-INPUT
4082B	7705901		AND GATE, DUAL 4-INPUT
4085B	/17201		AND-OR-INVERT GATE, DUAL 2-WIDE 2-INPUT
4086B	/17202		AND-OR-INVERT GATE, 4-WIDE 2-INPUT
4093B	7704601	/53001	NAND GATE, QUAD 2-INPUT, WITH SCHMITT TRIGGERS
4093B	/17701	/53001	NAND GATE, QUAD 2-INPUT, WITH SCHMITT TRIGGERS
4093B	7704602	/53001	NAND GATE, QUAD 2-INPUT, WITH SCHMITT TRIGGERS
46106B	5962-8550101	8409301	HEX INVERTER, SCHMITT TRIGGER
4973B	/17003		AND GATE, TRIPLE 3-INPUT
54L00	/02004	/30002	NAND GATE, QUAD 2-INPUT
54H00	/02304	/33002	NAND GATE, QUAD 2-INPUT
54S00	/07001	/33002	NAND GATE, QUAD 2-INPUT
5400	/00104	/33002	NAND GATE, QUAD 2-INPUT
54L01	/02006	/30003	NAND GATE, QUAD 2-INPUT
54H01	/02306	/30003	NAND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
5401	/00107	/30003	NAND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
5402	/00401	/33201	NOR GATE, QUAD 2-INPUT
54L02	/02701	/30302	NOR GATE, QUAD 2-INPUT
54S02	/07301	/33201	NOR GATE, QUAD 2-INPUT
54S03	/07002	/30003	NAND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54L03	/02006	/30003	NAND GATE, QUAD 2-INPUT
5403	/00109	/30003	NAND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54H04	/02305	/33003	HEX INVERTER
54L04	/02005	/30004	HEX INVERTER
54S04	/07003	/33003	HEX INVERTER
5404	/00105	/33003	HEX INVERTER
54S05	/07004	/30005	HEX INVERTER, WITH OPEN-COLLECTOR OUTPUTS
5405	/00108	/30005	HEX INVERTER, WITH OPEN-COLLECTOR OUTPUTS
5408	/01601	/34002	AND GATE, QUAD 2-INPUT
54C08	7703601	8404801	AND GATE, QUAD 2-INPUT
54S08	/08003	/34002	AND GATE, QUAD 2-INPUT
5409	/01602		AND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54L10	/02003	/30006	NAND GATE, TRIPLE 3-INPUT
5410	/00103	/30006	NAND GATE, TRIPLE 3-INPUT
54H10	/02303	/33004	NAND GATE, TRIPLE 3-INPUT
54S10	/07005	/33004	NAND GATE, TRIPLE 3-INPUT
54S11	/08001	/33901	AND GATE, TRIPLE 3-INPUT
54AC11000	5962-8754902		NAND GATE, QUAD 2-INPUT
54ACT11000	5962-8769902		NAND GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54AC11002	5962-8761202		NOR GATE, QUAD 2-INPUT
54AC11004	5962-8760902		HEX INVERTER
54ACT11004	5962-8973402		HEX INVERTER, TTL-COMPATIBLE INPUTS
54AC11008	5962-8761502		AND GATE, QUAD 2-INPUT
54ACT11008	5962-8954701		AND GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
54AC11010	5962-8761002		NAND GATE, TRIPLE 3-INPUT
54AC11011	5962-8761102		AND GATE, TRIPLE 3-INPUT
54AC11020	5962-8761302		NAND GATE, DUAL 4-INPUT
54ACT11032	5962-8973602		OR GATE, QUAD 2-INPUT, WITH TTL-COMPATIBLE INPUTS
5412	/00106	/30007	NAND GATE, TRIPLE 3-INPUT, WITH OPEN-COLLECTOR OUTPUTS
5413	/15101	/31302	NAND GATE, DUAL 4-INPUT
54132	/15103	7600401	NAND GATE, QUAD 2-INPUT, SCHMITT TRIGGER
54S133	/07009	5962-8765701	NAND GATE, 13-INPUT
5414	/15102	/31303	HEX INVERTER, SCHMITT TRIGGER
54S20	/07006	/32901	NAND GATE, DUAL 4-INPUT
5420	/00102	/32901	NAND GATE, DUAL 4-INPUT
54H20	/02302	/30008	NAND GATE, DUAL 4-INPUT
54L20	/02002	/30008	NAND GATE, DUAL 4-INPUT
54AS21	5962-8780401	5962-8766501	AND GATE, DUAL 4-INPUT
54S22	/07007	/30009	NAND GATE, DUAL 4-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54H22	/02307	/30009	NAND GATE, DUAL 4-INPUT, WITH OPEN-COLLECTOR OUTPUTS
5423	/00402		NOR GATE, DUAL 4-INPUT, W/ STROBE
5425	/00403		NOR GATE, DUAL 4-INPUT, W/ STROBE
5427	/00404	/30303	NOR GATE, TRIPLE 3-INPUT
54H30	/02301	/29105	NAND GATE, 8-INPUT
5430	/00101	/29105	NAND GATE, 8-INPUT
54L30	/02001	/29105	NAND GATE, 8-INPUT
54S30	/07008	/29105	NAND GATE, 8-INPUT
5432	/16101	/33401	OR GATE, QUAD 2-INPUT

This table contains devices which are not recommended for new designs because of diminishing sources, obsolete technology, or a preferred device listed in tables I or II is now available which performs the same function.

MILITARY PARTS
TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

Gates 1/ (continued)

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
5450	/00501		AND-OR-INVERT GATE, DUAL 2-WIDE
5451	/00502	/30402	AND-OR-INVERT GATE, DUAL 2-WIDE
54S51	/07401	/30402	AND-OR-INVERT GATE, DUAL 2-WIDE 2-INPUT
5453	/00503		AND-OR-INVERT GATE, 4-WIDE 2-INPUT
5454	/00504	/30301	AND-OR-INVERT GATE, 4-WIDE
54S64	/07402	/33301	AND-OR-INVERT GATE, QUAD 4-2-3-2-INPUT
54S86	/07501	/34401	EXCLUSIVE-OR GATE, QUAD 2-INPUT
5486	/00701	/30401	EXCLUSIVE-OR GATE, QUAD 2-INPUT
54L86	/02601	/30401	EXCLUSIVE-OR GATE, QUAD 2-INPUT
930	/03001	/31302	NAND GATE, DUAL 4-INPUT
MIC935	/03002		HEX INVERTER
936	/03003	/30004	HEX INVERTER
MIC940	/03002		HEX INVERTER
946	/03004	/33002	NAND GATE, QUAD 2-INPUT
962	/03005	/30006	NAND GATE, TRIPLE 3-INPUT

Buffers 2/

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
25S240	5962-8672401	/33203	BUFFER/DRIVER, OCTAL, INVERTING, THREE-STATE OUTPUTS
25S241	5962-8672501	5962-8688501	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
25S244	5962-8753601	/33107	BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
4009A	/05501		BUFFER/DRIVER, HEX, INVERTING
4009UB	/05551		BUFFER/DRIVER, HEX, INVERTING
4010A	/05502		BUFFER/DRIVER, HEX, NONINVERTING
4010B	/05552		BUFFER/DRIVER, HEX, NONINVERTING
40107B	/17402		BUFFER/DRIVER, NAND, DUAL 2-INPUT
40109B	/17404		VOLT. LEVEL SHIFTER, LOW TO HIGH
4041UB	/05555		TRUE/COMPLIMENT BUFFER, QUAD
4041A	/05505		TRUE/COMPLIMENT BUFFER, QUAD
4049A	/05503	7901401	HEX INVERTER BUFFER
4049UB	/05553		HEX INVERTER BUFFER
4049UB	7901401		HEX INVERTER BUFFER
4050B	/05554		HEX BUFFER, NONINVERTING
4050A	/05504		HEX BUFFER, NONINVERTING
4502B	/17403		BUFFER/DRIVER, HEX, INVERTING, STROBED, THREE-STATE OUTPUTS
4520B	7702001		BUFFER/DRIVER, HEX, INVERTING, STROBED, THREE-STATE OUTPUTS
54AS1004A	5962-8872901		BUFFER/DRIVER, HEX, INVERTING
54AS1032A	5962-8873001		OR DRIVER, QUAD 2-INPUT
54ACT11240	5962-8775902		BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AC11240	5962-8755002		BUFFER/DRIVER, OCTAL, INVERTING, WITH THREE-STATE OUTPUTS
54ACT11241	5962-8984702		BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE
54AC11241	5962-8755102		BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54AC11244	5962-8755202		BUFFER/DRIVER, OCTAL, NONINVERTING, WITH THREE-STATE OUTPUTS
54125	/15301	/32302	BUFFER/DRIVER, QUAD, NONINVERTING, WITH THREE-STATE OUTPUTS
54126	/15302	7601501	BUFFER/DRIVER, QUAD, NONINVERTING, WITH THREE-STATE OUTPUTS
5416	/00802	/00802	BUFFER/DRIVER, HEX, INVERTING, WITH OPEN-COLLECTOR OUTPUTS
5417	/00804	/00804	BUFFER/DRIVER, HEX, NONINVERTING, WITH OPEN-COLLECTOR OUTPUTS
5426	/00805	7602001	BUFFER/DRIVER, QUAD 2-INPUT, INVERTING
54365	/16301	/32203	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54366	/16302	/32204	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54367	/16303	/32102	BUFFER/DRIVER, HEX, NONINVERTING, WITH THREE-STATE OUTPUTS
54368	/16304	/32102	BUFFER/DRIVER, HEX, INVERTING, WITH THREE-STATE OUTPUTS
5437	/00302	8406001	BUFFER/DRIVER, NAND, QUAD 2-INPUT
5438	/00303	8416901	BUFFER/DRIVER, NAND, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54H40	/02401	/30202	BUFFER/DRIVER, NAND, DUAL 4-INPUT
5440	/00301	/30202	BUFFER/DRIVER, NAND, DUAL 4-INPUT
54S40	/07201	/30202	BUFFER/DRIVER, NAND, DUAL 4-INPUT
54AS760	5962-8776701		BUFFER/DRIVER, OCTAL, NONINVERTING, WITH OPEN-COLLECTOR OUTPUTS
54AS804	5962-8776601		BUFFER/DRIVER, NAND, HEX 2-INPUT
54AS805	5962-8779401		BUFFER/DRIVER, NOR, HEX 2-INPUT
54AS808	5962-8852201		BUFFER/DRIVER, AND, HEX 2-INPUT
54AS832B	5962-8852301		BUFFER/DRIVER, OR, HEX 2-INPUT
54C906	7705601		BUFFER/DRIVER, HEX, NONINVERTING, WITH OPEN-DRAIN OUTPUTS

This table contains devices which are not recommended for new designs because of diminishing sources, obsolete technology, or a preferred device listed in tables I or II is now available which performs the same function.

MILITARY

MILITARY PARTS

TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
Flip-Flops 3/			
26S02	5962-8766201	7603901	MULTIVIBRATOR, DUAL RETRIGGERABLE, RESETTABLE, MONOSTABLE
2918	5962-8671501	5962-8672001	FLIP-FLOP, D-TYPE, QUAD, WITH STANDARD AND THREE-STATE OUTPUTS
4013B	7901101		FLIP-FLOP, D-TYPE, DUAL
4013B	/05151		FLIP-FLOP, D-TYPE, DUAL
4013A	/05101	7901101	FLIP-FLOP, D-TYPE, DUAL
4013B	7901102		FLIP-FLOP, D-TYPE, DUAL
40174B	/17505		FLIP-FLOP, D-TYPE, HEX
40174B	8202201		FLIP-FLOP, D-TYPE, HEX
4027B	/05152	8415201	FLIP-FLOP, JK, DUAL
4027A	/05102		FLIP-FLOP, JK, DUAL
4042B	8101901		LATCH, D-TYPE, 4-BIT
4043B	/05153		LATCH, RS, 4-BIT, WITH THREE-STATE OUTPUTS
4043A	/05103		LATCH, RS, 4-BIT, WITH THREE-STATE OUTPUTS
4044B	7702601		LATCH, RS, 4-BIT, WITH THREE-STATE OUTPUTS
4047B	8102001		MULTIVIBRATOR, MONOSTABLE/ ASTABLE
4095B	/17502		FLIP-FLOP, JK, GATED
4096B	/17503		FLIP-FLOP, JK, GATED
4098B	/17504		MULTIVIBRATOR, DUAL RETRIGGERABLE/RESETTABLE MONOSTABLE
4098B	7705501		MULTIVIBRATOR, DUAL RETRIGGERABLE/RESETTABLE MONOSTABLE
4099B	/17601		LATCH, 8-BIT ADDRESSABLE
4508B	/17602		LATCH, DUAL 4-BIT
4514B	7703501		LATCH, 4-BIT/DECODER, 4-TO-16-LINE
4514B	/17301		LATCH, 4-BIT/DECODER, 4-TO-16-LINE
4528B	7704501	7705101	MULTIVIBRATOR, DUAL RETRIGGERABLE/RESETTABLE MONOSTABLE
4528B	7704502		MULTIVIBRATOR, DUAL RETRIGGERABLE/RESETTABLE MONOSTABLE
54H103	/02206		FLIP-FLOP, JK, DUAL
54107	/00203	/30109	FLIP-FLOP, JK, DUAL
54ACT11074	5962-8752502		FLIP-FLOP, D-TYPE, DUAL, WITH PRESET AND CLEAR AND TTL-COMPATIBLE INPUTS
54AC11074	5962-8852002		FLIP-FLOP, D-TYPE, DUAL, POSITIVE EDGE-TRIGGERED
54ACT11109	5962-8853402		FLIP-FLOP, JK, DUAL, POSITIVE EDGE-TRIGGERED, WITH TTL-COMPATIBLE INPUTS
54S112	/07102	/34105	FLIP-FLOP, JK, DUAL
54S113	/07103	/30105	FLIP-FLOP, JK, DUAL, WITH PRESET AND CLEAR
54ACT11373	5962-8755602		LATCH, D-TYPE TRANSPARENT, OCTAL, WITH 3-STATE OUTPUTS AND TTL-COMPATIBLE INPUTS
54AC11373	5962-8755502		LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
54ACT11374	5962-8763102		FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54S114	/07104	/30106	FLIP-FLOP, JK, DUAL, WITH PRESET
54ACT11534	5962-8965802		FLIP-FLOP, D-TYPE, OCTAL, WITH THREE-STATE OUTPUTS, TTL-COMPATIBLE INPUTS
54116	/01503		LATCH, DUAL 4-BIT
54121	/01201	7600301	MULTIVIBRATOR, MONOSTABLE
54122	/01202	7600301	MULTIVIBRATOR, MONOSTABLE RETRIGGERABLE
54123	/01203	7603901	MULTIVIBRATOR, DUAL MONOSTABLE RETRIGGERABLE
54174	/01701	/34109	FLIP-FLOP, D-TYPE, HEX
54S174	/07105	/34109	FLIP-FLOP, D-TYPE, QUAD
54175	/01702	/34106	FLIP-FLOP, D-TYPE, QUAD
54S175	/07106	/34106	FLIP-FLOP, D-TYPE, QUAD
54HC221A	5962-8780502	5962-8780901	MULTIVIBRATOR, DUAL NON-RETRIGGERABLE MONOSTABLE, WITH RESET
54221	5962-8771101	7604201	MULTIVIBRATOR, DUAL MONOSTABLE
54ALS564A	5962-8872801	8401002	FLIP-FLOP, D-TYPE, OCTAL, EDGE-TRIGGERED, WITH THREE-STATE OUTPUTS
5470	/00206		FLIP-FLOP, JK, SINGLE
54L71	/02101		FLIP-FLOP, RS
54L72	/02102		FLIP-FLOP, JK
5472	/00201		FLIP-FLOP, JK, SINGLE
54L73	/02103		FLIP-FLOP, JK, DUAL
5473	/00202	/30102	FLIP-FLOP, JK, DUAL
54L74	/02105	/30103	FLIP-FLOP, D-TYPE, DUAL
54S74	/07101	/34102	FLIP-FLOP, D-TYPE, DUAL
5474	/00205	/34102	FLIP-FLOP, D-TYPE, DUAL
5475	/01501	7601201	LATCH, 4-BIT, BISTABLE
5476	/00204	7601301	FLIP-FLOP, JK, DUAL
5477	/01502		LATCH, 4-BIT
54L78	/02104		FLIP-FLOP, JK, DUAL
5479	/00207		FLIP-FLOP, D-TYPE, DUAL
54AS823	5962-8952501		FLIP-FLOP, BUS INTERFACE, WITH THREE-STATE OUTPUTS
54ALS876	8401002		FLIP-FLOP, D-TYPE, DUAL 4-BIT, WITH PRESET AND THREE-STATE INVERTED OUTPUTS
54ALS880	8403202		LATCH, D-TYPE TRANSPARENT, DUAL 4-BIT, WITH INVERTED THREE-STATE OUTPUTS
8282	8417901		LATCH, D-TYPE TRANSPARENT, OCTAL, WITH THREE-STATE OUTPUTS
8283	8417902	5962-8866502	LATCH, D-TYPE TRANS PARENT, OCTAL, WITH INVERTED THREE-STATE OUTPUTS
9308	/01503		LATCH, DUAL 4-BIT
9314	/01504		LATCH, 4-BIT, WITH MASTER RESET
9601	/01204		MULTIVIBRATOR, ONE-SHOT
9602	/01205	7603901	MULTIVIBRATOR, DUAL ONE-SHOT
Combinational gates 4/			
1853	7901901		DECODER, N-BIT, 1-OF-8
4008B	/05451		ADDER, 4-BIT FULL
4008A	/05401		ADDER, 4-BIT FULL
40257B	/17803		DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
4028B	/05951		DECODER, BCD-TO-DECIMAL
4028A	/05901		DECODER, BCD-TO-DECIMAL
4515B	/17302		DECODER, 4-TO-16-LINE, WITH LATCHED INPUTS
4515B	7703201		DECODER, 4-TO-16-LINE, WITH

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MILITARY PARTS
TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

Combinational gates 4/ (continued)

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
			LATCHED INPUTS
4532B	/17303		PRIORITY ENCODER, 8-INPUT
4555B	/17304		DECODER/DEMULTIPLEXER, DUAL 1-TO-4-LINE
4555B	7704701		DECODER/DEMULTIPLEXER, DUAL 1-TO-4-LINE
4556B	/17305	8409401	DECODER/DEMULTIPLEXER, DUAL 1-TO-4-LINE
4556B	7704801	8409401	DECODER/DEMULTIPLEXER, DUAL 1-TO-4-LINE
4585B	7703702		MAGNITUDE COMPARATOR, 4-BIT
54S138	7604101	/33601	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54S138	/07701	/33601	DECODER/DEMULTIPLEXER, 3-LINE-TO-8-LINE
54S139	7700401	/33501	DECODER/DEMULTIPLEXER, DUAL 2-TO-4-LINE
54S139	/07702	/33501	DECODER/DEMULTIPLEXER, DUAL 2-TO-4-LINE
54145	/01005		DECODER, BCD-TO-DECIMAL, WITH OPEN-COLLECTOR OUTPUTS
54150	/01401		DATA SEL/MULTIPLEXER, 16-INPUT
54151	/01406	/33903	DATA SEL/MULTIPLEXER, 8-INPUT
54S151	/07901	/33903	DATA SEL/MULTIPLEXER, 8-INPUT
54S153	/07902	/33904	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54153	/01403	7601101	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
54S157	/07903	/33905	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54157	/01405	/33905	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54S158	/07904	/33906	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
54130	/01901	/34801	PARITY GENERATOR/CHECKER, 8-BIT
54181	/01101*	/30702	ALU/FUNCTION GENERATOR, 4-BIT
54S181	/07801	/33803	ALU/FUNCTION GENERATOR, 4-BIT
54182	/01102		LOOK AHEAD CARRY GENERATOR
54S182	/07802	/33804	LOOK AHEAD CARRY GENERATOR
54185A	7703001		CONVERTER, BINARY-TO-BCD, 6-BIT
54S251	8002201	/33907	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54S251	/07905	/33907	DATA SEL/MULTIPLEXER, 8-INPUT, WITH THREE-STATE OUTPUTS
54S253	/07908	/33910	DATA SEL/MULTIPLEXER, DUAL 4-INPUT, WITH THREE-STATE OUTPUTS
54S257	/07906	/33908	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE OUTPUTS
54S258	8002301	/33909	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE INVERTED OUTPUTS
54S258	/07907	/33909	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH THREE-STATE INVERTED OUTPUTS
5442	/01001	8607601	DECODER, BCD-TO-DECIMAL
5445	/01004	8509601	DECODER, BCD-TO-DECIMAL
5446	/01006		DECODER, BCD-TO-7-SEGMENT, WITH OPEN-COLLECTOR OUTPUTS
5447	/01007	7604501	DECODER, BCD-TO-7-SEGMENT, WITH OPEN-COLLECTOR OUTPUTS
5448	/01008		DECODER, BCD-TO-7-SEGMENT
5480	/00604		ADDER, FULL
5482	/00601	/34101	ADDER, 2-BIT
5483	/00602	/34101	ADDER, 4-BIT
54F85	5962-8606901		MAGNITUDE COMPARATOR, 4-BIT
54S85	/08201	/31001	MAGNITUDE COMPARATOR, 4-BIT
5485	/15001	/31001	MAGNITUDE COMPARATOR, 4-BIT
54C85	7703701	8601701	MAGNITUDE COMPARATOR, 4-BIT
54AS885	5962-8975701		MAGNITUDE COMPARATOR, 8-BIT
54C922	5962-8752101		KEYBOARD ENCODER, 16-KEY, WITH THREE-STATE OUTPUTS
7181	/01101*	/30702	ALU/FUNCTION GENERATOR, 4-BIT
82S62	5962-8754301	/34801	PARITY GENERATOR/CHECKER, 9-BIT
9304	/00603		ADDER, DUAL
9309	/01404	7601101	DATA SEL/MULTIPLEXER, DUAL 4-INPUT
9312	/01402		DATA SEL/MULTIPLEXER, 8-INPUT
9322	/01405	/33905	DATA SEL/MULTIPLEXER, QUAD 2-INPUT
9324	/15002		MAGNITUDE COMPARATOR, 5-BIT
9341	/01101*	/30702	ALU/FUNCTION GENERATOR, 4-BIT
9342	/01102		LOOK AHEAD CARRY GENERATOR
9383	/00602	/34101	ADDER, 4-BIT

Sequential registers/counters 5/

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
14035B	8101702		SHIFT REGISTER, 4-BIT PARALLEL-IN/PARALLEL-OUT
25S09	5962-8672801	/34901	SHIFT REGISTER, QUAD 2-INPUT
25S10	5962-8671801	8601001	SHIFT REGISTER, 4-BIT, WITH THREE-STATE OUTPUTS
25LS299	7802402		SHIFT/STORAGE REGISTER, 8-BIT UNIVERSAL
25LS399	5962-8670801	/34901	REGISTER, QUAD TWO-INPUT, HIGH-SPEED
29C921	5962-8851603		REGISTER, BUS INTERFACE, 10-WIDE, HIGH PERFORMANCE
29C923	5962-8851604		REGISTER, BUS INTERFACE, 9-WIDE, HIGH PERFORMANCE
4006B	/05751		SHIFT REGISTER, DUAL 4 STAGE/ 5 STAGE
4006A	/05701		SHIFT REGISTER, DUAL 4-STAGE/ 5-STAGE
4014B	/05752		SHIFT REGISTER, 8-BIT PARALLEL/SERIAL INPUT
4014A	/05702		SHIFT REGISTER, 8-BIT PARALLEL/SERIAL INPUT
4015B	/05753		SHIFT REGISTER, DUAL 4-STAGE
4015A	/05703		SHIFT REGISTER, DUAL 4-STAGE

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MILITARY

MILITARY PARTS

TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

MILITARY

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
Sequential registers/counters 5/ (continued)			
4017A	/05601		DECADE COUNTER
4017B	/05651		DECADE COUNTER
4018B	/05652		COUNTER, DIVIDE-BY-N
4018A	/05602		COUNTER, DIVIDE-BY-N
4020B	/05653		BINARY COUNTER, 14-STAGE
4020A	/05603		BINARY COUNTER, 14-STAGE
4021B	7901201		SHIFT REGISTER, STATIC
4021A	/05704	7901201	SHIFT REGISTER, 8-BIT PARALLEL/SERIAL INPUT
4021B	/05754		SHIFT REGISTER, STATIC
4022B	/05654		COUNTER, DIVIDE-BY-8
4022A	/05604		COUNTER, DIVIDE-BY-8
4024B	/05655		BINARY COUNTER, 7-STAGE
4024A	/05605		BINARY COUNTER, 7-STAGE
4029B	8101601		BINARY/DECADE COUNTER, 4-BIT PRESETTABLE UP/DOWN
4029B	8101602		COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
4031A	/05705		SHIFT REGISTER, 64-STAGE STATIC
4031B	/05755		SHIFT REGISTER, 64-STAGE
4034A	/05706		SHIFT REGISTER, 8-BIT UNIVERSAL
4034B	/05756		SHIFT REGISTER, 8-BIT UNIVERSAL
4035B	8101701		SHIFT REGISTER, 4-BIT PARALLEL-IN/PARALLEL-OUT
4040B	7705801	8501501	BINARY COUNTER, 12-BIT
4060A	7703101		BINARY COUNTER/DIVIDER AND OSCILLATOR, 14-STAGE RIPPLE CARRY
4076B	/17501		SHIFT REGISTER, D-TYPE, 4-BIT
4094B	7702501		SHIFT REGISTER/LATCH, 8-STAGE, THREE-STATE OUTPUTS
4520B	7702301		BINARY COUNTER, DUAL UP/DOWN
4557B	7901601		SHIFT REGISTER, 1-TO-64 BIT
54160	/01303	7700801	DECADE COUNTER, 4-BIT SYNCHRONOUS BCD
54161	/01306	7600901	BINARY COUNTER, 4-BIT SYNCHRONOUS
54162	/01305	/31513	DECADE COUNTER, 4-BIT SYNCHRONOUS
54163A	/01304	/34304	BINARY COUNTER, 4-BIT SYNCHRONOUS
54164	/00903	/30606	SHIFT REGISTER, 8-BIT PARALLEL-OUT
54L164	/02802		REGISTER, 8-BIT
54165	/00904	7700601	SHIFT REGISTER, 8-BIT PARALLEL/SERIAL INPUT
54192	/01308	7603401	DECADE COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54L193	/02503	7600601	COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54193	/01309	7600601	BINARY COUNTER, 4-BIT SYNCHRONOUS UP/DOWN
54S194	7604001	7802301	SHIFT REGISTER, 4-BIT BIDIRECTIONAL
54S194	/07601	7802301	SHIFT REGISTER, 4-BIT BIDIRECTIONAL
54194	/00905	/30603	SHIFT REGISTER, 4-BIT BIDIRECTIONAL
54195	/00906	/30603	SHIFT REGISTER, 4-BIT BIDIRECTIONAL
54AS867	5962-8966801		BINARY COUNTER, 8-BIT SYNCHRONOUS UP/DOWN, WITH ASYNCHRONOUS CLEAR
54AS869	5962-8952601		BINARY COUNTER, 8-BIT SYNCHRONOUS UP/DOWN
54L90	/02501		COUNTER, BINARY, 4-BIT
5490	/01307	7603201	DECADE COUNTER, 4-BIT
5492	/01301		COUNTER, DIVIDE-BY-TWELVE
5493	/01302	7604501	BINARY COUNTER, 4-BIT
54L93	/02502	7604501	BINARY COUNTER, 4-BIT
5495	/00901	/30604	SHIFT REGISTER, 4-BIT
54L95	/02801	/30604	REGISTER, 4-BIT
5496	/00902	/30605	SHIFT REGISTER, 5-BIT
76L70	/02805		REGISTER, 8-BIT, SERIAL-IN, PARALLEL-OUT
93L00	/02804		REGISTER, 4-BIT
93S16	5962-8672701	/34303	BINARY COUNTER, 4-BIT
93L28	/02803		REGISTER, 16-BIT
RAM 6/			
(SEE DWG)	8403605		STATIC RAM, 2K X 8, 200 NS ACCESS TIME
(SEE DWG)	8103902		STATIC RAM, 2K X 8, 120 NS ACCESS TIME
(SEE DWG)	8103905		STATUC RAM, 2K X 8, 200 NS ACCESS TIME
(SEE DWG)	5962-8858701	5962-8686401	STATIC RAM, 4K X 1, 45 NS ACCESS TIME
(SEE DWG)	8101501		DYNAMIC RAM, 16K X 1
(SEE DWG)	8103903		STATIC RAM, 2K X 8, 200 NS ACCESS TIME
(SEE DWG)	8102407		STATIC RAM, 4K X 1
(SEE DWG)	8103904		STATIC RAM, 2K X 8, 200 NS ACCESS TIME
(SEE DWG)	8103901		STATIC RAM, 2K X 8, 90 NS ACCESS TIME
1823	7901801		STATIC RAM, 128 X 8
82S16	8602301		STATIC RAM, 256 X 1
93415	/23101		STATIC RAM, 1K X 1, WITH OPEN-COLLECTOR OUTPUTS, 60 NS ACCESS TIME
ROM/PROM/PAL 7/			
(SEE DWG)	8202502	8300102	PROM, UV ERASABLE, 16K X 8, 250 NS ACCESS TIME
(SEE DWG)	8001206		PROM, UV ERASABLE, 4K X 8, 450 NS ACCESS TIME
(SEE DWG)	8202501	8203602	PROM, UV ERASABLE, 16K X 8, 450 NS ACCESS TIME
(SEE DWG)	8001205		PROM, UV ERASABLE, 4K X 8, 350 NS ACCESS TIME
(SEE DWG)	7902401		PROM, 1K X 8, POWER SWITCHED, 90 NS ACCESS TIME
(SEE DWG)	8001202		PROM, UV ERASABLE, 4K X 8, 450 NS ACCESS TIME
(SEE DWG)	5962-8683009	5962-8683009	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
(SEE DWG)	5962-8683010	5962-8683009	PROM, ELECTR. ERASABLE, 8K X 8, 350 NS ACCESS TIME
(SEE DWG)	8202508	8202507	PROM, UV ERASABLE, 16K X 8, 200 NS ACCESS TIME
(SEE DWG)	5962-8683004	5962-8683008	PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8683008	5962-8683009	

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MILITARY PARTS
TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

ROM/PROM/PAL 7/ (continued)

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
			PROM, ELECTR. ERASABLE, 8K X 8, 250 NS ACCESS TIME
(SEE DWG)	5962-8683003	5962-8683005	PROM, ELECTR. ERASABLE, 8K X 8, 300 NS ACCESS TIME
PAL16X4	8103605		PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR EXCLUSIVE OR
PAL16A4	8103606		PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-CARRY-OR EXCLUSIVE OR
PAL16R4	8103604	8103613	PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR
PAL16A4	/50406		PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-CARRY-OR EXCLUSIVE OR
PAL16X4	/50405		PROG. ARRAY LOGIC, 16-INPUT 4-OUTPUT REGISTERED AND-OR EXCLUSIVE OR
27C256-200	/27602		PROM, UV ERASABLE, 32K X 8
27C256-250	/27601		PROM, UV ERASABLE, 32K X 8, 250 NS ACCESS TIME
27256-30	8411105	8412901	PROM, UV ERASABLE, 32K X 8, 300 NS ACCESS TIME
27256-35	8411101	8412901	PROM, UV ERASABLE, 32K X 8, 350 NS ACCESS TIME
27C64-12	8510205		PROM, UV ERASABLE, 8K X 8, 120 NS ACCESS TIME
27C64-15	8510206		PROM, UV ERASABLE, 8K X 8, 150 NS ACCESS TIME
27HC64-155	/27402		PROM, UV ERASABLE, 8K X 8, 55 NS ACCESS TIME
27HC64-170	/27401		PROM, UV ERASABLE, 8K X 8, 70 NS ACCESS TIME
27C64-20	8510203		PROM, UV ERASABLE, 8K X 8, 200 NS ACCESS TIME
27C64-25	8510201		PROM, UV ERASABLE, 8K X 8, 250 NS ACCESS TIME
27C64-35	8510202		PROM, UV ERASABLE, 8K X 8, 350 NS ACCESS TIME
53S440	/20601		PROM, 1K X 4, WITH OPEN-COLLECTOR OUTPUTS
54S572	/20601		PROM, 1K X 4, WITH OPEN-COLLECTOR OUTPUTS
7640	/20801		PROM, 512 X 8, WITH OPEN-COLLECTOR OUTPUTS
7642	/20601		PROM, 1K X 4, WITH OPEN-COLLECTOR OUTPUTS
82S136	/20601		PROM, 1K X 4, WITH OPEN-COLLECTOR OUTPUTS
93452	/20601		PROM, 1K X 4, WITH OPEN-COLLECTOR OUTPUTS

Microprocessors and interface peripherals/FIFO 8/

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
2901A	7700701		MICROPROCESSOR, 4-BIT
AM2901	7700702		MICROPROCESSOR, 4-BIT
AM2932	8605001		PROGRAM CONTROL UNIT/ PUSH-POP STACK
MKB68000-6	8202101	8202103	MICROPROCESSOR, 16-BIT FIXED INSTRUCTION
68020-12	5962-8603201		MICROPROCESSOR, 32-BIT
68881-12	5962-8602101	8602701	COPROCESSOR, FLOATING-POINT
80C451	5962-8972601		MICROCONTROLLER, I/O EXPANDED
8080A	/42001	/47601	MICROPROCESSOR, 8-BIT, FIXED INSTRUCTION
8080A	7700201	/47601	MICROPROCESSOR, 8-BIT, FIXED INSTRUCTION
8085A	7901001	/48003	MICROPROCESSOR, 8-BIT, N-CHANNEL, FIXED INSTRUCTION
8251A	5962-8754802	5962-8760302	COMMUNICATION INTERFACE, PROGRAMMABLE
9914A	5962-8751901		CONTROLLER, GPIB
SBP9989	/46501		MICROPROCESSOR, 16-BIT

Operational amplifiers 9/

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
OP-15A	5962-8954201	/13101	OP AMP, JFET-INPUT
OP-16A	5962-8954301	/11202	OP AMP, JFET-INPUT
LM2110	/10603		VOLT. FOLLOWER
2700	/12201		OP AMP, LOW-POWER
3018A	/10801		TRANSISTOR ARRAY
CA3130BT	7703301		OP AMP
35074A	5962-8996902		OP AMP, QUAD, SINGLE SUPPLY
35074	5962-8996901		OP AMP, QUAD, SINGLE SUPPLY
OP37C	5962-8853703	5962-8853701	OP AMP, LOW-NOISE, PRECISION, HIGH-SPEED
OP37B	5962-8853702	5962-8853701	OP AMP, LOW-NOISE, PRECISION, HIGH-SPEED
DG405	5962-8996901		OP AMP, QUAD, SINGLE SUPPLY
LM709	7800701	8301301	OP AMP, GENERAL PURPOSE

Comparators 10/

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
LM106	/10303	5962-8965202	VOLT. COMPARATOR, HIGH-SPEED
LM106	8003701	5962-8965202	VOLT. COMPARATOR, HIGH-SPEED
HA-4902	5962-8686001		VOLT. COMPARATOR, QUAD, PRECISION
710	/10301	5962-8965202	VOLT. COMPARATOR, DIFFERENTIAL
711	/10302	/10201	VOLT. COMPARATOR, DUAL DIFFERENTIAL

Regulators 12/

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
LM105	5962-8958801		VOLT. REGULATOR, ADJ., POSITIVE
78MG	/11701		VOLT. REGULATOR, ADJ., POSITIVE
78G	/11702		VOLT. REGULATOR, ADJ., POSITIVE
79G	/11802		VOLT. REGULATOR, ADJ., NEGATIVE
79MG	/11801		VOLT. REGULATOR, ADJ., NEGATIVE
7905A	5962-8874601	7704003	VOLT. REGULATOR, FIXED, NEGATIVE, -5V, 1.0A
7912A	5962-8874701	7704003	VOLT. REGULATOR, FIXED, NEGATIVE, -12V, 1.0A
7915A	5962-8874801	7704005	VOLT. REGULATOR, FIXED, NEGATIVE, -15V, 1.0A
(SEE DWG)	5962-8987701		TRANSCEIVER, DUAL, RS232

This table contains devices which are not recommended for new designs because of diminishing sources, obsolete technology, or a preferred device listed in tables I or II is now available which performs the same function.

MILITARY

MILITARY PARTS

TABLE III- Logistics or Continuous Replacement Only (MIL-STD-1562R) (Cont'd)

Generic industry number	MIL-M-38510/	Preferred MIL-M-38510/	Circuit Description
Drivers/receivers 13/			
0026	7800802		CLOCK DRIVER, MOS, DUAL
0056	7800801		CLOCK DRIVER, MOS, DUAL, WITH VBB CONNECTION
CT-1487M	5962-8604905		DRIVER-RECEIVER, SINGLE CHANNEL (INTERFACES WITH MANCHESTER ENCODER-DECODER)
CT1487D	5962-8757907		BUS TRANSCEIVER, DUAL CHANNEL, LOW-POWER
DS1632	5962-9052201		PERIPHERAL DRIVER, DUAL OPEN COLLECTOR
1854	7901701		BUS TRANSCEIVER, UART
26S10	5962-8672001		BUS TRANSCEIVER, QUAD
26S12	5962-8753401		BUS TRANSCEIVER, QUAD
26S12A	5962-8753402		BUS TRANSCEIVER, QUAD
26LS32A	7802003	7802001	LINE RECEIVER, QUAD DIFFERENTIAL
26LS33A	7802004	7802002	LINE RECEIVER, QUAD DIFFERENTIAL
2946	5962-8672302	5962-868800	BUS TRANSCEIVER, OCTAL BIDIRECTIONAL, WITH INVERTING THREE-STATE OUTPUTS
54AS640	5962-8955301		BUS TRANSCEIVER, OCTAL, WITH THREE-STATE OUTPUTS
54AS646	5962-8759501		BUS TRANSCEIVER AND REGISTER, OCTAL, WITH THREE-STATE OUTPUTS
54AS651	5962-8875301		BUS TRANSCEIVER/REGISTER, OCTAL INVERTING, WITH THREE-STATE OUTPUTS OCTAL NONINVERTING, WITH THREE-STATE OUTPUTS
55189	5962-8688801	8200903	LINE RECEIVER, QUAD
55450	/12901		PERIPHERAL DRIVER, DUAL NAND
55460	/12906		PERIPHERAL DRIVER, DUAL NAND
BUS-63105	5962-8604901		DRIVER-RECEIVER, SINGLE CHANNEL (INTERFACES WITH MANCHESTER ENCODER-DECODER)
BUS-63125	5962-8757901	5962-8765003	BUS TRANSCEIVER, DUAL CHANNEL
7831	8004101		LINE DRIVER/RECEIVER, DUAL DIFFERENTIAL, W/OUTPUT DIODE CLAMPING
7832	8004102		LINE DRIVER/RECEIVER, DUAL DIFFERENTIAL
BUS-8553	5962-8604905		DRIVER-RECEIVER, SINGLE CHANNEL (INTERFACES WITH MANCHESTER ENCODER-DECODER)
9622	5962-8752201	/10405	LINE RECEIVER, DUAL
Timers 14/			
555	/10903		TIMER, PRECISION
D/A converters/16			
1020	/12705		D/A CONVERTER, 10-BIT
1218	/12707		D/A CONVERTER, 12-BIT
1220	/12706		D/A CONVERTER, 12-BIT
AD558T	5962-8778901	5962-8753103	D/A CONVERTER, 8-BIT, WITH FULL MICROPROCESSOR INTERFACE
7547T	5962-8965702		D/A CONVERTER, 12-BIT DUAL
A/D converters 17/			
574AT	5962-8512704		A/D CONVERTER, 12-BIT, WITH MICROPROCESSOR INTERFACE
574AU	5962-8512703		A/D CONVERTER, 12-BIT, WITH MICROPROCESSOR INTERFACE
Analog switches/multiplexers 18/			
14551B	5962-8775301		ANALOG MULTIPLEXER/DEMULTIPLEXER, FOUR-POLE, DOUBLE-THROW
DG180A	5962-8767301	/11104	ANALOG SWITCH, DUAL SPST
4016A	/05801		ANALOG SWITCH, QUAD
4016B	/05851		ANALOG SWITCH, SPST, 4-CHANNEL
4052B	7901501		ANALOG MULTIPLEXER/DEMULTIPLEXER, DIFFERENTIAL 4-CHANNEL
4053B	8101801		ANALOG MULTIPLEXER/DEMULTIPLEXER, TRIPLE 2-CHANNEL
4066A	/05802		ANALOG SWITCH, SPST, 4-CHANNEL
4066B	/05852	5962-8956801	ANALOG SWITCH, SPST, 4-CHANNEL
4067B	/17801		ANALOG MULTIPLEXER, 16-CHANNEL
4097B	/17802		ANALOG MULTIPLEXER, 8-CHANNEL DIFFERENTIAL
Voltage references 19/			
LM103H-1.8	7702801		VOLT. REFERENCE, 1.8V
LM103H-2.0	7702802		VOLT. REFERENCE, 2.0V
LM103H-2.2	7702803		VOLT. REFERENCE, 2.2V
LM103H-2.4	7702804		VOLT. REFERENCE, 2.4V
LM103H-2.7	7702805		VOLT. REFERENCE, 2.7V
LM103H-3.0	7702806		VOLT. REFERENCE, 3.0V
LM103H-4.7	7702811		VOLT. REFERENCE, 4.7V
LM103H-5.1	7702812		VOLT. REFERENCE, 5.1V
LM103H-5.6	7702813		VOLT. REFERENCE, 5.6V
AD587UQ	5962-8982503		VOLT. REFERENCE, 10V
Sample and hold 20/			
SMP-11A	5962-8954101		SAMPLE AND HOLD AMPLIFIER, LOW-DROOP-RATE
Analog circuit functions 24/			
54LS124	7704101	8102303	OSCILLATOR, VOLTAGE-CONTROLLED, DUAL

This table contains devices which are not recommended for new designs because of diminishing sources, obsolete technology, or a preferred device listed in tables I or II is now available which performs the same function.

MILITARY

MILITARY PARTS
TABLE IV- Inactive or Suspended Military Activity (MIL-STD-1562R) (Cont'd)

Gates 1/

Generic industry number	MIL-M-38510/	Circuit Description
54S09	08004	AND GATE, QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS
54S11	08001	AND GATE, TRIPLE 3-INPUT
54S134	07010	NAND GATE, 12-INPUT, TS
54S135	07502	EXCLUSIVE-OR/NOR GATE, QUAD
54S15	08002	AND GATE, TRIPLE 3-INPUT, WITH OPEN-COLLECTOR INPUTS
54H50	04001	AND-OR-INVERT GATE, DUAL 2-WIDE 2-INPUT
54H51	04002	AND-OR-INVERT GATE, DUAL 2-WIDE
54L51	04101	AND-OR-INVERT GATE, DUAL 2-WIDE
54H53	04003	AND-OR-INVERT GATE, 2-2-2-3 INPUT
54L54	04102	AND-OR-INVERT GATE, 4-WIDE 3-2-2-3 INPUT
54H54	04004	AND-OR-INVERT GATE, 2-2-2-3 INPUT
54L55	04103	AND-OR-INVERT GATE, 2-WIDE 4-INPUT
54H55	04005	AND-OR-INVERT GATE, 2-WIDE 4-INPUT
54S65	07403	AND-OR-INVERT GATE, QUAD 4-2-3-2 INPUT
54AC86	75202	EXCLUSIVE-OR GATE, QUAD 2-INPUT

Buffers 2/

Generic industry number	MIL-M-38510/	Circuit Description
1856	47601	BUS BUFFER/SEPARATOR, 4-BIT
1857	47602	BUS BUFFER/SEPARATOR, 4-BIT
5428	16201	BUFFER/DRIVER, NOR, QUAD 2-INPUT
932	03101	BUFFER, NAND DUAL 4-INPUT
933	03105	EXTENDER, DUAL 4-INPUT
944	03102	BUFFER, NAND DUAL 4-INPUT, WITH OPEN-COLLECTOR OUTPUTS
957	03103	BUFFER, NAND QUAD 2-INPUT
958	03104	BUFFER, NAND QUAD 2-INPUT, WITH OPEN-COLLECTOR OUTPUTS

Flip-Flops 3/

Generic industry number	MIL-M-38510/	Circuit Description
2918	44201	FLIP-FLOP, D-TYPE, QUAD, WITH STANDARD AND THREE-STATE OUTPUTS
54H101	02205	FLIP-FLOP, JK
54L121	04201	MULTIVIBRATOR, MONOSTABLE
54L122	04202	MULTIVIBRATOR, MONOSTABLE RETRIGGERABLE, W/CLEAR
54H72	02201	FLIP-FLOP, JK
54H73	02202	FLIP-FLOP, JK, DUAL
54S74	07101	FLIP-FLOP, D-TYPE, DUAL
54H74	02203	FLIP-FLOP, D-TYPE, DUAL
54H76	02204	FLIP-FLOP, JK, DUAL
9093	03304	FLIP-FLOP, JK, DUAL
93L08	04502	LATCH, DUAL 4-BIT
93L14	04501	LATCH, 4-BIT, WITH MASTER RESET
9334	16001	LATCH, 8-BIT ADDRESSABLE
945	03301	FLIP-FLOP, RS/JK
948	03302	FLIP-FLOP, RS/JK
950	03303	FLIP-FLOP, BINARY
951	03201	MULTIVIBRATOR, MONOSTABLE

Combinational gates 4/

Generic industry number	MIL-M-38510/	Circuit Description
1853	47401	DECODER, N-BIT, 1-OF-8
54147	15601	PRIORITY ENCODER, 10-TO-4-LINE
54148	15602	PRIORITY ENCODER, 8-LINE-TO-3-LINE
54154	15201	DECODER, 4-TO-16-LINE
54155	15202	DECODER, DUAL 2-LINE-TO-4-LINE
54156	15203	DECODER, DUAL 2-LINE-TO-4-LINE
54L157	04603	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH ENABLE
54L42	02901	DECODER, BCD-TO-DECIMAL
54L43	02902	DECODER, EXCESS-3-TO-DECIMAL
5443	01002	DECODER, EXCESS-3-TO-DECIMAL
54L44	02903	DECODER, EXCESS-3-GRAY-TO-DECIMAL
5444	01003	DECODER, EXCESS-3-GRAY-TO-DECIMAL
54L46	02904	DISPLAY DECODER, BCD-TO-7-SEGMENT
54L47	02905	DISPLAY DECODER, BCD-TO-7-SEGMENT
5449	01009	DECODER, BCD-TO-7-SEGMENT, WITH OPEN-COLLECTOR OUTPUTS
76L42A	02906	DECODER, BCD-TO-DECIMAL
8250	15204	DECODER, BINARY-TO-OCTAL
8251	15205	DECODER, 4-TO-10-LINE
8252	15206	DECODER, 4-TO-10-LINE
9301	15206	DECODER, 4-TO-10-LINE
93L01	02907	DECODER, BCD-TO-DECIMAL
93L09	04601	DATA SEL/MULTIPLEXER, 4-TO-1-LINE
9311	15201	DECODER, 4-TO-16-LINE
93L12	04602	DATA SEL/MULTIPLEXER, 8-INPUT, WITH ENABLE
9317	15802	DECODER, BCD-TO-7-SEGMENT
9318	15603	PRIORITY ENCODER, 8-INPUT
93L18	04301	PRIORITY ENCODER, 8-INPUT
9321	15801	DECODER, 1-TO-4-LINE
93L22	04603	DATA SEL/MULTIPLEXER, QUAD 2-INPUT, WITH ENABLE
93L24	04401	COMPARATOR, 5-BIT

Sequential registers/counters 5/

Generic industry number	MIL-M-38510/	Circuit Description
54170	01801	REGISTER FILE, 4 X 4
54S195	07602	SHIFT REGISTER, 4-BIT BIDIRECTIONAL
9300	15901	SHIFT REGISTER, 4-BIT
93L10	02504	COUNTER, BCD, SYNCHRONOUS
93L16	02505	BINARY COUNTER, 4-BIT SYNCHRONOUS
9328	15902	SHIFT REGISTER, DUAL 8-BIT
9338	15701	MULTIPORT REGISTER, 8-BIT

RAM 6/

Generic industry number	MIL-M-38510/	Circuit Description
1821	47101	STATIC RAM, 1K X 1
1822	47102	STATIC RAM, 256 X 4
TMS4050	23504	STATIC RAM, 4K X 1
TMS4050	23502	STATIC RAM, 4K X 1
TMS4060	23501	STATIC RAM, 4K X 1
TMS4060	23503	STATIC RAM, 4K X 1
MM5280	23505	STATIC RAM, 4K X 1
MM5280	23506	STATIC RAM, 4K X 1
6508	23901	STATIC RAM, 1K X 4, WITH THREE-STATE OUTPUTS
6518	23902	STATIC RAM, 1K X 4, WITH THREE-STATE OUTPUTS
MCM6604A	23604	STATIC RAM, 4K X 1
MCM6604A	23602	DYNAMIC RAM, 4K X 1, WITH THREE-STATE OUTPUTS
MCM6605	23601	DYNAMIC RAM, 4K X 1, WITH THREE-STATE OUTPUTS
MCM6605	23603	STATIC RAM, 4K X 1
6810	40201	STATIC RAM, 128 X 8
AM91L30CF	23705	STATIC RAM, 1K X 4
AM91L30AF	23706	STATIC RAM, 1K X 4
AM91L30AFM	23708	STATIC RAM, 1K X 4
AM9130AFM	23704	STATIC RAM, 1K X 4
AM9130CFC	23701	STATIC RAM, 1K X 4
AM9130AFC	23702	STATIC RAM, 1K X 4
AM9130CFM	23703	STATIC RAM, 1K X 4
AM91L30CFM	23707	STATIC RAM, 1K X 4

This tables contains devices which are not recommended for new design. It also includes devices which have had QPL status that has been cancelled or expired and there is no indication that a device manufacturer intends to requalify.

MILITARY PARTS

TABLE IV- Inactive or Suspended Military Activity (MIL-STD-1562R) (Cont'd)

Generic industry number	MIL-M-38510/	Circuit Description
RAM 6/ (continued)		
AM91L40AFM	23716	STATIC RAM, 4K X 1
AM91L40CFM	23715	STATIC RAM, 4K X 1
AM91L40AFC	23714	STATIC RAM, 4K X 1
AM91L40CFC	23713	STATIC RAM, 4K X 1
AM9140CFM	23711	STATIC RAM, 4K X 1
AM9140AFC	23710	STATIC RAM, 4K X 1
AM9140CFC	23709	STATIC RAM, 4K X 1
AM9140AFM	23712	STATIC RAM, 4K X 1
93410	23001	STATIC RAM, 256 X 1
93411	23003	STATIC RAM, 256 X 1, WITH OPEN-COLLECTOR OUTPUTS
93L420	23004	STATIC RAM, 256 X 1, INV.
93421	23002	STATIC RAM, 256 X 1, WITH THREE-STATE OUTPUTS
93470	23301	STATIC RAM, 4K X 1, WITH OPEN-COLLECTOR OUTPUTS
93471	23302	STATIC RAM, 4K X 1, WITH THREE-STATE OUTPUTS
ROM/PROM/PAL 7/		
1832	47201	STATIC ROM, 512 X 8
2532	22201	PROM, UV ERASABLE, 4K X 8
2708	22001	PROM, UV ERASABLE, 1K X 8
2716	22101	PROM, UV ERASABLE, 2K X 8, 450 NS ACCESS TIME
NMC2816	22601	PROM, ELECTR. ERASABLE, 2K X 8
34000	40301	STATIC ROM, 2K X 8, WITH THREE-STATE OUTPUTS
3516E	40301	STATIC ROM, 2K X 8, WITH THREE-STATE OUTPUTS
HPROM-512	20101	PROM, 64 X 8, WITH OPEN-COLLECTOR OUTPUTS
52116	40301	STATIC ROM, 2K X 8, WITH THREE-STATE OUTPUTS
MCM5303	20101	PROM, 64 X 8, WITH OPEN-COLLECTOR OUTPUTS
MCM5304	20102	PROM, 64 X 8
IM5603A	20201	PROM, 256 X 4
IM5623	20202	PROM, 256 X 4
6654	21901	PROM, UV ERASABLE, 512 X 8
6831B	40301	STATIC ROM, 2K X 8, WITH THREE-STATE OUTPUTS
68A316E	40301	STATIC ROM, 2K X 8, WITH THREE-STATE OUTPUTS
9218	40301	STATIC ROM, 2K X 8, WITH THREE-STATE OUTPUTS
Microprocessors amd interface peripherals/FIFO 8/		
MPY008HC2V	50004	MULTIPLIER, 8-BIT PARALLEL
MPY012HC1V	50005	MULTIPLIER, 12-BIT PARALLEL
MPY016HC1V	50006	MULTIPLIER, 16-BIT PARALLEL
TDC1008C1V	50001	MULTIPLIER, 8-BIT PARALLEL
TDC1009C1V	50002	MULTIPLIER/ACCUMULATOR, 12 X 12
TDC1010C1V	50003	MULTIPLIER/ACCUMULATOR, 16 X 16
1802D	47001	MICROPROCESSOR, 8-BIT
1852	47301	I/O PORT, 8-BIT
2901C	44001	MICROPROCESSOR SLICE, 4-BIT
6800	40001	MICROPROCESSOR, 8-BIT
MC6821	40101	PERIPHERAL INTERFACE ADAPTOR
Z80APIO	48401	I/O CONTROLLER, PARALLEL
Z80PIO	48402	I/O CONTROLLER, PARALLEL
Z80ACTC	48301	COUNTER/TIMER UNIT, 4.0 MHZ
Z80CTC	48302	COUNTER/TIMER UNIT, 2.5 MHZ
Z80ADMA	48201	DMA CONTROLLER
Z80DMA	48202	DMA CONTROLLER
Z-80SIO/2	48102	I/O CONTROLLER, DUAL
Z80ASIO/2	48101	CONTROLLER, I/O
8035L	49002	MICROCOMPUTER, 8-BIT
8048	49001	MICROCOMPUTER, 8-BIT
8212	42101	I/O PORT, 8-BIT
8228	42301	CONTROLLER/BUS DRIVER
9900A	46001	MICROPROCESSOR, 16-BIT
Drivers/receivers 13/		
MMH0026	03501	CLOCK DRIVER, MOS, DUAL
2905	44101	BUS TRANSCEIVER, QUAD 2-INPUT
2906	44102	BUS TRANSCEIVER, QUAD 2-INPUT
2907	44103	BUS TRANSCEIVER, QUAD, WITH INTERFACE LOGIC AND 2.0V INPUT RECEIVER THRESHOLD
2915	44104	BUS TRANSCEIVER, QUAD 2-INPUT
2916	44105	BUS TRANSCEIVER, QUAD, WITH THREE-STATE OUTPUTS
2917	44106	BUS TRANSCEIVER, QUAD, WITH THREE-STATE OUTPUTS
8224	42201	CLOCK GENERATOR/DRIVER

This tables contains devices which are not recommended for new design. It also includes devices which have had QPL status that has been cancelled or expired and there is no indication that a device manufacturer intends to requalify.

MILITARY

MILITARY PARTS
TABLE V- Not Recommended Under Any Circumstances (MIL-STD-1562R)

Generic industry number	MIL-M-38510/	Preferred generic number	Preferred MIL-M-38510/	Circuit Description	Generic industry number	MIL-M-38510/	Preferred generic number	Preferred MIL-M-38510/	Circuit Description
Microprocessor and interface peripherals/FIFO 8/									
SPB9900A	46001	8086	53001	16 bit fixed instruction microprocessor (3.0 MHz)					

Devices listed in this table will also have a preferred device for new design.

MILITARY

MILITARY PARTS
Cross Reference SORTED BY GENERIC INDUSTRY NUMBER (Cont'd)

Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
LH0002		7801301	1 9	L
LH0002		7801301	1 9	L
LH0002		7801301	1 9	L
LH0002		7801301	2 9	L
0006		5962-8761701	1 13	-
0008		5962-8761702	1 13	-
LH0021		8508801	1 9	-
LH0021		8508801	2 9	-
0026		7800802	3 13	L
MMH0026	/03501		4 13	L
ADC00300		5962-8854201	2 17	
0032		8001301	1 9	-
0032		8001301	1 9	-
0032		8001301	1 9	-
0032		8001301	2 9	-
LH0033		8001401	1 9	-
LH0033		8001401	1 9	-
LH0033		8001401	1 9	-
LH0033		8001401	1 9	-
LH0033		8001401	2 9	-
LH0041		8508701	1 9	-
LH0041		8508701	1 9	-
LH0041		8508701	2 9	-
0056		7800801	3 13	L
MPY008HC2V	/50004		4 8	-
AMP-01A		5962-8863001	2 9	
AMP-01B		5962-8863002	2 9	
REF01A		5962-8958101	2 19	
REF01		5962-8958102	2 19	
CMP-01		5962-8987101	2 10	
LH0101A		8508901	2 9	-
LH0101		8508902	2 9	-
MPY012HC1V	/50005		4 8	-
MPY016HC1V	/50006		4 8	-
REF02A		8551401	2 19	-
DAC02310-112		5962-8851701	1 16	
DAC02310-112		5962-8851701	1 16	
DAC02310-113		5962-8851702	1 16	
DAC02310-113		5962-8851702	1 16	
MOH0268D		5962-8858101	2 13	
MOH0272C		5962-8858201	2 13	
HTC-0300	/14201		2 20	-
CMP04B		5962-8990403	2 10	
HOS-050A		5962-8857901	1 9	
THA-05203-1	/14201		2 20	-
SW-06B		5962-8966901	2 18	-
HOS-060SH		5962-8857902	1 9	
061	/11901	8102301	2 9	-
062	/11902	8102302	2 9	-
064	/11903	8102303	2 9	-
OP-07A	/13501	8203601	2 9	-
OP-07	/13502	8203602	2 9	-
071	/11904		1 9	F
071	/11904	8102304	2 9	F
072	/11905		1 9	F
072	/11905	8102305	2 9	F
074	/11906		1 9	F
074	/11906	8102306	2 9	F
DAC-08	/11301		1 16	
DAC-08A	/11302		1 16	
MUX-08A		5962-8771601	2 18	
MUX-08B		5962-8771602	2 18	
DAC08		5962-8993201	2 16	
Z0853004		5962-8752702	2 8	-
Z0853006		5962-8752701	2 8	-
Z0858106		5962-8752602	2 8	-
Z0858110		5962-8752601	2 8	F
BFRP10	/63001		2 23	-
LM10		5962-8760401	2 9	-
REF10A	/12403	5962-8947901	2 19	-
REF10B		5962-8947902	2 19	-
LT1004-1.2		5962-8859701	2 19	-
LT1004-2.5		5962-8859702	2 19	-
LT1007A		5962-8757801	2 9	F
TDC1008C1V	/50001		4 8	-
LT1009		5962-8961001	2 19	
TDC1009C1V	/50002		4 8	-
LM101A	/10103		1 9	F
INA101		5962-8778001	2 9	
INA101		5962-8778002	2 9	
LT1010		5962-8856201	2 2	-
TDC1010C1V	/50003		4 8	-
LT1013A		5962-8876001	2 9	
LT1013		5962-8876002	2 9	
LT1014A		5962-8967701	2 9	
LT1014		5962-8967702	2 9	F
LT1016		5962-8684501	2 10	P
LT1017		5962-8950401	2 10	
LT1018		5962-8950402	2 10	
LM102	/10601		2 9	L
BT102		5962-8965301	2 16	
1020	/12705		3 16	L
102110	/12409		2 19	
LT1021BM-10		5962-8860001	2 19	-
LT1021CM-10		5962-8860002	2 19	P
LT1021DM-10		5962-8860003	2 19	P
10215	/12407		2 19	
LT1021BM-5		5962-8876201	2 19	-
LT1021CM-5		5962-8876202	2 19	-
LT1021DM-5		5962-8876203	2 19	
10217	/12408		2 19	
LT1021BM-7		5962-8864701	2 19	-
LT1021DM-7		5962-8864702	2 19	-
LT1022A		5962-8962201	2 9	
LT1022		5962-8962202	2 9	
LT1028M		5962-8862201	2 9	
LT1028AM		5962-8862202	2 9	
LM103H-1.8		7702801	3 19	L
LM103H-2.0		7702802	3 19	L
LM103H-2.2		7702803	3 19	L
LM103H-2.4		7702804	3 19	L
LM103H-2.7		7702805	3 19	L
LT1033		5962-8774101	2 12	-
LM103H-3.0		7702806	3 19	-
LM103H-3.3		7702807	2 19	-
LM103H-3.6		7702808	2 19	-
LM103H-3.9		7702809	2 19	L
LM103H-4.3		7702810	2 19	L
LM103H-4.7		7702811	3 19	L
LM103H-5.1		7702812	3 19	L
LM103H-5.6		7702813	3 19	L
LT1037A		5962-8856701	2 9	-
LM104		5962-8760501	2 12	-
10H416		5962-8759001	2 5	-
TDC1046		5962-8778601	2 17	-
TDC1048		5962-8760001	2 17	-
TDC1049		5962-8853201	2 17	F
LM105		5962-8958801	3 12	
10501	/06001		1 1	F
10H501		5962-8750301	2 1	
10502	/06002		2 1	F
10H502		5962-8755701	2 1	-
10H503		5962-8756501	2 1	-
10504	/06201		1 1	F
10H504		5962-8750401	2 1	-
10505	/06003		2 1	F
10H505		5962-8750701	2 1	-
10506	/06004		2 1	F
10H506		5962-8756401	2 1	-
10507	/06005		2 1	L
10H507		5962-8772701	2 1	L
10509	/06006		2 1	P
10H509		5962-8985601	2 1	
10H513		5962-8755801	2 1	-
10H515		5962-8750101	2 13	-
10516		7800901	2 13	-
10H516		5962-8750201	2 13	P
10H518		5962-8755901	2 1	-
10H519		5962-8772801	2 1	F
LTC1052		5962-8978201	2 9	
10521		5962-8857701	2 1	-
10H521		5962-8773001	2 1	
10524	/06301		1 2	F
10H524		5962-8756001	2 2	-
10525	/06302		1 2	F
10H525		5962-8750801	2 2	-
10531	/06101		1 3	F
10H531		5962-8756101	2 3	-
10535	/06104		2 3	F
10H535		5962-8750501	2 3	-
10H536		5962-8700101	2 5	-
LT1054M		5962-8956201	2 24	-
10H541		5962-8751101	2 5	-
10541		5962-8855701	2 5	-
10545		5962-8856001	2 6	-
10H558		5962-8756601	2 4	F
10558		5962-8779201	2 4	-
10H560		5962-8756201	2 4	-
10H561		5962-8756701	2 4	-
10H564		5962-8772901	2 4	
10564		5962-8852701	2 4	
10H571		5962-8756801	2 4	F
10H574		5962-8750601	2 4	-
10576	/06103		2 3	F
10H576		5962-8751201	2 3	
10H586		5962-8756301	2 3	-
10586		5962-8779301	2 3	
10H588		5962-8750901	2 2	-
10H589		5962-8751001	2 1	-
10597	/06202		2 1	F
10598		5962-8777301	2 3	-
LM106	/10303	8003701	3 10	L
LTC1060A		5962-8864101	2 24	P
10H609		5962-8756901	2 1	-
10H610		5962-8754101	2 1	-
10612		5962-8775001	2 1	-
10631	/06102		2 3	F
HSD1066-341H		5962-8949901	2 24	
HSD1066-341V		5962-8949902	2 24	
HSD1066-381H		5962-8949903	2 24	
HS1068		5962-8877601	2 17	
LM107		5962-8958901	2 9	
LM108A	/10104		1 9	F
PAL10H8	/50301	8103501	2 7	F
PAL10L8	/50306	8103506	2 7	F
PAL10H8A	/50310	8103510	2 7	-
PAL10L8A	/50315	8103514	2 7	-
LT1080		5962-8766601	2 13	-
LT1081		5962-8766602	2 13	-
PAL10H8A2	/50319		2 7	

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
PAL10L8A2	/50324		2	7
LM109	/10701	5962-8777401	2	12 -
LTC1090		5962-8983001	2	8
SMP-11A		5962-8954101	3	20
LM110	/10602	5962-8760601	2	9 F
LM111	/10304	5962-8687701	2	10
LM113		5962-8671101	2	19 -
LM113-1		5962-8671102	2	19 -
LM113-2		5962-8671103	2	19 -
LM117H	/11703		1	12 F
LM117K	/11704		1	12 F
LM117H	/11704	7703401	2	12 F
LM117HV		7703402	2	12 -
LT117A		7703405	2	12 -
LT117AHV		7703407	2	12 -
LM118	/10107		1	9
LM119A	/10307		1	10 -
LM119	/10306	8601401	2	10 -
LT119A	/10307	8601402	2	10 -
LM120H-05	/11501		1	12 L
LM120K-05	/11505		1	12 L
LM120H-05	/11505	7704001	2	12 L
LM120H-12	/11502		1	12 L
LM120K-12	/11506		1	12 L
LM120H-12	/11506	7704003	2	12 L
LM120H-15	/11503		1	12 -
LM120K-15	/11507		1	12 -
LM120H-15	/11507	7704004	2	12 -
LM120H-24	/11504		2	12 F
LM120K-24	/11508		2	12 F
LM120H-24	/11508	7704005	2	12 F
PAL12L10		5962-8680402	2	7 -
1218	/12707		3	16 L
1220	/12706		3	16 L
SG123		5962-8777501	2	12 -
LM124	/11005	7704301	2	9 F
LM124A	/11006	7704302	2	9 -
12540		5962-8775201	2	23 -
MT1257-12	/24601		1	6 -
MT1257-15	/24602		1	6 -
MT1259-12	/24603		1	6 -
MT1259-15	/24604		1	6 L
PAL12H6	/50302	8103502	2	7 -
PAL12L6	/50307	8103507	2	7 -
PAL12H6A	/50311	8103511	2	7 F
PAL12L6A	/50316	8103515	2	7 F
PAL12H6A2	/50320		2	7
PAL12L6A2	/50325		2	7
DG129A		7801401	2	18 L
LM129A	/12402	5962-8992101	2	19
LM129B	/12406	5962-8992102	2	19 F
LM129C		5962-8992103	2	19
MOF1305D		5962-8858301	2	13
LM131A		5962-8760701	2	24 -
1HC34-15	/61503		2	6 L
1HC34-15	/61506		2	6 L
1HC34-20	/61502		2	6 -
1HC34-20	/61505		2	6 L
1HC34-25	/61501		2	6 -
1HC34-25	/61504		2	6 L
LM136A-2.5		8418001	2	19 -
LM136A-5.0		8418002	2	19 P
LM137H	/11803		1	12 F
LT137AHV		7703408	2	12 -
LM137H	/11804	7703403	2	12 F
LM137HV		7703404	2	12 -
LT137A		7703406	2	12 -
LM137K	/11804		1	12 F
LM138K	/11706		1	12 F
LM139	/11201	7700801	2	10 F
LM139A		5962-8773901	2	10 F
OP14A		5962-8771401	2	9 P
OP14B		5962-8771402	2	9 F
LM140H-05	/10702		1	12 -
LM140K-05	/10706		1	12 -
LM140H-12	/10703		1	12 -
LM140K-12	/10707		1	12 -
LM140H-15	/10704		1	12 -
LM140K-15	/10708		1	12
LM140K-24	/10709		1	12
LM140H-24	/10705		2	12 -
14035B		8101702	3	5
LM143		7800303	2	9 L
1437		5962-8981301	2	9
LM144		7800301	2	9 -
PAL14H4	/50303	8103503	2	7 -
PAL14L4	/50308	8103508	2	7 F
PAL14H4A	/50312	8103512	2	7 F
PAL14L4A	/50317	8103516	2	7 F
PAL14H4A2	/50321		2	7
PAL14L4A2	/50326		2	7
14490A		5962-8764601	2	23 -
SDC14500-635		5962-9070701H	2	22
SDC14500-636		5962-9070702H	2	22
SDC14502-605		5962-9070703H	2	22
SDC14502-606		5962-9070704H	2	22
14551B		5962-8775301	3	18 -
SDC14560-114		5962-8949901	1	24
SDC14560-115		5962-8949902	1	24
SDC14560-605		5962-8949903	1	24
SDC14561-114		5962-8949801	1	24
SDC14561-115		5962-8949802	1	24
SDC14565-114		5962-8990801	1	24
SDC14565-115		5962-8990802	1	24
SDC14565-616		5962-8990803	1	24
SDC14566-115		5962-8990804	1	24
14584		5962-8550102	3	1 -
LF147	/11906		1	9 F
LM148	/11001		1	9 F
PAL14L8		5962-8680403	2	7 -
CT1487D		5962-8757907	3	13
CT-1487M		5962-8604905	3	13
LM149	/11002		2	9 F
OP-15A		5962-8954201	3	9
LM150K	/11705		1	12 P
LM150	/11705	5962-8767501	2	12 P
LM150A		5962-8767502	2	12 -
NHI-1500		5962-8757905	2	13 -
1503A		5962-8686102	2	19 -
SG1503		5962-8686101	2	19 L
LF151	/11904		1	9 F
1524	/12601	7802801	2	12 -
1524B		5962-8764501	2	12 -
1524A		5962-8764502	2	12 -
1525A	/12602	5962-8951101	2	12 -
UC1525A		5962-8951103	2	12
1526	/12603	8551501	2	12
1526A		8551502	2	12
1527A	/12604	5962-8951102	2	12
UC1527A		5962-8951104	2	12
NHI-1529		5962-8952203	2	13
LF153	/11905		1	9 F
1532		5962-8777001	2	12 -
1536		7800304	2	9 P
1543		5962-8774001	2	24 -
1544		5962-8774002	2	24 -
1545		5962-8671201	2	9 -
1549		5962-8684901	2	18 -
LF155	/11401		1	9 F
LF155A	/11404		1	9
UT1553BRTI	/55501		1	23 -
UT1553BB		5962-8862801	2	8 -
1553RTMP		5962-8864501	2	8
UT1553BCRTMP	/55501	5962-8950101	2	23 -
UT1553BBCRTM		5962-		
8957701	2	8		
UT1553BRTR		5962-8957601	2	23
15530		7802901	2	4 -
FC1553623		5962-8757906	2	13 -
1558	/10108		1	9
LF156	/11402		1	9 F
LF156A	/11405		1	9
1568		5962-8876301	2	12
1568		5962-8876302	2	12
LF157	/11403		1	9 F
LF157A	/11406		1	9 F
LM1578		5962-8958601	2	12
LM158		5962-8771001	2	9 -
LM158A		5962-8771002	2	9 -
1590		5962-8765701	2	9 -
1596		5962-8857101	2	24 -
WEDSP-16		5962-9070401Q	1	23
MUX-16A		5962-8771701	2	18
MUX-16B		5962-8771702	2	18
OP-16A		5962-8954301	3	9
LM160		5962-8767401	2	10 -
PAL16C1A	/50314		2	7
PAL16C1	/50305	8103505	2	7 F
LM161		5962-8757203	2	10 -
PLS161		5962-8850401	2	7 F
PAL16C1A2	/50323		2	7
PAL16H2	/50304	8103504	2	7 F
PAL16L2	/50309	8103509	2	7 F
PAL16H2A	/50313	8103513	2	7 -
PAL16L2A	/50318	8103517	2	7 F
PAL16H2A2	/50322		2	7
PAL16L2A2	/50327		2	7
MOR1623K		5962-8858401	2	13
SG1626		5962-8871601	2	13
DS1631		5962-8863101	2	13
DS1632		5962-9052201	3	13
DS1634		5962-8982101	2	13 -
UC1637		5962-8995701	2	24
PAL16R4B	/50604		1	7 F
PAL16R4A	/50404	8103610	2	7 F
PAL16R4		8103604	3	7 F
PAL16X4	/50405	8103605	3	7 -
PAL16A4	/50406	8103606	3	7 -
PAL16R4-15	/50612	5962-8515512	2	7 -
PAL16R4A2	/50410		1	7 -
PAL16R4B2	/50608		1	7 -
PAL16R4A-2	/50410	8103614	2	7 -
PAL16R4-20	/50604	5962-8515504	2	7 F
C16R4-20		5962-8867812	2	7
C16R4-20		5962-8871312	2	7
PAL16R4-30	/50608	5962-8515508	2	7 -

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
C16R4-30		5962-8867808	2	7
C16R4-30		5962-8871308	2	7
PAL16R4A-4		8506504	2	7 -
C16R4-40		5962-8867804	2	7
C16R4-40		5962-8871304	2	7
PAL16R6B	/50603		1	7 F
PAL16R6		8103603	2	7 -
PAL16R6A	/50403	8103609	2	7 F
PAL16L6		5962-8680404	2	7 -
PAL16R6-15	/50611	5962-8515511	2	7 -
PAL16R6A2	/50409		1	7 -
PAL16R6B2	/50607		1	7 -
PAL16R6A-2	/50409	8103613	2	7 -
PAL16R6-20	/50603	5962-8515503	2	7 F
C16R6-20		5962-8867811	2	7
C16R6-20		5962-8871311	2	7
PAL16R6-30	/50607	5962-8515507	2	7 -
C16R6-30		5962-8867807	2	7
C16R6-30		5962-8871307	2	7
PAL16R6A-4		8506503	2	7 F
C16R6-40		5962-8867803	2	7
C16R6-40		5962-8871303	2	7
PAL16L8B	/50601		1	7 F
PAL16R8B	/50602		1	7 F
PAL16L8		8103601	2	7 F
PAL16R8		8103602	2	7 -
PAL16L8A	/50401	8103607	2	7 F
PAL16R8A	/50402	8103608	2	7 F
16V8A		5962-8983901	2	7
16V8A		5962-8983902	2	7
16V8A		5962-8983903	2	7 -
PAL16L8-15	/50609	5962-8515509	2	7 -
PAL16R8-15	/50610	5962-8515510	2	7 -
PAL16L8A2	/50407		1	7 F
PAL16R8A2	/50408		1	7 -
PAL16L8B2	/50605		1	7 F
PAL16R8B2	/50606		1	7 -
PAL16L8A-2	/50407	8103611	2	7 F
PAL16R8A-2	/50408	8103612	2	7 -
PAL16L8-20	/50601	5962-8515501	2	7 F
PAL16R8-20	/50602	5962-8515502	2	7 F
C16L8-20		5962-8867809	2	7
C16R8-20		5962-8867810	2	7
C16L8-20		5962-8871309	2	7
C16R8-20		5962-8871310	2	7
PAL16L8-30	/50605	5962-8515505	2	7 F
PAL16R8-30	/50606	5962-8515506	2	7 -
C16L8-30		5962-8867805	2	7
C16R8-30		5962-8867806	2	7
C16L8-30		5962-8871305	2	7
C16R8-30		5962-8871306	2	7
PAL16L8A-4		8506501	2	7 -
PAL16R8A-4		8506502	2	7 -
C16L8-40		5962-8867801	2	7
C16R8-40		5962-8867802	2	7
C16L8-40		5962-8871301	2	7
C16R8-40		5962-8871302	2	7
DS16F95		5962-8961501	2	13
OP-17A		5962-8770601	2	9 -
OP-17B		5962-8770602	2	9 -
TSC170		5962-8963801	2	24 -
UC1706		5962-8961101	2	13
UC1707		5962-8761901	2	13 -
TSC171		5962-8963802	2	24 -
PLS173		5962-8850402	2	7 F
BX1750A		5962-8951901	2	8
BX1750A		5962-8951991	2	8
1750A-15		5962-8766501	2	8
1750A-20		5962-8766502	2	8
1750A-30		5962-8766503	2	8
UT1760ARTS		5962-8957501	2	23
UT1760RTS		5962-8957501	2	23
PLS179		5962-8850701	2	7 -
DG180A		5962-8767301	3	18 -
1802D	/47001		4	8 -
DG181A	/11101		1	18 F
DG182A	/11102		1	18 F
1821	/47101		4	6 -
1822	/47102		4	6 -
1823		7901801	3	6 L
1825		5962-8768101	2	12 -
1832	/47201		4	7 -
1834		5962-8774201	2	12 -
DG184A	/11103		1	18 F
PAL18L4		5962-8680401	2	7 -
HS-1840RH		5962D87538012		18
1842		5962-8670401	2	12 -
1843		5962-8670402	2	12 -
1844		5962-8670403	2	12
1845		5962-8670404	2	12
1846	/70201		1	12 -
UC1846	/70201	5962-8680601	2	12 -
1847	/70202	5962-8680602	2	12 -
DG185A	/11104		1	18 F
LM185-1.2		5962-8759401	2	19 F
LM185BX1.2		5962-8759403	2	19 -
LM185BY1.2		5962-8759405	2	19 -
1852	/47301		4	8 -
LM185-2.5		5962-8759402	2	19 -
LM185BX2.5		5962-8759404	2	19 -
LM185BY2.5		5962-8759406	2	19 -
1853		7901901	3	4 -
1853	/47401		4	4 -
1854		7901701	3	13 L
1856	/47601		4	2 -
1857	/47602		4	2 -
DG187A	/11105		1	18 F
DG188A	/11106		1	18 F
PAL18P8A		5962-8752801	2	7 -
PAL18P8B		5962-8752802	2	7 -
PAL18P8Q		5962-8752805	2	7 -
DG190A	/11107		1	18 F
UC1901		5962-8944101	2	24
UC1903		5962-8869701	2	24
DG191A	/11108		1	18 -
LM193	/11202		1	10 F
HCPL-1931		5962-8957201	1	22
LM194		5962-8777701	2	24 -
LM195		5962-8777801	2	24 -
198	/12501	5962-8760801	2	20 F
LM199A	/12401	5962-8856101	2	19 -
LM199	/12404	5962-8856102	2	19 -
LM199A-20	/12405		2	19 F
DAC-HKB-2		5962-8952802	2	16
200	/12301		1	18 F
OP-200A		5962-8859301	2	9 -
2001	/14101		1	13 F
2002	/14102		1	13 F
2003	/14103		1	13 F
EL2003		5962-8962301	2	24
2004	/14104		1	13
2004		5962-8771202	2	6 -
EL2004		5962-8965901	2	24
2004-25		5962-8771201	2	6 -
2005	/14105		1	13
201	/12302	7705301	2	18 -
PAL20C1		5962-8680406	2	7 -
PAL20L10A		8412905	2	7 -
PAL20X10A		8412907	2	7 -
PAL20RA10		5962-8680301	2	7 F
20G10-30		5962-8863702	2	7 -
20G10-40		5962-8863701	2	7 -
2018		5962-8863802	2	7
2018		5962-8863803	2	7
PAL20L2		5962-8680405	2	7 F
EL2020		5962-8962001	2	24
TMC2023V		5962-8971101	2	23
TMC2023V1		5962-8971102	2	23
TLE2027M		5962-9089601M	2	9
EL2030		5962-9081801M	2	24
EL2033		5962-8962302	2	24
TLE2037M		5962-9089602M	2	9
PAL20R4A	/50504	8412904	2	7 -
PAL20X4A		8412908	2	7 -
PAL20R4B		5962-8767104	2	7 -
EL-2041		5962-8778502	2	9
PAL20R4-15		5962-8767110	2	7
PAL20R4A-2		8412912	2	7 -
PAL20R6A	/50503	8412903	2	7 F
PAL20R6B		5962-8767103	2	7 -
TLE2061M		5962-9080701M	2	9
PAL20R6-15		5962-8767109	2	7
PAL20R6A-2		8412911	2	7 -
TLE2062M		5962-9080801M	2	9
TLE2064		5962-9080901M	2	9
2069		5962-8753201	2	18 -
OP207		5962-8771501	2	9
2070		5962-8753202	2	18 -
TLE2072M		5962-9089601M	2	9
PAL20L8A	/50501	8412901	2	7 F
PAL20R8A	/50502	8412902	2	7 F
PAL20X8A		8412906	2	7 F
PAL20L8B		5962-8767101	2	7 -
PAL20R8B		5962-8767102	2	7 -
20V8		5962-8984001	2	7
20V8		5962-8984002	2	7
20V8		5962-8984003	2	7
PLUS20L8		5962-8767105	2	7
PLUS20R8		5962-8767106	2	7 -
PAL20L8-15		5962-8767107	2	7
PAL20R8-15		5962-8767108	2	7
PAL20L8A-2		8412909	2	7 F
PAL20R8A-2		8412910	2	7 F
TMC208KB5V		5962-8873901	2	4
TMC208KB5V1		5962-8873902	2	4
2100SG		5962-8773501	2	8 -
2100TG		5962-8773502	2	8 -
2100ASG		5962-8773503	2	8 -
2100ATG		5962-8773504	2	8 -
LH2101A	/10105		1	9 F
LH2108A	/10106		1	9 F
LM2110	/10603		3	9 L
LH2111	/10305		1	10 F
2114	/23802		2	6 F
2114A	/23804		2	6 F
2117	/24004		1	6
2117	/24005		1	6 L
2117	/24001		2	6 L
2117	/24002		2	6 -
2147	/28903		1	6 F

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
2147	/23801		1 6	-
2147H	/23803		1 6	F
2147H-2	/23807		1 6	-
2147H-3	/23805		1 6	-
2148	/28904		1 6	F
2148H	/23806		1 6	-
OP215A		5962-8853801	2 9	
OP215B		5962-8853802	2 9	
OP215BR		5962-8853803	2 9	
2164	/24401		1 6	L
2164	/24402		1 6	L
2164	/24403		1 6	L
2167-40		8200704	2 6	-
2167-55		8200703	2 6	-
2167-70		8200702	2 6	-
2168-45		5962-8608105	2 6	F
2168-55		5962-8608101	2 6	-
2168-70		5962-8608102	2 6	-
2169-40		5962-8608106	2 6	F
2169-50		5962-8608103	2 6	-
2169-70		5962-8608104	2 6	-
PAL22V10A		5962-8605301	2 7	F
PAL22V10		5962-8605302	2 7	-
C22V10		5962-8753901	2 7	-
C22V10		5962-8753902	2 7	-
C22V10		5962-8753903	2 7	-
C22V10	/50702	5962-8867001	2 7	-
C22V10	/50701	5962-8867002	2 7	-
C22V10		5962-8867003	2 7	-
C22V10L		5962-8975501	2 7	
C22V10L		5962-8975502	2 7	
C22V10	/50703	5962-8867004	2 7	
22V10		5962-8984103	2 7	
C22V10		5962-8753904	2 7	P
22V10		5962-8984101	2 7	
22V10		5962-8984102	2 7	
C22V10L		5962-8975503	2 7	-
C22V10L		5962-8872404	2 7	-
PAL22V10-20		5962-8605304	2 7	-
C22V10L-25		5962-8872401	2 7	
PAL22VP10-25		5962-8605303	2 7	-
C22V10L-30		5962-8872402	2 7	
C22V10L-40		5962-8872403	2 7	
XR2211M		7705001	2 24	F
OP-227A	/13504	5962-8688701	2 9	F
CLC231A		5962-8959401	2 9	
OP-237A		5962-9056801	2 9	
OP-237C		5962-9056802	2 9	
MUX-24A		5962-8771801	2 18	
MUX-24B		5962-8771802	2 18	
HA-2400		5962-8778301	2 9	
ARX2411		5962-8757903	2 13	
2420		8001601	2 20	F
2452		5962-8753502	2 22	
2453		5962-8952202	2 13	
2500	/12204		1 9	-
25S09		5962-8672801	3 5	-
2510	/12205		1 9	-
25S10		5962-8671801	3 5	-
25LS174	/33106		2 3	F
25LS175	/33107		1 3	F
2520	/12206		1 9	-
25S240		5962-8672401	3 2	-
25S241		5962-8672501	3 2	-
25S244		5962-8753601	3 2	-
25LS2513		5962-8754201	2 4	-
25LS2519		5962-8670201	2 5	-
25LS2521		5962-8671301	2 4	F
25LS299		7802402	3 5	-
2532	/22201		4 7	
25LS399		5962-8670801	3 5	-
HA-2541		5962-8778501	2 9	
OP-260A		5962-9053601	2 9	
2600	/12202		1 9	
26S02		5962-8766201	3 3	-
26S10		5962-8672001	3 13	-
26S12		5962-8753401	3 13	-
26S12A		5962-8753402	3 13	-
2620	/12203		1 9	F
26LS29		5962-8767001	2 13	
26LS30		5962-8672101	2 13	-
26LS31		7802301	2 13	-
26LS32		7802001	2 13	-
26LS32B		5962-8761601	2 13	-
26LS32A		7802003	3 13	-
26LS33		7802002	2 13	-
26LS33A		7802004	3 13	-
26LS34		5962-8759601	2 13	-
2640		7800302	2 9	-
TLC2652M		5962-9089501M	2 9	
TLC2654M		5962-9089502M	2 9	
2681		5962-8856601	2 13	-
2681		5962-8856602	2 13	-
OP-27A	/13503		1 9	F
OP-270A		5962-8872101	2 9	-
2700		8503001	1 19	-
2700	/13601		2 19	-
2700		8503001	2 19	-
2700U		8503002	2 19	-
27LS00		8602001	2 6	L
27LS00A		8602002	2 6	-
2700	/12201		3 9	L
27LS01		8602003	2 6	-
27LS01A		8602004	2 6	-
2701		8503005	2 19	
2701		8503006	2 19	
2702	/13602		2 19	F
2702S		8503003	2 19	-
2702U		8503004	2 19	-
27S02		8605101	2 6	-
27S02A		8605102	2 6	-
27LS02		8605103	2 6	-
27S02-20		8605107	2 6	
27S03		8605104	2 6	-
27S03A		8605105	2 6	-
27LS03		8605106	2 6	-
27S03-20		8605108	2 6	-
27LS03-30		8605109	2 6	-
27S07A		7801501	2 6	-
27S07		7801503	2 6	-
27LS07		7801504	2 6	-
27S07-20		7801505	2 6	-
27LS07-30		7801506	2 6	-
2708	/22001		4 7	-
OP-271A		5962-8872102	2 9	
27C1024		5962-8680501	2 7	
27C1024		5962-8680502	2 7	
27C1024		5962-8680503	2 7	
27C1024		5962-8680504	2 7	
27S13A		5962-8854101	2 7	-
27S13		5962-8854102	2 7	-
2716	/22101		4 7	-
27S180	/20903		2 7	L
27S181	/20904		1 7	-
27S19		5962-8670301	2 7	-
27S19A		5962-8670302	2 7	-
27S191	/21002		1 7	F
27PS191		5962-8552601	2 7	-
27PS191A		5962-8552602	2 7	-
27256-170	/22403	8411104	2 7	F
27256-200	/22402	8411103	2 7	F
27C256-200	/27602		3 7	-
27256-250	/22401	8411102	2 7	F
27C256-250	/27601		3 7	-
27256-30		8411105	3 7	-
27256-35		8411101	3 7	-
27S29		5962-8769001	2 7	-
27S29A		5962-8769002	2 7	F
27PS291		5962-8552603	2 7	-
27PS291A		5962-8552604	2 7	-
27S35		5962-8670601	2 7	-
27S35A		5962-8670602	2 7	-
27S37		5962-8670603	2 7	-
27S37A		5962-8670604	2 7	-
TLC274		5962-9060401	2 9	
27S45		5962-8552701	2 7	-
27S45A		5962-8552702	2 7	-
27S47		5962-8552703	2 7	-
27S47A		5962-8552704	2 7	-
27C512		5962-8764801	2 7	-
27C512		5962-8764802	2 7	-
27C512		5962-8764803	2 7	-
27C512		5962-8764804	2 7	
27512-20		5962-8513505	2 7	
27512-25		5962-8513501	2 7	L
27512-30		5962-8513503	2 7	-
27512-35		5962-8513502	2 7	-
27512-45		5962-8513504	2 7	
27C64-12		8510205	3 7	-
27C64-15		8510206	3 7	-
2764-150		8200506	2 7	-
27HC64-155	/27402		3 7	-
27HC64-170	/27401		3 7	-
2764A-20		8200505	2 7	-
27C64-20	/27503	8510203	3 7	-
27C64-200	/27503		2 7	F
2764-200		8200507	2 7	
2764A-25		8200504	2 7	-
27C64-25	/27502	8510201	3 7	-
27C64-250	/27502		2 7	F
2764-250		8200502	2 7	-
2764A-35		8200503	2 7	-
27C64-35	/27501	8510202	3 7	-
27C64-350	/27501		2 7	F
2764-450		8200501	2 7	-
27C64-90		8510204	2 7	-
TLC279		5962-9060402	2 9	
2801	/14106		1 13	
2802	/14107		1 13	-
2803	/14108	5962-8605801	2 13	-
2804	/14109		1 13	-
2805	/14110		1 13	-
NMC2816	/22601		4 7	-
X2816A-25	/22704		2 7	
X2816A-30	/22703		1 7	
X2816A-35	/22702		1 7	
X2816A-45	/22701		1 7	F
28S166A	/21004		1 7	F
28S166A	/21002		1 7	F
2821		5962-8968401	2 24	
2823		5962-8968501	2 24	

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	N	A	T	O
2824		5962-8968601	2	24			
28C256-150	/26105		2	7			
28C256-150	/26111		2	7			
28C256-200	/26104		1	7			
28C256-200	/26110		2	7			
28C256-250	/26103		1	7			
28C256-250	/26106		2	7			
28C256-250	/26109		2	7			
28C256-250	/26112		2	7			
28C256-300	/26102		1	7			
28C256-300	/26108		2	7			
28C256-350	/26101		1	7			
28C256-350	/26107		2	7			
TMC28KUB5V		5962-8873903	2	4			
TMC28KUB5V1		5962-8873904	2	4	-		
28C64-200	/26004		1	7	-		
X2864A-25	/22804		2	7	-		
X2864A-25	/22806		2	7			
2864-250	/22808		1	7	F		
2864H-250	/22809		1	7	-		
28C64-250	/26003		1	7	-		
X2864A-30	/22803		2	7			
28C64-300	/26002		1	7	-		
X2864A-35	/22802		2	7	-		
X2864A-35	/22805		2	7			
2864-350	/22807		1	7	-		
28C64-350	/26001		1	7	-		
X2864A-45	/22801		2	7			
28C65-250	/26006		1	7	-		
28C65-350	/26007		1	7	-		
OP-290		5962-8978301	2	9			
2901C		8405701	2	8	-		
2901A		7700701	3	8			
AM2901		7700702	3	8			
2901C	/44001		4	8	-		
2903A		5962-8867701	2	8	-		
2904		8601701	2	8	-		
2905	/44101		4	13	-		
2906	/44102		4	13	-		
2907		5962-8770701	2	13	F		
2907	/44103		4	13	-		
2909A		8602701	2	8	-		
2910		7801701	2	8	F		
2910A		7801702	2	8	-		
29C10A		5962-8770801	2	8	-		
2911A		8602801	2	8	-		
29116		5962-8686301	2	8	-		
29C116		5962-8861201	2	8			
29C116-1		5962-8861202	2	8			
29C116-2		5962-8861203	2	8			
2914		8602901	2	8	-		
2915	/44104		4	13	-		
2916	/44105		4	13	-		
2917A		5962-8671401	2	13	-		
2917	/44106		4	13	-		
29LS18		5962-8671901	2	5	-		
2918		5962-8671501	3	3	F		
2918	/44201		4	3	F		
2925		5962-8859801	2	8	-		
2925A		5962-8859802	2	8	-		
2930		5962-8757301	2	8	-		
AM2932		8605001	3	8	-		
2940		8603001	2	8	-		
LM2940-5.0		5962-8958701	2	12			
2942		5962-8680101	2	8	-		
2946		5962-8672302	3	13			
2947		5962-8672301	2	13	-		
2952A		5962-8777201	2	13	-		
29FCT520A		5962-8873601	2	5			
29FCT520B		5962-8873603	2	5			
29FCT521A		5962-8873602	2	5			
29FCT521B		5962-8873604	2	5			
2953A		5962-8777202	2	13	-		
2960		5962-8760201	2	8	-		
29C60A		5962-8861303	2	8			
29611	/20402		1	7	F		
29621	/20805		2	7	L		
29631	/20904		1	7	-		
2964B		5962-8757401	2	8	-		
2965		5962-8670701	2	13	-		
29651	/20908		1	7	L		
29651	/20902		1	7	-		
2966		5962-8670702	2	13	-		
29C660A		5962-8853303	2	8	F		
29C660B		5962-8853304	2	8	F		
29C660C		5962-8853305	2	8	F		
29671	/21102		1	7	-		
29671	/21103		2	7			
2968A		5962-8869601	2	8	-		
2968A		5962-8869602	2	8	-		
29681	/21002		1	7	F		
29705A		8602501	2	6	F		
UDS2981		5962-8851901	2	13	-		
29818A		5962-8954901	2	5			
AM29C818		5962-9051501	2	5			
29C821		5962-8851601	2	5	-		
29821A		5962-8775501	2	5	-		
29C823		5962-8851602	2	5	-		
29823A		5962-8775502	2	5	-		
29825A		5962-8775503	2	5	-		
29C827		5962-8766701	2	2	-		
29827A		5962-8860501	2	2	-		
29C828		5962-8766702	2	2	-		
29828A		5962-8860502	2	2	-		
UDS2983		5962-8851902	2	13	-		
AM29833A		5962-9051301	2	13			
29C841		5962-8760301	2	8	-		
29C843		5962-8760302	2	8	-		
29C853		5962-8857301	2	13	F		
AM29853A		5962-9051302	2	13			
29C855		5962-8857302	2	13	F		
AM29855A		5962-9051303	2	13			
29C861		5962-8770401	2	13	-		
29861A		5962-8860401	2	13	-		
29C863		5962-8770402	2	13	-		
29863A		5962-8860402	2	13	-		
29921A		5962-8775504	2	5	-		
29C921		5962-8851603	3	5	-		
29923A		5962-8775505	2	5	-		
29C923		5962-8851604	3	5	-		
29925A		5962-8775506	2	5	-		
29C927		5962-8766703	2	2	F		
29C928		5962-8766704	2	2	F		
29C941		5962-8760303	2	8	-		
29C943		5962-8760304	2	8	-		
29C961		5962-8770403	2	13	-		
29C963		5962-8770404	2	13	-		
300	/11601		1	18	F		
MN3008		5962-8768801	1	16			
MN3009		5962-8768802	1	16			
301	/11602		1	18	F		
3018A	/10801		3	9	L		
302	/11603		1	18	F		
MN3020		5962-8971801	1	16			
303	/11604		1	18	F		
304	/11605		1	18	F		
3045	/10802		1	13	F		
305	/11606		1	18			
306	/11607		1	18			
307	/11608		1	18			
SG3081		5962-8866401	2	24	-		
CA3130BT		7703301	3	9	-		
RM3182		5962-8687901	2	13	-		
3183A		5962-8759801	2	24	-		
VFC32	/13801		2	24			
VFC320	/13802		2	24			
32010		8405301	2	8	-		
320C10		5962-8763301	2	8			
320CM10		5962-8763303	2	8	-		
320C10-25		5962-8763302	2	8			
320CM10-25		5962-8763304	2	8	-		
320CF10-25		5962-8763305	2	8	-		
320E15		5962-8763306	2	8			
320C15		5962-8763307	2	8			
320C15-25		5962-8763308	2	8			
320C25		5962-8861901	2	8			
32C201-10	/55201	5962-8859901	2	8	-		
3231		5962-8959201	2	13			
3231		5962-8959203	2	13			
3232		5962-8959202	2	13			
3232		5962-8959204	2	13			
HS3282		5962-8688001	2	24	-		
34000	/40301		4	7	-		
ARX3411		5962-8757904	2	13			
35074		5962-8996901	3	9			
35074A		5962-8996902	3	9			
3516E	/40301		4	7	-		
3517		5962-8764301	2	12	P		
3523		5962-8978001	2	24			
HS362		5962-8956501	2	18			
3636	/21002		1	7	F		
OP-37A	/13505	5962-8853701	2	9	-		
OP37B		5962-8853702	3	9			
OP37C		5962-8853703	3	9			
TLC372		5962-8765801	2	10	-		
TLC374		5962-8765901	2	10	-		
MN376H	/14201		2	20	-		
RGBDAC3808H		5962-8950901	2	16			
TVB382	/61601		2	8	F		
AD390S		5962-8850901	1	16			
AD390T		5962-8850902	1	16			
39C10B		5962-8770802	2	8			
39C10C		5962-8770803	2	8			
AD394S		5962-8851001	1	16			
AD394T		5962-8851002	1	16			
AD395S		5962-8851003	1	16			
AD395T		5962-8851004	1	16			
39C60A		5962-8861301	2	8			
39C60		5962-8861302	2	8			
OP-400A		5962-8777101	2	9	-		
4000A	/05201		3	1	L		
4000B	/05251		3	1	-		
4001A	/05202		3	1	L		
4001B	/05252		3	1	P		
4002A	/05203		3	1	L		
4002B	/05253		3	1	P		
4006A	/05701		3	5	L		
4006B	/05751		3	5	-		
4007A	/05301		3	1	L		
4007UB	/05351		3	1	P		
4008A	/05401		3	4	L		

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
4008B	/05451		3 4	P
4009A	/05501		3 2	L
4009UB	/05551		3 2	-
DG401		5962-9056901	2 18	-
4010A	/05502		3 2	L
4010B	/05552		3 2	-
40106B	/17702		3 1	-
40107B	/17402		3 2	-
40109B	/17404		3 2	-
4011A	/05001		3 1	L
4011B	/05051		3 1	P
4012A	/05002		3 1	L
4012B	/05052		3 1	P
4013A	/05101		3 3	L
4013B	/05151	7901101	3 3	P
4013B		7901102	3 3	
4014A	/05702		3 5	L
4014B	/05752		3 5	P
4015A	/05703		3 5	L
4015B	/05753		3 5	P
4016A	/05801		3 18	L
4016B	/05851		3 18	F
4017A	/05601		3 5	L
4017B	/05651		3 5	P
40174B	/17505	8202201	3 3	-
4018A	/05602		3 5	L
4018B	/05652		3 5	F
4019A	/05302		3 1	L
4019B	/05352		3 1	P
4020A	/05603		3 5	L
4020B	/05653		3 5	P
4021A	/05704		3 5	L
4021B	/05754	7901201	3 5	P
4022A	/05604		3 5	L
4022B	/05654		3 5	P
4023A	/05003		3 1	L
4023B	/05053	7901301	3 1	P
4024A	/05605		3 5	L
4024B	/05655		3 5	P
4025A	/05204		3 1	L
4025B	/05254		3 1	P
40257B	/17803		3 4	-
4027A	/05102		3 3	L
4027B	/05152		3 3	P
4028A	/05901		3 4	L
4028B	/05951		3 4	P
4029B		8101602	3 5	-
4029B		8101601	3 5	-
DG403		5962-8976301	2 18	
4030A	/05303		3 1	L
4030B	/05353		3 1	F
4031A	/05705		3 5	L
4031B	/05755		3 5	-
4034A	/05706		3 5	L
4034B	/05756		3 5	-
4035B		8101701	3 5	-
CMP404A		5962-8990401	2 10	
CMP404B		5962-8990402	2 10	
4040B		7705801	3 5	-
4041A	/05505		3 2	L
4041UB	/05555		3 2	F
4042B		8101901	3 3	-
4043A	/05103		3 3	L
4043B	/05153		3 3	-
4044B		7702601	3 3	-
4047B		8102001	3 3	-
4048A	/05304		3 1	L
4048B	/05354		3 1	-
4049A	/05503		3 2	L
4049UB	/05553	7901401	3 2	P
DG405		5962-8996101	2 18	-
DG405		5962-8996901	3 9	
4050A	/05504		3 2	L
4050B	/05554		3 2	P
TMS4050	/23502		4 6	-
TMS4050	/23504		4 6	-
4052B		7901501	3 18	-
4053B		8101801	3 18	-
4060A		7703101	3 5	L
TMS4060	/23501		4 6	-
TMS4060	/23503		4 6	-
4066A	/05802		3 18	L
4066B	/05852		3 18	P
4067B	/17801		3 18	-
MT4067-10		5962-8767604	2 6	F
MT4067-12		5962-8767601	2 6	-
MT4067-15		5962-8767602	2 6	F
MT4067-20		5962-8767603	2 6	F
4069UB	/17401	7702701	3 1	P
4070B	/17203		3 1	P
4071B	/17101		3 1	P
4072B	/17102	7706001	3 1	P
4073B		7705101	3 1	P
4075B	/17103		3 1	P
4076B	/17501		3 5	-
4077B	/17204		3 1	P
4078B		7704401	3 1	-
4081B	/17001	7702401	3 1	P
4082B	/17002	7705901	3 1	P
4085B	/17201		3 1	F
4086B	/17202		3 1	F
4093B	/17701	7704601	3 1	P
4093B		7704602	3 1	
4094B		7702501	3 5	-
4095B	/17502		3 3	-
4096B	/17503		3 3	-
4097B	/17802		3 18	-
4098B	/17504	7705501	3 3	F
4099B	/17601		3 3	P
4C1024-100	/24902		1 6	-
4C1024-120	/24903		1 6	-
4C1024-150	/24904		1 6	
4C1024-80	/24901		1 6	-
411024-100	/24902		1 6	-
411024-120	/24903		1 6	-
411024-150	/24904		1 6	
411024-80	/24901		1 6	-
4116	/24004		1 6	
4116	/24005		1 6	L
4116	/24001		2 6	L
4116	/24002		2 6	-
4116	/24003		2 6	
M41256P-12	/24601		1 6	-
M41256N-12	/24603		1 6	-
M41256P-15	/24602		1 6	-
M41256N-15	/24604		1 6	L
4136	/11004		1 9	L
4156	/11003		1 9	
4167		8200701	2 6	-
4194		7705401	2 12	-
OP-42	/12208		2 9	-
OP-42A	/12208	5962-8851301	2 9	-
OP421B		5962-8855901	2 9	
OP421C		5962-8855902	2 9	
4213	/13904		2 24	-
4250		7703901	2 9	-
TSC426		5962-8850301	2 13	-
TSC427		5962-8850302	2 13	-
TSC428		5962-8850303	2 13	-
TSC429		5962-8877001	2 13	
REF-43		5962-9060301	2 19	
TL431	/14801		1 12	-
431	/14801	8410901	2 12	-
UH-432		5962-8960401	2 13	
UH-432-1		5962-8960402	2 13	
MC4344		5962-8780301	2 24	-
L4C381-45		5962-8995901	2 5	
OP44A	/12207		2 9	
TSC4420		5962-8877003	2 13	-
TSC4423		5962-8850304	2 13	
TSC4424		5962-8850305	2 13	
TSC4425		5962-8850306	2 13	
TSC4426		5962-8850307	2 13	
TSC4427		5962-8850308	2 13	
TSC4428		5962-8850309	2 13	
TSC4429		5962-8877002	2 13	-
SMJ4461		5962-8956001	2 6	
MKB4501-80	/25002		1 8	-
MKB4501-81	/25001		1 8	-
MKB4501-88	/25003		1 8	-
4502B	/17403		3 2	P
4508B	/17602		3 3	-
4514B	/17301	7703501	3 3	-
4515B	/17302	7703201	3 4	-
45H16	/24004		1 6	
45H16	/24005		1 6	L
45H16	/24001		2 6	L
45H16	/24002		2 6	-
4520B		7702301	3 5	-
4520B	/17403	7702001	3 2	P
4528B		7704501	3 3	-
4528B		7704502	3 3	-
4532B	/17303		3 4	-
4N55		5962-8767901	1 24	-
4555B	/17304	7704701	3 4	-
4556B	/17305	7704801	3 4	-
4557B		7901601	3 5	-
4564	/24401		1 6	L
4564	/24402		1 6	L
4564	/24403		1 6	L
BT458		5962-8992801	2 16	
4585B		7703702	3 4	-
46106B	/17702	5962-8550101	3 1	-
OP-470A		5962-8856501	2 9	-
OP-471A		5962-8856502	2 9	-
4741	/11003		1 9	
SHM-4860MM	/14201		2 20	-
4860-83	/14201		2 20	-
OP490A		5962-8967001	2 9	-
HA-4902		5962-8686001	3 10	
49C410		5962-8864301	2 8	
49C410A		5962-8864302	2 8	-
49C460A		5962-8853301	2 8	-
49C460B		5962-8853302	2 8	-
49C460C		5962-8853306	2 8	
4973B	/17003		3 1	
OP-50A		5962-8967301	2 9	
OP-50B		5962-8967302	2 9	
HA-5002		5962-8963601	2 24	
OPA501		5962-8762001	2 9	F
AH5010		5962-9087801M	2 18	

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	N	A	T	O
CS5012		5962-8967901	2	17			
AH5012		5962-9088001M	2	18			
CS5014-S		5962-8967401	2	17			
CS5014-T		5962-8967402	2	17			
CS5016-S		5962-8967601	2	17		-	
CS5016-T		5962-8967602	2	17			
UH502		5962-8856401	2	13			
UH503		5962-8855101	2	13			
HA-5033		5962-8963301	2	24			
5040	/10501		1	18		F	
HI5040	/10501	8100601	2	18		F	
5041	/10502		1	18		F	
IH5041	/10502	8100602	2	18		F	
5042	/10503		1	18		F	
IH5042	/10503	8100603	2	18		F	
5043	/10504		1	18		F	
IH5043	/10504	8100604	2	18		F	
HI5043		8100612	2	18		-	
5044	/10505		1	18		F	
IH5044	/10505	8100605	2	18		F	
5045	/10506		1	18		F	
IH5045	/10506	8100606	2	18		F	
HI5045		8100614	2	18		-	
IH5046	/10507	8100607	2	18		-	
HI5046		8100615	2	18		-	
HI5046A		8100617	2	18		F	
IH5047	/10508	8100608	2	18		-	
HI5047		8100616	2	18		F	
HI5047A		8100618	2	18		F	
HI5049		8100620	2	18		-	
HI5050		8100621	2	18		-	
HI5051		8100622	2	18		-	
506	/19001		1	18			
506A	/19002	5962-8513101	2	18			
507	/19003		1	18			
507A	/19004	5962-8513102	2	18			
UH-507		5962-8986701	2	13			
508	/19007		1	18		F	
508	/19007	7705201	2	18		F	
508A	/19005	7705202	2	18		F	
UH-508		8550001	2	13		-	
509	/19008		1	18		-	
509A	/19006	5962-8513103	2	18		-	
HA-5101		5962-8963501	2	9			
HA-5102		5962-8954801	2	9			
CMM5104	/24505		2	6			
HA-5104		5962-8850201	2	9			
IH5108		7705203	2	18		P	
CMM5114	/24506		2	6		L	
IH5116		5962-8513104	2	18		-	
HPROM-512	/20101		4	7		-	
TL514		5962-8687801	2	10		-	
DG5140		8100609	2	18			
DG5141		8100610	2	18		F	
DG5142		8100611	2	18		-	
DG5144		8100613	2	18		-	
IH5148		8100619	2	1J		F	
HI-516		5962-8869901	2	18			
51C67	/29106		2	6		-	
51C98-35	/61301		2	6		L	
51C98-45	/61302		2	6			
51C98-55	/61303		2	6			
MN5200		5962-8958301	1	17			
5200	/12001		2	17			
HCPL-5201		5962-8876801	1	24			
MN5201		5962-8958303	1	17		-	
5201	/12003		2	17		-	
MN5202		5962-8958305	1	17		-	
5202	/12005		2	17		-	
MN5203		5962-8958302	1	17			
5203	/12002		2	17			
MN5204		5962-8958304	1	17		-	
5204	/12004		2	17		-	
MN5205		5962-8958306	1	17		-	
5205	/12006		2	17		-	
MN5206		5962-8958307	1	17		-	
5206	/12007		2	17		-	
5207	/12008		2	17		-	
IH5208		5962-8513106	2	18		-	
521		5962-8751601	2	10		F	
MN5210		5962-8958401	1	17			
5210	/12009		2	17			
MN5211		5962-8958403	1	17			
5211	/12011		2	17			
52116	/40301		4	7		-	
MN5212		5962-8958405	1	17			
5212	/12013		2	17			
MN5213		5962-8958402	1	17			
5213	/12010		2	17			
MN5214		5962-8958404	1	17			
5214	/12012		2	17			
MN5215		5962-8958406	1	17			
5215	/12014		2	17			
MN5216		5962-8958407	1	17			
5216	/12015		2	17			
IH5216		5962-8513105	2	18		-	
5217	/12016		2	17			
SL523AC		5962-8980301	2	24			
HCPL-5231		5962-8876901	1	24			
AD524S	/14301		2	9		-	
HI524		5962-8761801	2	18		-	
AD524	/14301	5962-8853901	2	9		-	
MN5245		5962-8959501	1	17			
MN5245A		5962-8959502	1	17			
MN5245		5962-8959501	2	17			
MN5245A		5962-8959502	2	17			
MN5246		5962-8959503	1	17			
MN5246A		5962-8959504	1	17			
MN5246		5962-8959503	2	17			
MN5246A		5962-8959504	2	17			
MT5C2561	/29301		1	6			
MT5C2561	/29302		1	6			
MT5C2561	/29310		1	6			
MT5C2564	/29303		2	6			
MT5C2564	/29304		2	6			
MT5C2564	/29311		2	6			
MT5C2565	/29312		2	6			
MT5C2565	/29314		2	6			
MT5C2565	/29315		2	6			
MT5C2568	/29307		1	6			
MT5C2568	/29308		1	6			
MT5C2568	/29309		1	6			
MT5C2568	/29313		1	6			
ADG526A		5962-8971001	2	18			
527		5962-8757201	2	10		-	
ADG527A		5962-8971002	2	18			
DG528		5962-8768901	2	18		-	
MM5280	/23505		4	6		-	
MM5280	/23506		4	6		-	
529		5962-8757202	2	10		-	
MN5290		5962-8956301H	2	17			
MN5291		5962-8956302H	2	17			
MN5295		5962-8956901H	1	17			
5300-1	/20301		1	7		F	
5301-1	/20302		1	7		L	
MCM5303	/20101		4	7		-	
MCM5304	/20102		4	7		-	
5305-1	/20401		1	7		-	
5306-1	/20402		1	7		F	
53S1680	/21001		2	7		-	
53S1681	/21002		1	7		F	
532S	/13903		1	8			
UH-532		5962-8960403	2	13			
5330	/20701		1	7		L	
HA-5330		5962-8767701	2	20			
5331	/20702		1	7		L	
53S3281	/21102		1	7		-	
534T	/13901		1	8		F	
534S	/13902		1	8			
5341-1	/20802		1	7		F	
53S440	/20601		3	7		L	
53S441	/20602		1	7		L	
5348-1	/20804		2	7		L	
5349-1	/20805		2	7		L	
IH5352		5962-8875001	2	24			
53S841	/20902		1	7		-	
AD539		5962-8980901	2	24			
54ALS00	/37001		1	1		-	
54F00	/33001		1	1		F	
54LS00	/30001		1	1		P	
54HC00	/65001	8403701	2	1		P	
54HCT00		5962-8683101	2	1		F	
54AC00	/75001	5962-8754901	2	1		-	
54ALS00A	/37001	5962-8683301	2	1		-	
54ACT00		5962-8769901	2	1			
54S00	/07001		3	1		L	
54H00	/02304		3	1		L	
54L00	/02004		3	1		L	
5400	/00104		3	1		L	
HCPL-5401		5962-8957001	1	22			
54H01	/02306		3	1		L	
54L01	/02006		3	1		L	
5401	/00107		3	1		L	
54F02	/33301		1	1		F	
54LS02	/30301		1	1		P	
54HC02	/65101	8404101	2	1		P	
54AC02		5962-8761201	2	1		-	
54ALS02	/37301	5962-8684401	2	1		F	
54HCT02		5962-8975101	2	1			
54S02	/07301		3	1		L	
54L02	/02701		3	1		L	
5402	/00401		3	1		L	
54LS03	/30002		1	1		P	
54HC03		5962-8764701	2	1		-	
54S03	/07002		3	1		L	
54L03	/02006		3	1		L	
5403	/00109		3	1		L	
54ALS04	/37006		1	1		L	
54F04	/33002		1	1		F	
54ACT04		5962-8973401	2	1			
54LS04	/30003		1	1		P	
54HCU04		8601001	2	1		F	
54AC04	/75701	5962-8760901	2	1		-	
54ALS04B	/37006	5962-8684301	2	1		L	
54HC04	/65701	8409801	2	1		P	
54HCT04	/65751	5962-8974701	2	1			

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54S04	/07003		3 1	L
54H04	/02305		3 1	L
54L04	/02005		3 1	L
5404	/00105		3 1	L
54LS05	/30004		1 1	P
54ALS05A		5962-8854001	2 1	-
54HC05		5962-8871801	2 1	-
54S05	/07004		3 1	L
5405	/00108		3 1	L
5406	/00801		1 2	L
5407	/00803		1 2	L
54F074	/34101		1 3	F
54F08	/34001		1 1	F
54LS08	/31004		1 1	
54HC08	/65203	8404701	2 1	P
54HCT08		5962-8688301	2 1	-
54AC08	/75203	5962-8761501	2 1	-
54ALS08	/37401	5962-8684201	2 1	-
5408	/01601		3 1	L
54S08	/08003		3 1	L
54C08		7703601	3 1	-
54LS09	/31005	8001901	2 1	P
54ALS09		8414201	2 1	-
54HC09		5962-8862001	2 1	-
54F09		5962-8872301	2 1	
5409	/01602		3 1	L
54S09	/08004		4 1	-
OPA541		5962-8870101	2 9	
5410	/00103		3 1	L
54ALS10A	/37002	5962-8686501	2 1	F
54LS10	/30005		1 1	P
54HC10	/65002	8403801	2 1	P
54AC10	/75002	5962-8761001	2 1	-
54F10	/33003		1 1	F
54HCT10		5962-8984301	2 1	
54S10	/07005		3 1	L
54H10	/02303		3 1	L
54L10	/02003		3 1	L
54ALS10	/37002		1 1	F
54ALS1000	/38401		1 2	-
54ALS1000A	/38401	8405901	2 2	-
54ALS1002	/38402		1 2	F
54ALS1003	/38403		2 2	-
54ALS1004	/38409	8406101	2 2	-
54AS1004A		5962-8872901	3 2	
54ALS1005	/38410		2 2	
54ALS1008A	/38404	8409701	2 2	P
54H101	/02205		4 3	L
54ALS1010A	/38405	8406001	2 2	-
54ALS1011	/38406		2 2	F
54ALS1020	/38407		1 2	F
54H103	/02206		3 3	L
54ALS1032	/38408		2 2	
54AS1032A		5962-8873001	3 2	
54ALS1034	/38411	8403101	2 2	-
54AS1034A		5962-8873101	2 2	
54ALS1035	/38412	5962-8874201	2 2	
54LS107	/30108		1 3	F
54HC107	/65303	5962-8515401	2 3	F
54107	/00203		3 3	L
54ALS109	/37102		1 3	F
54F109	/34102		1 3	F
54AC109	/75304	5962-8955101	2 3	
54ALS109A	/37102	8400001	2 3	F
54HC109	/65304	8415001	2 3	-
54ACT109		5962-8853401	2 3	-
54LS109	/30109		1 3	P
54ALS11	/37402		1 1	-
54F11	/34002		1 1	F
54LS11	/31001		1 1	F
54HC11	/65204	8404801	2 1	-
54AC11	/75204	5962-8761101	2 1	-
54ALS11A	/37402	5962-8684101	2 1	-
54HCT11		5962-8970901	2 1	-
54S11	/08001		3 1	L
54S11	/08001		4 1	L
54AC1100	/75021		2 1	-
54AC11000	/75021	5962-8754902	3 1	-
54ACT11000		5962-8769902	3 1	
54AC11002		5962-8761202	3 1	
54ACT11004		5962-8973402	3 1	
54AC11004		5962-8760902	3 1	
54ACT11008		5962-8954701	3 1	
54AC11008		5962-8761502	3 1	
54AC11010	/75022	5962-8761002	3 1	
54AC11011		5962-8761102	3 1	
54AC11020	/75023	5962-8761302	3 1	-
54AC11030	/75024		2 1	-
54ACT11032		5962-8973602	3 1	
54ACT11074		5962-8752502	3 3	-
54AC11074		5962-8852002	3 3	-
54ACT11109		5962-8853402	3 3	-
54ALS112	/37103		1 3	-
54F112	/34103		1 3	F
54LS112	/30103		1 3	P
54AC112	/75305		2 3	F
54ALS112A	/37103	8400002	2 3	-
54HC112	/65305	8408801	2 3	F
54HCT112		5962-8970201	2 3	
54S112	/07102		3 3	L
54AC11240		5962-8755002	3 2	-
54ACT11240		5962-8775902	3 2	-
54AC11241		5962-8755102	3 2	
54ACT11241		5962-8984702	3 2	
54AC11244		5962-8755202	3 2	-
54LS113	/30104		1 3	F
54HC113		5962-8969501	2 3	
54S113	/07103		3 3	L
54ACT11373		5962-8755602	3 3	
54AC11373		5962-8755502	3 3	
54ACT11374		5962-8763102	3 3	
54LS114	/30105		1 3	
54S114	/07104		3 3	L
54ACT11534		5962-8965802	3 3	
54116	/01503		3 3	L
54LS12	/30006		1 1	P
5412	/00106		3 1	L
54121	/01201		3 3	L
54L121	/04201		4 3	-
54LS122	/31403	7600301	2 3	P
54122	/01202		3 3	L
54L122	/04202		4 3	-
54LS123	/31401	7603901	2 3	P
54HC123		5962-8684701	2 3	-
54HC123A		5962-8684702	2 3	-
54HCT123		5962-8970001	2 3	
54123	/01203		3 3	L
54LS124		7704101	3 24	-
54ALS1244A		5962-8873801	2 2	
54ALS1245A		5962-8873701	2 13	
54LS125A	/32301		1 2	P
54HC125		5962-8772101	2 2	F
54BCT125		5962-9093701M	2 2	
54125	/15301		3 2	L
54LS126	/32302		1 2	F
54HC126		5962-8684801	2 2	-
54126	/15302		3 2	L
54LS13	/31301		1 1	P
5413	/15101		3 1	L
54HC132	/65005		1 1	F
54LS132	/31303	7600401	2 1	P
54HCT132		5962-8984501	2 1	
54132	/15103		3 1	L
54HC133		5962-8772301	2 1	-
54ALS133	/37005	5962-8859001	2 1	-
54S133	/07009		3 1	L
54S134	/07010		4 1	-
54S135	/07502		4 1	L
54F138	/33701		1 4	
54LS138	/30701	7600501	2 4	P
54HC138	/65802	8406201	2 4	-
54HCT138	/65852	8550401	2 4	F
54ACT138		5962-8755401	2 4	-
54S138	/07701	7604101	3 4	L
54FCT138		5962-8765401	2 4	-
54ALS138	/37701	5962-8686601	2 4	F
54FCT138A		5962-8765402	2 4	F
54AC138	/75802	5962-8762201	2 4	-
54F139	/33702		1 4	F
54HCT139	/65853		2 4	
54LS139	/30702	7600701	2 4	P
54HC139	/65803	8409201	2 4	F
54ACT139		5962-8755301	2 4	-
54ALS139		5962-8768301	2 4	F
54AC139	/75803	5962-8762301	2 4	-
54FCT139		5962-8950801	2 4	-
54FCT139A		5962-8950802	2 4	-
54S139	/07702	7700401	3 4	L
54LS14	/31302		1 1	
54HC14	/65702	8409101	2 1	F
54HCT14	/65752	5962-8689001	2 1	-
54AC14	/75702	5962-8762401	2 1	F
54F14		5962-8875201	2 1	
54HCT14		5962-8689001	2 1	
5414	/15102		3 1	L
54S140	/08101		1 13	L
54LS145		8508401	2 4	-
54145	/01005		3 4	L
54HC147		8406401	2 4	-
54147	/15601		4 4	-
54LS148	/36001	7802701	2 4	P
54F148		5962-8607001	2 4	P
54148	/15602		4 4	-
54LS15	/31002		1 1	P
54S15	/08002		4 1	-
54150	/01401		3 4	L
54F151A	/33901		1 4	F
54AC151		5962-8769101	2 4	-
54LS151	/30901	7601001	2 4	P
54HC151	/66201	8412801	2 4	F
54ALS151		8414101	2 4	-
54HC151B	/66201		2 4	F
54ACT151		5962-8875601	2 4	
54S151	/07901		3 4	L
54151	/01406		3 4	L
54F153	/33902		1 4	F
54HC153B	/66202		2 4	-
54LS153	/30902	7601101	2 4	P
54153	/01403		3 4	L
54HC153	/66202	8409301	2 4	-
54AC153		5962-8762501	2 4	

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	N	A	T	O
54ACT153		5962-8769801	2	4			
54S153	/07902		3	4	L		
54ALS153		8413401	2	4	-		
54LS154		8301701	2	4	F		
54HCT154		5962-8670101	2	4	-		
54HC154	/65804	5962-8682201	2	4	F		
54154	/15201		4	4	-		
54LS155	/32601		1	4			
54155	/15202		4	4	-		
54LS156	/32602		1	4	P		
54156	/15203		4	4	-		
54F157A	/33903		1	4	F		
54HC157B	/66203		2	4	-		
54LS157	/30903	7600201	2	4	P		
54HC157	/66203	5962-8606101	2	4	-		
54ALS157		5962-8686901	2	4	-		
54ACT157		5962-8968801	2	4			
54AC157		5962-8953901	2	4			
54S157	/07903		3	4	L		
54157	/01405		3	4	L		
54L157	/04603		4	4	-		
54F158A	/33904		1	4	F		
54HC158	/66204		1	4	F		
54HC158B	/66204		1	4	F		
54HC158	/66204	5962-8682301	2	4	F		
54LS158	/30904	7603301	2	4	-		
54ALS158		5962-8862501	2	4	F		
54ACT158		5962-8875501	2	4			
54AC158		5962-8972901	2	4			
54S158	/07904		3	4	L		
5416	/00802		3	2	L		
54LS160A	/31503	7700901	2	5	F		
54LS160	/31503		1	5	F		
54ALS160	/38101		2	5	-		
54HC160	/66301	5962-8682401	2	5	F		
54F160A	/34401		1	5	F		
54160	/01303		3	5	L		
54ALS161	/38001		1	5	-		
54F161A	/34301		1	5	F		
54LS161	/31504	7600801	2	5	P		
54HC161	/66302	8407501	2	5	P		
54HCT161		5962-8685401	2	5	F		
54ALS161B	/38001	8302201	2	5	-		
54FCT161		5962-8864001	2	5			
54AC161		5962-8956101	2	5	-		
54161	/01306		3	5	L		
54F162A	/34402		1	5	F		
54LS162A	/31511		1	5			
54ALS162A	/38102	8407901	2	5	P		
54HC162	/66303	8409401	2	5	P		
54HCT162		5962-8970701	2	5			
54162	/01305		3	5	L		
54ALS163	/38002		1	5	-		
54ALS163B	/38002	8302202	2	5	-		
54LS163	/31512		1	5	P		
54LS163A	/31512	7603401	2	5	P		
54HC163	/66304	8607601	2	5	-		
54F163A	/34302		1	5	F		
54FCT163		5962-8865701	2	5	-		
54FCT163A		5962-8865702	2	5	-		
54AC163		5962-8958201	2	5			
54163A	/01304		3	5	L		
54LS164	/30605		1	5	F		
54HC164	/66501	8416201	2	5	-		
54F164		5962-8607101	2	5	F		
54HCT164		5962-8970401	2	5			
54ALS164		5962-8687001	2	5			
54L164	/02802		3	5	L		
54164	/00903		3	5	L		
54LS165	/30608		1	5	F		
54LS165A	/30608	7700601	2	5	F		
54HC165	/66502	8409501	2	5	P		
54HCT165		5962-8685501	2	5	F		
54ALS165		5962-8957401	2	5			
54165	/00904		3	5	L		
54HC166	/66503		2	5			
54LS166	/30609	8001701	2	5	F		
54ALS168	/38103		2	5	-		
54LS168	/31505	8001801	2	5	-		
54ALS169	/38003		1	5	F		
54LS169	/31506	8001802	2	5	F		
54ALS169B	/38003	8302501	2	5	F		
54ALS569A	/38005	8302502	2	5	F		
54F169		5962-8607201	2	5	-		
5417	/00804		3	2	L		
54LS170	/31902	8002501	2	5	F		
54170	/01801		4	5	-		
54LS173A	/36101		1	3	F		
54HC173	/65306	5962-8682501	2	3	F		
54HCT173		5962-8875901	2	3			
54F174	/34107		1	3	-		
54LS174	/30106		1	3	F		
54ALS174	/37201	8301901	2	3	F		
54HC174	/65307	8407301	2	3	F		
54AC174	/75307	5962-8762601	2	3	-		
54ACT174		5962-8775701	2	3	-		
54HCT174		5962-8974301	2	3			
54S174	/07105		3	3	L		
54174	/01701		3	3	L		
54AC175	/75308	5962-8955201	2	3			
54LS175	/30107		1	3	F		
54ALS175	/37202	8301902	2	3	F		
54HC175	/65308	8408901	2	3	P		
54F175	/34104		1	3	F		
54ACT175		5962-8969301	2	3			
54HCT175		5962-8970101	2	3			
54S175	/07106		3	3	L		
54175	/01702		3	3	L		
54180	/01901		3	4	L		
54F181	/33801		1	4			
54LS181	/30801		1	4			
54S181	/07801		3	4	L		
54181	/01101		3	4	L		
54F182	/33802		1	4	-		
54FCT182		5962-8865201	2	4			
54FCT182A		5962-8865202	2	4			
54S182	/07802		3	4	L		
54182	/01102		3	4	L		
54185A		7703001	3	4	L		
54S189		7801502	2	6	-		
54F190	/34403		1	5	F		
54LS190	/31513	7603501	2	5	F		
54HC190		5962-8994601	2	5			
54F191	/34303		2	5	F		
54LS191	/31509	7600901	2	5	P		
54ALS191		5962-8684001	2	5	F		
54HC191	/66305	5962-8689101	2	5	-		
54HCT191		5962-8867101	2	5	-		
54FCT191		5962-8973301	2	5			
54FCT191A		5962-8973302	2	5			
54AC191		5962-8974901	2	5			
54F192	/34404		1	5	F		
54HC192	/66306	5962-8780801	2	5	F		
54LS192	/31507	7603601	2	5	P		
54192	/01308		3	5	L		
54F193	/34304		1	5	F		
54LS193	/31508	7600601	2	5	P		
54HC193	/66307	5962-8772401	2	5	F		
54ALS193		5962-8869801	2	5			
54L193	/02503		3	5	L		
54193	/01309		3	5	L		
54LS194A	/30601		1	5	P		
54HC194	/66504	5962-8682601	2	5	F		
54F194	/33601	5962-8685001	2	5	-		
54194	/00905		3	5	L		
54S194	/07601	7604001	3	5	L		
54LS195A	/30602		1	5	P		
54HC195	/66505	5962-8682701	2	5	F		
54195	/00906		3	5	L		
54S195	/07602		4	5	-		
54LS196	/32001	7701001	2	5	F		
54LS197	/32002	7601501	2	5	P		
54ALS20	/37003		1	1	-		
54F20	/33004		1	1	P		
54LS20	/30007		1	1	P		
54L20	/02002		3	1	L		
54HC20	/65003	8403901	2	1	P		
54ALS20A	/37003	5962-8858901	2	1	-		
54S20	/07006		3	1	L		
54H20	/02302		3	1	L		
54AC20	/75003	5962-8761301	2	1	-		
5420	/00102		3	1	L		
54LS21	/31003		1	1	P		
54ALS21		8414301	2	1	P		
54HC21		5962-8857601	2	1	P		
54F21		5962-8955401	2	1			
54AS21		5962-8780401	3	1	-		
54LS22	/30008		1	1	P		
54S22	/07007		3	1	L		
54H22	/02307		3	1	L		
54LS221	/31402	7604201	2	3	P		
54HC221		5962-8780501	2	3	F		
54HC221A		5962-8780502	3	3			
54221		5962-8771101	3	3	-		
5423	/00402		3	1	L		
54HC237		5962-8860601	2	4	F		
54HCT237		5962-9061301	2	4			
54HC238		5962-8688401	2	4	-		
54HCT238		5962-8974501	2	4			
54ALS240	/38301		1	2	-		
54F240	/33201		1	2	F		
54LS240	/32401	7801201	2	2	P		
54HC240	/65703	8407401	2	2	-		
54HCT240	/65753	8550501	2	2	F		
54AC240	/75703	5962-8755001	2	2	-		
54FCT240		5962-8765501	2	2	P		
54ALS240A	/38301	5962-8859101	2	2	-		
54ACT240		5962-8775901	2	13			
54FCT240A		5962-8765502	2	2			
54HC241	/65704		1	2			
54ALS241	/38302	5962-8859601	2	2	-		
54HCT241	/65754		2	2	-		
54F241	/33202	5962-8687401	2	2	-		
54AC241	/75704	5962-8755101	2	2	-		
54LS241	/32402		1	2			
54FCT241		5962-8973201	2	2			
54FCT241A		5962-8973202	2	2			
54ACT241		5962-8984701	2	2			
54HC242	/65501		2	13			
54F242	/34801		2	13			
54LS242	/32801	8002001	2	13	P		

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54ALS242B	/38506	8401301	2	13			-
54LS243	/32802	8002002	2	13			P
54ALS243A	/38507	8401302	2	13			F
54HC243	/65502	8409001	2	13			P
54F243	/34802	5962-8683401	2	13			
54ALS244	/38303		1	2			-
54F244	/33203		1	2			F
54HC244	/65705	8409601	2	2			P
54HCT244	/65755	8513001	2	2			-
54LS244	/32403	7705701	2	2			-
54AC244	/75705	5962-8755201	2	2			-
54ALS244A	/38303	5962-8683901	2	2			-
54FCT244		5962-8763001	2	2			-
54ACT244		5962-8776001	2	2			-
54FCT244A		5962-8763002	2	2			-
54BCT244		5962-9062501M	2	13			
54LS245	/32803	8002101	2	13			P
54ALS245A		8403001	2	13			-
54HC245	/65503	8408501	2	13			P
54HCT245	/65553	8550601	2	13			-
54F245	/34803	8551101	2	13			-
54ACT245		5962-8766301	2	13			
54FCT245		5962-8762901	2	13			-
54AC245		5962-8775801	2	13			
54FCT245A		5962-8762902	2	13			-
54BCT245		5962-9051401M	2	13			
54LS248		5962-8994401	2	4			
5425	/00403		3	1			L
54F251A	/33905		1	4			F
54LS251	/30905	7601601	2	4			P
54ALS251		8413501	2	4			-
54HC251B	/66205	8512501	2	4			-
54AC251		5962-8769201	2	4			-
54ACT251		5962-8959901	2	4			
54S251	/07905	8002201	3	4			L
54F253	/33908		1	4			F
54LS253	/30908	7601701	2	4			P
54ALS253		8509601	2	4			-
54AC253		5962-8769301	2	4			-
54ACT253		5962-8776101	2	4			-
54HC253B	/66206	5962-8868201	2	4			
54S253	/07908		3	4			L
54F257A	/33906		1	4			F
54LS257	/30906		1	4			F
54LS257B	/30906	7603701	2	4			F
54S257	/07906		3	4			L
54ALS257		8509701	2	4			-
54AC257		5962-8870301	2	4			-
54ACT257		5962-8968901	2	4			
54HCT257		5962-8970501	2	4			
54HC257	/66207	8512401	2	4			F
54F258A	/33907		1	4			F
54LS258	/30907		1	4			F
54LS258B	/30907	7603801	2	4			F
54ALS258		5962-8862601	2	4			F
54ACT258		5962-8870401	2	4			
54HCT258		5962-8970801	2	4			
54S258	/07907	8002301	3	4			L
54LS259	/31603		1	3			F
54LS259B	/31605		1	3			
54HC259	/65402	8551901	2	3			-
54ALS259		5962-8874101	2	3			
54F259		5962-8972301	2	3			
54LS26	/32102	7602001	2	1			P
5426	/00805		3	2			L
54LS261	/31801	8002601	2	4			-
54LS266	/30303		1	1			F
54HC266	/65103	8404301	2	1			F
54F269		5962-8862701	2	5			
54LS27	/30302		1	1			P
54HC27	/65102	8404201	2	1			P
54ALS27	/37302	5962-8683801	2	1			F
54F27		5962-8951001	2	1			
54HCT27		5962-8970301	2	1			
5427	/00404		3	1			L
54LS273	/32501	7801001	2	3			P
54HC273	/65601	8409901	2	3			F
54ALS273		8413601	2	3			-
54FCT273		5962-8765601	2	3			-
54HCT273		5962-8772501	2	3			-
54F273		5962-8855001	2	3			-
54AC273	/75601	5962-8775601	2	3			
54FCT273A		5962-8765602	2	3			
54ACT273		5962-8973501	2	3			
54LS279	/31602	7601801	2	3			P
54ALS28	/38402		1	2			F
54LS28	/30204		1	2			F
5428	/16201		4	2			-
54F280	/34901		1	4			F
54LS280	/32901		1	4			
54HC280		8607701	2	4			-
54F283	/34201		1	4			F
54LS283	/31202	7604301	2	4			P
54HC283		5962-8976501	2	4			
54AS286		5962-8966301	2	4			
54S287	/20302		1	7			L
DM54S288	/20702		1	7			L
54LS290	/32003		1	5			P
54LS293	/32004		1	5			
54LS295B	/30606		1	5			P
54LS298	/30909	7601901	2	4			P
54ALS29821		5962-9061601	2	3			
54LS299		7802401	2	5			-
54ACT299		5962-8877101	2	5			
54HC299	/66506	5962-8780601	2	5			-
54FCT299		5962-8686201	2	5			-
54AC299		5962-8875401	2	5			
54ALS299	/37601	8302101	2	5			-
54F299		5962-8957301	2	5			
54FCT299A		5962-8686202	2	5			
54ALS30	/37004		1	1			-
54LS30	/30009		1	1			-
54HC30	/65004	8404001	2	1			P
54ALS30A	/37004	5962-8683701	2	1			-
54L30	/02001		3	1			L
54HCT30		5962-8974601	2	1			
54S30	/07008		3	1			L
54H30	/02301		3	1			L
54F30		5962-8870801	2	1			-
5430	/00101		3	1			L
54F30244		5962-8872201	2	2			
54F30245		5962-8972201	2	13			
HCPL-5431		5962-8957101	1	21			-
54F32	/33501		1	1			F
54LS32	/30501		1	1			P
54ACT32		5962-8973601	2	1			
54HCT32		5962-8685201	2	1			F
54AC32	/75201	5962-8761401	2	1			F
54ALS32	/37501	5962-8683601	2	1			F
54HC32	/65201	8404501	2	1			P
5432	/16101		3	1			L
54F322		5962-8607401	2	5			F
54ALS323	/37602	8302102	2	5			F
54LS33		8512601	2	2			-
54LS348	/36002		1	4			F
54F350		5962-8607501	2	5			-
54F352	/33909		1	4			F
54F353	/33910		1	4			F
54LS353		8550801	2	4			-
54F36		5962-8870901	2	1			F
54LS365	/32201		1	2			F
54F365	/35101		1	2			
54HC365	/65706	8500101	2	2			-
54365	/16301		3	2			L
54LS366	/32202		1	2			F
54HC366	/65707	5962-8682801	2	13			-
54366	/16302		3	2			L
54LS367	/32203		1	2			
54HC367	/65708	8500201	2	2			-
54367	/16303		3	2			L
54LS368	/32204		1	13			
54HC368	/65709	5962-8681201	2	2			F
54368	/16304		3	2			L
54ALS37	/38401		1	2			-
54LS37	/30202		1	2			P
54F37	/35201		2	2			-
5437	/00302		3	2			L
54F373	/34601		1	3			F
54LS373	/32502		1	3			F
54FCT373		5962-8764401	2	3			-
54ALS373	/37203	8302001	2	3			-
54HCT373	/65453	5962-8686701	2	3			-
54AC373	/75403	5962-8755501	2	3			-
54ACT373		5962-8755601	2	3			-
54HC373	/65403	8407201	2	3			P
54FCT373A		5962-8764402	2	3			
54BCT373		5962-9074601M	2	3			
54F374	/34105		1	3			F
54LS374	/32503	7801101	2	3			P
54ALS374	/37204	8302002	2	3			-
54HC374	/65602	8407101	2	3			P
54FCT374A		5962-8762802	2	3			-
54ACT374		5962-8763101	2	3			-
54FCT374		5962-8762801	2	3			-
54AC374	/75602	5962-8769401	2	3			-
54HCT374	/65652	8550701	2	3			F
54LS375	/31604		1	3			
54LS377	/32504		1	3			P
54HC377	/65603	5962-8780701	2	3			F
54FCT377		5962-8762701	2	3			-
54AC377	/75603	5962-8870201	2	3			
54ACT377		5962-8769701	2	3			
54FCT377A		5962-8762702	2	3			
54HCT377		5962-8976901	2	3			
54F378	/34108	5962-8855501	2	5			-
54LS378		5962-8992501	2	3			
54F379	/34109		1	3			F
54LS38	/30203		1	2			P
54F38	/35202	5962-8687201	2	2			-
54ALS38A	/38403	5962-8687101	2	2			-
5438	/00303		3	2			L
54F381	/33803	5962-8671001	2	4			-
54F382	/33804		1	4			F
54LS382		5962-8688101	2	4			F
54LS390	/32701	7802601	2	5			P
54HC390	/66308	8600901	2	5			-
54LS393	/32702		1	5			F
54HC393	/66309	8410001	2	5			F
54HCT393		5962-8989001	2	5			

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
54LS395A	/30607		1	5
54LS396		5962-9050301	2	5
54F398	/35001		1	4 F
54F399	/35002		1	4 F
54LS399		8415401	2	5 -
54FCT399		5962-8965201	2	5
54FCT399A		5962-8965202	2	5
54ALS40	/38407		1	2 F
54LS40	/30201		1	2 P
54F40	/35203		2	2
54S40	/07201		3	2 L
54H40	/02401		3	2 -
5440	/00301		3	2 L
54HC4002	/65104	8404401	2	1 P
54HCT40102		5962-9057401	2	5
54HC40103		5962-9055301	2	5
54HC4017	/66310	8601101	2	5 -
54HC4020	/66311	8500301	2	5 -
54HCT4020		5962-8945801	2	5
54HC4024	/66312	8601201	2	5 P
54HC4040	/66313	8500401	2	5 -
54HC4046A		5962-8960901	2	24
54HCT4046A		5962-8875701	2	24
54HC4049		5962-8681901	2	2 -
54HC4050		5962-8682001	2	2 F
54HC4052		5962-8855601	2	18 -
54HC4053		5962-8775401	2	18 -
54HCT4059		5962-8862401	2	5 F
54HC4059		5962-8944501	2	5
54HC4060		5962-8768001	2	5 F
54HCT4060		5962-8977101	2	5
54HC4066		5962-8950701	2	18
54HC4075		5962-8772201	2	1 -
54HC4078		5962-8857401	2	1 -
54HC42	/65801	5962-8682101	2	4 F
54LS42	/30703	7603101	2	4 F
5442	/01001		3	4 L
54L42	/02901		4	4 -
54L43	/02902		4	4 -
5443	/01002		4	4 -
54F432		5962-9058501	2	3
54L44	/02903		4	4 -
5444	/01003		4	4 -
5445	/01004		3	4 L
54HC4511		5962-8773301	2	4 -
54HC4538		5962-8688601	2	3 -
5446	/01006		3	4 L
54L46	/02904		4	4 -
54LS47	/30704	7604501	2	4 F
5447	/01007		3	4 L
54L47	/02905		4	4 -
54S472	/20805		2	7 L
54S473	/20804		2	7 L
54S474	/20802		1	7 F
5448	/01008		3	4 L
5449	/01009		4	4 -
54LS490	/32703		1	5 P
5450	/00501		3	1 L
54H50	/04001		4	1 -
54LS51	/30401		1	1 P
54F51		5962-8877401	2	1
54S51	/07401		3	1 L
5451	/00502		3	1 L
54L51	/04101		4	1 -
54H51	/04002		4	1 -
54F518		5962-8871001	2	4
54F519		5962-8871101	2	4
54F520		5962-8871201	2	4
54ALS520		5962-8869101	2	4 -
54ACT520		5962-8979301	2	4
54BCT520A		5962-9075001M	2	13
54F521	/34701		1	4 F
54FCT521		5962-8854301	2	4
54FCT521A		5962-8854302	2	4
54ACT521		5962-8979302	2	4
54FCT521B		5962-8854303	2	4
5453	/00503		3	1 L
54H53	/04003		4	1 -
54F533	/34602		1	3 F
54AC533	/75404		2	3
54HC533	/65404	5962-8681301	2	3 -
54FCT533		5962-8865101	2	3
54FCT533A		5962-8865102	2	3
54F534	/34106		1	3
54AC534	/75605		2	3
54HC534	/65605	5962-8681401	2	3 P
54ACT534		5962-8965801	2	3
54FCT534		5962-8865501	2	3
54FCT534A		5962-8865502	2	3
54HCT534		5962-8984901	2	3
54ALS534		5962-8866801	2	3 -
54LS54	/30402		1	1 P
5454	/00504		3	1 L
54L54	/04102		4	1 -
54H54	/04004		4	1 -
54HC540	/65710		1	2 -
54HCT540	/65760		1	13
54FCT540A		5962-8976702	2	2
54LS540	/32404	8415501	2	2 F
54AC540	/75710	5962-8769501	2	13 -
54FCT540		5962-8976701	2	2
54F540	/33204		1	2 L
54BCT540		5962-9074801M	2	13
54HC541	/65711		1	2
54HCT541	/65761		1	2
54LS541	/32405	8415601	2	2 F
54AC541	/75711	5962-8870601	2	2
54ALS541		5962-8960201	2	2
54FCT541		5962-8976601	2	2
54FCT541A		5962-8976602	2	2 -
54BCT541		5962-9074901M	2	13
54FCT543		5962-8973001	2	13
54FCT543A		5962-8973002	2	13
54F544		5962-8955501	2	13
54F545	/34804		1	13
54L55	/04103		4	1 -
54H55	/04005		4	1 -
54ALS560	/38104		2	5
54ALS561A	/38004	8302203	2	5
54F563	/34603		1	3 F
54AC563	/75405		2	3
54HC563	/65405	5962-8606201	2	3 F
54ALS563A		5962-8870001	2	3
54ACT563		5962-8955601	2	3 -
54F564	/34111		2	3 F
54AC564	/75606		2	3
54HC564	/65606	5962-8681501	2	3 F
54ACT564		5962-8955701	2	3
54ALS564A		5962-8872801	3	3
54ALS568	/38105		2	5
54S570	/20401		1	7 -
54S571	/20402		1	7 F
54S572	/20601		2	7 L
54S572	/20601		3	7 L
54F573	/34604		1	3 F
54S573	/20602		1	7 L
54AC573	/75406		2	3
54ALS573	/38201	8401201	2	3 -
54HC573	/65406	8512801	2	3 -
54HCT573		5962-8685601	2	3 F
54FCT573		5962-8863901	2	3
54ACT573		5962-8766401	2	3
54FCT574A		5962-8951302	2	3
54HC574	/65604		1	3
54AC574	/75604		2	3
54ALS574A	/37104	8400101	2	3 -
54FCT574		5962-8951301	2	3
54ALS574	/37104		1	3 -
54ACT574		5962-8960101	2	3
54F574	/34110	5962-8972401	2	3
54ALS576A	/37105	8400102	2	3 -
54F579		5962-8954501	2	5
54ALS580	/38202	8401202	2	3 -
54LS590		5962-8751701	2	5 -
54HC590		5962-8960301	2	5
54LS592		5962-8762101	2	5 -
54LS595		5962-8671701	2	5 -
54HC595	/66507	5962-8681601	2	5 -
54HC597		5962-8681701	2	5 F
54HCT597		5962-8974101	2	5 -
54BCT620A		5962-9075001M	2	13
54HC623		5962-8998901	2	13
54BCT623		5962-9094001M	2	13
54LS629		8102101	2	24 -
54F64	/33401		1	1 F
54S64	/07402		3	1 L
54LS640		8416101	2	13 -
54HC640	/65506	5962-8780901	2	13 -
54ALS640A	/38501	5962-8872701	2	13 -
54FCT640		5962-8865401	2	13
54FCT640A		5962-8865402	2	13
54HCT640		5962-8974001	2	13
54BCT640		5962-9075201M	2	13
54FCT640		5962-9075201M	2	13
54AS640		5962-8955301	3	13
54ALS641	/38502		2	13 -
54ALS642	/38503		2	13
54LS642		5962-8974801	2	13
54HC643	/65507		2	13
54ALS643	/38504		2	13
54ALS645A	/38505	8403301	2	13 -
54FCT645		5962-8865301	2	13
54FCT645A		5962-8865302	2	13 -
54LS646	/32804		2	13 P
54HC646	/65508	5962-8688501	2	13 -
54FCT646		5962-8877501	2	13 -
54AC646		5962-8968201	2	13
54ALS646		5962-8995601	2	13
54F646		5962-8975401	2	13
54AS646		5962-8759501	3	13 -
54HC648	/65509		2	13
54LS648	/32805		2	13 P
54F648		5962-8975402	2	13
54ALS648		5962-9052301	2	13

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
54S65	/07403		4	1 L
54AS651		5962-8875301	3	13
54ALS652		5962-8867301	2	13
54F652		5962-8955801	2	13
54AS652		5962-8868701	3	13 -
54ALS653		5962-8968701	2	13
54F657		5962-8953501	2	13
54LS668		5962-8687601	2	5 -
54LS670	/31901	7704201	2	5 -
54LS673		5962-8860201	2	5 -
54LS674		5962-8860701	2	5 -
54F676		5962-8854601	2	5 -
54LS682		8415101	2	10 -
54LS684		8415201	2	10 F
54LS688		8415301	2	10 F
54HCT688		5962-8685701	2	4 -
54HC688		5962-8681801	2	4 -
54ALS688		5962-8857801	2	4 -
5470	/00206		3	3 L
54L71	/02101		3	3 L
54L72	/02102		3	3 L
5472	/00201		3	3 L
54H72	/02201		4	3 L
54HC7266	/65105	8404302	2	1 -
54LS73	/30101		1	3 F
54HC73	/65301	5962-8515301	2	3 F
54L73	/02103		3	3 L
5473	/00202		3	3 L
54H73	/02202		4	3 L
54ALS74	/37101		1	3 F
54LS74A	/30102		1	3 F
54ALS74A	/37101	8401101	2	3 F
54HC74	/65302	8405601	2	3 F
54HCT74	/65352	5962-8685301	2	3 -
54ACT74		5962-8752501	2	3 -
54AC74	/75302	5962-8852001	2	3 -
54S74	/07101		3	3 L
54L74	/02105		3	3 L
5474	/00205		3	3 L
54H74	/02203		4	3 L
54S74	/07101		4	3 L
54LS75	/31601	7601201	2	3 P
54HC75	/65401	8407001	2	3 P
5475	/01501		3	3 L
54AS756		5962-9056301	2	2
54LS76	/30110		1	3 F
54LS76A	/30110	7601301	2	3 F
54HC76		5962-8773201	2	3 -
5476	/00204		3	3 L
54H76	/02204		4	3 L
54AS760		5962-8776701	3	2
5477	/01502		3	3 L
54F776		5962-8870701	2	13 -
54L78	/02104		3	3 L
5479	/00207		3	3 L
5480	/00604		3	4 L
54ALS804		5962-8869301	2	13 -
54AS804		5962-8776601	3	2 -
54ALS805A		5962-8869401	2	13 -
54AS805		5962-8779401	3	2 -
54ALS808		5962-8869501	2	13 -
54AS808		5962-8852201	3	2 -
5482	/00601		3	4 L
54FCT821A		5962-8860801	2	5
54FCT821B		5962-8860802	2	5
54ACT821		5962-8870501	2	3
54FCT823A		5962-8865601	2	5
54FCT823B		5962-8865602	2	5
54AS823		5962-8952501	3	3
54FCT824A		5962-8966501	2	5
54FCT824B		5962-8966502	2	5
54FCT825A		5962-8867401	2	5
54FCT825B		5962-8867402	2	5
54FCT827A		5962-8950601	2	13
54FCT827B		5962-8950602	2	13
54LS83	/31201		1	4 F
54LS83A	/31201	7601401	2	4 F
5483	/00602		3	4 L
54ALS832		8414501	2	13 -
54AS832B		5962-8852301	3	2
54FCT833A		5962-8973101	2	13
54FCT833B		5962-8973102	2	13
54FCT841A		5962-8857501	2	3
54FCT841B		5962-8857502	2	3
54FCT845A		5962-8867501	2	8
54FCT845B		5962-8867502	2	8
54LS85	/31101		1	4 P
54HC85		8601301	2	4 -
54HCT85		5962-8867201	2	4 -
5485	/15001		3	4 L
54S85	/08201		3	4 L
54C85		7703701	3	4 -
54F85		5962-8606901	3	4 -
54ALS857	/37901		1	4 -
54ALS857A	/37901	5962-8753301	2	4 -
54F86	/34501		1	1 F
54HCT86		5962-8984401	2	1
54HC86	/65202	8404601	2	1 P
54ALS86		5962-8862101	2	1 -
54AC86	/75202	5962-8955001	2	1
54LS86	/30502		1	1 P
54S86	/07501		3	1 L
54L86	/02601		3	1 L
5486	/00701		3	1 L
54AC86	/75202		4	1
54FCT861A		5962-8953301	2	13
54FCT861B		5962-8953302	2	13
54FCT863A		5962-8866101	2	13
54FCT863B		5962-8866102	2	13
54AS867		5962-8966801	3	5
54AS869		5962-8952601	3	5
54ALS870		5962-8988901	2	5
54ALS873	/38203	8403201	2	3 -
54ALS874B	/37106	8401001	2	3 F
54ALS876	/37107	8401002	3	3 -
54ALS880	/38204	8403202	3	3 -
54AS885		5962-8975701	3	4
54LS90	/31501	7603201	2	5 P
54L90	/02501		3	5 L
5490	/01307		3	5 L
54C906		7705601	3	2 -
54LS92	/31510		1	5 P
5492	/01301		3	5 L
54C922		5962-8752101	3	4 -
54LS93	/31502	7700101	2	5 F
54L93	/02502		3	5 L
5493	/01302		3	5 L
54LS95B	/30603		1	5 F
54L95	/02801		3	5 L
5495	/00901		3	5 L
54LS96	/30604		1	5 P
5496	/00902		3	5 L
54ALS996		5962-8994501	2	3 -
54F198		5962-9050201	2	5
HCPL-5501		5962-9085401H	2	23
55107	/10401		1	13 F
55108	/10402		1	13 F
55110A		5962-8754701	2	13 -
55113	/10405		1	13 L
55114	/10403		1	13 F
55115	/10404		1	13 F
55116		5962-8851101	2	13 -
55117		5962-8851102	2	13 -
55118		5962-8851103	2	13 -
55119		5962-8851104	2	13 -
55121		5962-8776901	2	13 -
55ALS160		5962-8968001	2	13
55ALS161		5962-8968101	2	13
55188		5962-8688901	2	13 -
55189A		5962-8688802	2	13 -
55189		5962-8688801	3	13 -
55ALS194		5962-8864801	2	13 -
55ALS195		5962-8864901	2	13
5532A	/13102		1	9 F
55325	/13001		1	15
55326	/13002		1	15 -
55327	/13003		2	15 F
5534A	/13101		1	9 F
5537	/12502		2	20 -
5539		5962-8606401	2	9 -
55450	/12901		3	13 -
55451	/12902		1	13 F
55452	/12903	7704901	2	13 -
55453	/12904		1	13 F
55454	/12905		1	13 F
55454		5962-8871501	2	13
55460	/12906		3	13 -
55461	/12907		1	13 F
55462	/12908		1	13 F
55463	/12909		1	13 F
55464	/12910		2	13 L
55464		5962-8871502	2	13
55474		5962-8871503	2	13
555	/10901		1	14 L
555LV	/14905		2	14
TLC555	/14901	5962-8950301	2	14
555	/10903		3	14 L
55500		8601801	2	13 -
55501		8601802	2	13 -
556	/10902		1	14 L
TLC556	/14902	5962-8950302	2	14
5560		5962-8672201	2	12 -
5564-250	/22810		2	7
5564-250	/22811		2	7
55C64-250	/26005		2	7 -
AD558T	/14401	5962-8778902	2	16 -
AD558T		5962-8778901	3	16 -
56001-20		5962-8951201	2	8
IM5603A	/20201		4	7 -
561	/13301		1	16 -
562	/12101	8100801	2	16 -
IM5623	/20202		4	7 -
563	/12102	8100802	2	16 -
565	/12103		1	16 -
566	/12104		2	16 -
567		5962-8700301	2	24 -
AD567S		5962-8780101	2	16 F
AD570		5962-8680201	2	17 -
HCPL-5701		5962-8981001	1	25 -
AD571	/13401	5962-8680202	2	17 P

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	N A T O
AD573S		5962-8850501	2 17	-
HCPL-5731		5962-8978501	1 25	
574AU	/14001		1 17	F
574AT	/14002		1 17	-
574AU	/14003	5962-8512701	2 17	F
574AT	/14004	5962-8512702	2 17	-
574AU		5962-8512703	3 17	-
574AT		5962-8512704	3 17	-
57401		5962-8779101	2 8	-
57401A		5962-8779103	2 8	-
C57401		5962-8779105	2 8	-
C57401A		5962-8779107	2 8	-
57L401D		5962-8779109	2 8	F
57L4013D		5962-8779111	2 8	-
57402		5962-8779102	2 8	-
57402A		5962-8779104	2 8	-
C57402		5962-8779106	2 8	-
C57402A		5962-8779108	2 8	-
57L402D		5962-8779110	2 8	-
HCPL-5761		5962-8947701	1 22	
57C64-70		8510207	2 7	-
AD578SD		5962-8865801	1 17	
AD578TD		5962-8865802	1 17	
AD578ZSD		5962-8865803	1 17	
AD578ZTD		5962-8865804	1 17	
580S		5962-8686101	2 19	L
UCS-5800		5962-8764002	2 13	
UCS-5801		5962-8764001	2 13	-
UCS5822		5962-8764101	2 13	-
584S	/12801		1 19	L
584T	/12802		1 19	L
AD585		5962-8754001	2 20	-
AD586S		5962-8982401	2 19	
AD586T		5962-8982402	2 19	
AD587SQ		5962-8982501	2 19	
AD587TQ		5962-8982502	2 19	
AD587UQ		5962-8982503	3 19	
AD588S		5962-8972801	2 19	
AD588T		5962-8972802	2 19	
AD590J		5962-8757101	2 24	-
AD590K		5962-8757102	2 24	F
AD590L		5962-8757103	2 24	P
AD590M		5962-8757104	2 24	P
WS5910A		5962-8770801	2 8	-
592		8418502	2 9	-
604A		5962-8956401	2 24	
6108	/19007		1 18	F
6116	/29104		1 6	F
6116	/19001		1 18	
6116	/29105		2 6	P
6116	/29101		2 6	P
6N134		8102801	1 22	F
6N140A		8302401	1 22	F
6N140A		8302401	2 22	F
LM6161		5962-8962101	2 9	
LM6164		5962-8962401	2 9	
LM6165		5962-8962501	2 9	
6208	/19008		1 18	-
6216	/19003		1 18	
AD625		5962-8771901	2 9	-
AD630		5962-8980701	2 24	
BUS-63105II		5962-8604902	1 13	
UT63M105		5962-8864401	2 13	
BUS-63105		5962-8604901	3 13	-
BUS-63106II		5962-8604902	1 13	
UT63M107		5962-8864402	2 13	
UT63M115		5962-8864403	2 13	
UT63M117		5962-8864404	2 13	
BUS-63125II		5962-8757902	1 13	-
BUS-63125II		5962-8757902	1 13	-
UT63M125		5962-8864405	2 13	
BUS-63125		5962-8757901	3 13	-
UT63M127		5962-8864406	2 13	
UT63M135		5962-8864407	2 13	
UT63M137		5962-8864408	2 13	
BUS-63147		5962-8952201	1 13	
AD637		5962-8963701	2 24	
OP64A		5962-9053501	2 9	
HCPL-6431		5962-8957102	1 22	
AD650	/13803		2 17	-
6504	/24501		1 6	-
6504RH	/R2450	R24503	1 6	
6504RH	/24503		2 6	
6508	/23901		4 6	-
BUS-65111		5962-8763201	1 13	-
BUS-65112		5962-8753501	1 22	-
BUS-65112		5962-8753501	1 22	-
6514	/24502		1 6	-
6514RH	/24504		2 6	-
6516	/29102		1 6	F
6516-1	/61001		2 6	-
65162	/29110		1 6	P
6516-2	/61002		2 6	-
65162	/29101		2 6	P
6516-3	/61003		2 6	-
6518	/23902		4 6	-
65262	/29103		1 6	-
65262	/29109		1 6	
65C262RH	/29107		2 6	
65T262RH	/29108		2 6	
BUS-65600		5962-8858501	1 13	
BUS-65600		5962-8858501	1 13	
65642	/29205		1 6	F
65643	/29206		2 6	
MCM6604A	/23602		4 6	-
MCM6604A	/23604		4 6	-
MCM6605	/23601		4 6	-
MCM6605	/23603		4 6	-
BUS-66300II		5962-8858601	1 8	
BUS-66300II		5962-8858601	1 8	
6654	/21901		4 7	-
6665	/24401		1 6	L
6665	/24402		1 6	L
6665	/24403		1 6	L
AD667S		5962-8865901	2 16	
6685		8600803	2 10	-
AM6687		7801902	2 10	
670S		5962-8763501	2 17	F
AD673S		5962-8850502	2 17	-
HCPL-6731		5962-8978502	1 25	-
674AU	/14005		2 17	F
674AT	/14006		2 17	F
R675B-3	/13602		2 19	F
R675B-4	/13601		2 19	-
6800	/40001		4 8	-
68000-10	/54003	8202103	2 8	-
68000-12		8202104	2 8	-
68000-6	/54001		2 8	-
MKB68000-6	/54001	8202101	3 8	-
68000-8	/54002		1 8	-
MKB68000-8	/54002	8202102	2 8	-
68020-12		5962-8603201	3 8	-
68020-16		5962-8603202	2 8	-
68020-20		5962-8603203	2 8	-
6810	/40201		4 6	-
68154		5962-8857201	2 23	-
68155		5962-8866601	2 23	-
68172		5962-8770501	2 8	-
MC6821	/40101		4 8	-
6831B	/40301		4 7	-
68A316E	/40301		4 7	-
685		8600801	2 10	-
685		8600802	2 10	-
68562		5962-8681001	2 8	-
AM686		7801801	2 10	-
68681		5962-8856603	2 13	-
68C681		5962-8953203	2 13	
AM687		7801901	2 10	-
68HC811E2		5962-8952701	2 8	
68881-12		5962-8602101	3 8	-
68881-16		5962-8602102	2 8	F
68881-20		5962-8602103	2 8	-
68901-4		5962-8850601	2 8	-
68901-5		5962-8850602	2 8	-
DAC703		5962-8856301	2 16	
LM709		7800701	3 9	L
710	/10301		3 10	L
711	/10302		3 10	L
7132SA-45		5962-8700201	2 6	-
7132LA-45		5962-8700205	2 6	-
7132SA-55		5962-8700204	2 6	-
7132LA-55		5962-8700208	2 6	-
7132SA-70		5962-8700203	2 6	-
7132LA-70		5962-8700207	2 6	-
7132SA-90		5962-8700202	2 6	-
7132LA-90		5962-8700206	2 6	-
714	/13502		1 9	-
7142SA-45		5962-8700209	2 6	-
7142LA-45		5962-8700213	2 6	-
7142SA-55		5962-8700212	2 6	-
7142LA-55		5962-8700216	2 6	-
7142SA-70		5962-8700211	2 6	-
7142LA-70		5962-8700215	2 6	-
7142SA-90		5962-8700210	2 6	-
7142LA-90		5962-8700214	2 6	-
7C147	/28901		1 6	
7C148	/28902		1 6	-
ICM7170		5962-8765301	2 8	-
7181	/01101		3 4	L
7187S45	/29202		2 6	-
7187S55	/29201		2 6	-
7187L55	/29203		2 6	-
7187L70	/29204		2 6	-
7C190		5962-8969401	2 6	
7C194	/29303		2 6	
7C194	/29304		2 6	
7C194	/29311		2 6	
7C196	/29305		2 6	
7C196	/29306		2 6	
7C196	/29316		2 6	
7C197	/29301		1 6	
7C197	/29302		1 6	
7C197	/29310		1 6	
7C198	/29307		1 6	
7C198	/29308		1 6	
7C198	/29309		1 6	
7C198	/29313		1 6	
7V198	/29309		1 6	
7C199	/29307		1 6	
7C199	/29308		1 6	
7C199	/29309		1 6	

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
7C199	/29313		1	6
7201LA30		5962-8753101	2	8 -
7201LA50		5962-8753102	2	8 -
7201LA80	/25003	5962-8753103	2	8 -
7203S40		5962-8866904	2	8
7203S50		5962-8866903	2	8
7203S65		5962-8866902	2	8
7203S80		5962-8866901	2	8
721055		5962-8873301	2	4
721065		5962-8873302	2	4
721075		5962-8873303	2	4
7216L-40		5962-8687301	2	8 -
7216L-55		5962-8687302	2	8 -
7216L-75		5962-8687303	2	8 -
7217L-40		5962-8768601	2	4
7217L-55		5962-8768602	2	4
7217L-75		5962-8768603	2	4
7226		5962-8780201	2	16 -
7228T		5962-8866301	2	16
7228U		5962-8866302	2	16
723	/10201		1	12 F
7C235-30		5962-8863602	2	7
7C235-40		5962-8863601	2	7
72404L10		5962-8684601	2	8 -
72404L15		5962-8684602	2	8 F
72404L25		5962-8684603	2	8 -
72404L35		5962-8684604	2	8 -
733		8418501	2	9 P
CY7C331-25		5962-8985503M	2	7
CY7C331-30		5962-8985502M	2	7
CY7C331-40		5962-8985501M	2	7
741A	/10101		1	9 F
7C429-30		5962-8866905	2	8
747A	/10102		1	9 F
V750-35		5962-8872602	2	7
V750-40		5962-8872601	2	7
7520	/12702		1	16
7521	/12703		1	16
7523	/12701		2	16
7524		5962-8770001	2	16 -
7524		5962-8770002	2	16 -
7524		5962-8770003	2	16 -
7528		5962-8770102	2	16 -
7528		5962-8770103	2	16 P
7528		5962-8770101	2	16 -
7537S		5962-8776301	2	16 -
7537T		5962-8776302	2	16 -
7537U		5962-8776303	2	16 F
7541	/12704		2	16 -
AD7541AS		5962-8948101	2	16
AD7541AT		5962-8948102	2	16
PM7541AB		5962-8948103	2	16
PM7541AA		5962-8948104	2	16
7545S		5962-8770201	2	16 -
7545T		5962-8770202	2	16 -
7545U		5962-8770203	2	16 -
7545G		5962-8770204	2	16 -
7545B		5962-8770205	2	16 -
7545A		5962-8770206	2	16 -
7547S		5962-8965701	2	16 -
7547U		5962-8965703	2	16 -
7547T		5962-8965702	3	16
75C48S20		5962-8874301	2	17
7549S		5962-8876501	2	16
7549T		5962-8876502	2	16
7555	/14903	5962-8950303	2	14
7556	/14904	5962-8950304	2	14
AD7572S05		5962-8759104	2	17 F
AD7572T05		5962-8759105	2	17 F
AD7572U05		5962-8759106	2	17 F
AD7572U05		5962-8759105	2	17 F
AD7572S12		5962-8759101	2	17 -
AD7572T12		5962-8759102	2	17 -
AD7572U12		5962-8759103	2	17 -
PM-7574A		5962-8961603	2	17
PM-7574B		5962-8961604	2	17
7575S		5962-8776201	2	17 -
7575T		5962-8776202	2	17 -
AD7579		5962-8969801	2	17 -
AD7580		5962-8969802	2	17 -
760		5962-8754501	2	10 -
7602	/20701		1	7 L
7603	/20702		1	7 L
7610	/20301		1	7 F
7611	/20302		1	7 L
76160	/21001		2	7 -
76161	/21002		1	7 F
76165	/21005		1	7 L
7620	/20401		1	7 -
7621	/20402		1	7 F
76321	/21102		1	7 -
7640	/20801		3	7 L
7641	/20802		1	7 F
7642	/20601		3	7 L
76L42A	/02906		4	4 -
7643	/20602		1	7 L
7644	/20603		2	7 -
ICL7667		5962-8766001	2	13 -
AD767		5962-8961701	2	16
76L70	/02805		3	5 L
AD7672TQ05		5962-8965503	2	17
AD7672UQ05		5962-8965504	2	17
AD7672TQ10		5962-8965501	2	17
AD7672UQ10		5962-8965502	2	17
7680	/20903		2	7 L
7681	/20904		1	7 -
7684	/20901		2	7 -
7684T		5962-8977701	2	17
7684S		5962-8977702	2	17
7685	/20902		1	7 -
OP-77B		5962-8773801	2	9 -
OP-77A		5962-8773802	2	9 -
TL7702AM		5962-8868502	2	24
TL7705AM		5962-8868501	2	24 P
771	/11904		1	9 F
77S180	/20903		2	7 L
77S181	/20904		1	7 -
77S184	/20901		2	7 -
77S185	/20902		1	7 -
77S190	/21001		2	7 -
77S191	/21002		1	7 F
772	/11905		1	9 F
774	/11906		1	9 F
78MG	/11701		3	12 L
78G	/11702		3	12 L
78M05	/10702		1	12 -
7805	/10706		1	12 -
7805A		5962-8778201	2	12 -
7806A		5962-8962601	2	12
7808A		5962-8962801	2	12
78M12	/10703		1	12 -
7812	/10707		1	12 -
7812A		5962-8777601	2	12 -
78C120		5962-8963001	2	13
78M15	/10704		1	12 -
7815	/10708		1	12
7815A		5962-8855301	2	12 -
AD7820U		5962-8865001	2	17
AD7820T		5962-8865002	2	17
7824	/10709		1	12
78M24	/10705		2	12 -
7824T		5962-8876401	2	17
7824U		5962-8876402	2	17
7824A		5962-8855401	2	12
7828T		5962-8876403	2	17
7828U		5962-8876404	2	17
7831	/10406	8004101	3	13 F
7832	/10407	8004102	3	13 F
78S40		5962-8876101	2	12
AD7846		5962-8969701	2	16
78C48SC30		5962-8874302	2	17 -
79MG	/11801		3	12 L
79G	/11802		3	12 L
7C901-27		5962-8853502	2	8 -
7C901-32		5962-8853501	2	8 -
79M05	/11501		1	12 L
7905	/11505		1	12 L
7905A		5962-8874601	3	12
7C9101-35		5962-8951702	2	8
7C9101-45		5962-8951701	2	8
7C910-46		5962-8770805	2	8 -
7C910-51		5962-8770804	2	8 -
7C9116-40		5962-8861204	2	8
7C9116-65		5962-8861203	2	8
7C9116-75		5962-8861202	2	8
7C9116-99		5962-8861201	2	8
79M12	/11502		1	12 L
7912	/11506		1	12 L
7912A		5962-8874701	3	12
79M15	/11503		1	12 -
7915	/11507		1	12 -
7915A		5962-8874801	3	12
79M24	/11504		2	12 F
7924	/11508		2	12 F
7924A		5962-8874901	2	12
Z-80ACPU	/48001		1	8 -
Z-80CPU	/48002		1	8 -
Z-80BCMOS	/48501		1	8 -
Z-80BCPU	/48003		2	8
Z80APIO	/48401		4	8 -
Z80PIO	/48402		4	8 -
Z80ACTC	/48301		4	8 -
Z80CTC	/48302		4	8 -
Z80ADMA	/48201		4	8 -
Z80DMA	/48202		4	8 -
NSC800		8301301	2	8 -
Z8001CPU	/52001	8000301	2	8 -
Z8001ACPU	/52003	8000303	2	8 -
Z8001B		8000304	2	8 -
Z8002A CPU	/52004		1	8 F
Z8002CPU	/52002	8000302	2	8 F
Z8002B		8000305	2	8 -
Z8002ACPU	/52004	8000306	2	8 F
NSC800-4		8301302	2	8 -
80C186-10		5962-8850101	2	8
80C186-12		5962-8850102	2	8
M80186-6		8501002	2	8 -
M80186-8		8501001	2	8 -
80C196KB		5962-8998201	2	8
Z80ASIO/2	/48101		4	8 -
Z-80SIO/2	/48102		4	8 -

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Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
80286-10		5962-8514803	2 8	-
80286-6		5962-8514802	2 8	F
80286-8		5962-8514801	2 8	F
80287-10		5962-8513301	2 8	-
80287-5		5962-8513303	2 8	-
80287-8		5962-8513302	2 8	-
Z8030A		5962-8551801	2 8	-
Z8030		5962-8551802	2 8	-
80C31		8506401	2 8	-
80C31BH-16		8506403	2 8	
8035AHL		5962-8856801	2 8	-
8035L	/49002		4 8	-
Z8036A		8551701	2 8	
Z8036		8551702	2 8	F
ICL8038		5962-8877201	2 24	
80386-12		5962-8766802	2 8	-
80386-16		5962-8766801	2 8	-
80386-20		5962-8766803	2 8	-
80386-25		5962-8766804	2 8	-
80387-16		5962-8953401	2 8	
80387-20		5962-8953402	2 8	
80387-25		5962-8953403	2 8	
80C451		5962-8972601	3 8	
8048AH		5962-8856802	2 8	-
8048	/49001		4 8	-
80C51		8506402	2 8	-
80C51BH-16		8506404	2 8	
8080A	/42001	7700201	3 8	L
8085A		7901001	3 8	L
8086	/53001		1 8	
80C86		8405201	2 8	P
80C86-2		8405202	2 8	
8087		5962-8854702	2 8	
8087-2		5962-8854701	2 8	-
8088		5962-8768501	2 8	F
8097		8506301	2 8	-
8097BH		5962-8959601	2 8	
8155		5962-8759301	2 6	-
8156		5962-8759302	2 6	-
82S10	/23107		2 6	F
82S100	/50202		2 7	-
82S101	/50201		1 7	-
82S105		5962-8670901	2 7	-
82S105		5962-8671001	2 4	-
82S105		5962-8670902	2 7	-
82S11	/23108		1 6	F
ICL8211		5962-8984201	2 24	
82S115	/20803		1 7	-
ICL8212		5962-8984202	2 24	
8212	/42101		4 8	-
82S123A	/20704		1 7	L
82S126A	/20303		1 7	L
82S126A	/20301		1 7	F
82S129A	/20302		1 7	L
82S129A	/20304	5962-8778801	2 7	-
82S129A		5962-8778802	2 7	-
82S130A	/20401		1 7	-
82S130A	/20403		1 7	-
82S131A	/20402		1 7	F
82S131A	/20404		1 7	-
82S136	/20601		3 7	L
82S137A	/20602		1 7	L
82S137A	/20604		1 7	F
82S141	/20802		1 7	F
82S153A		5962-8768201	2 7	F
82S16		8602301	3 6	-
82S180	/20903		2 7	L
82S181A	/20904		1 7	-
82S181A	/20909		1 7	L
82S184	/20901		2 7	-
82S185A	/20910		1 7	L
82S185	/20902		1 7	-
82188		5962-8767201	2 8	-
82S190	/21001		2 7	-
82S191A	/21002		1 7	F
82S191A	/21004		1 7	F
82HS195	/21005		1 7	L
DAC8221A		5962-8967101	2 16	
DAC8222A		5962-8967201	2 16	
82S23A	/20701		1 7	L
82S23A	/20703		1 7	L
8224	/42201		4 13	-
82S2708	/20905		2 7	-
8228	/42301		4 8	-
82C284-10		5962-8773401	2 8	-
82C284-6		5962-8773403	2 8	-
82C284-8		5962-8773402	2 8	-
82288-6		5962-8514901	2 8	F
82288-8		5962-8514902	2 8	F
82HS321A	/21101		1 7	F
82380		5962-8959301	2 8	
82384-12		5962-8766902	2 8	-
82384-16		5962-8766901	2 8	-
8250	/15204		4 4	-
8251A		5962-8754801	2 8	-
8251A		5962-8754802	3 8	F
8251	/15205		4 4	-
82510		5962-8972501	2 8	
82C52		8501501	2 8	-
8252	/15206		4 4	-
8253		5962-8752001	2 8	-
8253		5962-8752002	2 8	-
8253-5		5962-8752003	2 8	-
82C54		8406501	2 8	-
82C55A		8406602	2 8	-
8255A		5962-8757001	2 8	-
82C55A-5		8406601	2 8	-
8255A-5		5962-8757002	2 8	-
82C59A		5962-8501602	2 8	-
8259A		5962-8751801	2 8	-
82C59A-5		5962-8501601	2 8	-
82S62		5962-8754301	3 4	-
8264	/24401		1 6	L
8264	/24402		1 6	L
8264	/24403		1 6	L
82HS641A-45	/21204		1 7	F
82HS641A-70	/21201		1 7	-
82720		5962-8608801	2 8	-
8274		5962-8771301	2 8	-
82C82		8406701	2 13	-
8282		8417903	2 3	
HI8282		5962-8688002	2 24	
8282		8417901	3 3	-
82C83		8406702	2 13	-
8283		8417904	2 3	
8283		8417902	3 3	-
82C84A		8406801	2 13	P
8286		5962-8686801	2 13	F
82C86H-5		5962-8757701	2 13	-
8287		5962-8686802	2 13	-
82C87H-5		5962-8757702	2 13	-
82C88		8406901	2 8	P
82C89		5962-8552801	2 8	-
8X305		8550201	2 8	-
8X305-10		8550202	2 8	F
83S123A	/20702		1 7	L
8X320		5962-8550301	2 8	-
83C451		5962-8972602	2 8	
8X350		5962-8605201	2 6	F
8X371		5962-8757601	2 8	-
8X376		5962-8685101	2 8	
8397		8552001	2 8	-
DAC-8408A		5962-8967801	2 16	
DAC-8408B		5962-8967802	2 16	
Z8420A		8418601	2 8	P
Z8420		8418602	2 8	-
Z84C2006		5962-8951401	2 8	
Z8430A		8301601	2 8	F
Z8430		8301602	2 8	F
Z84C3006		5962-8951501	2 8	
Z8442A		8301501	2 8	F
Z8442		8301502	2 8	F
Z84C4206		5962-8951601	2 8	
Z85C3006SCC	/48601		1 8	
Z85C3006	/48601	5962-8868901	2 8	
85C3008SCC	/48602		1 8	
Z85C3008	/48602	5962-8868902	2 8	
AM85C30-10		5962-8868903	2 8	
AM85C30-12		5962-8868904	2 8	
AM85C30-16		5962-8868905	2 8	-
AM85C30-8		5962-8868906	2 8	
Z8536		8300101	2 8	-
Z8536A		8300102	2 8	-
BUS-8553		5962-8604905	3 13	
DAC87		8300201	1 16	-
DAC87	/13701		2 16	-
DAC87	/13703	8300201	2 16	-
DAC87	/13702	8300301	2 17	-
87C51		5962-8768401	2 8	-
8751H		8419002	2 8	-
87C51-16		5962-8768402	2 8	
8751H-8		8419001	2 8	P
8797BH		5962-8680901	2 8	
88C681		5962-8953201	2 13	
88C681		5962-8953202	2 13	
HSDC-8915A		5962-9055401	2 24	
HSDC-8915		5962-9055402	2 24	
HSDC-8920A		5962-8768701	1 22	
HSDC-8920		5962-8768702	1 22	
AD9012S		5962-8965401	2 17	-
AD9012T		5962-8965402	2 17	-
ADC-908A		5962-8961601	2 17	
ADC-908B		5962-8961602	2 17	
9093	/03304		4 3	-
9114B	/23802		2 6	F
9114D	/23804		2 6	F
AM9130CFC	/23701		4 6	-
AM91L30CFM	/23707		4 6	-
AM9130AFC	/23702		4 6	-
AM9130AFM	/23704		4 6	-
AM91L30CF	/23705		4 6	-
AM91L30AF	/23706		4 6	-
AM9130CFM	/23703		4 6	-
AM91L30AFM	/23708		4 6	-
AM9140CFC	/23709		4 6	-
AM9140AFC	/23710		4 6	-
AM9140CFM	/23711		4 6	-
AM9140AFM	/23712		4 6	-
AM91L40CFC	/23713		4 6	-
AM91L40AFC	/23714		4 6	-
AM91L40CFM	/23715		4 6	-

MILITARY PARTS
Cross Reference SORTED BY GENERIC INDUSTRY NUMBER (Cont'd)

Generic Industry Number	MIL-M-38510/	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
AM91L40AFM	/23716		4 6	-
9147-45	/23807		1 6	-
9147-55	/23805		1 6	-
9147-70	/23803		1 6	F
9147-85	/23801		1 6	-
9148-70	/23806		1 6	-
9150-25		5962-8759201	2 6	-
9150-35		5962-8759202	2 6	-
9150-45		5962-8759203	2 6	-
9218	/40301		4 7	-
930	/03001		3 1	L
93L00	/02804		3 5	L
9300	/15901		4 5	-
9301	/15206		4 4	-
93L01	/02907		4 4	-
9304	/00603		3 4	L
9308	/01503		3 3	L
93L08	/04502		4 3	-
9309	/01404		3 4	L
93L09	/04601		4 4	-
93L10	/02504		4 5	-
9311	/15201		4 4	-
9312	/01402		3 4	L
93L12	/04602		4 4	-
9314	/01504		3 3	L
93L14	/04501		4 3	-
93S16		5962-8672701	3 5	-
93L16	/02505		4 5	-
9317	/15802		4 4	-
9318	/15603		4 4	-
93L18	/04301		4 4	-
932	/03101		4 2	-
9321	/15801		4 4	-
9322	/01405		3 4	L
93L22	/04603		4 4	-
HS9324		5962-8862901	2 16	
9324	/15002		3 4	L
93L24	/04401		4 4	-
93L28	/02803		3 5	L
9328	/15902		4 5	-
933	/03105		4 2	-
9334	/16001		4 3	-
9338	/15701		4 5	-
9341	/01101		3 4	L
93410	/23001		4 6	-
93411	/23003		4 6	-
93412	/23109		2 6	F
93L412	/23111		2 6	F
93L415	/23103		1 6	F
93415	/23105		2 6	-
93415	/23107		2 6	F
93415	/23101		3 6	-
93417	/20301		1 7	F
93419	/23201		2 6	F
9342	/01102		3 4	L
93L420	/23004		4 6	-
93421	/23002		4 6	-
93422	/23110		1 6	F
93L422	/23112		1 6	F
93422A	/23114		1 6	-
93L422A	/23115		1 6	-
93425	/23102		1 6	-
93L425	/23104		1 6	-
93425	/23106		1 6	F
93425A	/23108		1 6	F
93L425A	/23113		1 6	-
93427	/20302		1 7	L
93436	/20401		1 7	-
93446	/20402		1 7	F
93448	/20802		1 7	F
93Z450	/20903		2 7	L
93Z451	/20909		1 7	L
93Z451	/20904		1 7	-
93452	/20601		3 7	L
93453	/20602		1 7	L
93458	/50201		1 7	-
93459	/50202		2 7	-
93Z460	/20906		2 7	L
93Z461	/20905		2 7	-
93470	/23301		4 6	L
93471	/23302		4 6	L
93S48		5962-8672601	2 4	-
MIC935	/03002		3 1	L
93Z510	/21003		2 7	L
93Z511	/21002		1 7	F
93Z511	/21004		1 7	F
936	/03003		3 1	L
93Z665-45	/21204		1 7	F
93Z665-50	/21203		1 7	
93Z665-55	/21202		1 7	F
93Z665-70	/21201		1 7	-
93Z667-70	/21201		1 7	-
9383	/00602		3 4	L
MIC940	/03002		3 1	L
HS9403-16		5962-8851402	2 22	
HS9403-8		5962-8851401	2 22	
944	/03102		4 2	-
945	/03301		4 3	-
F9450-15		8416901	2 8	-
F9450-F15		8416904	2 8	-
F9450-F18		8416902	2 8	-
F9450-F20		8416903	2 8	-
946	/03004		3 1	L
948	/03302		4 3	-
950	/03303		4 3	-
951	/03201		4 3	-
9513A		5962-8552301	2 8	-
9517A		5962-8757501	2 8	F
9517A-4		5962-8757502	2 8	F
9519A		5962-8759701	2 8	
957	/03103		4 2	-
958	/03104		4 2	-
9601	/01204		3 3	L
9602	/01205		3 3	L
9614	/10403		1 13	F
9615	/10404		1 13	F
96F173		5962-9076602M	2 13	
96F175		5962-9076601M	2 13	
962	/03005		3 1	L
9622		5962-8752201	3 13	-
9636A		5962-8752301	2 13	F
9637A		5962-8752401	2 13	-
9638		5962-8754601	2 13	-
96685		8600804	2 10	-
AD96687		7801903	2 10	
OP-97		5962-8954401	2 9	-
HS9716		5962-8956601H	2 20	
9900A	/46001		4 8	-
9914A		5962-8751901	3 8	-
99C641-45	/29202		2 6	-
99C641-55	/29201		2 6	-
99CL641-55	/29203		2 6	-
99CL641-70	/29204		2 6	-
SBP9989	/46501		3 8	-

MILITARY

MILITARY PARTS
Cross Reference SORTED BY MIL-M-38510/ (Cont'd)

MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
/00101	5430		3 1	L
/00102	5420		3 1	L
/00103	5410		3 1	L
/00104	5400		3 1	L
/00105	5404		3 1	L
/00106	5412		3 1	L
/00107	5401		3 1	L
/00108	5405		3 1	L
/00109	5403		3 1	L
/00201	5472		3 3	L
/00202	5473		3 3	L
/00203	54107		3 3	L
/00204	5476		3 3	L
/00205	5474		3 3	L
/00206	5470		3 3	L
/00207	5479		3 3	L
/00301	5440		3 2	L
/00302	5437		3 2	L
/00303	5438		3 2	L
/00401	5402		3 1	L
/00402	5423		3 1	L
/00403	5425		3 1	L
/00404	5427		3 1	L
/00501	5450		3 1	L
/00502	5451		3 1	L
/00503	5453		3 1	L
/00504	5454		3 1	L
/00601	5482		3 4	L
/00602	5483		3 4	L
/00602	9383		3 4	L
/00603	9304		3 4	L
/00604	5480		3 4	L
/00701	5486		3 1	L
/00801	5406		1 2	L
/00802	5416		3 2	L
/00803	5407		1 2	L
/00804	5417		3 2	L
/00805	5426		3 2	L
/00901	5495		3 5	L
/00902	5496		3 5	L
/00903	54164		3 5	L
/00904	54165		3 5	L
/00905	54194		3 5	L
/00906	54195		3 5	L
/01001	5442		3 4	L
/01002	5443		4 4	-
/01003	5444		4 4	-
/01004	5445		3 4	L
/01005	54145		3 4	L
/01006	5446		3 4	L
/01007	5447		3 4	L
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/01101	54181		3 4	L
/01101	9341		3 4	L
/01101	7181		3 4	L
/01102	54182		3 4	L
/01102	9342		3 4	L
/01201	54121		3 3	L
/01202	54122		3 3	L
/01203	54123		3 3	L
/01204	9601		3 3	L
/01205	9602		3 3	L
/01301	5492		3 5	L
/01302	5493		3 5	L
/01303	54160		3 5	L
/01304	54163A		3 5	L
/01305	54162		3 5	L
/01306	54161		3 5	L
/01307	5490		3 5	L
/01308	54192		3 5	L
/01309	54193		3 5	L
/01401	54150		3 4	L
/01402	9312		3 4	L
/01403	54153		3 4	L
/01404	9309		3 4	L
/01405	54157		3 4	L
/01405	9322		3 4	L
/01406	54151		3 4	L
/01501	5475		3 3	L
/01502	5477		3 3	L
/01503	54116		3 3	L
/01503	9308		3 3	L
/01504	9314		3 3	L
/01601	5408		3 1	L
/01602	5409		3 1	L
/01701	54174		3 3	L
/01702	54175		3 3	L
/01801	54170		4 5	-
/01901	54180		3 4	L
/02001	54L30		3 1	L
/02002	54L20		3 1	L
/02003	54L10		3 1	L
/02004	54L00		3 1	L
/02005	54L04		3 1	L
/02006	54L01		3 1	L
/02006	54L03		3 1	L
/02101	54L71		3 3	L
/02102	54L72		3 3	L
/02103	54L73		3 3	L
/02104	54L78		3 3	L
/02105	54L74		3 3	L
/02201	54H72		4 3	L
/02202	54H73		4 3	L
/02203	54H74		4 3	L
/02204	54H76		4 3	L
/02205	54H101		4 3	L
/02206	54H103		3 3	L
/02301	54H30		3 1	L
/02302	54H20		3 1	L
/02303	54H10		3 1	L
/02304	54H00		3 1	L
/02305	54H04		3 1	L
/02306	54H01		3 1	L
/02307	54H22		3 1	L
/02401	54H40		3 2	-
/02501	54L90		3 5	L
/02502	54L93		3 5	L
/02503	54L193		3 5	L
/02504	93L10		4 5	-
/02505	93L16		4 5	-
/02601	54L86		3 1	L
/02701	54L02		3 1	L
/02801	54L95		3 5	L
/02802	54L164		3 5	L
/02803	93L28		3 5	L
/02804	93L00		3 5	L
/02805	76L70		3 5	L
/02901	54L42		4 4	-
/02902	54L43		4 4	-
/02903	54L44		4 4	-
/02904	54L46		4 4	-
/02905	54L47		4 4	-
/02906	76L42A		4 4	-
/02907	93L01		4 4	-
/03001	930		3 1	L
/03002	MIC935		3 1	L
/03002	MIC940		3 1	L
/03003	936		3 1	L
/03004	946		3 1	L
/03005	962		3 1	L
/03101	932		4 2	-
/03102	944		4 2	-
/03103	957		4 2	-
/03104	958		4 2	-
/03105	933		4 2	-
/03201	951		4 3	-
/03301	945		4 3	-
/03302	948		4 3	-
/03303	950		4 3	-
/03304	9093		4 3	-
/03501	MMH0026		4 13	L
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/04002	54H51		4 1	-
/04003	54H53		4 1	-
/04004	54H54		4 1	-
/04005	54H55		4 1	-
/04101	54L51		4 1	-
/04102	54L54		4 1	-
/04103	54L55		4 1	-
/04201	54L121		4 3	-
/04202	54L122		4 3	-
/04301	93L18		4 4	-
/04401	93L24		4 4	-
/04501	93L14		4 3	-
/04502	93L08		4 3	-
/04601	93L09		4 4	-
/04602	93L12		4 4	-
/04603	54L157		4 4	-
/04603	93L22		4 4	-
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/05002	4012A		3 1	L
/05003	4023A		3 1	L
/05051	4011B		3 1	P
/05052	4012B		3 1	P
/05053	4023B	7901301	3 1	P
/05101	4013A		3 3	L
/05102	4027A		3 3	L
/05103	4043A		3 3	L
/05151	4013B	7901101	3 3	P
/05152	4027B		3 3	P
/05153	4043B		3 3	-
/05201	4000A		3 1	L
/05202	4001A		3 1	L
/05203	4002A		3 1	L
/05204	4025A		3 1	L
/05251	4000B		3 1	-
/05252	4001B		3 1	P
/05253	4002B		3 1	P
/05254	4025B		3 1	P
/05301	4007A		3 1	L
/05302	4019A		3 1	L
/05303	4030A		3 1	L
/05304	4048A		3 1	L
/05351	4007UB		3 1	P
/05352	4019B		3 1	P
/05353	4030B		3 1	F
/05354	4048B		3 1	-
/05401	4008A		3 4	L

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MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
/05451	4008B		3 4	P
/05501	4009A		3 2	L
/05502	4010A		3 2	L
/05503	4049A		3 2	L
/05504	4050A		3 2	L
/05505	4041A		3 2	L
/05551	4009UB		3 2	-
/05552	4010B		3 2	-
/05553	4049UB	7901401	3 2	P
/05554	4050B		3 2	P
/05555	4041UB		3 2	F
/05601	4017A		3 5	L
/05602	4018A		3 5	L
/05603	4020A		3 5	L
/05604	4022A		3 5	L
/05605	4024A		3 5	L
/05651	4017B		3 5	P
/05652	4018B		3 5	F
/05653	4020B		3 5	P
/05654	4022B		3 5	P
/05655	4024B		3 5	P
/05701	4006A		3 5	L
/05702	4014A		3 5	L
/05703	4015A		3 5	L
/05704	4021A		3 5	L
/05705	4031A		3 5	L
/05706	4034A		3 5	L
/05751	4006B		3 5	-
/05752	4014B		3 5	P
/05753	4015B		3 5	P
/05754	4021B	7901201	3 5	P
/05755	4031B		3 5	-
/05756	4034B		3 5	-
/05801	4016A		3 18	L
/05802	4066A		3 18	L
/05851	4016B		3 18	F
/05852	4066B		3 18	P
/05901	4028A		3 4	L
/05951	4028B		3 4	P
/06001	10501		1 1	F
/06002	10502		2 1	F
/06003	10505		2 1	F
/06004	10506		2 1	F
/06005	10507		2 1	L
/06006	10509		2 1	P
/06101	10531		1 3	F
/06102	10631		2 3	F
/06103	10576		2 3	F
/06104	10535		2 3	F
/06201	10504		1 1	F
/06202	10597		2 1	F
/06301	10524		1 2	F
/06302	10525		1 2	F
/07001	54S00		3 1	L
/07002	54S03		3 1	L
/07003	54S04		3 1	L
/07004	54S05		3 1	L
/07005	54S10		3 1	L
/07006	54S20		3 1	L
/07007	54S22		3 1	L
/07008	54S30		3 1	L
/07009	54S133		3 1	L
/07010	54S134		4 1	-
/07101	54S74		3 3	L
/07101	54S74		4 3	L
/07102	54S112		3 3	L
/07103	54S113		3 3	L
/07104	54S114		3 3	L
/07105	54S174		3 3	L
/07106	54S175		3 3	L
/07201	54S40		3 2	L
/07301	54S02		3 1	L
/07401	54S51		3 1	L
/07402	54S64		3 1	L
/07403	54S65		4 1	L
/07501	54S86		3 1	L
/07502	54S135		4 1	L
/07601	54S194	7604001	3 5	L
/07602	54S195		4 5	-
/07701	54S138	7604101	3 4	L
/07702	54S139	7700401	3 4	L
/07801	54S181		3 4	L
/07802	54S182		3 4	L
/07901	54S151		3 4	L
/07902	54S153		3 4	L
/07903	54S157		3 4	L
/07904	54S158		3 4	L
/07905	54S251	8002201	3 4	L
/07906	54S257		3 4	L
/07907	54S258	8002301	3 4	L
/07908	54S253		3 4	L
/08001	54S11		3 1	L
/08001	54S11		4 1	L
/08002	54S15		4 1	-
/08003	54S08		3 1	L
/08004	54S09		4 1	-
/08101	54S140		1 13	L
/08201	54S85		3 4	L
/10101	741A		1 9	F
/10102	747A		1 9	F
/10103	LM101A		1 9	F
/10104	LM108A		1 9	F
/10105	LH2101A		1 9	F
/10106	LH2108A		1 9	F
/10107	LM118		1 9	
/10108	1558		1 9	
/10201	723		1 12	F
/10301	710		3 10	L
/10302	711		3 10	L
/10303	LM106	8003701	3 10	L
/10304	LM111	5962-8687701	2 10	
/10305	LH2111		1 10	F
/10306	LM119	8601401	2 10	-
/10307	LM119A		1 10	-
/10307	LT119A	8601402	2 10	-
/10401	55107		1 13	F
/10402	55108		1 13	F
/10403	55114		1 13	F
/10403	9614		1 13	F
/10404	55115		1 13	F
/10404	9615		1 13	F
/10405	55113		1 13	L
/10406	7831	8004101	3 13	F
/10407	7832	8004102	3 13	F
/10501	HI5040	8100601	2 18	F
/10501	5040		1 18	F
/10502	5041		1 18	F
/10502	IH5041	8100602	2 18	F
/10503	5042		1 18	F
/10503	IH5042	8100603	2 18	F
/10504	IH5043	8100604	2 18	F
/10504	5043		1 18	F
/10505	5044		1 18	F
/10505	IH5044	8100605	2 18	F
/10506	5045		1 18	F
/10506	IH5045	8100606	2 18	F
/10507	IH5046	8100607	2 18	-
/10508	IH5047	8100608	2 18	-
/10601	LM102		2 9	L
/10602	LM110	5962-8760601	2 9	F
/10603	LM2110		3 9	L
/10701	LM109	5962-8777401	2 12	-
/10702	LM140H-05		1 12	-
/10702	78M05		1 12	-
/10703	LM140H-12		1 12	-
/10703	78M12		1 12	-
/10704	LM140H-15		1 12	-
/10704	78M15		1 12	-
/10705	LM140H-24		2 12	-
/10705	78M24		2 12	-
/10706	LM140K-05		1 12	-
/10706	7805		1 12	-
/10707	LM140K-12		1 12	-
/10707	7812		1 12	-
/10708	LM140K-15		1 12	
/10708	7815		1 12	
/10709	LM140K-24		1 12	
/10709	7824		1 12	
/10801	3018A		3 9	L
/10802	3045		1 13	F
/10901	555		1 14	L
/10902	556		1 14	L
/10903	555		3 14	L
/11001	LM148		1 9	F
/11002	LM149		2 9	F
/11003	4741		1 9	
/11003	4156		1 9	
/11004	4136		1 9	L
/11005	LM124	7704301	2 9	F
/11006	LM124A	7704302	2 9	-
/11101	DG181A		1 18	F
/11102	DG182A		1 18	F
/11103	DG184A		1 18	F
/11104	DG185A		1 18	F
/11105	DG187A		1 18	F
/11106	DG188A		1 18	F
/11107	DG190A		1 18	F
/11108	DG191A		1 18	-
/11201	LM139	7700801	2 10	F
/11202	LM193		1 10	F
/11301	DAC-08		1 16	
/11302	DAC-08A		1 16	
/11401	LF155		1 9	F
/11402	LF156		1 9	F
/11403	LF157		1 9	F
/11404	LF155A		1 9	
/11405	LF156A		1 9	
/11406	LF157A		1 9	F
/11501	LM120H-05		1 12	L
/11501	79M05		1 12	L
/11502	LM120H-12		1 12	L
/11502	79M12		1 12	L
/11503	LM120H-15		1 12	-
/11503	79M15		1 12	-
/11504	LM120H-24		2 12	F
/11504	79M24		2 12	F
/11505	LM120K-05		1 12	L
/11505	LM120H-05	7704001	2 12	L
/11505	7905		1 12	L
/11506	LM120H-12	7704003	2 12	L
/11506	LM120K-12		1 12	L

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MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
/11506	7912		1 12	L
/11507	LM120K-15		1 12	-
/11507	LM120H-15	7704004	2 12	-
/11507	7915		1 12	-
/11508	LM120K-24		2 12	F
/11508	LM120H-24	7704005	2 12	F
/11508	7924		2 12	F
/11601	300		1 18	F
/11602	301		1 18	F
/11603	302		1 18	F
/11604	303		1 18	F
/11605	304		1 18	F
/11606	305		1 18	
/11607	306		1 18	
/11608	307		1 18	
/11701	78MG		3 12	L
/11702	78G		3 12	L
/11703	LM117H		1 12	F
/11704	LM117H	7703401	2 12	F
/11704	LM117K		1 12	F
/11705	LM150K		1 12	P
/11705	LM150	5962-8767501	2 12	P
/11706	LM138K		1 12	F
/11801	79MG		3 12	L
/11802	79G		3 12	L
/11803	LM137H		1 12	F
/11804	LM137K		1 12	F
/11804	LM137H	7703403	2 12	F
/11901	061	8102301	2 9	-
/11902	062	8102302	2 9	-
/11903	064	8102303	2 9	-
/11904	071	8102304	2 9	F
/11904	071		1 9	F
/11904	LF151		1 9	F
/11904	771		1 9	F
/11905	072		1 9	F
/11905	072	8102305	2 9	F
/11905	LF153		1 9	F
/11905	772		1 9	F
/11906	074	8102306	2 9	F
/11906	074		1 9	F
/11906	LF147		1 9	F
/11906	774		1 9	F
/12001	5200		2 17	
/12002	5203		2 17	
/12003	5201		2 17	-
/12004	5204		2 17	-
/12005	5202		2 17	-
/12006	5205		2 17	-
/12007	5206		2 17	-
/12008	5207		2 17	-
/12009	5210		2 17	
/12010	5213		2 17	
/12011	5211		2 17	
/12012	5214		2 17	
/12013	5212		2 17	
/12014	5215		2 17	
/12015	5216		2 17	
/12016	5217		2 17	
/12101	562	8100801	2 16	-
/12102	563	8100802	2 16	-
/12103	565		1 16	-
/12104	566		2 16	-
/12201	2700		3 9	L
/12202	2600		1 9	
/12203	2620		1 9	F
/12204	2500		1 9	-
/12205	2510		1 9	-
/12206	2520		1 9	-
/12207	OP44A		2 9	
/12208	OP-42A	5962-8851301	2 9	-
/12208	OP-42		2 9	-
/12301	200		1 18	F
/12302	201	7705301	2 18	-
/12401	LM199A	5962-8856101	2 19	-
/12402	LM129A	5962-8992101	2 19	
/12403	REF10A	5962-8947901	2 19	-
/12404	LM199	5962-8856102	2 19	-
/12405	LM199A-20		2 19	F
/12406	LM129B	5962-8992102	2 19	F
/12407	10215		2 19	
/12408	10217		2 19	
/12409	102110		2 19	
/12501	198	5962-8760801	2 20	F
/12502	5537		2 20	-
/12601	1524	7802801	2 12	-
/12602	1525A	5962-8951101	2 12	-
/12603	1526	8551501	2 12	
/12604	1527A	5962-8951102	2 12	
/12701	7523		2 16	
/12702	7520		1 16	
/12703	7521		1 16	
/12704	7541		2 16	-
/12705	1020		3 16	L
/12706	1220		3 16	L
/12707	1218		3 16	L
/12801	584S		1 19	L
/12802	584T		1 19	L
/12901	55450		3 13	-
/12902	55451		1 13	F
/12903	55452	7704901	2 13	-
/12904	55453		1 13	F
/12905	55454		1 13	F
/12906	55460		3 13	-
/12907	55461		1 13	F
/12908	55462		1 13	F
/12909	55463		1 13	F
/12910	55464		2 13	L
/13001	55325		1 15	
/13002	55326		1 15	-
/13003	55327		2 15	F
/13101	5534A		1 9	F
/13102	5532A		1 9	F
/13301	561		1 16	-
/13401	AD571	5962-8680202	2 17	P
/13501	OP-07A	8203601	2 9	-
/13502	OP-07	8203602	2 9	-
/13502	714		1 9	-
/13503	OP-27A		1 9	F
/13504	OP-227A	5962-8688701	2 9	F
/13505	OP-37A	5962-8853701	2 9	-
/13601	2700		2 19	-
/13601	R675B-4		2 19	-
/13602	2702		2 19	F
/13602	R675B-3		2 19	F
/13701	DAC87		2 16	-
/13702	DAC87	8300301	2 17	-
/13703	DAC87	8300201	2 16	-
/13801	VFC32		2 24	
/13802	VFC320		2 24	
/13803	AD650		2 17	-
/13901	534T		1 8	F
/13902	534S		1 8	
/13903	532S		1 8	
/13904	4213		2 24	-
/14001	574AU		1 17	F
/14002	574AT		1 17	-
/14003	574AU	5962-8512701	2 17	F
/14004	574AT	5962-8512702	2 17	-
/14005	674AU		2 17	F
/14006	674AT		2 17	F
/14101	2001		1 13	F
/14102	2002		1 13	F
/14103	2003		1 13	F
/14104	2004		1 13	
/14105	2005		1 13	
/14106	2801		1 13	
/14107	2802		1 13	-
/14108	2803	5962-8605801	2 13	-
/14109	2804		1 13	-
/14110	2805		1 13	-
/14201	THA-05203-1		2 20	-
/14201	HTC-0300		2 20	-
/14201	4860-83		2 20	-
/14201	SHM-4860MM		2 20	-
/14201	MN376H		2 20	-
/14301	AD524S		2 9	-
/14301	AD524	5962-8853901	2 9	-
/14401	AD558T	5962-8778902	2 16	-
/14801	TL431		1 12	-
/14801	431	8410901	2 12	-
/14901	TLC555	5962-8950301	2 14	
/14902	TLC556	5962-8950302	2 14	
/14903	7555	5962-8950303	2 14	
/14904	7556	5962-8950304	2 14	
/14905	555LV		2 14	
/15001	5485		3 4	L
/15002	9324		3 4	L
/15101	5413		3 1	L
/15102	5414		3 1	L
/15103	54132		3 1	L
/15201	54154		4 4	-
/15201	9311		4 4	-
/15202	54155		4 4	-
/15203	54156		4 4	-
/15204	8250		4 4	-
/15205	8251		4 4	-
/15206	8252		4 4	-
/15206	9301		4 4	-
/15301	54125		3 2	L
/15302	54126		3 2	L
/15601	54147		4 4	-
/15602	54148		4 4	-
/15603	9318		4 4	-
/15701	9338		4 5	-
/15801	9321		4 4	-
/15802	9317		4 4	-
/15901	9300		4 5	-
/15902	9328		4 5	-
/16001	9334		4 3	-
/16101	5432		3 1	L
/16201	5428		4 2	-
/16301	54365		3 2	L
/16302	54366		3 2	L
/16303	54367		3 2	L
/16304	54368		3 2	L
/17001	4081B	7702401	3 1	P
/17002	4082B	7705901	3 1	P
/17003	4973B		3 1	
/17101	4071B		3 1	P

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MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
/17102	4072B	7706001	3 1	P
/17103	4075B		3 1	P
/17201	4085B		3 1	F
/17202	4086B		3 1	F
/17203	4070B		3 1	P
/17204	4077B		3 1	P
/17301	4514B	7703501	3 3	-
/17302	4515B	7703201	3 4	-
/17303	4532B		3 4	-
/17304	4555B	7704701	3 4	-
/17305	4556B	7704801	3 4	-
/17401	4069UB	7702701	3 1	P
/17402	40107B		3 2	-
/17403	4502B		3 2	P
/17403	4520B	7702001	3 2	P
/17404	40109B		3 2	-
/17501	4076B		3 5	-
/17502	4095B		3 3	-
/17503	4096B		3 3	-
/17504	4098B	7705501	3 3	F
/17505	40174B	8202201	3 3	-
/17601	4099B		3 3	P
/17602	4508B		3 3	-
/17701	4093B	7704601	3 1	P
/17702	46106B	5962-8550101	3 1	-
/17702	40106B		3 1	-
/17801	4067B		3 18	-
/17802	4097B		3 18	-
/17803	40257B		3 4	-
/19001	506		1 18	
/19001	6116		1 18	
/19002	506A	5962-8513101	2 18	
/19003	507		1 18	
/19003	6216		1 18	
/19004	507A	5962-8513102	2 18	
/19005	508A	7705202	2 18	F
/19006	509A	5962-8513103	2 18	-
/19007	508	7705201	2 18	F
/19007	508		1 18	F
/19007	6108		1 18	F
/19008	509		1 18	-
/19008	6208		1 18	-
/20101	HPROM-512		4 7	-
/20101	MCM5303		4 7	-
/20102	MCM5304		4 7	-
/20201	IM5603A		4 7	-
/20202	IM5623		4 7	-
/20301	5300-1		1 7	F
/20301	7610		1 7	F
/20301	93417		1 7	F
/20301	82S126A		1 7	F
/20302	5301-1		1 7	L
/20302	54S287		1 7	L
/20302	82S129A		1 7	L
/20302	93427		1 7	L
/20302	7611		1 7	L
/20303	82S126A		1 7	L
/20304	82S129A	5962-8778801	2 7	-
/20401	5305-1		1 7	-
/20401	54S570		1 7	-
/20401	82S130A		1 7	-
/20401	93436		1 7	-
/20401	7620		1 7	-
/20402	29611		1 7	F
/20402	5306-1		1 7	F
/20402	54S571		1 7	F
/20402	93446		1 7	F
/20402	7621		1 7	F
/20402	82S131A		1 7	F
/20403	82S130A		1 7	-
/20404	82S131A		1 7	-
/20601	53S440		3 7	L
/20601	54S572		3 7	L
/20601	54S572		2 7	L
/20601	7642		3 7	L
/20601	93452		3 7	L
/20601	82S136		3 7	L
/20602	53S441		1 7	L
/20602	54S573		1 7	L
/20602	82S137A		1 7	L
/20602	93453		1 7	L
/20602	7643		1 7	L
/20603	7644		2 7	-
/20604	82S137A		1 7	F
/20701	5330		1 7	L
/20701	7602		1 7	L
/20701	82S23A		1 7	L
/20702	5331		1 7	L
/20702	DM54S288		1 7	L
/20702	7603		1 7	L
/20702	83S123A		1 7	L
/20703	82S23A		1 7	L
/20704	82S123A		1 7	L
/20801	7640		3 7	L
/20802	(SEE DWG)	7801601	2 7	F
/20802	5341-1		1 7	F
/20802	54S474		1 7	F
/20802	7641		1 7	F
/20802	93448		1 7	F
/20802	82S141		1 7	F
/20803	82S115		1 7	-
/20804	5348-1		2 7	L
/20804	54S473		2 7	L
/20805	29621		2 7	L
/20805	5349-1		2 7	L
/20805	54S472		2 7	L
/20901	77S184		2 7	-
/20901	82S184		2 7	-
/20901	7684		2 7	-
/20902	29651		1 7	-
/20902	53S841		1 7	-
/20902	82S185		1 7	-
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/20903	93Z450		2 7	L
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/20904	93Z451		1 7	-
/20904	7681		1 7	-
/20904	77S181		1 7	-
/20905	82S2708		2 7	-
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/20909	93Z451		1 7	L
/20910	82S185A		1 7	L
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/21002	27S191		1 7	F
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/21102	(SEE DWG)	8200801	2 7	-
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/21102	53S3281		1 7	-
/21102	76321		1 7	-
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/21201	93Z665-70		1 7	-
/21202	93Z665-55		1 7	F
/21203	93Z665-50		1 7	
/21204	(SEE DWG)	8200902	2 7	F
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/21204	82HS641A-45		1 7	F
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/22001	2708		4 7	-
/22101	2716		4 7	-
/22201	2532		4 7	
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/22402	27256-200	8411103	2 7	F
/22403	27256-170	8411104	2 7	F
/22601	NMC2816		4 7	-
/22701	X2816A-45		1 7	F
/22702	X2816A-35		1 7	
/22703	X2816A-30		1 7	
/22704	X2816A-25		2 7	
/22801	X2864A-45		2 7	
/22802	(SEE DWG)	5962-8683007	2 7	-
/22802	X2864A-35		2 7	-
/22803	X2864A-30		2 7	
/22804	(SEE DWG)	5962-8683006	2 7	-
/22804	X2864A-25		2 7	-
/22805	X2864A-35		2 7	
/22806	X2864A-25		2 7	
/22807	(SEE DWG)	5962-8683002	2 7	-
/22807	2864-350		1 7	-
/22808	(SEE DWG)	5962-8683001	2 7	F
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/22809	(SEE DWG)	5962-8683005	2 7	-
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/23002	93421		4 6	-
/23003	93411		4 6	-
/23004	93L420		4 6	-
/23101	93415		3 6	-
/23102	93425		1 6	-

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Cross Reference SORTED BY MIL-M-38510/ (Cont'd)

MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
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/23108	82S11		1 6	F
/23108	93425A		1 6	F
/23109	93412		2 6	F
/23110	93422		1 6	F
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/23112	93L422		1 6	F
/23113	93L425A		1 6	-
/23114	93422A		1 6	-
/23115	93L422A		1 6	-
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/23302	93471		4 6	L
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/23502	TMS4050		4 6	-
/23503	TMS4060		4 6	-
/23504	TMS4050		4 6	-
/23505	MM5280		4 6	-
/23506	MM5280		4 6	-
/23601	MCM6605		4 6	-
/23602	MCM6604A		4 6	-
/23603	MCM6605		4 6	-
/23604	MCM6604A		4 6	-
/23701	AM9130CFC		4 6	-
/23702	AM9130AFC		4 6	-
/23703	AM9130CFM		4 6	-
/23704	AM9130AFM		4 6	-
/23705	AM91L30CF		4 6	-
/23706	AM91L30AF		4 6	-
/23707	AM91L30CFM		4 6	-
/23708	AM91L30AFM		4 6	-
/23709	AM9140CFC		4 6	-
/23710	AM9140AFC		4 6	-
/23711	AM9140CFM		4 6	-
/23712	AM9140AFM		4 6	-
/23713	AM91L40CFC		4 6	-
/23714	AM91L40AFC		4 6	-
/23715	AM91L40CFM		4 6	-
/23716	AM91L40AFM		4 6	-
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/23805	2147H-3		1 6	-
/23805	9147-55		1 6	-
/23806	2148H		1 6	-
/23806	9148-70		1 6	-
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/24602	MT1257-15		1 6	-
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/24603	MT1259-12		1 6	-
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/24902	4C1024-100		1 6	-
/24902	411024-100		1 6	-
/24903	4C1024-120		1 6	-
/24903	411024-120		1 6	-
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/24904	4C1024-150		1 6	
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/25003	MKB4501-88		1 8	-
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/26002	(SEE DWG)	5962-8751402	2 7	-
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/26003	(SEE DWG)	5962-8751403	2 7	-
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/26004	(SEE DWG)	5962-8751404	2 7	-
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/26005	(SEE DWG)	5962-8751405	2 7	-
/26005	55C64-250		2 7	-
/26006	(SEE DWG)	5962-8751425	2 7	-
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/26007	(SEE DWG)	5962-8751423	2 7	-
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/26102	28C256-300		1 7	
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/26104	28C256-200		1 7	
/26105	28C256-150		2 7	
/26106	28C256-250		2 7	
/26107	(SEE DWG)	5962-8852501	2 7	
/26107	28C256-350		2 7	
/26108	(SEE DWG)	5962-8852502	2 7	
/26108	28C256-300		2 7	
/26109	(SEE DWG)	5962-8852503	2 7	
/26109	28C256-250		2 7	
/26110	(SEE DWG)	5962-8852504	2 7	
/26110	28C256-200		2 7	
/26111	(SEE DWG)	5962-8852506	2 7	
/26111	28C256-150		2 7	
/26112	(SEE DWG)	5962-8852505	2 7	
/26112	28C256-250		2 7	
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/27502	27C64-250		2 7	F
/27503	27C64-20	8510203	3 7	-
/27503	27C64-200		2 7	F
/27601	27C256-250		3 7	-
/27602	27C256-200		3 7	-
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/28902	7C148		1 6	-
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/28904	2148		1 6	F
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/29101	6116		2 6	P
/29102	(SEE DWG)	8403601	2 6	F
/29102	6516		1 6	F
/29103	(SEE DWG)	8413201	2 6	-
/29103	65262		1 6	-
/29104	(SEE DWG)	8403602	2 6	F
/29104	6116		1 6	F
/29105	(SEE DWG)	8403605	3 6	F
/29105	6116		2 6	P
/29106	(SEE DWG)	8413202	2 6	-
/29106	51C67		2 6	-
/29107	65C262RH		2 6	
/29108	65T262RH		2 6	
/29109	65262		1 6	
/29110	(SEE DWG)	8403606	2 6	P
/29110	65162		1 6	P
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/29201	99C641-55		2 6	-
/29202	(SEE DWG)	5962-8601503	2 6	-
/29202	7187S45		2 6	-
/29202	99C641-45		2 6	-
/29203	(SEE DWG)	5962-8601506	2 6	-
/29203	7187L55		2 6	-
/29203	99CL641-55		2 6	-
/29204	(SEE DWG)	5962-8601508	2 6	-
/29204	7187L70		2 6	-
/29204	99CL641-70		2 6	-
/29205	65642		1 6	F

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MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
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/29305	7C196		2 6	
/29306	7C196		2 6	
/29307	MT5C2568		1 6	
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/29315	MT5C2565		2 6	
/29316	7C196		2 6	
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/30007	54LS20		1 1	P
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/30009	54LS30		1 1	-
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/30102	54LS74A		1 3	F
/30103	54LS112		1 3	P
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/30105	54LS114		1 3	
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/30203	54LS38		1 2	P
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/30402	54LS54		1 1	P
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/30609	54LS166	8001701	2 5	F
/30701	54LS138	7600501	2 4	P
/30702	54LS139	7600701	2 4	P
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/30902	54LS153	7601101	2 4	P
/30903	54LS157	7600201	2 4	P
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/30905	54LS251	7601601	2 4	P
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/30907	54LS258B	7603801	2 4	F
/30908	54LS253	7601701	2 4	P
/30909	54LS298	7601901	2 4	P
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/31005	54LS09	8001901	2 1	P
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/34107	54F174		1 3	-
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/34110	54F574	5962-8972401	2 3	
/34111	54F564		2 3	F

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MILITARY PARTS
Cross Reference SORTED BY MIL-M-38510/ (Cont'd)

MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
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/34604	54F573		1 3	F
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/34802	54F243	5962-8683401	2 13	
/34803	54F245	8551101	2 13	-
/34804	54F545		1 13	
/34901	54F280		1 4	F
/35001	54F398		1 4	F
/35002	54F399		1 4	F
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/35201	54F37		2 2	-
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/35203	54F40		2 2	
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/36002	54LS348		1 4	F
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/37202	54ALS175	8301902	2 3	F
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/37204	54ALS374	8302002	2 3	-
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/37302	54ALS27	5962-8683801	2 1	F
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/37602	54ALS323	8302102	2 5	F
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/38005	54ALS569A	8302502	2 5	F
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/38102	54ALS162A	8407901	2 5	P
/38103	54ALS168		2 5	-
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/38105	54ALS568		2 5	
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/38202	54ALS580	8401202	2 3	-
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/38506	54ALS242B	8401301	2 13	-
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/48102	Z-80SIO/2		4 8	-
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/48202	Z80DMA		4 8	-
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/48302	Z80CTC		4 8	-
/48401	Z80APIO		4 8	-
/48402	Z80PIO		4 8	-
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/48601	Z85C3006	5962-8868901	2 8	
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/50003	TDC1010C1V		4 8	-
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/50005	MPY012HC1V		4 8	-
/50006	MPY016HC1V		4 8	-
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/50309	PAL16L2	8103509	2 7	F
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/50317	PAL14L4A	8103516	2 7	F
/50318	PAL16L2A	8103517	2 7	F
/50319	PAL10H8A2		2 7	
/50320	PAL12H6A2		2 7	
/50321	PAL14H4A2		2 7	
/50322	PAL16H2A2		2 7	
/50323	PAL16C1A2		2 7	
/50324	PAL10L8A2		2 7	
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/50326	PAL14L4A2		2 7	
/50327	PAL16L2A2		2 7	
/50401	PAL16L8A	8103607	2 7	F
/50402	PAL16R8A	8103608	2 7	F
/50403	PAL16R6A	8103609	2 7	F

MILITARY

MILITARY PARTS
Cross Reference SORTED BY MIL-M-38510/ (Cont'd)

MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
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/50406	PAL16A4	8103606	3 7	-
/50407	PAL16L8A2		1 7	F
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/50408	PAL16R8A2		1 7	-
/50408	PAL16R8A-2	8103612	2 7	-
/50409	PAL16R6A-2	8103613	2 7	-
/50409	PAL16R6A2		1 7	-
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/50410	PAL16R4A2		1 7	-
/50501	PAL20L8A	8412901	2 7	F
/50502	PAL20R8A	8412902	2 7	F
/50503	PAL20R6A	8412903	2 7	F
/50504	PAL20R4A	8412904	2 7	-
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/50602	PAL16R8B		1 7	F
/50603	PAL16R6B		1 7	F
/50603	PAL16R6-20	5962-8515503	2 7	F
/50604	PAL16R4B		1 7	F
/50604	PAL16R4-20	5962-8515504	2 7	F
/50605	PAL16L8-30	5962-8515505	2 7	F
/50605	PAL16L8B2		1 7	F
/50606	PAL16R8-30	5962-8515506	2 7	-
/50606	PAL16R8B2		1 7	-
/50607	PAL16R6-30	5962-8515507	2 7	-
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/50612	PAL16R4-15	5962-8515512	2 7	-
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/50702	C22V10	5962-8867001	2 7	-
/50703	C22V10	5962-8867004	2 7	
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/52002	Z8002CPU	8000302	2 8	F
/52003	Z8001ACPU	8000303	2 8	-
/52004	Z8002ACPU	8000306	2 8	F
/52004	Z8002A CPU		1 8	F
/53001	8086		1 8	
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/61303	51C98-55		2 6	
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/61503	1HC34-15		2 6	L
/61504	1HC34-25		2 6	L
/61505	1HC34-20		2 6	L
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/65002	54HC10	8403801	2 1	P
/65003	54HC20	8403901	2 1	P
/65004	54HC30	8404001	2 1	P
/65005	54HC132		1 1	F
/65101	54HC02	8404101	2 1	P
/65102	54HC27	8404201	2 1	P
/65103	54HC266	8404301	2 1	F
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/65105	54HC7266	8404302	2 1	-
/65201	54HC32	8404501	2 1	P
/65202	54HC86	8404601	2 1	P
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/65305	54HC112	8408801	2 3	F
/65306	54HC173	5962-8682501	2 3	F
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/65308	54HC175	8408901	2 3	P
/65352	54HCT74	5962-8685301	2 3	-
/65401	54HC75	8407001	2 3	P
/65402	54HC259	8551901	2 3	-
/65403	54HC373	8407201	2 3	P
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/65406	54HC573	8512801	2 3	-
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/65503	54HC245	8408501	2 13	P
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/65553	54HCT245	8550601	2 13	-
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/65754	54HCT241		2 2	-

MILITARY

MILITARY PARTS
Cross Reference SORTED BY MIL-M-38510/ (Cont'd)

MIL-M-38510/	Generic Industry Number	DESC Drawing -or- MIL Drawing	Table/ Function Code	NATO
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/65804	54HC154	5962-8682201	2 4	F
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/75704	54AC241	5962-8755101	2 2	-
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/75803	54AC139	5962-8762301	2 4	-
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MILITARY

MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING(Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
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5962-8512702	574AT	/14004	2 17	-
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5962-8512704	574AT		3 17	-
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5962-8513102	507A	/19004	2 18	
5962-8513103	509A	/19006	2 18	-
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5962-8513105	IH5216		2 18	-
5962-8513106	IH5208		2 18	-
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5962-8513303	80287-5		2 8	-
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5962-8513502	27512-35		2 7	-
5962-8513503	27512-30		2 7	-
5962-8513504	27512-45		2 7	
5962-8513505	27512-20		2 7	
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5962-8514802	80286-6		2 8	F
5962-8514803	80286-10		2 8	-
5962-8514901	82288-6		2 8	F
5962-8514902	82288-8		2 8	F
5962-8515301	54HC73	/65301	2 3	F
5962-8515401	54HC107	/65303	2 3	F
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5962-8515502	PAL16R8-20	/50602	2 7	F
5962-8515503	PAL16R6-20	/50603	2 7	F
5962-8515504	PAL16R4-20	/50604	2 7	F
5962-8515505	PAL16L8-30	/50605	2 7	F
5962-8515506	PAL16R8-30	/50606	2 7	-
5962-8515507	PAL16R6-30	/50607	2 7	-
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5962-8603202	68020-16		2 8	-
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5962-8607401	54F322		2 5	F
5962-8607501	54F350		2 5	-
5962-8608101	2168-55		2 6	-
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5962-8671801	25S10		3 5	-
5962-8671901	29LS18		2 5	-
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5962-8672101	26LS30		2 13	-
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5962-8680402	PAL12L10		2 7	-
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5962-8680406	PAL20C1		2 7	-
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5962-8681401	54HC534	/65605	2 3	P
5962-8681501	54HC564	/65606	2 3	F
5962-8681601	54HC595	/66507	2 5	-
5962-8681701	54HC597		2 5	F
5962-8681801	54HC688		2 4	-
5962-8681901	54HC4049		2 2	-
5962-8682001	54HC4050		2 2	F
5962-8682101	54HC42	/65801	2 4	F
5962-8682201	54HC154	/65804	2 4	F

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MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING (Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
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5962-8682501	54HC173	/65306	2 3	F
5962-8682601	54HC194	/66504	2 5	F
5962-8682701	54HC195	/66505	2 5	F
5962-8682801	54HC366	/65707	2 13	-
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5962-8683002	(SEE DWG)	/22807	2 7	-
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5962-8683006	(SEE DWG)	/22804	2 7	-
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5962-8683010	(SEE DWG)		3 7	-
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5962-8683401	54F243	/34802	2 13	
5962-8683601	54ALS32	/37501	2 1	F
5962-8683701	54ALS30A	/37004	2 1	-
5962-8683801	54ALS27	/37302	2 1	F
5962-8683901	54ALS244A	/38303	2 2	-
5962-8684001	54ALS191		2 5	F
5962-8684101	54ALS11A	/37402	2 1	-
5962-8684201	54ALS08	/37401	2 1	-
5962-8684301	54ALS04B	/37006	2 1	L
5962-8684401	54ALS02	/37301	2 1	F
5962-8684501	LT1016		2 10	P
5962-8684601	72404L10		2 8	-
5962-8684602	72404L15		2 8	F
5962-8684603	72404L25		2 8	-
5962-8684604	72404L35		2 8	-
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5962-8684702	54HC123A		2 3	-
5962-8684801	54HC126		2 2	-
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5962-8685001	54F194	/33601	2 5	-
5962-8685101	8X376		2 8	
5962-8685201	54HCT32		2 1	F
5962-8685301	54HCT74	/65352	2 3	-
5962-8685401	54HCT161		2 5	F
5962-8685501	54HCT165		2 5	F
5962-8685601	54HCT573		2 3	F
5962-8685701	54HCT688		2 4	-
5962-8685901	(SEE DWG)		2 6	-
5962-8685902	(SEE DWG)		2 6	-
5962-8685903	(SEE DWG)		2 6	-
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5962-8685924	(SEE DWG)		2 6	-
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5962-8686102	1503A		2 19	-
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5962-8686202	54FCT299A		2 5	
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5962-8686801	8286		2 13	F
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5962-8687101	54ALS38A	/38403	2 2	-
5962-8687201	54F38	/35202	2 2	-
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5962-8687506	(SEE DWG)		2 6	-
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5962-8687515	(SEE DWG)		2 6	-
5962-8687516	(SEE DWG)		2 6	-
5962-8687517	(SEE DWG)		2 6	-
5962-8687518	(SEE DWG)		2 6	F
5962-8687601	54LS668		2 5	-
5962-8687701	LM111	/10304	2 10	
5962-8687801	TL514		2 10	-
5962-8687901	RM3182		2 13	-
5962-8688001	HS3282		2 24	-
5962-8688002	HI8282		2 24	
5962-8688101	54LS382		2 4	F
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5962-8688202	(SEE DWG)		2 19	-
5962-8688203	(SEE DWG)		2 19	-
5962-8688301	54HCT08		2 1	-
5962-8688401	54HC238		2 4	-
5962-8688501	54HC646	/65508	2 13	-
5962-8688601	54HC4538		2 3	-
5962-8688701	OP-227A	/13504	2 9	F
5962-8688801	55189		3 13	-
5962-8688802	55189A		2 13	-
5962-8688901	55188		2 13	-
5962-8689001	54HCT14	/65752	2 1	-
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5962-8689101	54HC191	/66305	2 5	-
5962-8700101	10H536		2 5	-
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5962-8700202	7132SA-90		2 6	-
5962-8700203	7132SA-70		2 6	-
5962-8700204	7132SA-55		2 6	-
5962-8700205	7132LA-45		2 6	-
5962-8700206	7132LA-90		2 6	-
5962-8700207	7132LA-70		2 6	-
5962-8700208	7132LA-55		2 6	-
5962-8700209	7142SA-45		2 6	-
5962-8700210	7142SA-90		2 6	-
5962-8700211	7142SA-70		2 6	-
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5962-8700214	7142LA-90		2 6	-
5962-8700215	7142LA-70		2 6	-
5962-8700216	7142LA-55		2 6	-
5962-8700301	567		2 24	-
5962-8750101	10H515		2 13	-
5962-8750201	10H516		2 13	P
5962-8750301	10H501		2 1	
5962-8750401	10H504		2 1	-
5962-8750501	10H535		2 3	-
5962-8750601	10H574		2 4	-
5962-8750701	10H505		2 1	-
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5962-8750901	10H588		2 2	-
5962-8751001	10H589		2 1	-
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5962-8751201	10H576		2 3	
5962-8751301	(SEE DWG)		2 6	-
5962-8751302	(SEE DWG)		2 6	-
5962-8751303	(SEE DWG)		2 6	-
5962-8751304	(SEE DWG)		2 6	-
5962-8751305	(SEE DWG)		2 6	-
5962-8751306	(SEE DWG)		2 6	-
5962-8751401	(SEE DWG)	/26001	2 7	-
5962-8751402	(SEE DWG)	/26002	2 7	-
5962-8751403	(SEE DWG)	/26003	2 7	-
5962-8751404	(SEE DWG)	/26004	2 7	-
5962-8751405	(SEE DWG)	/26005	2 7	-
5962-8751406	(SEE DWG)		2 7	-
5962-8751407	(SEE DWG)		2 7	-
5962-8751408	(SEE DWG)		2 7	-
5962-8751409	(SEE DWG)		2 7	-
5962-8751410	(SEE DWG)		2 7	-
5962-8751411	(SEE DWG)		2 7	-
5962-8751412	(SEE DWG)		2 7	-
5962-8751413	(SEE DWG)		2 7	-
5962-8751414	(SEE DWG)		2 7	-
5962-8751415	(SEE DWG)		2 7	-
5962-8751416	(SEE DWG)		2 7	-
5962-8751417	(SEE DWG)		2 7	-
5962-8751418	(SEE DWG)		2 7	-
5962-8751419	(SEE DWG)		2 7	-
5962-8751420	(SEE DWG)		2 7	-
5962-8751421	(SEE DWG)		2 7	-
5962-8751422	(SEE DWG)		2 7	-
5962-8751423	(SEE DWG)	/26007	2 7	-
5962-8751424	(SEE DWG)		2 7	-
5962-8751425	(SEE DWG)	/26006	2 7	-
5962-8751426	(SEE DWG)		2 7	
5962-8751427	(SEE DWG)		2 7	
5962-8751501	(SEE DWG)		2 7	-
5962-8751502	(SEE DWG)		2 7	-
5962-8751503	(SEE DWG)		2 7	-
5962-8751504	(SEE DWG)		2 7	-
5962-8751505	(SEE DWG)		2 7	-
5962-8751506	(SEE DWG)		2 7	-
5962-8751601	521		2 10	F
5962-8751701	54LS590		2 5	-
5962-8751801	8259A		2 8	-

MILITARY

MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING(Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-8751901	9914A		3 8	-
5962-8752001	8253		2 8	-
5962-8752002	8253		2 8	-
5962-8752003	8253-5		2 8	-
5962-8752101	54C922		3 4	-
5962-8752201	9622		3 13	-
5962-8752301	9636A		2 13	F
5962-8752401	9637A		2 13	-
5962-8752501	54ACT74		2 3	-
5962-8752502	54ACT11074		3 3	-
5962-8752601	Z0858110		2 8	F
5962-8752602	Z0858106		2 8	-
5962-8752701	Z0853006		2 8	-
5962-8752702	Z0853004		2 8	-
5962-8752801	PAL18P8A		2 7	-
5962-8752802	PAL18P8B		2 7	-
5962-8752805	PAL18P8Q		2 7	-
5962-8752901	(SEE DWG)		2 7	
5962-8752902	(SEE DWG)		2 7	
5962-8753001	(SEE DWG)		2 7	-
5962-8753002	(SEE DWG)		2 7	-
5962-8753003	(SEE DWG)		2 7	-
5962-8753004	(SEE DWG)		2 7	-
5962-8753101	7201LA30		2 8	-
5962-8753102	7201LA50		2 8	-
5962-8753103	7201LA80	/25003	2 8	-
5962-8753201	2069		2 18	-
5962-8753202	2070		2 18	-
5962-8753301	54ALS857A	/37901	2 4	-
5962-8753401	26S12		3 13	-
5962-8753402	26S12A		3 13	-
5962-8753501	BUS-65112		1 22	-
5962-8753501	BUS-65112		1 22	-
5962-8753502	2452		2 22	
5962-8753601	25S244		3 2	-
5962-8753901	C22V10		2 7	-
5962-8753902	C22V10		2 7	-
5962-8753903	C22V10		2 7	-
5962-8753904	C22V10		2 7	P
5962-8754001	AD585		2 20	-
5962-8754101	10H610		2 1	-
5962-8754201	25LS2513		2 4	-
5962-8754301	82S62		3 4	-
5962-8754501	760		2 10	-
5962-8754601	9638		2 13	-
5962-8754701	55110A		2 13	-
5962-8754801	8251A		2 8	-
5962-8754802	8251A		3 8	F
5962-8754901	54AC00	/75001	2 1	-
5962-8754902	54AC11000	/75021	3 1	-
5962-8755001	54AC240	/75703	2 2	-
5962-8755002	54AC11240		3 2	-
5962-8755101	54AC241	/75704	2 2	-
5962-8755102	54AC11241		3 2	
5962-8755201	54AC244	/75705	2 2	-
5962-8755202	54AC11244		3 2	-
5962-8755301	54ACT139		2 4	-
5962-8755401	54ACT138		2 4	-
5962-8755501	54AC373	/75403	2 3	-
5962-8755502	54AC11373		3 3	
5962-8755601	54ACT373		2 3	-
5962-8755602	54ACT11373		3 3	
5962-8755701	10H502		2 1	-
5962-8755801	10H513		2 1	-
5962-8755901	10H518		2 1	-
5962-8756001	10H524		2 2	-
5962-8756101	10H531		2 3	-
5962-8756201	10H560		2 4	-
5962-8756301	10H586		2 3	-
5962-8756401	10H506		2 1	-
5962-8756501	10H503		2 1	-
5962-8756601	10H558		2 4	F
5962-8756701	10H561		2 4	-
5962-8756801	10H571		2 4	F
5962-8756901	10H609		2 1	-
5962-8757001	8255A		2 8	-
5962-8757002	8255A-5		2 8	-
5962-8757101	AD590J		2 24	-
5962-8757102	AD590K		2 24	F
5962-8757103	AD590L		2 24	P
5962-8757104	AD590M		2 24	P
5962-8757201	527		2 10	-
5962-8757202	529		2 10	-
5962-8757203	LM161		2 10	-
5962-8757301	2930		2 8	-
5962-8757401	2964B		2 8	-
5962-8757501	9517A		2 8	F
5962-8757502	9517A-4		2 8	F
5962-8757601	8X371		2 8	-
5962-8757701	82C86H-5		2 13	-
5962-8757702	82C87H-5		2 13	-
5962-8757801	LT1007A		2 9	F
5962-8757901	BUS-63125		3 13	-
5962-8757902	BUS-63125II		1 13	-
5962-8757902	BUS-63125II		1 13	-
5962-8757903	ARX2411		2 13	
5962-8757904	ARX3411		2 13	
5962-8757905	NHI-1500		2 13	-
5962-8757906	FC1553623		2 13	-
5962-8757907	CT1487D		3 13	
5962-8759001	10H416		2 5	-
5962-8759101	AD7572S12		2 17	-
5962-8759102	AD7572T12		2 17	-
5962-8759103	AD7572U12		2 17	-
5962-8759104	AD7572S05		2 17	F
5962-8759105	AD7572U05		2 17	F
5962-8759105	AD7572T05		2 17	F
5962-8759106	AD7572U05		2 17	F
5962-8759201	9150-25		2 6	-
5962-8759202	9150-35		2 6	-
5962-8759203	9150-45		2 6	-
5962-8759301	8155		2 6	-
5962-8759302	8156		2 6	-
5962-8759401	LM185-1.2		2 19	F
5962-8759402	LM185-2.5		2 19	-
5962-8759403	LM185BX1.2		2 19	-
5962-8759404	LM185BX2.5		2 19	-
5962-8759405	LM185BY1.2		2 19	-
5962-8759406	LM185BY2.5		2 19	-
5962-8759501	54AS646		3 13	-
5962-8759601	26LS34		2 13	-
5962-8759701	9519A		2 8	
5962-8759801	3183A		2 24	-
5962-8760001	TDC1048		2 17	-
5962-8760201	2960		2 8	-
5962-8760301	29C841		2 8	-
5962-8760302	29C843		2 8	-
5962-8760303	29C941		2 8	-
5962-8760304	29C943		2 8	-
5962-8760401	LM10		2 9	-
5962-8760501	LM104		2 12	-
5962-8760601	LM110	/10602	2 9	F
5962-8760701	LM131A		2 24	-
5962-8760801	198	/12501	2 20	F
5962-8760901	54AC04	/75701	2 1	-
5962-8760902	54AC11004		3 1	
5962-8761001	54AC10	/75002	2 1	-
5962-8761002	54AC11010	/75022	3 1	
5962-8761101	54AC11	/75204	2 1	-
5962-8761102	54AC11011		3 1	
5962-8761201	54AC02		2 1	-
5962-8761202	54AC11002		3 1	
5962-8761301	54AC20	/75003	2 1	-
5962-8761302	54AC11020	/75023	3 1	-
5962-8761401	54AC32	/75201	2 1	F
5962-8761501	54AC08	/75203	2 1	-
5962-8761502	54AC11008		3 1	
5962-8761601	26LS32B		2 13	-
5962-8761701	0006		1 13	-
5962-8761702	0008		1 13	-
5962-8761801	HI524		2 18	-
5962-8761901	UC1707		2 13	-
5962-8762001	OPA501		2 9	F
5962-8762101	54LS592		2 5	-
5962-8762201	54AC138	/75802	2 4	-
5962-8762301	54AC139	/75803	2 4	-
5962-8762401	54AC14	/75702	2 1	F
5962-8762501	54AC153		2 4	
5962-8762601	54AC174	/75307	2 3	-
5962-8762701	54FCT377		2 3	-
5962-8762702	54FCT377A		2 3	
5962-8762801	54FCT374		2 3	-
5962-8762802	54FCT374A		2 3	-
5962-8762901	54FCT245		2 13	-
5962-8762902	54FCT245A		2 13	-
5962-8763001	54FCT244		2 2	-
5962-8763002	54FCT244A		2 2	-
5962-8763101	54ACT374		2 3	-
5962-8763102	54ACT11374		3 3	
5962-8763201	BUS-65111		1 13	-
5962-8763301	320C10		2 8	
5962-8763302	320C10-25		2 8	
5962-8763303	320CM10		2 8	-
5962-8763304	320CM10-25		2 8	-
5962-8763305	320CF10-25		2 8	-
5962-8763306	320E15		2 8	
5962-8763307	320C15		2 8	
5962-8763308	320C15-25		2 8	
5962-8763501	670S		2 17	F
5962-8764001	UCS-5801		2 13	-
5962-8764002	UCS-5800		2 13	
5962-8764101	UCS5822		2 13	-
5962-8764301	3517		2 12	P
5962-8764401	54FCT373		2 3	-
5962-8764402	54FCT373A		2 3	
5962-8764501	1524B		2 12	-
5962-8764502	1524A		2 12	-
5962-8764601	14490A		2 23	-
5962-8764701	54HC03		2 1	-
5962-8764801	27C512		2 7	-
5962-8764802	27C512		2 7	-
5962-8764803	27C512		2 7	-
5962-8764804	27C512		2 7	
5962-8764901	(SEE DWG)		2 7	-
5962-8764902	(SEE DWG)		2 7	P
5962-8764903	(SEE DWG)		2 7	-
5962-8765001	(SEE DWG)		2 7	-
5962-8765002	(SEE DWG)		2 7	P
5962-8765003	(SEE DWG)		2 7	F
5962-8765004	(SEE DWG)		2 7	-
5962-8765101	(SEE DWG)		2 7	-

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MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING (Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-8765301	ICM7170		2 8	-
5962-8765401	54FCT138		2 4	-
5962-8765402	54FCT138A		2 4	F
5962-8765501	54FCT240		2 2	P
5962-8765502	54FCT240A		2 2	
5962-8765601	54FCT273		2 3	-
5962-8765602	54FCT273A		2 3	
5962-8765701	1590		2 9	-
5962-8765801	TLC372		2 10	-
5962-8765901	TLC374		2 10	-
5962-8766001	ICL7667		2 13	-
5962-8766101	(SEE DWG)		2 7	-
5962-8766102	(SEE DWG)		2 7	-
5962-8766103	(SEE DWG)		2 7	-
5962-8766104	(SEE DWG)		2 7	-
5962-8766105	(SEE DWG)		2 7	-
5962-8766106	(SEE DWG)		2 7	-
5962-8766107	(SEE DWG)		2 7	-
5962-8766108	(SEE DWG)		2 7	
5962-8766201	26S02		3 3	-
5962-8766301	54ACT245		2 13	
5962-8766401	54ACT573		2 3	
5962-8766501	1750A-15		2 8	
5962-8766502	1750A-20		2 8	
5962-8766503	1750A-30		2 8	
5962-8766601	LT1080		2 13	-
5962-8766602	LT1081		2 13	-
5962-8766701	29C827		2 2	-
5962-8766702	29C828		2 2	-
5962-8766703	29C927		2 2	F
5962-8766704	29C928		2 2	F
5962-8766801	80386-16		2 8	-
5962-8766802	80386-12		2 8	-
5962-8766803	80386-20		2 8	-
5962-8766804	80386-25		2 8	-
5962-8766901	82384-16		2 8	-
5962-8766902	82384-12		2 8	-
5962-8767001	26LS29		2 13	
5962-8767101	PAL20L8B		2 7	-
5962-8767102	PAL20R8B		2 7	-
5962-8767103	PAL20R6B		2 7	-
5962-8767104	PAL20R4B		2 7	-
5962-8767105	PLUS20L8		2 7	
5962-8767106	PLUS20R8		2 7	-
5962-8767107	PAL20L8-15		2 7	
5962-8767108	PAL20R8-15		2 7	
5962-8767109	PAL20R6-15		2 7	
5962-8767110	PAL20R4-15		2 7	
5962-8767201	82188		2 8	-
5962-8767301	DG180A		3 18	-
5962-8767401	LM160		2 10	-
5962-8767501	LM150	/11705	2 12	P
5962-8767502	LM150A		2 12	-
5962-8767601	MT4067-12		2 6	-
5962-8767602	MT4067-15		2 6	F
5962-8767603	MT4067-20		2 6	F
5962-8767604	MT4067-10		2 6	F
5962-8767701	HA-5330		2 20	
5962-8767901	4N55		1 24	-
5962-8768001	54HC4060		2 5	F
5962-8768101	1825		2 12	-
5962-8768201	82S153A		2 7	F
5962-8768301	54ALS139		2 4	F
5962-8768401	87C51		2 8	-
5962-8768402	87C51-16		2 8	
5962-8768501	8088		2 8	F
5962-8768601	7217L-40		2 4	
5962-8768602	7217L-55		2 4	
5962-8768603	7217L-75		2 4	
5962-8768701	HSDC-8920A		1 22	
5962-8768702	HSDC-8920		1 22	
5962-8768801	MN3008		1 16	
5962-8768802	MN3009		1 16	
5962-8768901	DG528		2 18	-
5962-8769001	27S29		2 7	-
5962-8769002	27S29A		2 7	F
5962-8769101	54AC151		2 4	-
5962-8769201	54AC251		2 4	-
5962-8769301	54AC253		2 4	-
5962-8769401	54AC374	/75602	2 3	-
5962-8769501	54AC540	/75710	2 13	-
5962-8769701	54ACT377		2 3	
5962-8769801	54ACT153		2 4	
5962-8769901	54ACT00		2 1	
5962-8769902	54ACT11000		3 1	
5962-8770001	7524		2 16	-
5962-8770002	7524		2 16	-
5962-8770003	7524		2 16	-
5962-8770101	7528		2 16	-
5962-8770102	7528		2 16	-
5962-8770103	7528		2 16	P
5962-8770201	7545S		2 16	-
5962-8770202	7545T		2 16	-
5962-8770203	7545U		2 16	-
5962-8770204	7545G		2 16	-
5962-8770205	7545B		2 16	-
5962-8770206	7545A		2 16	-
5962-8770301	(SEE DWG)		2 6	
5962-8770302	(SEE DWG)		2 6	-
5962-8770303	(SEE DWG)		2 6	P
5962-8770401	29C861		2 13	-
5962-8770402	29C863		2 13	-
5962-8770403	29C961		2 13	-
5962-8770404	29C963		2 13	-
5962-8770501	68172		2 8	-
5962-8770601	OP-17A		2 9	-
5962-8770602	OP-17B		2 9	-
5962-8770701	2907		2 13	F
5962-8770801	29C10A		2 8	-
5962-8770801	WS5910A		2 8	-
5962-8770802	39C10B		2 8	
5962-8770803	39C10C		2 8	
5962-8770804	7C910-51		2 8	-
5962-8770805	7C910-46		2 8	-
5962-8771001	LM158		2 9	-
5962-8771002	LM158A		2 9	-
5962-8771101	54221		3 3	-
5962-8771201	2004-25		2 6	-
5962-8771202	2004		2 6	-
5962-8771301	8274		2 8	-
5962-8771401	OP14A		2 9	P
5962-8771402	OP14B		2 9	F
5962-8771501	OP207		2 9	
5962-8771601	MUX-08A		2 18	
5962-8771602	MUX-08B		2 18	
5962-8771701	MUX-16A		2 18	
5962-8771702	MUX-16B		2 18	
5962-8771801	MUX-24A		2 18	
5962-8771802	MUX-24B		2 18	
5962-8771901	AD625		2 9	-
5962-8772101	54HC125		2 2	F
5962-8772201	54HC4075		2 1	-
5962-8772301	54HC133		2 1	-
5962-8772401	54HC193	/66307	2 5	F
5962-8772501	54HCT273		2 3	-
5962-8772701	10H507		2 1	L
5962-8772801	10H519		2 1	F
5962-8772901	10H564		2 4	
5962-8773001	10H521		2 1	
5962-8773201	54HC76		2 3	-
5962-8773301	54HC4511		2 4	-
5962-8773401	82C284-10		2 8	-
5962-8773402	82C284-8		2 8	-
5962-8773403	82C284-6		2 8	-
5962-8773501	2100SG		2 8	-
5962-8773502	2100TG		2 8	-
5962-8773503	2100ASG		2 8	-
5962-8773504	2100ATG		2 8	-
5962-8773801	OP-77B		2 9	-
5962-8773802	OP-77A		2 9	-
5962-8773901	LM139A		2 10	F
5962-8774001	1543		2 24	-
5962-8774002	1544		2 24	-
5962-8774101	LT1033		2 12	-
5962-8774201	1834		2 12	-
5962-8774401	(SEE DWG)		2 7	P
5962-8774402	(SEE DWG)		2 7	P
5962-8775001	10612		2 1	-
5962-8775201	12540		2 23	-
5962-8775301	14551B		3 18	-
5962-8775401	54HC4053		2 18	-
5962-8775501	29821A		2 5	-
5962-8775502	29823A		2 5	-
5962-8775503	29825A		2 5	-
5962-8775504	29921A		2 5	-
5962-8775505	29923A		2 5	-
5962-8775506	29925A		2 5	-
5962-8775601	54AC273	/75601	2 3	
5962-8775701	54ACT174		2 3	-
5962-8775801	54AC245		2 13	
5962-8775901	54ACT240		2 13	
5962-8775902	54ACT11240		3 2	-
5962-8776001	54ACT244		2 2	-
5962-8776101	54ACT253		2 4	-
5962-8776201	7575S		2 17	-
5962-8776202	7575T		2 17	-
5962-8776301	7537S		2 16	-
5962-8776302	7537T		2 16	-
5962-8776303	7537U		2 16	F
5962-8776601	54AS804		3 2	-
5962-8776701	54AS760		3 2	
5962-8776901	55121		2 13	-
5962-8777001	1532		2 12	-
5962-8777101	OP-400A		2 9	-
5962-8777201	2952A		2 13	-
5962-8777202	2953A		2 13	-
5962-8777301	10598		2 3	-
5962-8777401	LM109	/10701	2 12	-
5962-8777501	SG123		2 12	-
5962-8777601	7812A		2 12	-
5962-8777701	LM194		2 24	-
5962-8777801	LM195		2 24	-
5962-8778001	INA101		2 9	
5962-8778002	INA101		2 9	
5962-8778201	7805A		2 12	-
5962-8778301	HA-2400		2 9	
5962-8778501	HA-2541		2 9	
5962-8778502	EL-2041		2 9	
5962-8778601	TDC1046		2 17	-
5962-8778801	82S129A	/20304	2 7	-
5962-8778802	82S129A		2 7	-

MILITARY

MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING(Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-8778901	AD558T		3 16	-
5962-8778902	AD558T	/14401	2 16	-
5962-8779101	57401		2 8	-
5962-8779102	57402		2 8	-
5962-8779103	57401A		2 8	-
5962-8779104	57402A		2 8	-
5962-8779105	C57401		2 8	-
5962-8779106	C57402		2 8	-
5962-8779107	C57401A		2 8	-
5962-8779108	C57402A		2 8	-
5962-8779109	57L401D		2 8	F
5962-8779110	57L402D		2 8	-
5962-8779111	57L4013D		2 8	-
5962-8779201	10558		2 4	-
5962-8779301	10586		2 3	
5962-8779401	54AS805		3 2	-
5962-8780101	AD567S		2 16	F
5962-8780201	7226		2 16	-
5962-8780301	MC4344		2 24	-
5962-8780401	54AS21		3 1	-
5962-8780501	54HC221		2 3	F
5962-8780502	54HC221A		3 3	
5962-8780601	54HC299	/66506	2 5	-
5962-8780701	54HC377	/65603	2 3	F
5962-8780801	54HC192	/66306	2 5	F
5962-8780901	54HC640	/65506	2 13	-
5962-8850101	80C186-10		2 8	
5962-8850102	80C186-12		2 8	
5962-8850201	HA-5104		2 9	
5962-8850301	TSC426		2 13	-
5962-8850302	TSC427		2 13	-
5962-8850303	TSC428		2 13	-
5962-8850304	TSC4423		2 13	
5962-8850305	TSC4424		2 13	
5962-8850306	TSC4425		2 13	
5962-8850307	TSC4426		2 13	
5962-8850308	TSC4427		2 13	
5962-8850309	TSC4428		2 13	
5962-8850401	PLS161		2 7	F
5962-8850402	PLS173		2 7	F
5962-8850501	AD573S		2 17	-
5962-8850502	AD673S		2 17	-
5962-8850601	68901-4		2 8	-
5962-8850602	68901-5		2 8	-
5962-8850701	PLS179		2 7	-
5962-8850801	ADC-HX		2 17	
5962-8850802	ADC-HZ		2 17	
5962-8850901	AD390S		1 16	
5962-8850902	AD390T		1 16	
5962-8851001	AD394S		1 16	
5962-8851002	AD394T		1 16	
5962-8851003	AD395S		1 16	
5962-8851004	AD395T		1 16	
5962-8851101	55116		2 13	-
5962-8851102	55117		2 13	-
5962-8851103	55118		2 13	-
5962-8851104	55119		2 13	-
5962-8851301	OP-42A	/12208	2 9	-
5962-8851401	HS9403-8		2 22	
5962-8851402	HS9403-16		2 22	
5962-8851501	(SEE DWG)		2 7	-
5962-8851502	(SEE DWG)		2 7	-
5962-8851503	(SEE DWG)		2 7	-
5962-8851504	(SEE DWG)		2 7	
5962-8851601	29C821		2 5	-
5962-8851602	29C823		2 5	-
5962-8851603	29C921		3 5	-
5962-8851604	29C923		3 5	-
5962-8851701	DAC02310-112		1 16	
5962-8851701	DAC02310-112		1 16	
5962-8851702	DAC02310-113		1 16	
5962-8851702	DAC02310-113		1 16	
5962-8851801	(SEE DWG)		2 7	-
5962-8851802	(SEE DWG)		2 7	P
5962-8851803	(SEE DWG)		2 7	-
5962-8851901	UDS2981		2 13	-
5962-8851902	UDS2983		2 13	-
5962-8852001	54AC74	/75302	2 3	-
5962-8852002	54AC11074		3 3	-
5962-8852201	54AS808		3 2	-
5962-8852301	54AS832B		3 2	
5962-8852501	(SEE DWG)	/26107	2 7	
5962-8852502	(SEE DWG)	/26108	2 7	
5962-8852503	(SEE DWG)	/26109	2 7	
5962-8852504	(SEE DWG)	/26110	2 7	
5962-8852505	(SEE DWG)	/26112	2 7	
5962-8852506	(SEE DWG)	/26111	2 7	
5962-8852507	(SEE DWG)		2 7	
5962-8852701	10564		2 4	
5962-8853201	TDC1049		2 17	F
5962-8853301	49C460A		2 8	-
5962-8853302	49C460B		2 8	-
5962-8853303	29C660A		2 8	F
5962-8853304	29C660B		2 8	F
5962-8853305	29C660C		2 8	F
5962-8853306	49C460C		2 8	
5962-8853401	54ACT109		2 3	-
5962-8853402	54ACT11109		3 3	-
5962-8853501	7C901-32		2 8	-
5962-8853502	7C901-27		2 8	-
5962-8853701	OP-37A	/13505	2 9	-
5962-8853702	OP37B		3 9	
5962-8853703	OP37C		3 9	
5962-8853801	OP215A		2 9	
5962-8853802	OP215B		2 9	
5962-8853803	OP215BR		2 9	
5962-8853901	AD524	/14301	2 9	-
5962-8854001	54ALS05A		2 1	-
5962-8854101	27S13A		2 7	-
5962-8854102	27S13		2 7	-
5962-8854201	ADC00300		2 17	
5962-8854301	54FCT521		2 4	
5962-8854302	54FCT521A		2 4	
5962-8854303	54FCT521B		2 4	
5962-8854401	(SEE DWG)		2 6	-
5962-8854402	(SEE DWG)		2 6	-
5962-8854403	(SEE DWG)		2 6	-
5962-8854404	(SEE DWG)		2 6	-
5962-8854501	(SEE DWG)		2 6	-
5962-8854502	(SEE DWG)		2 6	-
5962-8854503	(SEE DWG)		2 6	-
5962-8854504	(SEE DWG)		2 6	-
5962-8854601	54F676		2 5	-
5962-8854701	8087-2		2 8	-
5962-8854702	8087		2 8	
5962-8854801	(SEE DWG)		2 7	
5962-8854901	(SEE DWG)		2 7	
5962-8854902	(SEE DWG)		2 7	
5962-8855001	54F273		2 3	-
5962-8855101	UH503		2 13	
5962-8855201	(SEE DWG)		2 6	-
5962-8855202	(SEE DWG)		2 6	-
5962-8855203	(SEE DWG)		2 6	-
5962-8855204	(SEE DWG)		2 6	-
5962-8855301	7815A		2 12	-
5962-8855401	7824A		2 12	
5962-8855501	54F378	/34108	2 5	-
5962-8855601	54HC4052		2 18	-
5962-8855701	10541		2 5	-
5962-8855901	OP421B		2 9	
5962-8855902	OP421C		2 9	
5962-8856001	10545		2 6	-
5962-8856101	LM199A	/12401	2 19	-
5962-8856102	LM199	/12404	2 19	-
5962-8856201	LT1010		2 2	-
5962-8856301	DAC703		2 16	
5962-8856401	UH502		2 13	
5962-8856501	OP-470A		2 9	-
5962-8856502	OP-471A		2 9	-
5962-8856601	2681		2 13	-
5962-8856602	2681		2 13	-
5962-8856603	68681		2 13	-
5962-8856701	LT1037A		2 9	-
5962-8856801	8035AHL		2 8	-
5962-8856802	8048AH		2 8	-
5962-8857101	1596		2 24	-
5962-8857201	68154		2 23	-
5962-8857301	29C853		2 13	F
5962-8857302	29C855		2 13	F
5962-8857401	54HC4078		2 1	-
5962-8857501	54FCT841A		2 3	
5962-8857502	54FCT841B		2 3	
5962-8857601	54HC21		2 1	P
5962-8857701	10521		2 1	-
5962-8857801	54ALS688		2 4	-
5962-8857901	HOS-050A		1 9	
5962-8857902	HOS-060SH		1 9	
5962-8858101	MOH0268D		2 13	
5962-8858201	MOH0272C		2 13	
5962-8858301	MOF1305D		2 13	
5962-8858401	MOR1623K		2 13	
5962-8858501	BUS-65600		1 13	
5962-8858501	BUS-65600		1 13	
5962-8858601	BUS-66300II		1 8	
5962-8858601	BUS-66300II		1 8	
5962-8858701	(SEE DWG)		3 6	
5962-8858702	(SEE DWG)	/28901	2 6	
5962-8858801	(SEE DWG)		2 6	-
5962-8858802	(SEE DWG)		2 6	
5962-8858803	(SEE DWG)		2 6	
5962-8858901	54ALS20A	/37003	2 1	-
5962-8859001	54ALS133	/37005	2 1	-
5962-8859101	54ALS240A	/38301	2 2	-
5962-8859301	OP-200A		2 9	-
5962-8859401	(SEE DWG)		2 6	-
5962-8859402	(SEE DWG)		2 6	-
5962-8859403	(SEE DWG)		2 6	-
5962-8859501	(SEE DWG)		2 6	F
5962-8859601	54ALS241	/38302	2 2	-
5962-8859701	LT1004-1.2		2 19	-
5962-8859702	LT1004-2.5		2 19	-
5962-8859801	2925		2 8	-
5962-8859802	2925A		2 8	-
5962-8859901	32C201-10	/55201	2 8	-
5962-8860001	LT1021BM-10		2 19	-
5962-8860002	LT1021CM-10		2 19	P
5962-8860003	LT1021DM-10		2 19	P
5962-8860201	54LS673		2 5	-
5962-8860401	29861A		2 13	-
5962-8860402	29863A		2 13	-
5962-8860501	29827A		2 2	-

MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING (Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-8860502	29828A		2 2	-
5962-8860601	54HC237		2 4	F
5962-8860701	54LS674		2 5	-
5962-8860801	54FCT821A		2 5	
5962-8860802	54FCT821B		2 5	
5962-8861001	(SEE DWG)		2 6	
5962-8861002	(SEE DWG)		2 6	
5962-8861003	(SEE DWG)		2 6	
5962-8861004	(SEE DWG)		2 6	
5962-8861101	(SEE DWG)		2 6	
5962-8861102	(SEE DWG)		2 6	
5962-8861103	(SEE DWG)		2 6	
5962-8861104	(SEE DWG)		2 6	
5962-8861105	(SEE DWG)		2 6	
5962-8861201	29C116		2 8	
5962-8861201	7C9116-99		2 8	
5962-8861202	29C116-1		2 8	
5962-8861202	7C9116-75		2 8	
5962-8861203	29C116-2		2 8	
5962-8861203	7C9116-65		2 8	
5962-8861204	7C9116-40		2 8	
5962-8861301	39C60A		2 8	
5962-8861302	39C60		2 8	
5962-8861303	29C60A		2 8	
5962-8861901	320C25		2 8	
5962-8862001	54HC09		2 1	-
5962-8862101	54ALS86		2 1	-
5962-8862201	LT1028M		2 9	
5962-8862202	LT1028AM		2 9	
5962-8862401	54HCT4059		2 5	F
5962-8862501	54ALS158		2 4	F
5962-8862601	54ALS258		2 4	F
5962-8862701	54F269		2 5	
5962-8862801	UT1553BB		2 8	-
5962-8862901	HS9324		2 16	
5962-8863001	AMP-01A		2 9	
5962-8863002	AMP-01B		2 9	
5962-8863101	DS1631		2 13	
5962-8863401	(SEE DWG)		2 7	
5962-8863402	(SEE DWG)		2 7	
5962-8863403	(SEE DWG)		2 7	
5962-8863404	(SEE DWG)		2 7	
5962-8863501	(SEE DWG)		2 7	
5962-8863601	7C235-40		2 7	
5962-8863602	7C235-30		2 7	
5962-8863701	20G10-40		2 7	-
5962-8863702	20G10-30		2 7	-
5962-8863802	2018		2 7	
5962-8863803	2018		2 7	
5962-8863901	54FCT573		2 3	
5962-8864001	54FCT161		2 5	
5962-8864101	LTC1060A		2 24	P
5962-8864301	49C410		2 8	
5962-8864302	49C410A		2 8	-
5962-8864401	UT63M105		2 13	
5962-8864402	UT63M107		2 13	
5962-8864403	UT63M115		2 13	
5962-8864404	UT63M117		2 13	
5962-8864405	UT63M125		2 13	
5962-8864406	UT63M127		2 13	
5962-8864407	UT63M135		2 13	
5962-8864408	UT63M137		2 13	
5962-8864501	1553RTMP		2 8	
5962-8864601	(SEE DWG)		2 12	
5962-8864701	LT1021BM-7		2 19	-
5962-8864702	LT1021DM-7		2 19	-
5962-8864801	55ALS194		2 13	-
5962-8864901	55ALS195		2 13	
5962-8865001	AD7820U		2 17	
5962-8865002	AD7820T		2 17	
5962-8865101	54FCT533		2 3	
5962-8865102	54FCT533A		2 3	
5962-8865201	54FCT182		2 4	
5962-8865202	54FCT182A		2 4	
5962-8865301	54FCT645		2 13	
5962-8865302	54FCT645A		2 13	-
5962-8865401	54FCT640		2 13	
5962-8865402	54FCT640A		2 13	
5962-8865501	54FCT534		2 3	
5962-8865502	54FCT534A		2 3	
5962-8865601	54FCT823A		2 5	
5962-8865602	54FCT823B		2 5	
5962-8865701	54FCT163		2 5	-
5962-8865702	54FCT163A		2 5	-
5962-8865801	AD578SD		1 17	
5962-8865802	AD578TD		1 17	
5962-8865803	AD578ZSD		1 17	
5962-8865804	AD578ZTD		1 17	
5962-8865901	AD667S		2 16	
5962-8866101	54FCT863A		2 13	
5962-8866102	54FCT863B		2 13	
5962-8866201	(SEE DWG)		2 6	-
5962-8866202	(SEE DWG)		2 6	-
5962-8866203	(SEE DWG)		2 6	-
5962-8866204	(SEE DWG)		2 6	-
5962-8866301	7228T		2 16	
5962-8866302	7228U		2 16	
5962-8866401	SG3081		2 24	-
5962-8866501	(SEE DWG)		2 6	
5962-8866502	(SEE DWG)		2 6	
5962-8866503	(SEE DWG)		2 6	
5962-8866504	(SEE DWG)		2 6	
5962-8866601	68155		2 23	-
5962-8866801	54ALS534		2 3	-
5962-8866901	7203S80		2 8	
5962-8866902	7203S65		2 8	
5962-8866903	7203S50		2 8	
5962-8866904	7203S40		2 8	
5962-8866905	7C429-30		2 8	
5962-8867001	C22V10	/50702	2 7	-
5962-8867002	C22V10	/50701	2 7	-
5962-8867003	C22V10		2 7	-
5962-8867004	C22V10	/50703	2 7	
5962-8867101	54HCT191		2 5	-
5962-8867201	54HCT85		2 4	-
5962-8867301	54ALS652		2 13	
5962-8867401	54FCT825A		2 5	
5962-8867402	54FCT825B		2 5	
5962-8867501	54FCT845A		2 8	
5962-8867502	54FCT845B		2 8	
5962-8867601	(SEE DWG)		2 7	
5962-8867602	(SEE DWG)		2 7	
5962-8867603	(SEE DWG)		2 7	
5962-8867701	2903A		2 8	-
5962-8867801	C16L8-40		2 7	
5962-8867802	C16R8-40		2 7	
5962-8867803	C16R6-40		2 7	
5962-8867804	C16R4-40		2 7	
5962-8867805	C16L8-30		2 7	
5962-8867806	C16R8-30		2 7	
5962-8867807	C16R6-30		2 7	
5962-8867808	C16R4-30		2 7	
5962-8867809	C16L8-20		2 7	
5962-8867810	C16R8-20		2 7	
5962-8867811	C16R6-20		2 7	
5962-8867812	C16R4-20		2 7	
5962-8868101	(SEE DWG)		2 6	-
5962-8868102	(SEE DWG)		2 6	
5962-8868103	(SEE DWG)		2 6	
5962-8868104	(SEE DWG)		2 6	
5962-8868201	54HC253B	/66206	2 4	
5962-8868301	(SEE DWG)		2 6	
5962-8868302	(SEE DWG)		2 6	
5962-8868303	(SEE DWG)		2 6	
5962-8868501	TL7705AM		2 24	P
5962-8868502	TL7702AM		2 24	
5962-8868701	54AS652		3 13	-
5962-8868901	Z85C3006	/48601	2 8	
5962-8868902	Z85C3008	/48602	2 8	
5962-8868903	AM85C30-10		2 8	
5962-8868904	AM85C30-12		2 8	
5962-8868905	AM85C30-16		2 8	-
5962-8868906	AM85C30-8		2 8	
5962-8869001	(SEE DWG)		2 7	-
5962-8869002	(SEE DWG)		2 7	-
5962-8869101	54ALS520		2 4	-
5962-8869201	(SEE DWG)		1 8	
5962-8869201	(SEE DWG)		1 8	
5962-8869202	(SEE DWG)		1 8	
5962-8869202	(SEE DWG)		1 8	
5962-8869203	(SEE DWG)		2 8	
5962-8869204	(SEE DWG)		2 8	
5962-8869301	54ALS804		2 13	-
5962-8869401	54ALS805A		2 13	-
5962-8869501	54ALS808		2 13	-
5962-8869601	2968A		2 8	-
5962-8869602	2968A		2 8	-
5962-8869701	UC1903		2 24	
5962-8869801	54ALS193		2 5	
5962-8869901	HI-516		2 18	
5962-8870001	54ALS563A		2 3	
5962-8870101	OPA541		2 9	
5962-8870201	54AC377	/75603	2 3	
5962-8870301	54AC257		2 4	-
5962-8870401	54ACT258		2 4	
5962-8870501	54ACT821		2 3	
5962-8870601	54AC541	/75711	2 2	
5962-8870701	54F776		2 13	-
5962-8870801	54F30		2 1	-
5962-8870901	54F36		2 1	F
5962-8871001	54F518		2 4	
5962-8871101	54F519		2 4	
5962-8871201	54F520		2 4	
5962-8871301	C16L8-40		2 7	
5962-8871302	C16R8-40		2 7	
5962-8871303	C16R6-40		2 7	
5962-8871304	C16R4-40		2 7	
5962-8871305	C16L8-30		2 7	
5962-8871306	C16R8-30		2 7	
5962-8871307	C16R6-30		2 7	
5962-8871308	C16R4-30		2 7	
5962-8871309	C16L8-20		2 7	
5962-8871310	C16R8-20		2 7	
5962-8871311	C16R6-20		2 7	
5962-8871312	C16R4-20		2 7	
5962-8871501	55454		2 13	
5962-8871502	55464		2 13	
5962-8871503	55474		2 13	
5962-8871601	SG1626		2 13	
5962-8871801	54HC05		2 1	-
5962-8872101	OP-270A		2 9	-

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MILITARY PARTS
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DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-8872102	OP-271A		2 9	
5962-8872201	54F30244		2 2	
5962-8872301	54F09		2 1	
5962-8872401	C22V10L-25		2 7	
5962-8872402	C22V10L-30		2 7	
5962-8872403	C22V10L-40		2 7	
5962-8872404	C22V10L		2 7	-
5962-8872501	(SEE DWG)		2 6	
5962-8872502	(SEE DWG)		2 6	
5962-8872503	(SEE DWG)		2 6	
5962-8872504	(SEE DWG)		2 6	
5962-8872505	(SEE DWG)		2 6	
5962-8872601	V750-40		2 7	
5962-8872602	V750-35		2 7	
5962-8872701	54ALS640A	/38501	2 13	-
5962-8872801	54ALS564A		3 3	
5962-8872901	54AS1004A		3 2	
5962-8873001	54AS1032A		3 2	
5962-8873101	54AS1034A		2 2	
5962-8873301	721055		2 4	
5962-8873302	721065		2 4	
5962-8873303	721075		2 4	
5962-8873401	(SEE DWG)		2 7	
5962-8873402	(SEE DWG)		2 7	
5962-8873403	(SEE DWG)		2 7	
5962-8873404	(SEE DWG)		2 7	-
5962-8873501	(SEE DWG)		2 7	
5962-8873502	(SEE DWG)		2 7	
5962-8873503	(SEE DWG)		2 7	
5962-8873504	(SEE DWG)		2 7	F
5962-8873601	29FCT520A		2 5	
5962-8873602	29FCT521A		2 5	
5962-8873603	29FCT520B		2 5	
5962-8873604	29FCT521B		2 5	
5962-8873701	54ALS1245A		2 13	
5962-8873801	54ALS1244A		2 2	
5962-8873901	TMC208KB5V		2 4	
5962-8873902	TMC208KB5V1		2 4	
5962-8873903	TMC28KUB5V		2 4	
5962-8873904	TMC28KUB5V1		2 4	-
5962-8874001	(SEE DWG)		2 6	
5962-8874002	(SEE DWG)		2 6	
5962-8874101	54ALS259		2 3	
5962-8874201	54ALS1035	/38412	2 2	
5962-8874301	75C48S20		2 17	
5962-8874302	78C48SC30		2 17	-
5962-8874601	7905A		3 12	
5962-8874701	7912A		3 12	
5962-8874801	7915A		3 12	
5962-8874901	7924A		2 12	
5962-8875001	IH5352		2 24	
5962-8875101	(SEE DWG)		2 13	-
5962-8875102	(SEE DWG)		2 13	-
5962-8875201	54F14		2 1	
5962-8875301	54AS651		3 13	
5962-8875401	54AC299		2 5	
5962-8875501	54ACT158		2 4	
5962-8875601	54ACT151		2 4	
5962-8875701	54HCT4046A		2 24	
5962-8875901	54HCT173		2 3	
5962-8876001	LT1013A		2 9	
5962-8876002	LT1013		2 9	
5962-8876101	78S40		2 12	
5962-8876201	LT1021BM-5		2 19	-
5962-8876202	LT1021CM-5		2 19	-
5962-8876203	LT1021DM-5		2 19	
5962-8876301	1568		2 12	
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5962-8876403	7828T		2 17	
5962-8876404	7828U		2 17	
5962-8876501	7549S		2 16	
5962-8876502	7549T		2 16	
5962-8876801	HCPL-5201		1 24	
5962-8876901	HCPL-5231		1 24	
5962-8877001	TSC429		2 13	
5962-8877002	TSC4429		2 13	-
5962-8877003	TSC4420		2 13	-
5962-8877101	54ACT299		2 5	
5962-8877201	ICL8038		2 24	
5962-8877401	54F51		2 1	
5962-8877501	54FCT646		2 13	-
5962-8877601	HS1068		2 17	
5962-8877801	(SEE DWG)		2 16	
5962-8877802	(SEE DWG)		2 16	
5962-8944101	UC1901		2 24	
5962-8944501	54HC4059		2 5	
5962-8945801	54HCT4020		2 5	
5962-8947701	HCPL-5761		1 22	
5962-8947901	REF10A	/12403	2 19	-
5962-8947902	REF10B		2 19	-
5962-8948101	AD7541AS		2 16	
5962-8948102	AD7541AT		2 16	
5962-8948103	PM7541AB		2 16	
5962-8948104	PM7541AA		2 16	
5962-8949801	SDC14561-114		1 24	
5962-8949802	SDC14561-115		1 24	
5962-8949901	SDC14560-114		1 24	
5962-8949901	HSD1066-341H		2 24	
5962-8949902	HSD1066-341V		2 24	
5962-8949902	SDC14560-115		1 24	
5962-8949903	SDC14560-605		1 24	
5962-8949903	HSD1066-381H		2 24	
5962-8950101	UT1553BCRTMP	/55501	2 23	-
5962-8950301	TLC555	/14901	2 14	
5962-8950302	TLC556	/14902	2 14	
5962-8950303	7555	/14903	2 14	
5962-8950304	7556	/14904	2 14	
5962-8950401	LT1017		2 10	
5962-8950402	LT1018		2 10	
5962-8950601	54FCT827A		2 13	
5962-8950602	54FCT827B		2 13	
5962-8950701	54HC4066		2 18	
5962-8950801	54FCT139		2 4	-
5962-8950802	54FCT139A		2 4	-
5962-8950901	RGBDAC3808H		2 16	
5962-8951001	54F27		2 1	
5962-8951101	1525A	/12602	2 12	-
5962-8951102	1527A	/12604	2 12	
5962-8951103	UC1525A		2 12	
5962-8951104	UC1527A		2 12	
5962-8951201	56001-20		2 8	
5962-8951301	54FCT574		2 3	
5962-8951302	54FCT574A		2 3	
5962-8951401	Z84C2006		2 8	
5962-8951501	Z84C3006		2 8	
5962-8951601	Z84C4206		2 8	
5962-8951701	7C9101-45		2 8	
5962-8951702	7C9101-35		2 8	
5962-8951901	BX1750A		2 8	
5962-8951991	BX1750A		2 8	
5962-8952001	(SEE DWG)		2 12	
5962-8952101	(SEE DWG)		2 12	
5962-8952201	BUS-63147		1 13	
5962-8952202	2453		2 13	
5962-8952203	NHI-1529		2 13	
5962-8952301	(SEE DWG)		2 8	
5962-8952302	(SEE DWG)		2 8	
5962-8952303	(SEE DWG)		2 8	
5962-8952304	(SEE DWG)		2 8	
5962-8952401	(SEE DWG)		2 6	
5962-8952402	(SEE DWG)		2 6	
5962-8952403	(SEE DWG)		2 6	
5962-8952404	(SEE DWG)		2 6	
5962-8952405	(SEE DWG)		2 6	
5962-8952501	54AS823		3 3	
5962-8952601	54AS869		3 5	
5962-8952701	68HC811E2		2 8	
5962-8952801	DAC-HKB		2 16	
5962-8952802	DAC-HKB-2		2 16	
5962-8953101H	DAC-HPB		2 16	
5962-8953102H	DAC-HPB-1		2 16	
5962-8953201	88C681		2 13	
5962-8953202	88C681		2 13	
5962-8953203	68C681		2 13	
5962-8953301	54FCT861A		2 13	
5962-8953302	54FCT861B		2 13	
5962-8953401	80387-16		2 8	
5962-8953402	80387-20		2 8	
5962-8953403	80387-25		2 8	
5962-8953501	54F657		2 13	
5962-8953601	(SEE DWG)		2 8	
5962-8953602	(SEE DWG)		2 8	
5962-8953603	(SEE DWG)		2 8	
5962-8953604	(SEE DWG)		2 8	
5962-8953605	(SEE DWG)		2 8	
5962-8953701	(SEE DWG)		2 7	
5962-8953702	(SEE DWG)		2 7	
5962-8953801	(SEE DWG)		2 7	
5962-8953802	(SEE DWG)		2 7	
5962-8953901	54AC157		2 4	
5962-8954001	(SEE DWG)		2 7	
5962-8954002	(SEE DWG)		2 7	
5962-8954101	SMP-11A		3 20	
5962-8954201	OP-15A		3 9	
5962-8954301	OP-16A		3 9	
5962-8954401	OP-97		2 9	-
5962-8954501	54F579		2 5	
5962-8954601	(SEE DWG)		2 7	
5962-8954602	(SEE DWG)		2 7	
5962-8954603	(SEE DWG)		2 7	
5962-8954701	54ACT11008		3 1	
5962-8954801	HA-5102		2 9	
5962-8954901	29818A		2 5	
5962-8955001	54AC86	/75202	2 1	
5962-8955101	54AC109	/75304	2 3	
5962-8955201	54AC175	/75308	2 3	
5962-8955301	54AS640		3 13	
5962-8955401	54F21		2 1	
5962-8955501	54F544		2 13	
5962-8955601	54ACT563		2 3	-
5962-8955701	54ACT564		2 3	
5962-8955801	54F652		2 13	
5962-8956001	SMJ4461		2 6	
5962-8956101	54AC161		2 5	-
5962-8956201	LT1054M		2 24	-

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MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING (Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-8956301H				
	MN5290		2	17
5962-8956302H				
	MN5291		2	17
5962-8956401	604A		2	24
5962-8956501	HS362		2	18
5962-8956601H				
	HS9716		2	20
5962-8956701	(SEE DWG)		2	8
5962-8956702	(SEE DWG)		2	8
5962-8956703	(SEE DWG)		2	8
5962-8956704	(SEE DWG)		2	8
5962-8956705	(SEE DWG)		2	8
5962-8956801	(SEE DWG)		2	8
5962-8956802	(SEE DWG)		2	8
5962-8956803	(SEE DWG)		2	8
5962-8956804	(SEE DWG)		2	8
5962-8956805	(SEE DWG)		2	8
5962-8956901H				
	MN5295		1	17
5962-8957001	HCPL-5401		1	22
5962-8957101	HCPL-5431		1	21
5962-8957102	HCPL-6431		1	22
5962-8957201	HCPL-1931		1	22
5962-8957301	54F299		2	5
5962-8957401	54ALS165		2	5
5962-8957501	UT1760RTS		2	23
5962-8957501	UT1760ARTS		2	23
5962-8957601	UT1553BRTR		2	23
5962-8957701	UT1553BBCRTM		2	8
5962-8958101	REF01A		2	19
5962-8958102	REF01		2	19
5962-8958201	54AC163		2	5
5962-8958301	MN5200		1	17
5962-8958302	MN5203		1	17
5962-8958303	MN5201		1	17 -
5962-8958304	MN5204		1	17 -
5962-8958305	MN5202		1	17 -
5962-8958306	MN5205		1	17 -
5962-8958307	MN5206		1	17 -
5962-8958401	MN5210		1	17
5962-8958402	MN5213		1	17
5962-8958403	MN5211		1	17
5962-8958404	MN5214		1	17
5962-8958405	MN5212		1	17
5962-8958406	MN5215		1	17
5962-8958407	MN5216		1	17
5962-8958601	LM1578		2	12
5962-8958701	LM2940-5.0		2	12
5962-8958801	LM105		3	12
5962-8958901	LM107		2	9
5962-8959001	(SEE DWG)		2	7
5962-8959201	3231		2	13
5962-8959202	3232		2	13
5962-8959203	3231		2	13
5962-8959204	3232		2	13
5962-8959301	82380		2	8
5962-8959401	CLC231A		2	9
5962-8959501	MN5245		1	17
5962-8959501	MN5245		2	17
5962-8959502	MN5245A		2	17
5962-8959502	MN5245A		1	17
5962-8959503	MN5246		2	17
5962-8959503	MN5246		1	17
5962-8959504	MN5246A		2	17
5962-8959504	MN5246A		1	17
5962-8959601	8097BH		2	8
5962-8959801	(SEE DWG)		2	6
5962-8959802	(SEE DWG)		2	6
5962-8959803	(SEE DWG)		2	6
5962-8959804	(SEE DWG)		2	6
5962-8959901	54ACT251		2	4
5962-8960101	54ACT574		2	3
5962-8960201	54ALS541		2	2
5962-8960301	54HC590		2	5
5962-8960401	UH-432		2	13
5962-8960402	UH-432-1		2	13
5962-8960403	UH-532		2	13
5962-8960901	54HC4046A		2	24
5962-8961001	LT1009		2	19
5962-8961101	UC1706		2	13
5962-8961401	(SEE DWG)		2	7
5962-8961402	(SEE DWG)		2	7
5962-8961403	(SEE DWG)		2	7
5962-8961404	(SEE DWG)		2	7
5962-8961405	(SEE DWG)		2	7
5962-8961406	(SEE DWG)		2	7
5962-8961501	DS16F95		2	13
5962-8961601	ADC-908A		2	17
5962-8961602	ADC-908B		2	17
5962-8961603	PM-7574A		2	17
5962-8961604	PM-7574B		2	17
5962-8961701	AD767		2	16
5962-8962001	EL2020		2	24
5962-8962101	LM6161		2	9
5962-8962201	LT1022A		2	9
5962-8962202	LT1022		2	9
5962-8962301	EL2003		2	24
5962-8962302	EL2033		2	24
5962-8962401	LM6164		2	9
5962-8962501	LM6165		2	9
5962-8962601	7806A		2	12
5962-8962801	7808A		2	12
5962-8963001	78C120		2	13
5962-8963301	HA-5033		2	24
5962-8963501	HA-5101		2	9
5962-8963601	HA-5002		2	24
5962-8963701	AD637		2	24
5962-8963801	TSC170		2	24 -
5962-8963802	TSC171		2	24 -
5962-8965201	54FCT399		2	5
5962-8965202	54FCT399A		2	5
5962-8965301	BT102		2	16
5962-8965401	AD9012S		2	17 -
5962-8965402	AD9012T		2	17 -
5962-8965501	AD7672TQ10		2	17
5962-8965502	AD7672UQ10		2	17
5962-8965503	AD7672TQ05		2	17
5962-8965504	AD7672UQ05		2	17
5962-8965701	7547S		2	16 -
5962-8965702	7547T		3	16
5962-8965703	7547U		2	16 -
5962-8965801	54ACT534		2	3
5962-8965802	54ACT11534		3	3
5962-8965901	EL2004		2	24
5962-8966101	(SEE DWG)		2	8
5962-8966102	(SEE DWG)		2	8
5962-8966301	54AS286		2	4
5962-8966401	(SEE DWG)		2	8
5962-8966402	(SEE DWG)		2	8
5962-8966501	54FCT824A		2	5
5962-8966502	54FCT824B		2	5
5962-8966601	(SSE DWG)		2	8
5962-8966601	(SEE DWG)		2	8
5962-8966602	(SEE DWG)		2	8
5962-8966603	(SEE DWG)		2	8
5962-8966604	(SEE DWG)		2	8
5962-8966605	(SEE DWG)		2	8
5962-8966606	(SEE DWG)		2	8
5962-8966701	(SEE DWG)		2	7
5962-8966801	54AS867		3	5
5962-8966901	SW-06B		2	18 -
5962-8967001	OP490A		2	9 -
5962-8967101	DAC8221A		2	16
5962-8967201	DAC8222A		2	16
5962-8967301	OP-50A		2	9
5962-8967302	OP-50B		2	9
5962-8967401	CS5014-S		2	17
5962-8967402	CS5014-T		2	17
5962-8967601	CS5016-S		2	17 -
5962-8967602	CS5016-T		2	17
5962-8967701	LT1014A		2	9
5962-8967702	LT1014		2	9 F
5962-8967801	DAC-8408A		2	16
5962-8967802	DAC-8408B		2	16
5962-8967901	CS5012		2	17
5962-8968001	55ALS160		2	13
5962-8968101	55ALS161		2	13
5962-8968201	54AC646		2	13
5962-8968401	2821		2	24
5962-8968501	2823		2	24
5962-8968601	2824		2	24
5962-8968701	54ALS653		2	13
5962-8968801	54ACT157		2	4
5962-8968901	54ACT257		2	4
5962-8969001	(SEE DWG)		2	6
5962-8969002	(SEE DWG)		2	6
5962-8969101	(SEE DWG)		2	6
5962-8969102	(SEE DWG)		2	6
5962-8969104	(SEE DWG)		2	6
5962-8969106	(SEE DWG)		2	6 -
5962-8969106	(SEE DWG)		2	6 -
5962-8969201	(SEE DWG)		2	6
5962-8969202	(SEE DWG)		2	6
5962-8969203	(SEE DWG)		2	6
5962-8969204	(SEE DWG)		2	6
5962-8969301	54ACT175		2	3
5962-8969401	7C190		2	6
5962-8969501	54HC113		2	3
5962-8969601	(SEE DWG)		2	6
5962-8969602	(SEE DWG)		2	6
5962-8969603	(SEE DWG)		2	6
5962-8969604	(SEE DWG)		2	6
5962-8969605	(SEE DWG)		2	6
5962-8969606	(SEE DWG)		2	6
5962-8969701	AD7846		2	16
5962-8969801	AD7579		2	17 -
5962-8969802	AD7580		2	17 -
5962-8970001	54HCT123		2	3
5962-8970101	54HCT175		2	3
5962-8970201	54HCT112		2	3
5962-8970301	54HCT27		2	1
5962-8970401	54HCT164		2	5
5962-8970501	54HCT257		2	4
5962-8970701	54HCT162		2	5
5962-8970801	54HCT258		2	4
5962-8970901	54HCT11		2	1 -
5962-8971001	ADG526A		2	18
5962-8971002	ADG527A		2	18
5962-8971101	TMC2023V		2	23
5962-8971102	TMC2023V1		2	23

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MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING(Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	N A T O
5962-8971801	MN3020		1	16
5962-8972201	54F30245		2	13
5962-8972301	54F259		2	3
5962-8972401	54F574	/34110	2	3
5962-8972501	82510		2	8
5962-8972601	80C451		3	8
5962-8972602	83C451		2	8
5962-8972801	AD588S		2	19
5962-8972802	AD588T		2	19
5962-8972901	54AC158		2	4
5962-8973001	54FCT543		2	13
5962-8973002	54FCT543A		2	13
5962-8973101	54FCT833A		2	13
5962-8973102	54FCT833B		2	13
5962-8973201	54FCT241		2	2
5962-8973202	54FCT241A		2	2
5962-8973301	54FCT191		2	5
5962-8973302	54FCT191A		2	5
5962-8973401	54ACT04		2	1
5962-8973402	54ACT11004		3	1
5962-8973501	54ACT273		2	3
5962-8973601	54ACT32		2	1
5962-8973602	54ACT11032		3	1
5962-8974001	54HCT640		2	13
5962-8974101	54HCT597		2	5 -
5962-8974301	54HCT174		2	3
5962-8974501	54HCT238		2	4
5962-8974601	54HCT30		2	1
5962-8974701	54HCT04	/65751	2	1
5962-8974801	54LS642		2	13
5962-8974901	54AC191		2	5
5962-8975101	54HCT02		2	1
5962-8975401	54F646		2	13
5962-8975402	54F648		2	13
5962-8975501	C22V10L		2	7
5962-8975502	C22V10L		2	7
5962-8975503	C22V10L		2	7 -
5962-8975701	54AS885		3	4
5962-8976301	DG403		2	18
5962-8976501	54HC283		2	4
5962-8976601	54FCT541		2	2
5962-8976602	54FCT541A		2	2 -
5962-8976701	54FCT540		2	2
5962-8976702	54FCT540A		2	2
5962-8976901	54HCT377		2	3
5962-8977101	54HCT4060		2	5
5962-8977701	7684T		2	17
5962-8977702	7684S		2	17
5962-8978001	3523		2	24
5962-8978201	LTC1052		2	9
5962-8978301	OP-290		2	9
5962-8978501	HCPL-5731		1	25
5962-8978502	HCPL-6731		1	25 -
5962-8979301	54ACT520		2	4
5962-8979302	54ACT521		2	4
5962-8980301	SL523AC		2	24
5962-8980701	AD630		2	24
5962-8980901	AD539		2	24
5962-8981001	HCPL-5701		1	25 -
5962-8981301	1437		2	9
5962-8982101	DS1634		2	13 -
5962-8982401	AD586S		2	19
5962-8982402	AD586T		2	19
5962-8982501	AD587SQ		2	19
5962-8982502	AD587TQ		2	19
5962-8982503	AD587UQ		3	19
5962-8983001	LTC1090		2	8
5962-8983901	16V8A		2	7
5962-8983902	16V8A		2	7
5962-8983903	16V8A		2	7 -
5962-8984001	20V8		2	7
5962-8984002	20V8		2	7
5962-8984003	20V8		2	7
5962-8984101	22V10		2	7
5962-8984102	22V10		2	7
5962-8984103	22V10		2	7
5962-8984201	ICL8211		2	24
5962-8984202	ICL8212		2	24
5962-8984301	54HCT10		2	1
5962-8984401	54HCT86		2	1
5962-8984501	54HCT132		2	1
5962-8984701	54ACT241		2	2
5962-8984702	54ACT11241		3	2
5962-8984901	54HCT534		2	3
5962-8985501M				
	CY7C331-40		2	7
5962-8985502M				
	CY7C331-30		2	7
5962-8985503M				
	CY7C331-25		2	7
5962-8985601	10H509		2	1
5962-8986301	(SEE DWG)		2	8
5962-8986302	(SEE DWG)		2	8
5962-8986303	(SEE DWG)		2	8
5962-8986304	(SEE DWG)		2	8
5962-8986305	(SEE DWG)		2	8
5962-8986306	(SEE DWG)		2	8
5962-8986701	UH-507		2	13
5962-8987101	CMP-01		2	10
5962-8987701	(SEE DWG)		3	13
5962-8988301	(SEE DWG)		2	6
5962-8988302	(SEE DWG)		2	6
5962-8988303	(SEE DWG)		2	6
5962-8988901	54ALS870		2	5
5962-8989001	54HCT393		2	5
5962-8989101	(SEE DWG)		2	6
5962-8989102	(SEE DWG)		2	6
5962-8989103	(SEE DWG)		2	6
5962-8989104	(SEE DWG)		2	6
5962-8989105	(SEE DWG)		2	6
5962-8989106	(SEE DWG)		2	6
5962-8989201	(SEE DWG)		2	6
5962-8989202	(SEE DWG)		2	6
5962-8989203	(SEE DWG)		2	6
5962-8989204	(SEE DWG)		2	6
5962-8989205	(SEE DWG)		2	6
5962-8989206	(SEE DWG)		2	6
5962-8990401	CMP404A		2	10
5962-8990402	CMP404B		2	10
5962-8990403	CMP04B		2	10
5962-8990801	SDC14565-114		1	24
5962-8990802	SDC14565-115		1	24
5962-8990803	SDC14565-616		1	24
5962-8990804	SDC14566-115		1	24
5962-8992101	LM129A	/12402	2	19
5962-8992102	LM129B	/12406	2	19 F
5962-8992103	LM129C		2	19
5962-8992501	54LS378		2	3
5962-8992801	BT458		2	16
5962-8993201	DAC08		2	16
5962-8994201	(SEE DWG)		2	8
5962-8994202	(SEE DWG)		2	8 -
5962-8994203	(SEE DWG)		2	8
5962-8994204	(SEE DWG)		2	8
5962-8994301	(SEE DWG)		2	8
5962-8994302	(SEE DWG)		2	8
5962-8994303	(SEE DWG)		2	8
5962-8994304	(SEE DWG)		2	8
5962-8994401	54LS248		2	4
5962-8994501	54ALS996		2	3 -
5962-8994601	54HC190		2	5
5962-8995601	54ALS646		2	13
5962-8995701	UC1637		2	24
5962-8995901	L4C381-45		2	5
5962-8996101	DG405		2	18 -
5962-8996901	DG405		3	9
5962-8996901	35074		3	9
5962-8996902	35074A		3	9
5962-8998101	(SEE DWG)		2	12
5962-8998201	80C196KB		2	8
5962-8998901	54HC623		2	13
5962-9050201	54F198		2	5
5962-9050301	54LS396		2	5
5962-9051301	AM29833A		2	13
5962-9051302	AM29853A		2	13
5962-9051303	AM29855A		2	13
5962-9051401M				
	54BCT245		2	13
5962-9051501	AM29C818		2	5
5962-9052201	DS1632		3	13
5962-9052301	54ALS648		2	13
5962-9053501	OP64A		2	9
5962-9053601	OP-260A		2	9
5962-9055301	54HC40103		2	5
5962-9055401	HSDC-8915A		2	24
5962-9055402	HSDC-8915		2	24
5962-9056301	54AS756		2	2
5962-9056801	OP-237A		2	9
5962-9056802	OP-237C		2	9
5962-9056901	DG401		2	18 -
5962-9057401	54HCT40102		2	5
5962-9058501	54F432		2	3
5962-9060301	REF-43		2	19
5962-9060401	TLC274		2	9
5962-9060402	TLC279		2	9
5962-9061301	54HCT237		2	4
5962-9061601	54ALS29821		2	3
5962-9062501M				
	54BCT244		2	13
5962-9070401Q				
	WEDSP-16		1	23
5962-9070701H				
	SDC14500-635		2	22
5962-9070702H				
	SDC14500-636		2	22
5962-9070703H				
	SDC14502-605		2	22
5962-9070704H				
	SDC14502-606		2	22
5962-9074601M				
	54BCT373		2	3
5962-9074801M				
	54BCT540		2	13
5962-9074901M				
	54BCT541		2	13
5962-9075001M				
	54BCT520A		2	13
5962-9075001M				
	54BCT620A		2	13
5962-9075201M				
	54FCT640		2	13

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MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING (Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
5962-9075201M				
	54BCT640		2 13	
5962-9075401M				
	(SEE DWG)		2 7	
5962-9075402M				
	(SEE DWG)		2 7	
5962-9075403M				
	(SEE DWG)		2 7	
5962-9076601M				
	96F175		2 13	
5962-9076602M				
	96F173		2 13	
5962-9080701M				
	TLE2061M		2 9	
5962-9080801M				
	TLE2062M		2 9	
5962-9080901M				
	TLE2064		2 9	
5962-9081801M				
	EL2030		2 24	
5962-9085401H				
	HCPL-5501		2 23	
5962-9087801M				
	AH5010		2 18	
5962-9088001M				
	AH5012		2 18	
5962-9089501M				
	TLC2652M		2 9	
5962-9089502M				
	TLC2654M		2 9	
5962-9089601M				
	TLE2072M		2 9	
5962-9089601M				
	TLE2027M		2 9	
5962-9089602M				
	TLE2037M		2 9	
5962-9093701M				
	54BCT125		2 2	
5962-9094001M				
	54BCT623		2 13	
5962D8753801	HS-1840RH		2 18	
7600201	54LS157	/30903	2 4 P	
7600301	54LS122	/31403	2 3 P	
7600401	54LS132	/31303	2 1 P	
7600501	54LS138	/30701	2 4 P	
7600601	54LS193	/31508	2 5 P	
7600701	54LS139	/30702	2 4 P	
7600801	54LS161	/31504	2 5 P	
7600901	54LS191	/31509	2 5 P	
7601001	54LS151	/30901	2 4 P	
7601101	54LS153	/30902	2 4 P	
7601201	54LS75	/31601	2 3 P	
7601301	54LS76A	/30110	2 3 F	
7601401	54LS83A	/31201	2 4 F	
7601501	54LS197	/32002	2 5 P	
7601601	54LS251	/30905	2 4 P	
7601701	54LS253	/30908	2 4 P	
7601801	54LS279	/31602	2 3 P	
7601901	54LS298	/30909	2 4 P	
7602001	54LS26	/32102	2 1 P	
7603101	54LS42	/30703	2 4 F	
7603201	54LS90	/31501	2 5 P	
7603301	54LS158	/30904	2 4 -	
7603401	54LS163A	/31512	2 5 P	
7603501	54LS190	/31513	2 5 F	
7603601	54LS192	/31507	2 5 P	
7603701	54LS257B	/30906	2 4 F	
7603801	54LS258B	/30907	2 4 F	
7603901	54LS123	/31401	2 3 P	
7604001	54S194	/07601	3 5 L	
7604101	54S138	/07701	3 4 L	
7604201	54LS221	/31402	2 3 P	
7604301	54LS283	/31202	2 4 P	
7604501	54LS47	/30704	2 4 F	
7700101	54LS93	/31502	2 5 F	
7700201	8080A	/42001	3 8 L	
7700401	54S139	/07702	3 4 L	
7700601	54LS165A	/30608	2 5 F	
7700701	2901A		3 8	
7700702	AM2901		3 8	
7700801	LM139	/11201	2 10 F	
7700901	54LS160A	/31503	2 5 F	
7701001	54LS196	/32001	2 5 F	
7702001	4520B	/17403	3 2 P	
7702301	4520B		3 5 -	
7702401	4081B	/17001	3 1 P	
7702501	4094B		3 5 -	
7702601	4044B		3 3 -	
7702701	4069UB	/17401	3 1 P	
7702801	LM103H-1.8		3 19 L	
7702802	LM103H-2.0		3 19 L	
7702803	LM103H-2.2		3 19 L	
7702804	LM103H-2.4		3 19 L	
7702805	LM103H-2.7		3 19 L	
7702806	LM103H-3.0		3 19 -	
7702807	LM103H-3.3		2 19 -	
7702808	LM103H-3.6		2 19 -	
7702809	LM103H-3.9		2 19 L	
7702810	LM103H-4.3		2 19 L	
7702811	LM103H-4.7		3 19 L	
7702812	LM103H-5.1		3 19 L	
7702813	LM103H-5.6		3 19 L	
7703001	54185A		3 4 L	
7703101	4060A		3 5 L	
7703201	4515B	/17302	3 4 -	
7703301	CA3130BT		3 9 -	
7703401	LM117H	/11704	2 12 F	
7703402	LM117HV		2 12 -	
7703403	LM137H	/11804	2 12 F	
7703404	LM137HV		2 12 -	
7703405	LT117A		2 12 -	
7703406	LT137A		2 12 -	
7703407	LT117AHV		2 12 -	
7703408	LT137AHV		2 12 -	
7703501	4514B	/17301	3 3 -	
7703601	54C08		3 1 -	
7703701	54C85		3 4 -	
7703702	4585B		3 4 -	
7703901	4250		2 9 -	
7704001	LM120H-05	/11505	2 12 L	
7704003	LM120H-12	/11506	2 12 L	
7704004	LM120H-15	/11507	2 12 -	
7704005	LM120H-24	/11508	2 12 F	
7704101	54LS124		3 24 -	
7704201	54LS670	/31901	2 5 -	
7704301	LM124	/11005	2 9 F	
7704302	LM124A	/11006	2 9 -	
7704401	4078B		3 1 -	
7704501	4528B		3 3 -	
7704502	4528B		3 3 -	
7704601	4093B	/17701	3 1 P	
7704602	4093B		3 1	
7704701	4555B	/17304	3 4 -	
7704801	4556B	/17305	3 4 -	
7704901	55452	/12903	2 13 -	
7705001	XR2211M		2 24 F	
7705101	4073B		3 1 P	
7705201	508	/19007	2 18 F	
7705202	508A	/19005	2 18 F	
7705203	IH5108		2 18 P	
7705301	201	/12302	2 18 -	
7705401	4194		2 12 -	
7705501	4098B	/17504	3 3 F	
7705601	54C906		3 2 -	
7705701	54LS244	/32403	2 2 -	
7705801	4040B		3 5 -	
7705901	4082B	/17002	3 1 P	
7706001	4072B	/17102	3 1 P	
7800301	LM144		2 9 -	
7800302	2640		2 9 -	
7800303	LM143		2 9 L	
7800304	1536		2 9 P	
7800701	LM709		3 9 L	
7800801	0056		3 13 L	
7800802	0026		3 13 L	
7800901	10516		2 13 -	
7801001	54LS273	/32501	2 3 P	
7801101	54LS374	/32503	2 3 P	
7801201	54LS240	/32401	2 2 P	
7801301	LH0002		1 9 L	
7801301	LH0002		1 9 L	
7801301	LH0002		2 9 L	
7801301	LH0002		1 9 L	
7801401	DG129A		2 18 L	
7801501	27S07A		2 6 -	
7801502	54S189		2 6 -	
7801503	27S07		2 6 -	
7801504	27LS07		2 6 -	
7801505	27S07-20		2 6 -	
7801506	27LS07-30		2 6 -	
7801601	(SEE DWG)	/20802	2 7 F	
7801602	(SEE DWG)		2 7 -	
7801701	2910		2 8 F	
7801702	2910A		2 8 -	
7801801	AM686		2 10 -	
7801901	AM687		2 10 -	
7801902	AM6687		2 10	
7801903	AD96687		2 10	
7802001	26LS32		2 13 -	
7802002	26LS33		2 13 -	
7802003	26LS32A		3 13 -	
7802004	26LS33A		3 13 -	
7802201	(SEE DWG)		2 7 -	
7802205	(SEE DWG)		2 7 -	
7802206	(SEE DWG)		2 7 -	
7802207	(SEE DWG)		2 7 -	
7802208	(SEE DWG)		2 7 -	
7802209	(SEE DWG)		2 7 -	
7802301	26LS31		2 13 -	
7802401	54LS299		2 5 -	
7802402	25LS299		3 5 -	
7802601	54LS390	/32701	2 5 P	
7802701	54LS148	/36001	2 4 P	
7802801	1524	/12601	2 12 -	
7802901	15530		2 4 -	
7901001	8085A		3 8 L	
7901101	4013B	/05151	3 3 P	
7901102	4013B		3 3	
7901201	4021B	/05754	3 5 P	
7901301	4023B	/05053	3 1 P	
7901401	4049UB	/05553	3 2 P	

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DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	NATO
7901501	4052B		3 18	-
7901601	4557B		3 5	-
7901701	1854		3 13	L
7901801	1823		3 6	L
7901901	1853		3 4	-
7902401	(SEE DWG)		3 7	L
7902402	(SEE DWG)		2 7	-
8000301	Z8001CPU	/52001	2 8	-
8000302	Z8002CPU	/52002	2 8	F
8000303	Z8001ACPU	/52003	2 8	-
8000304	Z8001B		2 8	-
8000305	Z8002B		2 8	-
8000306	Z8002ACPU	/52004	2 8	F
8001201	(SEE DWG)		2 7	-
8001202	(SEE DWG)		3 7	-
8001203	(SEE DWG)		2 7	-
8001204	(SEE DWG)		2 7	-
8001205	(SEE DWG)		3 7	-
8001206	(SEE DWG)		3 7	-
8001208	(SEE DWG)		2 7	-
8001209	(SEE DWG)		2 7	-
8001210	(SEE DWG)		2 7	-
8001211	(SEE DWG)		2 7	-
8001301	0032		1 9	-
8001301	0032		1 9	-
8001301	0032		2 9	-
8001301	0032		1 9	-
8001401	LH0033		1 9	-
8001401	LH0033		1 9	-
8001401	LH0033		2 9	-
8001401	LH0033		1 9	-
8001401	LH0033		1 9	-
8001601	2420		2 20	F
8001701	54LS166	/30609	2 5	F
8001801	54LS168	/31505	2 5	-
8001802	54LS169	/31506	2 5	F
8001901	54LS09	/31005	2 1	P
8002001	54LS242	/32801	2 13	P
8002002	54LS243	/32802	2 13	P
8002101	54LS245	/32803	2 13	P
8002201	54S251	/07905	3 4	L
8002301	54S258	/07907	3 4	L
8002501	54LS170	/31902	2 5	F
8002601	54LS261	/31801	2 4	-
8003701	LM106	/10303	3 10	L
8004101	7831	/10406	3 13	F
8004102	7832	/10407	3 13	F
8100601	HI5040	/10501	2 18	F
8100602	IH5041	/10502	2 18	F
8100603	IH5042	/10503	2 18	F
8100604	IH5043	/10504	2 18	F
8100605	IH5044	/10505	2 18	F
8100606	IH5045	/10506	2 18	F
8100607	IH5046	/10507	2 18	-
8100608	IH5047	/10508	2 18	-
8100609	DG5140		2 18	
8100610	DG5141		2 18	F
8100611	DG5142		2 18	-
8100612	HI5043		2 18	-
8100613	DG5144		2 18	-
8100614	HI5045		2 18	-
8100615	HI5046		2 18	-
8100616	HI5047		2 18	F
8100617	HI5046A		2 18	F
8100618	HI5047A		2 18	F
8100619	IH5148		2 18	F
8100620	HI5049		2 18	-
8100621	HI5050		2 18	-
8100622	HI5051		2 18	-
8100801	562	/12101	2 16	-
8100802	563	/12102	2 16	-
8101501	(SEE DWG)		3 6	L
8101601	4029B		3 5	-
8101602	4029B		3 5	-
8101701	4035B		3 5	-
8101702	14035B		3 5	
8101801	4053B		3 18	-
8101901	4042B		3 3	-
8102001	4047B		3 3	-
8102101	54LS629		2 24	-
8102301	061	/11901	2 9	-
8102302	062	/11902	2 9	-
8102303	064	/11903	2 9	-
8102304	071	/11904	2 9	F
8102305	072	/11905	2 9	F
8102306	074	/11906	2 9	F
8102401	(SEE DWG)		2 6	F
8102402	(SEE DWG)		2 6	F
8102403	(SEE DWG)		2 6	
8102404	(SEE DWG)		2 6	P
8102405	(SEE DWG)	/24501	2 6	-
8102406	(SEE DWG)	/24502	2 6	-
8102407	(SEE DWG)		3 6	-
8102801	6N134		1 22	F
8103501	PAL10H8	/50301	2 7	F
8103502	PAL12H6	/50302	2 7	-
8103503	PAL14H4	/50303	2 7	-
8103504	PAL16H2	/50304	2 7	F
8103505	PAL16C1	/50305	2 7	F
8103506	PAL10L8	/50306	2 7	F
8103507	PAL12L6	/50307	2 7	-
8103508	PAL14L4	/50308	2 7	F
8103509	PAL16L2	/50309	2 7	F
8103510	PAL10H8A	/50310	2 7	-
8103511	PAL12H6A	/50311	2 7	F
8103512	PAL14H4A	/50312	2 7	F
8103513	PAL16H2A	/50313	2 7	-
8103514	PAL10L8A	/50315	2 7	-
8103515	PAL12L6A	/50316	2 7	F
8103516	PAL14L4A	/50317	2 7	F
8103517	PAL16L2A	/50318	2 7	F
8103601	PAL16L8		2 7	F
8103602	PAL16R8		2 7	-
8103603	PAL16R6		2 7	-
8103604	PAL16R4		3 7	F
8103605	PAL16X4	/50405	3 7	-
8103606	PAL16A4	/50406	3 7	-
8103607	PAL16L8A	/50401	2 7	F
8103608	PAL16R8A	/50402	2 7	F
8103609	PAL16R6A	/50403	2 7	F
8103610	PAL16R4A	/50404	2 7	F
8103611	PAL16L8A-2	/50407	2 7	F
8103612	PAL16R8A-2	/50408	2 7	-
8103613	PAL16R6A-2	/50409	2 7	-
8103614	PAL16R4A-2	/50410	2 7	-
8103901	(SEE DWG)		3 6	
8103902	(SEE DWG)		3 6	
8103903	(SEE DWG)		3 6	
8103904	(SEE DWG)		3 6	
8103905	(SEE DWG)		3 6	
8103906	(SEE DWG)		2 6	-
8103907	(SEE DWG)		2 6	-
8103908	(SEE DWG)		2 6	-
8200501	2764-450		2 7	-
8200502	2764-250		2 7	-
8200503	2764A-35		2 7	-
8200504	2764A-25		2 7	-
8200505	2764A-20		2 7	-
8200506	2764-150		2 7	-
8200507	2764-200		2 7	
8200701	4167		2 6	-
8200702	2167-70		2 6	-
8200703	2167-55		2 6	-
8200704	2167-40		2 6	-
8200801	(SEE DWG)	/21102	2 7	-
8200802	(SEE DWG)	/21101	2 7	F
8200803	(SEE DWG)		2 7	F
8200804	(SEE DWG)	/21103	2 7	
8200901	(SEE DWG)		2 7	-
8200902	(SEE DWG)	/21204	2 7	F
8200903	(SEE DWG)		2 7	-
8201001	(SEE DWG)		2 6	-
8201002	(SEE DWG)		2 6	-
8201003	(SEE DWG)		2 6	-
8201004	(SEE DWG)		2 6	-
8201005	(SEE DWG)		2 6	-
8201006	(SEE DWG)		2 6	-
8201007	(SEE DWG)		2 6	-
8201008	(SEE DWG)		2 6	-
8202101	MKB68000-6	/54001	3 8	-
8202102	MKB68000-8	/54002	2 8	-
8202103	68000-10	/54003	2 8	-
8202104	68000-12		2 8	-
8202201	40174B	/17505	3 3	-
8202501	(SEE DWG)		3 7	-
8202502	(SEE DWG)		3 7	-
8202503	(SEE DWG)		2 7	-
8202504	(SEE DWG)		2 7	F
8202505	(SEE DWG)		2 7	-
8202506	(SEE DWG)		2 7	-
8202507	(SEE DWG)		2 7	-
8202508	(SEE DWG)		3 7	-
8202509	(SEE DWG)		2 7	-
8203601	OP-07A	/13501	2 9	-
8203602	OP-07	/13502	2 9	-
8300101	Z8536		2 8	-
8300102	Z8536A		2 8	-
8300201	DAC87	/13703	2 16	-
8300201	DAC87		1 16	-
8300301	DAC87	/13702	2 17	-
8301301	NSC800		2 8	-
8301302	NSC800-4		2 8	-
8301501	Z8442A		2 8	F
8301502	Z8442		2 8	F
8301601	Z8430A		2 8	F
8301602	Z8430		2 8	F
8301701	54LS154		2 4	F
8301901	54ALS174	/37201	2 3	F
8301902	54ALS175	/37202	2 3	F
8302001	54ALS373	/37203	2 3	-
8302002	54ALS374	/37204	2 3	-
8302101	54ALS299	/37601	2 5	-
8302102	54ALS323	/37602	2 5	F
8302201	54ALS161B	/38001	2 5	-
8302202	54ALS163B	/38002	2 5	-
8302203	54ALS561A	/38004	2 5	
8302401	6N140A		2 22	F
8302401	6N140A		1 22	F
8302501	54ALS169B	/38003	2 5	F
8302502	54ALS569A	/38005	2 5	F
8400001	54ALS109A	/37102	2 3	F

MILITARY

MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING (Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Function Code	N A T O
8400002	54ALS112A	/37103	2 3	-
8400101	54ALS574A	/37104	2 3	-
8400102	54ALS576A	/37105	2 3	-
8401001	54ALS874B	/37106	2 3	F
8401002	54ALS876	/37107	3 3	-
8401101	54ALS74A	/37101	2 3	F
8401201	54ALS573	/38201	2 3	-
8401202	54ALS580	/38202	2 3	-
8401301	54ALS242B	/38506	2 13	-
8401302	54ALS243A	/38507	2 13	F
8403001	54ALS245A		2 13	-
8403101	54ALS1034	/38411	2 2	-
8403201	54ALS873	/38203	2 3	-
8403202	54ALS880	/38204	3 3	-
8403301	54ALS645A	/38505	2 13	-
8403601	(SEE DWG)	/29102	2 6	F
8403602	(SEE DWG)	/29104	2 6	F
8403603	(SEE DWG)		2 6	P
8403604	(SEE DWG)	/29101	2 6	P
8403605	(SEE DWG)	/29105	3 6	F
8403606	(SEE DWG)	/29110	2 6	P
8403607	(SEE DWG)		2 6	-
8403608	(SEE DWG)		2 6	-
8403609	(SEE DWG)		2 6	-
8403610	(SEE DWG)		2 6	-
8403611	(SEE DWG)		2 6	-
8403612	(SEE DWG)		2 6	-
8403613	(SEE DWG)		2 6	-
8403614	(SEE DWG)		2 6	-
8403615	(SEE DWG)		2 6	-
8403616	(SEE DWG)		2 6	-
8403701	54HC00	/65001	2 1	P
8403801	54HC10	/65002	2 1	P
8403901	54HC20	/65003	2 1	P
8404001	54HC30	/65004	2 1	P
8404101	54HC02	/65101	2 1	P
8404201	54HC27	/65102	2 1	P
8404301	54HC266	/65103	2 1	F
8404302	54HC7266	/65105	2 1	-
8404401	54HC4002	/65104	2 1	P
8404501	54HC32	/65201	2 1	P
8404601	54HC86	/65202	2 1	P
8404701	54HC08	/65203	2 1	P
8404801	54HC11	/65204	2 1	-
8405201	80C86		2 8	P
8405202	80C86-2		2 8	
8405301	32010		2 8	-
8405601	54HC74	/65302	2 3	F
8405701	2901C		2 8	-
8405901	54ALS1000A	/38401	2 2	-
8406001	54ALS1010A	/38405	2 2	-
8406101	54ALS1004	/38409	2 2	-
8406201	54HC138	/65802	2 4	-
8406401	54HC147		2 4	-
8406501	82C54		2 8	-
8406601	82C55A-5		2 8	-
8406602	82C55A		2 8	-
8406701	82C82		2 13	-
8406702	82C83		2 13	-
8406801	82C84A		2 13	P
8406901	82C88		2 8	P
8407001	54HC75	/65401	2 3	P
8407101	54HC374	/65602	2 3	P
8407201	54HC373	/65403	2 3	P
8407301	54HC174	/65307	2 3	F
8407401	54HC240	/65703	2 2	-
8407501	54HC161	/66302	2 5	P
8407901	54ALS162A	/38102	2 5	P
8408501	54HC245	/65503	2 13	P
8408801	54HC112	/65305	2 3	F
8408901	54HC175	/65308	2 3	P
8409001	54HC243	/65502	2 13	P
8409101	54HC14	/65702	2 1	F
8409201	54HC139	/65803	2 4	F
8409301	54HC153	/66202	2 4	-
8409401	54HC162	/66303	2 5	P
8409501	54HC165	/66502	2 5	P
8409601	54HC244	/65705	2 2	P
8409701	54ALS1008A	/38404	2 2	P
8409801	54HC04	/65701	2 1	P
8409901	54HC273	/65601	2 3	F
8410001	54HC393	/66309	2 5	F
8410901	431	/14801	2 12	-
8411101	27256-35		3 7	-
8411102	27256-250	/22401	2 7	F
8411103	27256-200	/22402	2 7	F
8411104	27256-170	/22403	2 7	F
8411105	27256-30		3 7	-
8412801	54HC151	/66201	2 4	F
8412901	PAL20L8A	/50501	2 7	F
8412902	PAL20R8A	/50502	2 7	F
8412903	PAL20R6A	/50503	2 7	F
8412904	PAL20R4A	/50504	2 7	-
8412905	PAL20L10A		2 7	-
8412906	PAL20X8A		2 7	F
8412907	PAL20X10A		2 7	-
8412908	PAL20X4A		2 7	-
8412909	PAL20L8A-2		2 7	F
8412910	PAL20R8A-2		2 7	F
8412911	PAL20R6A-2		2 7	-
8412912	PAL20R4A-2		2 7	-
8413201	(SEE DWG)	/29103	2 6	-
8413202	(SEE DWG)	/29106	2 6	-
8413203	(SEE DWG)		2 6	
8413204	(SEE DWG)		2 6	
8413205	(SEE DWG)		2 6	
8413206	(SEE DWG)		2 6	
8413207	(SEE DWG)		2 6	
8413208	(SEE DWG)		2 6	
8413209	(SEE DWG)		2 6	-
8413401	54ALS153		2 4	-
8413501	54ALS251		2 4	-
8413601	54ALS273		2 3	-
8414101	54ALS151		2 4	-
8414201	54ALS09		2 1	-
8414301	54ALS21		2 1	P
8414501	54ALS832		2 13	-
8415001	54HC109	/65304	2 3	-
8415101	54LS682		2 10	-
8415201	54LS684		2 10	F
8415301	54LS688		2 10	F
8415401	54LS399		2 5	-
8415501	54LS540	/32404	2 2	F
8415601	54LS541	/32405	2 2	F
8416101	54LS640		2 13	-
8416201	54HC164	/66501	2 5	-
8416901	F9450-15		2 8	-
8416902	F9450-F18		2 8	-
8416903	F9450-F20		2 8	-
8416904	F9450-F15		2 8	-
8417901	8282		3 3	-
8417902	8283		3 3	-
8417903	8282		2 3	
8417904	8283		2 3	
8418001	LM136A-2.5		2 19	-
8418002	LM136A-5.0		2 19	P
8418501	733		2 9	P
8418502	592		2 9	-
8418601	Z8420A		2 8	P
8418602	Z8420		2 8	-
8419001	8751H-8		2 8	P
8419002	8751H		2 8	-
8500101	54HC365	/65706	2 2	-
8500201	54HC367	/65708	2 2	-
8500301	54HC4020	/66311	2 5	-
8500401	54HC4040	/66313	2 5	-
8501001	M80186-8		2 8	-
8501002	M80186-6		2 8	-
8501501	82C52		2 8	-
8503001	2700		2 19	-
8503001	2700		1 19	-
8503002	2700U		2 19	-
8503003	2702S		2 19	-
8503004	2702U		2 19	-
8503005	2701		2 19	
8503006	2701		2 19	
8506301	8097		2 8	-
8506401	80C31		2 8	-
8506402	80C51		2 8	-
8506403	80C31BH-16		2 8	
8506404	80C51BH-16		2 8	
8506501	PAL16L8A-4		2 7	-
8506502	PAL16R8A-4		2 7	-
8506503	PAL16R6A-4		2 7	F
8506504	PAL16R4A-4		2 7	-
8508401	54LS145		2 4	-
8508701	LH0041		1 9	-
8508701	LH0041		2 9	-
8508701	LH0041		1 9	-
8508801	LH0021		1 9	-
8508801	LH0021		2 9	-
8508901	LH0101A		2 9	-
8508902	LH0101		2 9	-
8509601	54ALS253		2 4	-
8509701	54ALS257		2 4	-
8510201	27C64-25	/27502	3 7	-
8510202	27C64-35	/27501	3 7	-
8510203	27C64-20	/27503	3 7	-
8510204	27C64-90		2 7	-
8510205	27C64-12		3 7	-
8510206	27C64-15		3 7	-
8510207	57C64-70		2 7	-
8512401	54HC257	/66207	2 4	F
8512501	54HC251B	/66205	2 4	-
8512601	54LS33		2 2	-
8512801	54HC573	/65406	2 3	-
8513001	54HCT244	/65755	2 2	-
8515201	(SEE DWG)		2 6	F
8515202	(SEE DWG)		2 6	F
8515203	(SEE DWG)		2 6	F
8550001	UH-508		2 13	-
8550201	8X305		2 8	-
8550202	8X305-10		2 8	F
8550401	54HCT138	/65852	2 4	F
8550501	54HCT240	/65753	2 2	F
8550601	54HCT245	/65553	2 13	-
8550701	54HCT374	/65652	2 3	F
8550801	54LS353		2 4	-
8551101	54F245	/34803	2 13	-
8551401	REF02A		2 19	-
8551501	1526	/12603	2 12	

MILITARY PARTS
Cross Reference SORTED BY DESC DRAWING -OR- MIL DRAWING(Cont'd)

DESC Drawing -or- MIL Drawing	Generic Industry Number	MIL-M-38510/	Table/ Func-tion Code	NATO
8551502	1526A		2 12	
8551701	Z8036A		2 8	
8551702	Z8036		2 8	F
8551901	54HC259	/65402	2 3	-
8552001	8397		2 8	-
8600801	685		2 10	-
8600802	685		2 10	-
8600803	6685		2 10	-
8600804	96685		2 10	-
8600901	54HC390	/66308	2 5	-
8601001	54HCU04		2 1	F
8601101	54HC4017	/66310	2 5	-
8601201	54HC4024	/66312	2 5	P
8601301	54HC85		2 4	-
8601401	LM119	/10306	2 10	-
8601402	LT119A	/10307	2 10	-
8601701	2904		2 8	-
8601801	55500		2 13	-
8601802	55501		2 13	-
8602001	27LS00		2 6	L
8602002	27LS00A		2 6	-
8602003	27LS01		2 6	-
8602004	27LS01A		2 6	-
8602301	82S16		3 6	-
8602501	29705A		2 6	F
8602701	2909A		2 8	-
8602801	2911A		2 8	-
8602901	2914		2 8	-
8603001	2940		2 8	-
8605001	AM2932		3 8	-
8605101	27S02		2 6	-
8605102	27S02A		2 6	-
8605103	27LS02		2 6	-
8605104	27S03		2 6	-
8605105	27S03A		2 6	-
8605106	27LS03		2 6	-
8605107	27S02-20		2 6	
8605108	27S03-20		2 6	-
8605109	27LS03-30		2 6	-
8607601	54HC163	/66304	2 5	-
8607701	54HC280		2 4	-
R24503	6504RH	/R2450	1 6	

MILITARY

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DIGITAL

Description	M38510/	Device	Source
Quad 2-Input NAND Buffer/Driver, O/C	00805	5426	National
Hex Buffer/Driver, O/C High Voltage Output	00803	5407	National
		5407	TI
	00804	5417	National
		5417	TI
Hex Inverter Buffer/Driver, O/C High Voltage Output	00801	5406	National
		5406	TI
	00802	5416	National
		5416	TI

Arithmetic Functions

Description	M38510/	Device	Source
ALU/Function Generator	07801	54S181	Signetics
Arithmetic Logic/Function Generator	01101	54181	National
	30801	54LS181	Motorola
Decoder/Demultiplexer	07801	54S181	National
Look Ahead Carry Generator	33802	54F182	National
Look-Ahead Carry Generator	07802	54S182	TI
4-Bit ALU	33801	54F181	National
	33803	54F381	Motorola
	33804	54F382	Motorola
4-Bit Full Adder	R05451	4008B	Harris
	05401	4008A	Harris
4-Bit Magnitude Comparator	08201	54S85	Signetics
		54S85	TI
	15001	5485	Signetics
	31101	54LS85	Motorola
		54LS85	National
		54LS85	Signetics
		54LS85	TI
4-Bit Binary Full Adder	31201	54LS83A	Motorola
		54LS83A	National
		54LS83A	TI
	31202	54LS283	Motorola
		54LS283	National
		54LS283	TI
4-Bit Binary Full Adder (Look-Ahead Carry)	00602	5483	National
		5483	TI
	34201	54F283	◊ Motorola
		54F283	◊ National
		54F283	◊ TI

Buffers/Inverters

Description	M38510/	Device	Source
Dual Complementary Pair plus Inverter	H05351	4007UB	Harris
	05301	4007A	Harris
		4007A	National
Dual 4-Input Buffer NAND Gate	38407	54ALS40	TI
Dual 4-Input NAND Buffer	00301	5440	National
		5440	TI
	07201	54S40	Signetics
	30201	54LS40	Motorola
		54LS40	TI
Quad Gated Buffer, TS	15302	54126	Signetics
	32301	54LS125	Motorola
		54LS125	Signetics
		54LS125	TI
	32302	54LS126	Motorola
		54LS126	TI
Quad True/Complement Buffer	R05555	4041UB	Harris
Quad 2-Input Buffer NAND Gate	38401	54ALS37	TI
Quad 2-Input NAND Buffer	00302	5437	National
		5437	TI
	30202	54LS37	Motorola
		54LS37	Signetics
		54LS37	TI
	35202	54F38	National
Quad 2-Input NAND Buffer, O/C	00303	5438	National
		5438	TI
Quad 2-Input NOR Buffer	30204	54LS28	Motorola
	38402	54ALS28	TI
Hex Buffer	65706	54HC365	TI
	65708	54HC367	TI
Hex Buffer/Converter, Inverting	H05553	4049UB	Harris
	05503	4049A	Harris
		4049A	National
Hex Buffer/Converter, Non-Inverting	H05554	5040B	Harris
	05504	4050A	Harris
		4050A	National
	05554	5040B	National
Hex Buffer, Inverting	65709	54HC368	TI
Hex Buffer, TS	16301	54365	Signetics
	32201	54LS365	Motorola
		54LS365	National
		54LS365	Signetics
		54LS365	TI
	32203	54LS367	Motorola
		54LS367	National
		54LS367	Signetics
		54LS367	TI
	38411	54ALS1034	TI
Hex Buffer, Three State	16303	54367	Signetics
Hex Inverter	H17401	4069UB	Harris
	00105	5404	National
		5404	Signetics
		5404	TI
	02005	54L04	National
	03003	936	National
	07003	54S04	National
		54S04	Signetics
		54S04	TI
	30003	54LS04	Motorola
		54LS04	National
		54LS04	Signetics
		54LS04	TI
	33002	54F04	Motorola
		54F04	◊ National
		54F04	Signetics
		54F04	TI
	37006	54ALS04	TI
	65701	54HC04	Harris

(Continued)

Description	M38510/	Device	Source
Hex Inverter	65701		
		54HC04	National
		54HC04	TI
Hex Inverter/Buffer	R17403	4502B	Harris
Hex Inverter, O/C	00108	5405	TI
	07004	54S05	TI
	30004	54LS05	Motorola
		54LS05	National
Hex Inverter, Schmitt Trigger	65702	54HC14	National
		54HC14	TI
Hex Inverter, TS	16304	54368	Signetics
	32202	54LS366	Motorola
		54LS366	National
		54LS366	TI
	32204	54LS368	Motorola
		54LS368	National
		54LS368	Signetics
		54LS368	TI
Octal Buffer, Inverting	38301	54ALS240	TI
Octal Buffer, Line Driver	65704	54HC241	National
		54HC241	TI
	65705	54HC244	Harris
		54HC244	Motorola
		54HC244	National
		54HC244	TI
	65755	54HCT244	Harris
		54HCT244	TI
Octal Buffer, Line Driver, Inverting	65703	54HC240	TI
Octal Buffer, Non-Inverting	38302	54ALS241	TI

Counters

Description	M38510/	Device	Source
Divide-by-8 Counter	H05654	4022B	Harris
Divide-by-8 Counter/Divider, Decoded Output	05604	4022A	Harris
		4022A	National
Divide-by-12 Counter	31510	54LS92	TI
Fully Synchronous Decade Counter	31511	54LS162	Motorola
		54LS162	TI
Fully Synchronous 4-Bit Binary Counter	01304	54163	National
		54163	Signetics
	31512	54LS163	Motorola
		54LS163	Signetics
		54LS163	TI
	34302	54F163A	◊ National
		54F163A	◊ Signetics
	34403	54F190	Signetics
	38002	54ALS163	TI
Presettable Divide-by-N Counter	H05652	4018B	Harris
	05602	4018A	Harris
		4018A	National
	05652	4018B	Allegro Micro
		4018B	National
Synchronous, Preset Input, Mode Control, Look-Ahead Carry, Counter	31506	54LS169A	National

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DIGITAL

Counters (Cont'd)

Description	M38510/	Device	Source
Synchronous Binary Up/Down Counter			
	31509	54LS191	Motorola
		54LS191	Signetics
		54LS191	TI
Synchronous Decade Counter			
	01303	54160	National
	31503	54LS160	Motorola
		54LS160	TI
Synchronous Decade Up/Down Counter			
	31513	54LS190	Motorola
		54LS190	TI
Synchronous 4-Bit Binary Counter			
	01306	54161	National
		54161	Signetics
		54161	TI
	31504	54LS161	Motorola
		54LS161A	National
		54LS161	Signetics
		54LS161	TI
	34301	54F161A	◊ National
		54F161A	◊ Signetics
	38001	54ALS161	TI
Binary Up Counter			
	32002	54LS197	Signetics
Binary Up/Down Counter			
	31508	54LS193	Motorola
		54LS193	National
		54LS193	Signetics
		54LS193	TI
	34304	54F193	◊ National
		54F193	◊ Signetics
	38003	54ALS169	TI
Dual Decade Counter, Ripple			
	32701	54LS390	TI
	32703	54LS490	TI
Dual 4-Bit Binary Counter			
	66309	54HC393	TI
Dual 4-Bit Binary Counter, Ripple			
	32702	54LS393	Motorola
		54LS393	Signetics
		54LS393	TI
Decade Count Up/Down, Synchronous, Preset Input			
	34404	54F192	◊ National
Decade Counter			
	31501	54LS90	TI
Decade Counter, Divide-by-2 and 5			
	32003	54LS290	TI
Decade Counter/Divider, Decoded Output			
	H05651	4017B	Harris
	05601	4017A	Harris
		4017A	National
Decade Counter, Synchronous, Preset Input			
	34401	54F160A	◊ National
	34402	54F162A	◊ National
Decade Up/Down			
	01309	54193	Signetics
Decade Up/Down Counter			
	31507	54LS192	Motorola
		54LS192	TI
4-Bit Binary Counter			
	01302	5493	Signetics
	02502	54L93	National
	31502	54LS93	TI
	66302	54HC161	TI
	66304	54HC163	TI
4-Bit Binary Counter, Ripple			
	32004	54LS293	TI
7-Bit Binary Counter			
	H05655	4024B	Harris
	05605	4024A	Harris
		4024A	National
14-Bit Binary Counter			
	H05653	4020B	Harris
	05603	4020A	Harris
		4020A	National

Decoders

Description	M38510/	Device	Source
BCD to Decimal Decoder			
	30703	54LS42	Motorola
		54LS42	National
		54LS42	TI
BCD to 7-Segment Decoder			
	30704	54LS47	Motorola
		54LS47	TI
BCD-to-Decimal Decoder			
	R05951	4028B	Harris
	01001	5442	National
	05901	4028A	Harris
BCD-to-Decimal Decoder/Driver, 15V Output			
	01007	5447	National
Dual 2-Line to 4-Line Decoder/Demultiplexer			
	30702	54LS139	Motorola
		54LS139	National
		54LS139	TI
	33702	54F139	Motorola
		54F139	◊ National
		54F139	Signetics
Dual 2-to-4 Line Decoder/Demultiplexer			
	32601	54LS155	Motorola
		54LS155	TI
	32602	54LS156	Motorola
		54LS156	TI
Dual 2-to-4-Line Decoder/Demultiplexer			
	07702	54S139	National
	65803	54HC139	TI
3- to 8-Line Decoder/Demultiplexer			
	33701	54F138	Motorola
		54F138	◊ National
		54F138	Signetics
		54F138	TI
3-Line to 8-Line Decoder/Multiplexer			
	37701	54ALS138	TI
3-to-8-Line Decoder/Demultiplexer			
	07701	54S138	National
		54S138	Signetics
		54S138	TI
	30701	54LS138	Motorola
		54LS138	National
		54LS138	Signetics
		54LS138	TI
	65802	54HC138	National
		54HC138	TI
	65852	54HCT138	TI
8-Input Priority Encoder			
	36001	54LS148	TI
	36002	54LS348	TI

Flip-Flops

Description	M38510/	Device	Source
J-K Master Slave Flip-Flop (AND Inputs)			
	00201	5472	TI
J-K Positive Edge-Triggered Flip-Flop			
	00206	5470	TI
Dual D-Type Edge-Triggered Flip-Flop			
	00205	5474	National
		5474	TI
	02105	54L74	National
Dual D-Type Flip-Flop			
	H05151	4013B	Harris
	05151	4013B	National
Dual D-Type Flip-Flop with Set/Reset			
	05101	4013A	Harris
		4013A	National
Dual D-Type Master Slave Flip-Flop			
	06101	10531	Motorola
	06102	10631	Motorola
Dual D-Type Positive Edge-Triggered Flip-Flop with Preset and Clear			
	30102	54LS74	Motorola
		54LS74	National
		54LS74	Signetics
		54LS74	TI
	37101	54ALS74	TI
	65302	54HC74	Harris
		54HC74	TI
	65352	54HCT74	TI
Dual Flip-Flop			
	07101	54S74	◊ Signetics
		54S74	TI
Dual J-K Flip-Flop			
	65304	54HC109	TI
Dual J-K Flip-Flop, Negative Edge-Triggered with Preset and Clear			
	65305	54HC112	TI
Dual J-K Master Slave Flip-Flop			
	00202	5473	TI
	00203	54107	National
		54107	TI
	30101	54LS73	Motorola
		54LS73	TI
Dual J-K Master Slave Flip-Flop with Preset and Clear			
	00204	5476	TI
Dual J-K Master-Slave Flip-Flop			
	H05152	4027B	Harris
	02103	54L73	National
	05102	4027A	Allegro Micro
		4027A	Harris
		4027A	National
	06104	10535	Motorola
Dual J-K Negative Edge-Triggered Flip-Flop			
	07102	54S112	National
		54S112	Signetics
		54S112	TI
	34103	54F112	Signetics
Dual J-K Negative Edge-Triggered Flip-Flop Separate Preset and Clock (no clear)			
	07103	54S113	National
		54S113	Signetics
Dual J-K Negative Edge-Triggered Flip-Flop with Preset and Clear			
	30103	54LS112	Motorola
		54LS112	National
		54LS112	Signetics
		54LS112	TI
	30104	54LS113	Motorola
		54LS113	National
		54LS113	TI
	30105	54LS114	Motorola
		54LS114	National
		54LS114	TI
	37103	54ALS112A	TI
Dual J-K Positive Edge-Triggered Flip-Flop with Preset and Clear			
	30109	54LS109	Motorola
		54LS109	National
		54LS109	Signetics
		54LS109	TI

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Flip-Flops (Cont'd)

M38510/	Device	Source
Dual J-K Positive Edge-Triggered Flip-Flop with Preset and Clear (Cont'd)		
34102	54F109	Motorola
	54F109	◊ National
	54F109	Signetics
Dual J-K Type Positive Edge-Triggered Flip-Flop with Preset and Clear		
37102	54ALS109	TI
Dual J-K-Master Slave Flip-Flop with Preset and Clear		
30110	54LS76	Motorola
	54LS76	TI
Dual Master Slave Flip-Flop		
30108	54LS107	Motorola
	54LS107	TI
Quad D-Type Edge-Triggered Flip-Flop with Clear		
30107	54LS175	Motorola
	54LS175	National
	54LS175	Signetics
	54LS175	TI
34104	54F175	Motorola
	54F175	◊ National
	54F175	Signetics
37202	54ALS175	TI
Quad D-Type Flip-Flop		
01702	54175	National
	54175	Signetics
	54175	TI
07106	54S175	TI
33107	25LS175	Motorola
65308	54HC175	TI
Quad D-Type Flip-Flop with Clear, TS		
65306	54HC173	TI
Quad D-Type Three-State Flip Flop		
36101	54LS173A	Signetics
Quad D-Type Three-State Flip-Flop		
36101	54LS173A	TI
Hex D-Type Flip-Flop		
01701	54174	National
	54174	Signetics
	54174	TI
07105	54S174	Signetics
	54S174	TI
30106	54LS174	Motorola
	54LS174	National
	54L174	Signetics
	54LS174	TI
33106	25LS174	Motorola
	25LS174	TI
65307	54HC174	TI
Hex D-Type Master Slave Flip-Flop		
06103	10576	Motorola
Hex Edge-Triggered Flip-Flop with Clear		
34101	54F174	Motorola
	54F174	◊ National
	54F174	Signetics
	54F174	TI
34107	54F174	Motorola
	54F174	National
	54F174	Signetics
Hex Edge-Triggered with Clear		
37201	54ALS174	TI
Octal D-Type Edge-Triggered Flip-Flop with Clear		
32501	54LS273	Motorola
	54LS273	National
	54LS273	Signetics
	54LS273	TI
Octal D-Type Edge-Triggered Flip-Flop, Three State		
32503	54LS374	Motorola
	54LS374	Signetics
	54LS374	TI
37104	54ALS574	TI
37204	54ALS374	TI
65602	54HC374	National
Octal D-Type, Edge-Triggered, TS		
34105	54F374	Motorola
	54F374	◊ National
	54F374	Signetics
	54F374	◊ TI
Octal D-Type Flip-Flip, TS		
65604	54HC574	TI
Octal D-Type Flip-Flop, TS		
65403	54HC373	Harris
	54HC373	National
	54HC373	TI
65453	54HCT373	TI
65602	54HC374	TI
65652	54HCT374	TI
Octal D-Type Flip-Flop with Enable		
32504	54LS377	Motorola
	54LS377	Signetics
	54LS377	TI
65601	54HC273	TI
Octal D-Type Positive Edge-Triggered Flip-Flop, TS		
34106	54F534	Motorola
	54F534	National

Gates, AND/NAND

M38510/	Device	Source
Dual 4-Input AND Gate		
R17002	4082B	Harris
31003	54LS21	Motorola
	54LS21	National
	54LS21	TI
Dual 4-Input NAND Gate		
H05052	4012B	Harris
00102	5420	National
	5420	TI
02002	54L20	National
05002	4012A	Harris
	4012A	National
07006	54S20	National
	54S20	Signetics
	54S20	TI
30007	54LS20	Motorola
	54LS20	National
	54LS20	Signetics
	54LS20	TI
33004	54F20	Motorola
	54F20	◊ National
	54F20	Signetics
	54F20	TI
37003	54ALS20	TI
65003	54HC20	National
	54HC20	TI
Dual 4-Input NAND Gate, Expandable, DTL		
03001	930	National
Dual 4-Input NAND Gate, O/C		
07007	54S22	TI
30008	54LS22	Motorola
	54LS22	National
	54LS22	TI
Triple 3-Input AND Gate		
R17003	4073B	Harris
08001	54S11	National
	54S11	Signetics
	54S11	TI

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M38510/	Device	Source
Triple 3-Input AND Gate (Cont'd)		
31001	54LS11	Motorola
	54LS11	National
	54LS11	TI
34002	54F11	Motorola
	54F11	◊ National
	54F11	Signetics
	54F11	TI
37402	54ALS11	TI
65204	54HC11	TI
Triple 3-Input AND Gate, O/C		
31002	54LS15	Motorola
	54LS15	TI
Triple 3-Input NAND Gate		
H05053	4023B	Harris
00103	5410	National
	5410	TI
02003	54L10	National
05003	4023A	Harris
	4023A	National
07005	54S10	National
	54S10	Signetics
	54S10	TI
30005	54LS10	Motorola
	54LS10	National
	54LS10	Signetics
	54LS10	TI
33003	54F10	◊ Motorola
	54F10	◊ National
	54F10	Signetics
	54F10	TI
37002	54ALS10	TI
65002	54HC10	Harris
	54HC10	National
	54HC10	TI
Triple 3-Input NAND Gate, DTL		
03005	962	National
Triple 3-Input NAND Gate, O/C		
00106	5412	TI
30006	54LS12	Motorola
	54LS12	TI
Quad 2-Input AND Gate		
H17001	4081B	Harris
01601	5408	National
08003	54S08	National
	54S08	Signetics
31004	54LS08	Motorola
	54LS08	National
	54LS08	Signetics
	54LS08	TI
31005	54LS09	Motorola
34001	54F08	Motorola
	54F08	◊ National
	54F08	Signetics
37401	54ALS08	TI
65203	54HC08	Harris
	54HC08	National
	54HC08	TI
Quad 2-Input AND Gate, O/C		
01602	5409	National
Quad 2-Input NAND Gate		
H05051	4011B	Harris
00104	5400	National
	5400	Signetics
	5400	TI
02004	54L00	National
05001	4011A	Harris
	4011A	National
06201	10504	Motorola
07001	54S00	National

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Gates, AND/NAND (Cont'd)

Description M38510/	Device	Source
Quad 2-Input NAND Gate (Cont'd)		
07001	54S00	Signetics
	54S00	TI
30001	54LS00	Motorola
	54LS00	National
	54LS00	Signetics
	54LS00	TI
33001	54F00	Motorola
	54F00	◊ National
	54F00	Signetics
	54F00	TI
37001	54ALS00	TI
65001	54HC00	Harris
	54HC00	National
	54HC00	TI
Quad 2-Input NAND Gate, DTL		
03004	946	National
Quad 2-Input NAND Gate, O/C		
00107	5401	National
	5401	TI
00109	5403	National
	5403	TI
07002	54S03	TI
30002	54LS03	Motorola
	54LS03	National
	54LS03	TI
30203	54LS38	Motorola
	54LS38	National
	54LS38	TI
Quad 2-Input NAND O/C to 15V		
32102	54LS26	Motorola
	54LS26	Signetics
	54LS26	TI
Hex AND Gate		
06202	10597	Motorola
8-Input NAND Gate		
00101	5430	National
	5430	TI
02001	54L30	National
07008	54S30	TI
30009	54LS30	Motorola
	54LS30	National
	54LS30	TI
37004	54ALS30	TI
65004	54HC30	National
	54HC30	TI
13-Input NAND Gate		
07009	54S133	National
	54S133	Signetics
37005	54ALS133	TI

Gates, AND-OR/AND-OR-Invert

Description M38510/	Device	Source
Dual 2-Input 2-Wide AOI Gate		
H17201	4085B	Harris
00502	5451	TI
07401	54S51	National
Dual 2-Input 2-Wide AOI Gate, Expandable		
00501	5450	TI
Dual 2-Input 4-Wide AOI Gate		
07401	54S51	Signetics
Dual 2–2-Input AOI Gate		
30401	54LS51	Motorola
	54LS51	National
	54LS51	TI
Quad AND-OR Select Gate		
H05352	4019B	Harris
05302	4019A	Harris
	4019A	National
05352	4019B	National
2-Input AOI Gate		
07402	54S64	TI
2-Input 4-Wide AOI Gate		
00504	5454	TI
2-Input 4-Wide AOI Gate, Expandable		
H17202	4086B	Harris
00503	5453	TI
2–2–2–3-Input AOI Gate		
30402	54LS54	National
	54LS54	TI
4–2–3–2-Input AOI Gate		
07402	54S64	National
33401	54F64	Motorola
	54F64	◊ National
	54F64	Signetics

Gates, OR/NOR

Description M38510/	Device	Source
Dual 3-Input NOR Gate plus Inverter		
05201	4000A	Harris
Dual 4-Input NOR Gate		
05203	4002A	Harris
65104	54HC4002	TI
Dual 4-Input NOR Gate with Strobe		
00403	5425	TI
Dual 4-Input NOR Gate with Strobe, Expandable		
00402	5423	TI
Dual 4-Input OR Gate		
R17102	4072B	Harris
Triple 2–3–2-Input OR/NOR Gate		
06003	10505	Motorola
Triple 3-Input NOR Gate		
H05254	4025B	Harris
H17103	4075B	Harris
00404	5427	TI
05204	4025A	Harris
	4025A	National
05254	4025B	Allegro Micro
	4025B	Harris
30302	54LS27	Motorola
	54LS27	National
	54LS27	TI
37302	54ALS27	TI
65102	54HC27	TI
Triple 3–4–3-Input OR/NOR Gate		
06004	10506	Motorola
Quad 2-Input Gate (3 NOR, 1 OR/NOR)		
06002	10502	Motorola
Quad 2-Input NOR Gate		
H05252	4001B	Harris
00401	5402	National
	5402	TI
02701	54L02	National
05202	4001A	Harris
	4001A	National
05252	4001B	National
07301	54S02	National
	54S02	Signetics
	54S02	TI
30301	54LS02	Motorola
	54LS02	National
	54LS02	Signetics
	54LS02	TI
33301	54F02	Motorola
	54F02	◊ National

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Description M38510/	Device	Source
Quad 2-Input NOR Gate (Cont'd)		
33301	54F02	Signetics
	54F02	TI
37301	54ALS02	TI
38402	54ALS1002	TI
65101	54HC02	Harris
	54HC02	National
	54HC02	TI
Quad 2-Input OR Gate		
H17101	4071B	Harris
16101	5432	Signetics
30501	54LS32	Motorola
	54LS32	National
	54LS332	National
	54LS32	Signetics
	54LS32	TI
33501	54F32	Motorola
	54F32	◊ National
	54F32	Signetics
37501	54ALS32	TI
65201	54HC32	Harris
	54HC32	National
	54HC32	TI
Quad 2-Input OR/NOR Gate		
06001	10501	Motorola
4–5-Input OR/NOR Gate		
06006	10509	Motorola

Gates, Exclusive OR/NOR

Description M38510/	Device	Source
Triple 2-Input Exclusive OR/NOR Gate		
06005	10507	Motorola
Quad Exclusive OR Gate		
H17203	4070B	Harris
R17204	4077B	Harris
05303	4030A	Harris
Quad 2-Input Exclusive NOR Gate, O/C		
30303	54LS266	Motorola
	54LS266	National
	54LS266	TI
65103	54HC266	TI
Quad 2-Input Exclusive OR		
30502	54LS86	Motorola
	54LS86	National
	54LS86	Signetics
	54LS86	TI
Quad 2-Input Exclusive OR Gate		
H05353	4030B	Harris
00701	5486	National
	5486	TI
02601	54L86	National
07501	54S86	Signetics
	54S86	TI
65202	54HC86	TI
Quad 2-Input, Totem Pole Outputs		
34501	54F86	Motorola
	54F86	◊ National

Latches

Description M38510/	Device	Source
Quad Bistable Latch		
31601	54LS75	Motorola
	54LS75	Signetics
	54LS75	TI
31604	54LS375	Motorola
	54LS375	TI
Quad Set Reset Latch		
31602	54LS279	Motorola
	54LS279	National
	54LS279A	TI
Octal D-Type Latch, TS, Cascadable		
34604	54F573	National

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Latches (Cont'd)

Description	M38510/	Device	Source
Octal D-Type Latch with Inverted Outputs, TS	34603	54F563	National
8-Bit Addressable	65402	54HC259	TI
8-Bit Addressable Latch	R17601	4099B	Harris
	31603	54LS259	Motorola
		54LS259	National
	31605	54LS259B	TI
8-Bit D-Type	65406	54HC573	TI
8-Bit Latch, Transparent D-Type, TS	34601	54F373	National
8-Bit Latch, Transparent D-Type, Three State	32502	54LS373	Motorola
		54LS373	Signetics
		54LS373	TI
	34601	54F373	◊ Motorola
		54F373	Signetics
		54F373	◊ TI
	38201	54ALS573B	TI
8-Bit Transparent, D-Type, Inverting, Three-State	34602	54F533	◊ Motorola
		54F533	◊ National
8-Bit Transparent, D-Type, TS	37203	54ALS373	TI

Multiplexers

Description	M38510/	Device	Source
Dual 3-Input Multiplexer, Inverting, TS	33910	54F353	Motorola
		54F353	◊ National
Dual 4-Channel Data Selector/Multiplexer	01403	54153	National
	30902	54LS153	Motorola
		54LS153	National
		54LS153	Signetics
		54LS153	TI
	33902	54F153	Motorola
		54F153	◊ National
		54F153	TI
Dual 4-Input Multiplexer	01404	9309	National
	07902	54S153	National
		54S153	Signetics
		54S153	TI
Dual 4-Input Multiplexer, Inverting	33909	54F352	Motorola
		54F352	◊ National
Dual 4-Input Multiplexer, TS	30908	54LS253	Motorola
		54LS253	National
		54LS253	TI
	33908	54F253	Motorola
		54F253	National
Dual 4-Input Multiplexer, Three State	07908	54S253	National
		54S253	Signetics
Quad 2-Input Data Selector/Multiplexer (Non-Inverting)	01405	54157	◊ National
Quad 2-Input Multiplexer, Inverting	07904	54S158	Signetics
		54S158	TI
	30904	54LS158	Motorola
		54LS158	National
		54LS158	TI
	33904	54F158	Motorola
		54F158	National
Quad 2-Input Multiplexer, Inverting, TS	30907	54LS258	Motorola
		54LS258	National
		54LS258	Signetics
		54LS258B	TI
	33907	54F258	National
		54F258A	National
Quad 2-Input Multiplexer, Non-Inverting	07903	54S157	Signetics
		54S157	TI
	30903	54LS157	Motorola
		54LS157	National
		54LS157	TI
	33903	54F157	Motorola
		54F157	National
		54F157A	◊ National
Quad 2-Input Multiplexer, Non-Inverting, TS	07906	54S257	TI
	30906	54LS257	Motorola
		54LS257	National
		54LS257	Signetics
		54LS257B	TI
	33906	54F257	National
Quad 2-Input Multiplexer with Output Register	30909	54LS298	Motorola
	35002	54F399	Motorola
		54F399	National
		54F399	Signetics
Quad 2-Input with Output Register	35001	54F398	National
		54F398	Signetics
Hex 2-Input Three-State Multiplexer	37901	54ALS857	TI
8-Input Multiplexer	01406	54151	National
	07901	54S151	Signetics
		54S151	TI
	30901	54LS151	Motorola
		54LS151	National
		54LS151	TI
	33901	54F151A	Motorola
		54F151	National
		54F151A	◊ National
8-Input Multiplexer, Complementary Input, Strobe, TS	07905	54S251	Signetics
	30905	54LS251	Motorola
		54LS251	National
		54LS251	TI
	33905	54F251	National
		54F251A	◊ National

Multivibrators

Description	M38510/	Device	Source
Monostable Multivibrator	01201	54121	National
Retriggerable Monostable Multivibrator with Clear	01203	54123	Signetics
Dual Monostable Multivibrator	R17504	4098B	Harris
Dual Monostable Multivibrator, Schmitt Trigger Input	31402	54LS221	Motorola
		54LS221	TI
Dual Retriggerable Monostable Multivibrator with Clear	31401	54LS123	Motorola
		54LS123	TI
	31403	54LS122	Motorola
		54LS122	TI
Dual One Shot Multivibrator	01205	9602	National
One Shot Multivibrator	01204	9601	National

Miscellaneous

Description	M38510/	Device	Source
Bus Driver, Octal Inverter	65710	54HC540	TI
	65760	54HCT540	TI
Bus Transceiver, Quad Non-Inverting	34802	54F533	Motorola
Bus Transceiver, Octal, Bidirectional	34804	CAF545	National
Bus Transceiver, Octal Non-Inverting	34803	54F245	Motorola
		54F245	National
		54F245	Signetics
		54F245	TI
Remote Terminal Interface	55501	**UT1553B**	**UTMC (3693, 3695)**
Dual 4-Input NAND Schmitt Trigger	31301	54LS13	Motorola
Quad Bus Transceiver	32801	54LS242	Motorola
		54LS242	TI
	32802	54LS243	Motorola
		54LS243	TI
Quad ECL to TTL Translator	06302	10525	Motorola
Quad TTL to ECL OR/NOR Translator	06301	10524	Motorola
Quad 2-Input NAND Gate Schmitt Trigger	65005	54HC132	National
Quad 2-Input NAND Schmitt Trigger	31303	54LS132	Motorola
		54LS132	Signetics
Hex Bus Driver	35101	54F365	National
Hex Schmitt Trigger, Inverting	15102	5414	National
	31302	54LS14	Motorola
		54LS14	Signetics
Octal Bus Driver	65711	54HC541	TI
	65761	54HCT541	TI
Octal Bus Driver, Inverting	32401	54LS240	Motorola
		54LS240	National
		54LS240	Signetics
		54LS240	TI
	32404	54LS540	TI
Octal Bus Driver, Inverting, Three State	33201	54F240	Motorola
		54F240	◊ National
		54F240	Signetics
		54F240	TI
	33204	54F540	National
Octal Bus Driver, Non-Inverting, Three State	32402	54LS241	Motorola
		54LS241	National
		54LS241	Signetics
		54LS241	TI
	32403	54LS244	Motorola
		54LS244	National
		54LS244	Signetics
		54LS244	TI
	32405	54LS541	TI
	33202	54F241	◊ National
		54F241	◊ Signetics
		54F241	◊ TI
	33203	54F244	◊ Motorola
		54F244	◊ National
		54F244	Signetics
	38303	54ALS244A	TI

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DIGITAL

Miscellaneous (Cont'd)

Description	M38510/	Device	Source
Octal Bus Driver, Non-Inverting, Three-State			
	33203	54F244	TI
Octal Bus Transceiver, Non-Inverting			
	65503	54HC245	National
		54HC245	TI
	65553	54HCT245	TI
Octal Bus Transceiver, Three State			
	32803	54LS245	Motorola
		32803	Signetics
		54LS245	TI
9-Bit Odd/Even Parity Generator/Checker			
	01901	54180	National
	32901	54LS280	Motorola
		54LS280	TI
	34901	54F280	◊ Motorola
		54F280	◊ National
		54F280	Signetics

MICROPROCESSORS

Description	M38510/	Device	Source
Microprocessor			
	48002	Z80	Zilog
	52004	Z8002A CPU	Zilog
	53001	8086	◊ Intel
	54002	68000-8	Signetics
	54003	68000-10	Signetics

INTERFACE

Description	M38510/	Device	Source
A/D Converter, 12-Bit			
	14001	574AU	AD
	14002	574AT	AD

Analog Switches

Description	M38510/	Device	Source
2xSPST, Bipolar			
	12301	HI200	Siliconix
2xSPST, CMOS			
	10502	5041	Harris
	11601	DG300	Harris
		DG300	Siliconix
	11605	DG304	Siliconix
2xSPST, JFET			
	11101	DG181A	Harris
		DG181A	Siliconix
	11102	DG182A	Harris
		DG182A	Siliconix
4xSPST, CMOS			
	H05852	4066B	Harris
	12302	DG201	Harris
		201	Harris
		DG201	Siliconix
SPST, CMOS			
	10501	5040	Harris
2xSPDT, CMOS			
	10504	5043	Harris
	11604	DG303	Harris
		DG303	Siliconix
	11608	DG307	Siliconix
2xSPDT, JFET			
	11107	DG190A	Harris
		DG190A	Siliconix
	11108	DG191A	Harris
		DG191A	Siliconix
SPDT, CMOS			
	10503	5042	Harris
	11602	DG301	Harris
		DG301	Siliconix
	11606	DG305	Siliconix
SPDT, JFET			
	11105	DG187A	Harris
		DG187A	Siliconix
	11106	DG188A	Harris
		DG188A	Siliconix
2xDPST, CMOS			
	10506	5045	Harris
	11603	DG302	Harris
		DG302	Siliconix
	11607	DG306	Siliconix
2xDPST, JFET			
	11103	DG184A	Harris
		DG184A	Siliconix
	11104	DG185A	Harris
		DG185A	Siliconix
DPST, CMOS			
	10505	5044	Harris
4-Channel Multiplexer			
	19006	509A	Harris
4-Channel Multiplexer Differential, Latched			
	19008	509	Harris
		6208	Harris
		509	Siliconix
8-Channel Multiplexer			
	19003	507	Harris
		507	Siliconix
	19004	507A	Harris
	19005	508A	Harris
	19007	508	Harris
		6108	Harris
		6108	Siliconix
16-Channel Multiplexer			
	19001	506	Harris
		506	Siliconix
	19002	506A	Harris

Digital to Analog Converters

Description	M38510/	Device	Source
D/A Converter, 8-Bit			
	11301	DAC08	◊ AD
		DAC08	Raytheon
	11302	DAC08A	AD
		DAC08A	Raytheon
D/A Converter, 10-Bit			
	12702	7520	AD
		7520	Harris
	13301	AD561	AD
D/A Converter, 12-Bit			
	12101	562	AD
	12103	565	AD

Line Drivers and Receivers

Description	M38510/	Device	Source
Differential Line Receiver			
	10401	55107	Motorola
		55107	National
		55107	TI
	10402	55108	TI
Memory Driver			
	13001	55325	SiliconG
		55325	TI
	13002	55326	SiliconG
		55326	TI
	13003	55327	TI
Dual Differential Line Driver			
	10403	9614	National
		55114	TI
Dual Differential Line Driver, TS			
	10406	7831	TI
	10407	7832	TI
Dual Differential Line Driver, Three-State			
	10405	55113	National
		55113	TI
Dual Differential Line Receiver			
	10404	9615	National
		55115	TI
Dual Peripheral AND Driver			
	12902	55451	TI
	12907	55461	TI
Dual Peripheral OR Driver			
	12904	55453	TI
Dual 4-Input Positive NAND Line Driver			
	08101	54S140	Signetics

Peripheral Drivers

Description	M38510/	Device	Source
Driver, 7-Channel			
	14101	2001	SiliconG
	14102	2002	SiliconG
	14103	2003	Motorola
		2003	SiliconG
	14104	2004	SiliconG
	14105	2005	SiliconG
Driver, 8-Channel			
	14106	2801	SiliconG
	14107	2802	SiliconG
	14108	2803	SiliconG
	14109	2804	SiliconG
	14110	2805	SiliconG
Dual Peripheral NAND Driver			
	12903	55452	TI
	12908	55462	TI
Dual Peripheral NOR Driver			
	12905	55454	TI
Dual Peripheral OR Driver			
	12909	55463	TI

LINEAR

Amplifiers

Description	M38510/	Device	Source
Operational Amplifier			
	10101	LM741A	AD
		741	National
		LM741	Raytheon
	10103	LM101A	LinearTech
		LM101A	National
		LM101A	Raytheon
		LM101A	SiliconG
	10104	LM108A	AD
		LM108A	LinearTech
		LM108A	Motorola
		LM108A	National
		LM108A	Raytheon
	10107	LM118	LinearTech
		LM118	◊ National
	11401	LF155	AD
		LF155	LinearTech
		LF155	National
	11402	LF156	AD
		PM156	AD
		LF156	LinearTech
		PM156	LinearTech
		LF146	National
	11403	PM157	AD
	11404	LF155A	AD
		LF155A	LinearTech
	11405	PM156A	◊ AD
		LF156A	LinearTech
		PM156A	LinearTech
	11406	PM157A	AD
	12202	HA2600	Harris
	12203	HA2620	◊ Harris

(Continued)

MILITARY

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MILITARY

Description M38510/	Device	Source
LINEAR		
Amplifiers (Cont'd)		
Operational Amplifier (Cont'd)		
12204	HA2500	Harris
12205	HA2510	Harris
12206	HA2520	◊ Harris
13101	5534A	Raytheon
13501	**OP07A**	**AD (3243)**
	4021B	AD
	OP07A	LinearTech
	OP07A	Raytheon
13502	714	AD
	714	LinearTech
	714	Raytheon
13503	OP07	◊ AD
	OP07	LinearTech
	OP07	Raytheon
Operational Amplifier, BIFET		
11904	LF151	National
Sample/Hold Amplifier		
12501	LF198	LinearTech
Dual Operational Amplifier		
10102	747	National
	747	Raytheon
10105	LH2101A	National
	LH2101A	Raytheon
	LH2101A	Signetics
	LH2101A	SiliconG
10106	PM2108A	AD
	PM2108A	LinearTech
	PM3108A	National
	PM2108A	Raytheon
10108	1558	National
11905	LF153	National
	772	National
13102	5532A	Raytheon
Quad Operational Amplifier		
11001	LM148	National
	LM148	Raytheon
11003	4156	Raytheon
11004	4136	AD
	4136	National
	4136	Raytheon
11005	LM124	Motorola
	LM124	National
	LM124	Raytheon
	LM124	Signetics
Quad Operational Amplifier, BIFET		
11906	LF147	National
Comparators		
Voltage Comparator		
10301	710	National
10304	111	AD
	111	LinearTech
	111	National
	111	SiliconG
34701	54F521	National
	54F521	TI
Dual Precision Voltage Comparator		
10306	LM119	LinearTech
10307	LT119A	LinearTech
Dual Voltage Comparator		
10302	711	National
10305	LH2111	National
	LH2111	Raytheon
11202	LM193	National
	LM193	TI
Quad Voltage Comparator		
11201	LM139	AD
	139	Motorola
	139	National
	139	Raytheon
	139	Signetics
Timers		
Timer		
10901	555	National
	555	Signetics
Dual Timer		
10902	556	Signetics
Voltage Regulators		
Voltage Reference		
12802	**AD584T**	**AD (3238)**
13902	534S	AD
Voltage Regulator		
10201	LM723	National
	LM723	SiliconG
10701	LM109	National
	LM109	SiliconG
10702	78M05	National
	78M05	SiliconG
10703	78M12	National
	78M12	SiliconG
10704	78M15	National
	78M15	SiliconG
10706	7805	National
	7805	SiliconG
	7805	Unitrode
10707	7812	National
	7812	SiliconG
	7812	Unitrode
10708	7815	National
	7815	SiliconG
	7815	Unitrode
10709	7824	National
11501	79M05	National
	79M05	SiliconG
11502	79M12	National
11503	79M15	National
11505	7905	National
	7905	SiliconG
	7905	Unitrode
11506	7912	National
	7912	SiliconG
	7912	Unitrode
11507	7915	National
	7915	SiliconG
	7915	Unitrode
11703	LM117H	LinearTech
	LM117H	National
	LM117H	SiliconG
	LM117H	Unitrode
11704	LM117K	LinearTech
	LM117K	National
	LM117K	SiliconG
	LM117K	Unitrode
11705	LM150K	Unitrode
11706	LM138K	LinearTech
11803	LM137H	LinearTech
	LM137H	National
11804	LM137K	LinearTech
	LM137K	National
	LM137K	Unitrode
12601	1524	LinearTech
	1524	SiliconG
	1524	Unitrode
		(Continued)
Voltage Regulator (Cont'd)		
12603	1526A	Motorola
	1526A	SiliconG
	1526A	Unitrode
12604	1527A	SiliconG
14801	TL431	Motorola
Voltage Regulator, PWM		
12602	1525A	SiliconG
	1525A	Unitrode
Transistor Arrays		
Transistor Array		
10802	3045	National
Miscellaneous		
Multiplier/Divider		
13901	534T	AD
13903	532S	AD
Voltage Reference		
12801	584S	AD
MEMORY		
RAMs		
256x4, TS		
23110	93422 (60 ns)	National
23112	93L422 (75 ns)	Motorola
	93L422 (75 ns)	National
23114	93422a (45 ns)	National
23115	93L422A (55 ns)	National
512x9, TS		
25001	MKB4501-81	SGS-Thomson
25002	MKB4501-80	SGS-Thomson
25003	MKB4501-88	SGS-Thomson
1024x1, OC		
23103	93L415 (60 ns)	National
1024x1, TS		
23102	93425 (60 ns)	National
23104	93L425 (70 ns)	National
23106	93425	◊ National
23108	93425A (45 ns)	National
23113	93L425A (50 ns)	National
1024x4, TS		
23806	2148H	Intel
24502	HM6514	◊ Harris
2048x8, TS		
29102	6516	Harris
29104	65162	Harris
29110	65162	Harris
4096x1, TS		
R24503	6504RH	Harris
23801	2147H (85 ns)	Intel
23803	2147H (70 ns)	Intel
23805	2147H (55 ns)	Intel
23807	2147H (45 ns)	Intel
24501	6504	Harris
28901	7C147 (35 ns)	Cypress
28903	7C147 (55 ns)	Cypress
8192x8		
29205	65642	Harris
16384x1, TS		
29103	65262	Harris
29109	65262	Harris
16384x4		
61302	51C98	Intel
61303	51C98	Intel
16384x8		
61301	51C98	Intel

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MEMORY

RAMs (Cont'd)

Description / M38510/	Device	Source
65536x1, TS		
24401	4564 (150 ns)	SGS-Thomson
24402	4564 (150 ns)	SGS-Thomson
24403	4564 (200 ns)	SGS-Thomson
262144x1		
24601	MT1257-12	MicronTech
24602	MT1257-12	MicronTech
	M41256P-15	SGS-Thomson
24603	MT1259-12	MicronTech
24604	MT1259-15	MicronTech
	M41256N-15	SGS-Thomson
1048576x1, TS		
24902	4C1024-100	MicronTech
24903	4C1024-120	MicronTech
24904	4C1024-150	MicronTech

PROMs

Description / M38510/	Device	Source
32x8, OC		
20701	82S23	Signetics
20703	82S23A	Signetics
32x8, TS		
20702	54S288	National
	82S123	Signetics
20704	82S123A	Signetics
256x4, OC		
20301	82S126	Signetics
20303	82S126A	Signetics
256x4, TS		
20302	54S287	National
	82S129	Signetics
20304	82S129A	Signetics
512x4, OC		
20401	82S130	Signetics
20403	82S130A	Signetics
512x4, TS		
20402	54S571	National
	82S131	Signetics
20404	82S131A	Signetics
512x8, TS		
20802	54S474	National
	82S141	Signetics
20803	82S115	Signetics
1024x4		
20602	5353-1	AMD
1024x4, TS		
20602	54S573	National
	82S137	Signetics
20604	82S137A	Signetics
1024x8, TS		
20904	77S181	National
	29631	Raytheon
	82S181	Signetics
20909	82S181A	Signetics
2048x4		
20902	77S185	National
	29651	Raytheon
	82S185	Signetics
2048x4, TS		
20908	53S841	◊ AMD
	53S841	◊ Signetics
20910	82S185A	Signetics
2048x8 EEPROM, TS		
22701	X2816A-45	Xicor
22702	X2816A-35	Xicor
2048x8, TS		
21002	82S191	Signetics
21004	82S191A	Signetics
2048x8,TS		
21002	29681	Raytheon
4096x4, TS		
21005	76165	Signetics
4096x8, TS		
21101	82HS321A	Signetics
21102	29671	Signetics
8192x8 EEPROM, TS		
22807	2864-350	SEEQ
22808	2864-250	SEEQ
22809	2864H-250	SEEQ
8192x8, TS		
21201	93Z665-70	Signetics
21202	93Z655-55	Signetics
21203	93Z665-50	Signetics
21204	93Z665-45	Signetics
32768x8, TS		
22401	27256-250	AMD
	27256-250	Intel
22402	27256-200	AMD
	27256-200	Intel

Shift Registers

Description / M38510/	Device	Source
Dual 4-Bit Static S.R.		
H05753	4015B	Harris
05703	4015A	Harris
	4015A	National
4-Bit Bidirectional, Cascadable S.R.		
33601	54F194	National
	54F194	Signetics
4-Bit Parallel Access S.R.		
00901	5495	National
02801	54L95	National
30603	54LS95	Motorola
	54LS95	National
	54LS95B	Signetics
	54LS95	TI
4-Bit Parallel In, Parallel Out, Cascadable S.R.		
30607	54LS395A	Signetics
	54LS395	TI
4-Bit Parallel In, Parallel Out, Right/Left S.R.		
30606	54LS295	Signetics
	54LS295	TI
4-Bit Parallel In, Parallel Out, S.R.		
30602	54LS195	Motorola
	54LS195	Signetics
	54LS195	TI
30606	54LS295B	Signetics
4-Bit Universal Bidirection S.R.		
07601	54S194	TI
4-Bit Universal Bidirectional S.R.		
30601	54LS194	Motorola
	54LS194	National
	54LS194	TI
4-Bit Universal S.R.		
00905	54194	National
	54194	Signetics
4x4 Register File, TS		
31901	54LS670	Motorola
	54LS670	National
5-Bit S.R.		
30604	54LS96	TI
8-Bit Parallel Load S.R., Complementary Outputs		
30608	54LS165	Motorola
	54LS165	TI
8-Bit Parallel-In, Serial-Out S.R.		
30609	54LS166	Motorola
	54LS166	TI
8-Bit Serial In, Parallel Out, S.R.		
30605	54LS164	Motorola
	54LS164	National
	54LS164	Signetics
	54LS164	TI
8-Bit Serial-In Parallel-Out S.R.		
00903	54164	Signetics
8-Bit Static S.R. Asynchronous		
H05754	4021B	Harris
05704	4021A	Harris
	4021A	National
18-Bit Static S.R.		
05701	4006A	Harris
	4006A	National
18-Bit Static S.R. (Synchronous)		
H05752	4014B	Harris
05702	4014A	Harris
	4014A	National
64-Bit Static S.R.		
05705	4031A	Harris

Programmable Logic

Description / M38510/	Device	Source
FPLA		
50201	82S101	Signetics
50202	82S100	Signetics
PAL		
50301	PAL10H8	AMD
50302	PAL12H6	AMD
50303	PAL14H4	AMD
50306	PAL10L8	AMD
50307	PAL12L6	AMD
50308	PAL14L4	AMD
50401	PAL16L8A	AMD
	PAL16L8A	◊ TI
50402	PAL16R8A	AMD
	PAL16R8A	TI
50403	PAL16R6A	AMD
	PAL16R6A	◊ TI
50404	PAL16R4	AMD
	PAL16R4A	◊ TI
50407	PAL16L8A-2	AMD
	PAL16L8A-2	TI
50408	PAL16R8A-2	AMD
	PAL16R8A-2	TI
50409	PAL16R6A-2	AMD
	PAL16R6A-2	TI
50410	PAL16R4A-2	AMD
	PAL16R4A-2	TI
50501	PAL20L8A	AMD
50502	PAL20R8A	AMD
50503	PAL20R6A	AMD
50504	PAL20R4A	AMD
50601	PAL16L8-20	TI
50602	PAL16R8-20	TI
50603	PAL16R6-20	TI
50604	PAL16R4-20	TI
50605	PAL16L8-30	TI
50606	PAL16R8-30	TI
50607	PAL16R6-30	TI
50608	PAL16R4-30	TI

Gate Arrays

Description / M38510/	Device	Source
8000-Gate Array, CMOS		
60608	8000 Gate Array	UTMC

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INTRODUCTION TO DIGITAL

Digital devices are listed by major product families: BiCMOS, CMOS, ECL, GaAs, or TTL, and within them by functional groups such as arithmetic, buffers and inverters.

A separate guide for circuits specifically directed to Digital Signal Processing (DSP) applications is included within the Digital section. Some of these circuits may also be repeated in the Digital families, the Interface, or Microprocessor portions of IC Master.

A few digital devices, such as watch, clock, speech and music circuits, are not covered in the digital section, but are included in the Linear – Consumer guide.

Digital Logic Topics

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Arithmetic Functions

Function	Device	Source	Line
Logic Unit, 32-Bit	AM29C332	AMD	
Adder, NBCD (natural binary coded decimal)			
4XXX	GD4560B	GoldStar	
	MC14560BA	† Motorola	
	MC14560BC	Motorola	
	TC4560B	Toshiba	5
Adder, Triple Serial, Negative Logic, with Internal Carry			
4XXX	MC14038BA	† Motorola	
	MC14038BC	Motorola	
	HCC4038B	† SGS-Thomson	
	HCF4038B	◊ SGS-Thomson	
	TC4038B	Toshiba	10
Adder, Triple Serial, Positive Logic, with Internal Carry			
4XXX	MC14032BA	† Motorola	
	MC14032BC	Motorola	
	HCF4032B	◊ SGS-Thomson	
	TC4032B	Toshiba	
Adder, 4-Bit, Full			
AC	CD54AC283	† Harris	15
ACT	CD74ACT283	Harris	
C	MM74C83	National	
HC	CD54HC583	† Harris	
	CD74HC583	Harris	
	74HC583	Signetics	20
HCT	CD54HCT583	† Harris	
	CD74HCT583	Harris	
	74HCT583	Signetics	
4XXX	GD4008B	‡ GoldStar	
	CD4008B	‡ Harris	25
	CD4008BE	Harris	
	CD4008A	‡ Micrel	
	CD4008B	‡ Micrel	
	MC14008BA	† Motorola	
	MC14008BC	Motorola	30
	CD4008BC	National	
	CD4008BM	† National	
	HCC4008B	† SGS-Thomson	
	HCF4008B	SGS-Thomson	
	HEF4008B	Signetics	35
	TC4008B	Toshiba	
Adder, 4-Bit, Full with Fast Carry			
AC	CD74AC283	Harris	
ACT	CD54ACT283	† Harris	
Cell	SN74283	° TI	
HC	**GD74HC283**	**† GoldStar (3439)**	40
	CD54HC283	† Harris	
	CD74HC283	Harris	
	HD74HC83	Hitachi	
	MM54HC283	† National	
	MM74HC283	National	45
	M74HC283	SGS-Thomson	
	74HC283	Signetics	
	SN74HC283	TI	
	TC74HC283A	**Toshiba (3674)**	
HCT	**GD74HCT283**	**GoldStar (3439)**	50
	CD54HCT283	† Harris	
	CD74HCT283	Harris	
	74HCT283	Signetics	
Adder, 4-Bit, Full with Fast Carry and Center Power Pins			
C	MM54C83	† National	
Adder, 4-Bit, Full with Fast Carry			
HC	M74HC283	Mitsubishi	55
Adder-Subtractor	L4C381C	◊ LogicDev	
	L4C381M	◊† LogicDev	
Address Comparator, 12-Bit			
HCTLS	KS74HCTLS679	Samsung	
	KS74HCTLS680	Samsung	
Address Comparator, 12-Bit to 4-Bit			
AHCT	KS74AHCT679	Samsung	60
	KS74AHCT680	Samsung	
HC	SN74HC679	TI	
	SN74HC680	TI	
Address Comparator, 16-Bit			
AC	74AC11677	Signetics	
	74AC11678	Signetics	65
ACT	74ACT11677	Signetics	
	74ACT11678	Signetics	
Address Comparator, 16-Bit to 4-Bit			
HC	SN74HC677	TI	
	SN74HC678	TI	
Address Generator, 16 Bit with Look-Ahead Pipeline			
	ADSP1410J	**AD (3256)**	70
	ADSP1410K	**AD (3256)**	
	ADSP1410S	**† AD (3256)**	
	ADSP1410T	**† AD (3256)**	
Advanced, Image Manipulation Engine			
	TMC2302	TRWLSI	
ALU Function Generator			
AC	74AC11181	TI	75
ALU, 16-Bit	CY7C9116-35	◊† Cypress	
	CY7C9117-35	◊† Cypress	
Arithmetic Logic Unit (for Digital Signal Processing applications)			
ACT	54ACT705	† National	
	74ACT705	National	
Arithmetic Logic Unit/Function Generator			
ACT	74ACT11181	TI	80
Arithmetic Logic Unit, 4-Bit			
4XXX	CD40181BE	† Harris	
Barrel-Shifter, 32-bit			
	LSH32-1C	◊ LogicDev	
	LSH32-1M	◊† LogicDev	
Bit Multiplier, 2's Complement (12x12)			
	MPY012-1	IMI	
	MPY012-5	IMI	85
Comparator			
HC	HCC4585B	SGS-Thomson	
Comparator, 8-Bit			
PCT	P54PCT521	Performance	
	P54PCT521A	◊‡ Performance	
	P54PCT521B	◊‡ Performance	
	P74PCT521	◊ Performance	90
	P74PCT521A	◊ Performance	
	P74PCT521B	◊ Performance	
Comparator, 8-Bit Equality			
HCT	**TC74HCT688A**	**Toshiba (3674)**	
Correlator	TMC2023-1	† TRWLSI	
	TMC2221-1	† TRWLSI	95
Correlator, 1x128, 20 MHz			
C	TMC2221	TRWLSI	
Correlator, 64x1, 30 MHz			
C	TMC2023	TRWLSI	
Data Access Register (for memory address arithmetic)			
4XXX	GD4707B	GoldStar	
Data Path Switch			
4XXX	GD4704B	GoldStar	
Diagnostic Scan Register			
PCT	P29PCT818AC	Performance	100
	P29PCT818AM	† Performance	
Digital Mixer	TMC2249-1	TRWLSI	
Equality Comparator, 8-Bit			
HC	CD54HC688	† Harris	
	CD74HC688	Harris	
	HD74HC688	Hitachi	105
	74HC688	† Signetics	
	TC74HC688A	**Toshiba (3674)**	
HCT	**GD74HCT688**	**† GoldStar (3439)**	
	CD54HCT688	† Harris	
	CD74HCT688	Harris	110
	M74HCT688	† SGS-Thomson	
	74HCT688	† Signetics	
Fast Cosine Transformer			
	TMC2311	TRWLSI	
Fast Fourier Transform Controller and ALU, 16-Bit, 20 MHz			
C	TMC2310	TRWLSI	
Fixed-Point Multiplier (8x8)			
	ADSP1080A	**AD (3255)**	115
	ADSP1081A	**AD (3255)**	
Fixed-Point Multiplier (12x12)			
	ADSP1012A	**◊ AD (3255)**	
Fixed-Point Multiplier (16x16)			
	ADSP1016A	**◊ AD (3255)**	
Fixed-Point Multiplier (24x24)			
	ADSP1024A	**AD (3255)**	
Floating Point Accelerator, MIL-STD–1750A, 8 MFLOPs			
C	TMC3202	TRWLSI	120
Floating Point Chipset (multiplier and ALU)			
	ADSP3211	AD	
	ADSP3221	AD	
	ADSP3222	**AD (3256)**	
Floating Point Divider, 32-Bit			
	TMC3210	TRWLSI	
Floating Point Multiplier and ALU, 32-Bit			
	TMC3032	TRWLSI	125
	TMC3032-1	TRWLSI	
	TMC3033	TRWLSI	
	TMC3033-1	TRWLSI	
Floating Point Processor, 32-Bit			
	AM29C325	AMD	
	L64133-10	**LSI Logic (3536)**	130
	L64133-60	**LSI Logic (3536)**	
	L64133-80	**LSI Logic (3536)**	
Floating Point Processor, 64-Bit			
ACT	SN74ACT8847	TI	
Floating Pt. Arithmetic Unit			
	TDC1032-1	† TRWLSI	
Identity Comparator, 4-Bit			
HC	**GD74HC85**	**GoldStar (3439)**	135
HCT	**GD74HCT85**	**GoldStar (3439)**	
Identity Comparator, 8-Bit			
AC	54AC521	† National	
	74AC521	National	
	74AC11520	Signetics	
	74AC11521	Signetics	140
	SN54AC11520	† TI	
	SN54AC11521	† TI	
ACT	74ACT11520	Signetics	
	74ACT11521	Signetics	
	SN54ACT11520	† TI	145
	SN54ACT11521	† TI	
AHCT	KS74AHCT682	Samsung	
	KS74AHCT684	Samsung	
	KS74AHCT686	Samsung	
	KS74AHCT688	† Samsung	150
FCT	IDT54FCT521A	◊† IDT	
	IDT74FCT521A	◊ IDT	
HC	**GD74HC688**	**GoldStar (3439)**	
	MC54HC688	† Motorola	
	MC74HC688	Motorola	155
	MM54HC688	† National	
	MM74HC688	National	
	M74HC688	SGS-Thomson	
	LR74HC688	† Sharp	
	SN54HC688	† TI	160
	SN74HC682	TI	
	SN74HC684	TI	
	SN74HC688	TI	
HCT	MM54HCT688	† National	
	MM74HCT688	National	165
HCTLS	KS74HCTLS518	Samsung	
	KS74HCTLS519	Samsung	
	KS74HCTLS520	Samsung	
	KS74HCTLS521	Samsung	
	KS74HCTLS522	Samsung	170

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL–CMOS (Cont'd)

Arithmetic Functions (Cont'd)

Function	Device	Source
Identity Comparator, 8-Bit		
HCTLS		(Cont'd)
	KS74HCTLS688	Samsung
	KS74HCTLS689	Samsung
Identity Comparator, 8-Bit with Open Drain Outputs		
AHCT	KS74AHCT689	Samsung
Identity Comparator, 8-Bit with Pullup Resistors		
AC	54AC520	† National
	74AC520	National
ACT	54ACT520	† National
	74ACT520	National
Identity Comparator, 8-Bit		
AC	74AC11521	TI
ACT	74ACT11520	TI
	74ACT11521	TI
Identity Comparator, 8-Bit with Pullup Resistors		
AC	74AC11520	TI
Identity Comparators, 8-Bit		
AHCT	KS74AHCT518	Samsung
	KS74AHCT519	Samsung
	KS74AHCT520	Samsung
	KS74AHCT521	Samsung
	KS74AHCT522	Samsung
Image Filter, 10x11x4, 30 MHz		
C	TMC2246	TRWLSI
Image Resampling Sequencer		
	TMC2301-1	† TRWLSI
	TMC2301-2	TRWLSI
Integer Divider, 32-Bit, 25 MHz (16-bit divisor)		
C	TMC3211	TRWLSI
Logic Register Stack		
4XXX	GD4705B	GoldStar
Logic Unit, Floating Point ALU, 22-Bit		
	TDC1032	TRWLSI
Logic Unit, Floating Point, IEEE 754		
	ADSP3220J	AD
	ADSP3220K	AD
	ADSP3220S	† AD
	ADSP3220T	† AD
Logic Unit, Floating Point, 32–34-Bit		
	TMC3200	TRWLSI
Logic Unit, Registered, 16-Bit		
ACT	SN74ACT8816	TI
Logic Unit, Registered, 32-Bit		
ACT	SN74ACT8832	TI
Logic Unit, 4-Bit		
AC	74AC11881	TI
ACT	74ACT11881	TI
HC	CD54HC181	† Harris
	CD74HC181	Harris
	MM54HC181	† National
	MM74HC181	National
	M74HC181	SGS-Thomson
	74HC181	Signetics
	TC74HC181A	**Toshiba (3674)**
HCT	CD54HCT181	† Harris
	CD74HCT181	Harris
	74HCT181	Signetics
4XXX	GD4581B	† GoldStar
	MC14581BA	† Motorola
	MC14581BC	Motorola
	HCC40181B	† SGS-Thomson
	HCF40181B	SGS-Thomson
Logic Unit, 16 Bit Slice		
	L29C101C	◊ LogicDev
	L29C101M	◊† LogicDev
Logic Unit, 16-Bit Cascadable		
	IDT7381	IDT
Look Ahead Carry Block		
4XXX	CD40182BE	† Harris
Look-Ahead Carry Generator		
ACT	54ACT182	† National
	74ACT182	National
AHCT	KS74AHCT182	Samsung
FCT	IDT54FCT182	◊† IDT
	IDT54FCT182A	◊† IDT
	IDT74FCT182	◊† IDT
	IDT74FCT182A	◊† IDT
HC	CD54HC182	† Harris
	CD74HC182	Harris
	HD74HC182	Hitachi
	MM54HC182	† National
	MM74HC182	National
	M74HC182	SGS-Thomson
	74HC182	Signetics
	TC74HC182A	**Toshiba (3674)**
HCT	CD54HCT182	† Harris
	CD74HCT182	Harris
	74HCT182	Signetics
HCTLS	KS74HCTLS182	Samsung
4XXX	GD4582B	GoldStar
	MC14582BA	† Motorola
	MC14582BC	Motorola
	HCC40182	† SGS-Thomson
	HCF40182	SGS-Thomson
Look-Ahead Carry Generator, 32-Bit		
AC	74AC11882	TI
ACT	74ACT11882	TI
Magnitude Comparator, 4-Bit		
	NJU74HC85	◊ NJR
AC	54AC85	† National
	74AC85	National
ACT	54ACT521	† National
	54ACT85	† National
	74ACT521	National
	74ACT85	National
C	MM54C85	‡ Micrel
	MM54C85	† National
	MM74C85	National
HC	CD54HC85	† Harris
	CD74HC85	Harris
	HD74HC85	Hitachi
	MC54HC85	† Motorola
	MC74HC85	Motorola
	MM54HC521	† National
	MM54HC85	† National
	MM74HC521	National
	MM74HC85	National
	MN74HC85	Panasonic
	M74HC85	SGS-Thomson
	LR74HC85	Sharp
	74HC85	Signetics
	SN54HC85A	† TI
	SN74HC85	TI
	TC74HC85A	**Toshiba (3674)**
HCT	CD54HCT85	† Harris
	CD74HCT85	Harris
	MM54HCT521	† National
	MM74HCT521	◊ National
	74HCT85	Signetics
4XXX	GD40085B	GoldStar
	CD4063B	† Harris
	CD4063BE	Harris
	CD4585B	† Harris
	CD4585BE	Harris
	MC14585BA	† Motorola
	MC14585BC	Motorola
	MN4585B	◊† Panasonic
	HCC4063B	† SGS-Thomson
	HCF4063B	◊ SGS-Thomson
	HEF4585B	Signetics
	TC4063B	Toshiba
	TC4585B	Toshiba
Magnitude Comparator 8-Bit		
ACT	74ACT11865	TI
	74ACT11885	TI
HCTLS	KS74HCTLS682	Samsung
	KS74HCTLS684	Samsung
	KS74HCTLS686	Samsung
Microprogram Sequencer, 16-Bit		
	AM29C331	AMD
Multi-Level Pipeline Register		
HCT	P29PCT520	† Performance
	P29PCT521	† Performance
Multilevel Pipeline Register		
	L29C520C	◊ LogicDev
	L29C520M	◊† LogicDev
	L29C521C	◊ LogicDev
	L29C521M	◊† LogicDev
FCT	CD54FCT29520A	† Harris
	CD54FCT29521A	† Harris
	CD74FCT29520A	Harris
	CD74FCT29521A	Harris
Multiplier/Accumulator (12x12)		
	LMA2009C	◊ LogicDev
	LMA2009M	◊† LogicDev
Multiplier/Accumulator, 16x16		
ACT	54ACT1110	† National
	74ACT1110	National
Multiplier, Floating Point, IEEE 754		
	ADSP3210J	AD
	ADSP3210K	AD
	ADSP3210S	† AD
	ADSP3210T	† AD
Multiplier, Parallel (16x16)		
	AM29C516A	AMD
	AM29C517A	AMD
Multiplier, 2's Complement (8x8)		
	LMU08C	◊† LogicDev
Multiplier (2x2) Parallel		
4XXX	MC14554BA	† Motorola
	MC14554BC	Motorola
Multiplier (8x8) Divider (16÷8)		
	MSM6203	OKI
	MSM80C58	OKI
Multiplier (8x8) Unsigned Magnitude		
	ADSP1081AJ	**AD (3255)**
	ADSP1081AK	**AD (3255)**
	ADSP1081AS	**† AD (3255)**
	ADSP1081AT	**† AD (3255)**
	LMU8UC	◊† LogicDev
	LMU8UM	◊† LogicDev
Multiplier (8x8) 2's Complement		
	ADSP1080AJ	**AD (3255)**
	ADSP1080AK	**AD (3255)**
	ADSP1080AS	**† AD (3255)**
	ADSP1080AT	**† AD (3255)**
	LMU08M	◊† LogicDev
Multiplier (8x8) 2's Complement and Unsigned Magnitude	LMU557C	◊ LogicDev
	LMU557M	◊† LogicDev
	LMU558C	◊ LogicDev
	LMU558M	◊† LogicDev
Multiplier (12x12)	IDT7212L	◊ IDT
	IDT7212LB	◊† IDT
	IDT7213LB	◊† IDT
Multiplier (12x12) 2's Complement		
	ADSP1012AJ	**◊ AD (3219)**
	ADSP1012AK	**◊ AD (3255)**
	ADSP1012AS	**◊† AD (3255)**
	ADSP1012AT	**◊† AD (3255)**
Multiplier (12x12) 2's Complement and Unsigned Magnitude, Mixed Mode		
	MPY12IMI	IMI
	LMU112C	◊ LogicDev

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL–CMOS (Cont'd)

Arithmetic Functions (Cont'd)

Function	Device	Source	Line
Multiplier (12x12) 2's Complement and Unsigned Magnitude (Cont'd)			
	LMU112M	◊† LogicDev	
	LMU12C	◊ LogicDev	
	LMU12M	◊† LogicDev	
Multiplier (16x16)			
ACT	54ACT1016	† National	
	74ACT1016	National	5
Multiplier (16x16) 2's Complement			
	ADSP1016AJ	**◊ AD (3255)**	
	ADSP1016AK	**◊ AD (3255)**	
	ADSP1016AS	**◊† AD (3255)**	
	ADSP1016AT	**◊† AD (3255)**	
(Multiplier (16x16) 2's Complement and Unsigned Magnitude, Individual Clocks			
	CY7C516C	◊ Cypress	10
	CY7C516M	◊† Cypress	
	CY7C517C	◊ Cypress	
	CY7C517M	◊† Cypress	
	IDT7216L	◊ IDT	
	IDT7216LB	◊† IDT	15
	IDT7217L	◊ IDT	
	IDT7217LB	◊† IDT	
	LMU16C	◊† LogicDev	
	LMU16M	◊† LogicDev	
	LMU17C	◊† LogicDev	20
	LMU17M	◊† LogicDev	
	LMU216C	◊ LogicDev	
	LMU216M	◊† LogicDev	
	LMU217C	◊ LogicDev	
	LMU217M	◊† LogicDev	25
	TMC216H	TRWLSI	
	WTL2517C	Weitek	
	WTL2517M	† Weitek	
Multiplier (16x16) 2's Complement, Unsigned or Mixed Operands	LMU18C	◊ LogicDev	
	LMU18M	◊† LogicDev	30
Multiplier (24x24)	**ADSP1024AJ**	**AD (3255)**	
	ADSP1024AK	**AD (3255)**	
	ADSP1024AS	**AD (3255)**	
	ADSP1024AT	**AD (3255)**	
Multiplier 32-Bit Parallel			
	AM29C323	AMD	35
Multiplier-Accumulator (8x8)			
	ADSP1008A	**AD (3255)**	
	ADSP1008AJ	**AD (3255)**	
	ADSP1008AK	**AD (3255)**	
	ADSP1008AS	**† AD (3255)**	
	ADSP1008AT	**† AD (3255)**	40
C	TMC2208	TRWLSI	
Multiplier-Accumulator (12x12)			
	AM29C509	AMD	
	ADSP1009A	**◊ AD (3255)**	
	ADSP1009AJ	**◊ AD (3255)**	
	ADSP1009AK	**◊ AD (3255)**	45
	ADSP1009AS	**◊† AD (3255)**	
	ADSP1009AT	**◊† AD (3255)**	
	IDT7209L	◊ IDT	
	IDT7209LB	◊† IDT	
	LMA1009C	◊ LogicDev	50
	LMA1009M	◊† LogicDev	
Multiplier-Accumulator (16x16)			
	ADSP1010A	**◊ AD (3255)**	
	ADSP1010AJ	**◊ AD (3255)**	
	ADSP1010AK	**◊ AD (3255)**	
	ADSP1010AS	**◊† AD (3255)**	55
	ADSP1010AT	**◊† AD (3255)**	
	ADSP1101	**AD (3255)**	
	ADSP1110AJ	**AD (3255)**	
	ADSP1110AK	**AD (3255)**	
	ADSP1110AS	**† AD (3255)**	60
	ADSP1110AT	**† AD (3255)**	
	CY7C510	◊† Cypress	
		(Continued)	

Function	Device	Source	Line
Multiplier-Accumulator (16x16) (Cont'd)			
	CY7C510C	◊ Cypress	
	CY7C510M	◊† Cypress	
	IDT7210L	◊ IDT	65
	IDT7210LB	◊† IDT	
	IDT7243LB	◊† IDT	
	LMA1010C	◊ LogicDev	
	LMA1010M	◊† LogicDev	
	LMA2010C	◊ LogicDev	70
	LMA2010M	◊† LogicDev	
	TMC2210-1	TRWLSI	
	TMC2210-2	TRWLSI	
	TMC2210-3	TRWLSI	
	WS59510	**Waferscale (3717)**	75
	WTL2010C	Weitek	
	WTL2010M	† Weitek	
Multiplier-Accumulator (16x16) Expandable			
	WTL2245C	Weitek	
	WTL2245M	† Weitek	
Multiplier-Accumulator (16x16) Multiply Only or Multiply-Accumulate Modes			
	WTL2044C	Weitek	80
	WTL2044M	† Weitek	
Multiplier-Accumulator (32x32)			
	L64032-10	**† LSI Logic (3536)**	
	L64032-12	**† LSI Logic (3536)**	
	L64032-80	**† LSI Logic (3536)**	
ACT	SN74ACT8836	TI	85
Multiplier-Summer (12x12)			
	LMS12C	◊ LogicDev	
	LMS12M	◊† LogicDev	
Parity Generator/Checker with Clear, 9-Bit			
HCTLS	KS74HCTLS280	Samsung	
Parity Generator/Checker, 8-Bit Even, Dual			
PCT	P54PCT481	◊‡ Performance	
	P54PCT481A	◊‡ Performance	90
	P74PCT481	◊ Performance	
	P74PCT481A	◊ Performance	
Parity Generator/Checker, 8-Bit Odd, Dual			
PCT	P54PCT480	◊‡ Performance	
	P54PCT480A	◊‡ Performance	
	P74PCT480	◊ Performance	95
	P74PCT480A	◊ Performance	
Parity Generator/Checker, 9-Bit			
AC	54AC280	† National	
	74AC280	National	
ACT	54ACT280	† National	
	74ACT280	National	100
Parity Generator/Checker, 9-Bit Odd/Even			
AC	CD54AC280	† Harris	
	CD74AC280	Harris	
	74AC11280	TI	
ACT	CD54ACT280	† Harris	
	CD74ACT280	Harris	105
HC	CD54HC280	† Harris	
	CD74HC280	Harris	
	HD74HC280	Hitachi	
	M74HC280	Mitsubishi	
	MC54HC280	† Motorola	110
	MC74HC280	Motorola	
	MM54HC280	† National	
	MM74HC280	National	
	M74HC280	SGS-Thomson	
	74HC280	Signetics	115
HCT	CD54HCT280	† Harris	
	CD74HCT280	Harris	
	74HCT280	Signetics	
Parity Generator/Checker, 9-Bit			
4XXX	HCC40101B	† SGS-Thomson	

Function	Device	Source	Line
Parity Generator/Checker, 9-Bit Odd/Even			
AC	74AC11286	TI	120
ACT	74ACT11280	TI	
	74ACT11286	TI	
Parity Generator-Checker, 9-Bit			
4XXX	HCF40101B	◊ SGS-Thomson	
Pipeline Register, Fast Multi-Level			
PCT	P29PCT520AC	Performance	
	P29PCT520AM	† Performance	125
	P29PCT521AC	Performance	
	P29PCT521AM	† Performance	
Pipeline Register, Multilevel			
FCT	IDT29FCT520A	IDT	
	IDT29FCT520AT	IDT	
	IDT29FCT520BT	IDT	130
	IDT29FCT520CT	IDT	
	IDT29FCT521A	IDT	
	IDT29FCT521AT	IDT	
	IDT29FCT521BT	IDT	
	IDT29FCT521CT	IDT	135
PCT	29PCT520	Performance	
	29PCT520A	Performance	
	29PCT520B	Performance	
	29PCT521	◊‡ Performance	
	29PCT521A	◊‡ Performance	140
	29PCT521B	◊‡ Performance	
Priority Encoder, 10-Line Decimal to 4-Line BCD			
HC	LR74HC147	Sharp	
	SN74HC147	TI	
Processor, Simulator/Assembler for Geometric Arithmetic Parallel Processor			
	NCR45GS4	NCR	
Program Sequencer, 16 Bit with Look-Ahead Pipeline			
	ADSP1401J	AD	145
	ADSP1401K	AD	
	ADSP1401S	AD	
	ADSP1401T	AD	
	ADSP3220J	AD	
	ADSP3220K	AD	150
	ADSP3220S	† AD	
	ADSP3220T	† AD	
Register File, Dual 16x4			
ACT	74ACT11870	TI	
Register Files, 4x4, Three-State			
HCTLS	KS74HCTLS670	Samsung	
Shift Register	TMC2111	† TRWLSI	155
Binary Full Adder with Fast Carry (4-bit)			
AC	54AC283	† National	
	74AC283	National	
ACT	54ACT283	† National	
	74ACT283	National	
Dual High-Speed Adder			
AHCT	KS74AHCT183	Samsung	160
HCTLS	KS74HCTLS183	Samsung	
Dual-Port 16x4 Register File			
AC	74AC11870	TI	
Dual-Port 16x5 Register File			
AC	74AC11858	TI	
ACT	74ACT11858	TI	
Dual-Port 32x4 Register File			
AC	74AC11859	TI	165
ACT	74ACT11859	TI	
Three-Port Register File			
	TMC3220	† TRWLSI	
Nines Complementer			
4XXX	GD4561B	GoldStar	
	MC14561BA	† Motorola	
	MC14561BC	Motorola	170
	TC4561B	Toshiba	
4-Bit ALU			
AC	74AC11181	Signetics	
ACT	74ACT11181	Signetics	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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DIGITAL—CMOS (Cont'd)

Arithmetic Functions (Cont'd)

Function	Device	Source
4-Bit ALU (Cont'd)		
AHCT	KS74AHCT181	Samsung
HCTLS	KS74HCTLS181	Samsung
4-Bit Arithmetic Logic Unit		
ACT	54ACT181	† National
	54ACT381	† National
	74ACT181	National
	74ACT381	National
4-Bit Magnitude Comparator		
HC	M74HC85	Mitsubishi
	HCF4585B	SGS-Thomson
4-Stage Pipeline Register		
	29C520C	AMD
	29C521C	AMD
8 to 3-Line Priority Encoder		
AHCT	KS74AHCT148	Samsung
HC	**GD74HC148**	**GoldStar (3439)**
	HD74HC148	Hitachi
	SN74HC148	TI
HCT	**GD74HCT148**	**GoldStar (3439)**
8-Bit Magnitude Comparator		
AC	74AC11860	TI
	74AC11865	TI
	74AC11885	TI
ACT	74ACT11860	TI
8-Bit Multiplexed I/O Read-Back Register		
AC	74AC11979	TI
8x9 I/O Read-Back Register		
AC	74AC11987	TI
8x9 I/O Read-Back Register w/Address Latch		
AC	74AC11988	TI
9-Bit Odd/Even Parity Generator/Checker		
AC	74AC11280	Signetics
ACT	74ACT11280	Signetics
9-Bit Odd/Even Parity Generator/Checker with Bus Drive I/O Port		
AC	74AC11286	Signetics
ACT	74ACT11286	Signetics
9-Bit Parity Generator		
ACT	SN54ACT11280	◊† TI
10-Bit Serial-In, Parallel-Out Shift Register		
AC	74AC11898	TI
16-Bit Address Comparators		
AC	74AC11677	TI
	74AC11678	TI
ACT	74ACT11677	TI
	74ACT11678	TI
16x8 I/O Read-Back Register		
AC	74AC11980	TI
	74AC11981	TI
16x16 Multiplier with 32-Bit Output		
	IDT7316	IDT
	IDT7317	IDT
32-Bit Error Detection and Correction Unit, Three-State		
HCT	P54PCT633	† Performance
	P54PCT633A	† Performance
	P54PCT633B	† Performance
	P54PCT634	† Performance
	P54PCT634A	† Performance
	P54PCT634B	† Performance
	P54PCT635	† Performance
	P54PCT635A	† Performance
	P54PCT635B	† Performance
	P74PCT633	Performance
	P74PCT633A	Performance
	P74PCT633B	Performance
	P74PCT634	Performance
	P74PCT634A	Performance
	P74PCT634B	Performance
	P74PCT635	Performance

(Continued)

Function	Device	Source
32-Bit Error Detection and Correction Unit, Three-State (Cont'd)		
HCT	P74PCT635A	Performance
	P74PCT635B	Performance
PCT	P54PCT632	◊‡ Performance
	P54PCT632A	◊‡ Performance
	P54PCT632B	◊‡ Performance
	P74PCT632	◊‡ Performance
	P74PCT632A	◊† Performance
	P74PCT632B	◊‡ Performance
4-Bit Binary Adder		
AC	**TC74AC283**	**◊ Toshiba (3674)**
4-Bit Binary Full Adder		
ACT	**TC74ACT283**	**◊ Toshiba (3674)**
8-Bit Identity Comparator		
AC	**TC74AC520**	**◊ Toshiba (3674)**
	TC74AC521	**◊ Toshiba (3674)**
ACT	**TC74ACT520**	**◊ Toshiba (3674)**
	TC74ACT521	**◊ Toshiba (3674)**
9-Bit Parity Checker		
AC	**TC74AC280**	**◊ Toshiba (3674)**
9-Bit Parity Checker/Generator		
ACT	**TC74ACT280**	**◊ Toshiba (3674)**

Buffers

Function	Device	Source
Buffer, Three-State		
AC	**TC74AC367**	**Toshiba (3674)**
	TC74AC368	**Toshiba (3674)**
Quad Bus Buffer		
AC	**TC74AC125**	**◊ Toshiba (3674)**
	TC74AC126	**◊ Toshiba (3674)**
Quad Gated, Three-State		
HC	**GD74HC125**	**GoldStar (3439)**
	GD74HC126	**GoldStar (3439)**
	CD54HC125	† Harris
	CD54HC126	† Harris
	CD74HC125	Harris
	CD74HC126	Harris
	HD74HC125	Hitachi
	HD74HC126	Hitachi
	MC54HC125A	† Motorola
	MC54HC126A	† Motorola
	MC74HC125A	Motorola
	MC74HC126A	Motorola
	MM54HC125	† National
	MM54HC126	† National
	MM74HC125	National
Quad Gated, Three-State		
HC	MM74HC126	National
Quad Gated, Three-State		
HC	M74HC125	SGS-Thomson
	M74HC126	SGS-Thomson
	74HC125	Signetics
	74HC126	Signetics
	SN54HC125	TI
	SN74HC125	TI
	SN74HC126	TI
	TC74HC125A	**Toshiba (3674)**
	TC74HC126A	**Toshiba (3674)**
HCT	**GD74HCT125**	**GoldStar (3439)**
	GD74HCT126	**GoldStar (3439)**
	CD54HCT125	† Harris
	CD54HCT126	† Harris
	CD74HCT125	Harris
	CD74HCT126	Harris
	74HCT125	Signetics
	74HCT126	Signetics
Quad True/Complement		
4XXX	GD4041B	‡ GoldStar
	CD4041UB	‡ Harris
	CD4041UBE	Harris
	CD4041A	‡ Micrel
	CD4041C	National
	CD4041M	National

(Continued)

Function	Device	Source
Quad True/Complement (Cont'd)		
4XXX	HCC4041UB	† SGS-Thomson
	HCF4041UB	◊ SGS-Thomson
	HEF4041B	Signetics
Quad True/Complement Buffer		
4XXX	CD4041AE	◊ Harris
Quad, Three-State		
AHCT	KS74AHCT125	Samsung
	KS74AHCT126	Samsung
HC	SN54HC126	◊† TI
HCTLS	KS74HCTLS125	Samsung
	KS74HCTLS126	Samsung
Quad Three-State Non-Inverting		
5XXX	TC5024B	Toshiba
	TC5025B	Toshiba
Hex	DS1630	† National
	DS3630	National
AC	74AC11034	Signetics
	SN54AC11034	† TI
ACT	74ACT11034	Signetics
	SN54ACT11034	† TI
HC	**GD74HC34**	**GoldStar (3439)**
	MM54HC34	† National
	MM74HC34	National
	HCF4009UB	SGS-Thomson
	HCF4010B	SGS-Thomson
	HCF4503B	SGS-Thomson
	SN74HC4061	TI
HCT	**GD74HCT34**	**GoldStar (3439)**
	M74HCT7007	SGS-Thomson
	TC74HCT7007A	**Toshiba (3674)**
Hex Buffer		
HC	M74HC7007	◊ SGS-Thomson
Hex Buffer/Counter, Inverting		
4XXX	CD4049AE	† Harris
Hex High Voltage		
5XXX	TC5064B	Toshiba
	TC5065B	Toshiba
Hex (Inverting)		
HC	M74HC4049B	Mitsubishi
HCT	CD54HCT4049	† Harris
	CD74HCT4049	Harris
4XXX	CD4009UB	† Harris
	CD4009UBE	Harris
	CD4009A	‡ Micrel
	CD4009AC	National
	CD4009AM	† National
	TC4009UB	Toshiba
Hex (Inverting) Three-State, Strobed		
4XXX	CD4502B	‡ Harris
	CD4502BE	Harris
	MC14502BA	† Motorola
	MC14502BC	Motorola
	HCC4502B	† SGS-Thomson
	HCF4502B	◊ SGS-Thomson
	HEF4502B	Signetics
	TC4502B	Toshiba
Hex (Inverting)-Improved		
HC	CD54HC4049	† Harris
	CD74HC4049	Harris
	MC54HC4049	† Motorola
	MC74HC4049	Motorola
	MM54HC4049	† National
	MM74HC4049	National
	MN74HC4049	Panasonic
	M74HC4049	SGS-Thomson
	74HC4049	Signetics
	TC74HC4049A	**Toshiba (3674)**
4XXX	**GD4049B**	**‡ GoldStar (3431)**
	CD4049UB	‡ Harris
	CD4049UBE	Harris
	CD4049A	‡ Micrel

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL–CMOS (Cont'd)

Buffers (Cont'd)

Function	Device	Source
Hex (Inverting)-Improved		
4XXX		(Cont'd)
	CD4049UB	‡ Micrel
	MC14049UBA	† Motorola
	MC14049UBC	Motorola
	CD4049UB	National
	MN4049B	◊† Panasonic
	HCC4049UB	† SGS-Thomson
	HCF4049UB	◊ SGS-Thomson
	HEF4049B	Signetics
	TC4049B	Toshiba
Hex Non-Inverting		
AC	74AC11034	TI
ACT	74ACT11034	† TI
HC	M74HC4050B	Mitsubishi
4XXX	CD4010B	† Harris
	CD4010BE	Harris
	CD4010A	‡ Micrel
	CD4010A	National
	TC4010B	Toshiba
Hex Non-Inverting-Improved		
HC	CD54HC4050	† Harris
	CD74HC4050	Harris
	MC54HC4050	† Motorola
	MC74HC4050	Motorola
	MM54HC4050	† National
	MM74HC4050	National
	MN74HC4050	Panasonic
	M74HC4050	SGS-Thomson
	74HC4050	Signetics
	TC74HC4050A	**Toshiba (3674)**
4XXX	**GD4050B**	**‡ GoldStar (3431)**
	CD4050B	‡ Harris
	CD4050BE	Harris
	CD4050A	‡ Micrel
	CD4050B	‡ Micrel
	MC14050BA	† Motorola
	MC14050BC	Motorola
	CD4050BC	National
	CD4050BM	National
	MN4050B	◊† Panasonic
	HCC4050B	† SGS-Thomson
	HCF4050B	◊ SGS-Thomson
	HEF4050B	Signetics
	TC4050B	Toshiba
Hex Open Drain Active Pull Down		
C	MM54C906	‡ Micrel
	MM54C906	† National
	MM74C906	National
Hex Open Drain Active Pull Up		
C	MM54C907	‡ Micrel
	MM54C907	† National
	MM74C907	National
Hex PMOS Inverting (PMOS to CMOS or TTL)		
C	MM54C903	‡ Micrel
	MM54C903	† National
	MM74C903	National
Hex PMOS Non-Inverting (PMOS to CMOS or TTL)		
C	MM54C904	‡ Micrel
	MM54C904	† National
	MM74C904	National
Hex TTL Inverting (CMOS to TTL)		
C	MM54C901	‡ Micrel
	MM54C901	† National
	MM74C901	National
Hex TTL Non-Inverting (CMOS to TTL)		
C	MM54C902	‡ Micrel
	MM54C902	† National
	MM74C902	National
Hex Three-State	MM70C95	† National
	MM70C97	† National
	MM80C95	National
	MM80C97	National

(Continued)

Function	Device	Source
Hex, Three-State		(Cont'd)
	54ACT367	◊† National
	74ACT367	◊ National
AHCT	KS74AHCT365	Samsung
HC	**GD74HC365**	**GoldStar (3439)**
	GD74HC367	**GoldStar (3439)**
	CD54HC365	† Harris
	CD54HC367	† Harris
	CD74HC365	Harris
	CD74HC367	Harris
	HD74HC365	Hitachi
	HD74HC367	Hitachi
	M74HC367	Mitsubishi
	MC54HC365	† Motorola
	MC54HC367	† Motorola
	MC74HC365	Motorola
	MC74HC367	Motorola
	MM54HC365	† National
	MM54HC367	† National
	MM74HC365	National
	MM74HC367	National
	MN74HC365	◊ Panasonic
	MN74HC367	Panasonic
	HCC4503B	SGS-Thomson
	M74HC365	SGS-Thomson
	M74HC367	SGS-Thomson
	LR74HC365	Sharp
	74HC365	Signetics
	74HC367	Signetics
	SN54HC365	† TI
	SN74HC365	TI
	SN74HC367	TI
	TC74HC365A	**Toshiba (3674)**
	TC74HC367A	**Toshiba (3674)**
HCT	**GD74HCT365**	**GoldStar (3439)**
	GD74HCT367	**GoldStar (3439)**
	CD54HCT365	† Harris
	CD54HCT367	† Harris
	CD74HCT365	Harris
	CD74HCT367	Harris
	KS74HCTLS365	Samsung
	KS74HCTLS367	Samsung
	74HCT365	Signetics
	74HCT367	Signetics
4XXX	GD40097B	GoldStar
	CD4503BD	† Harris
	CD4503BE	Harris
	MC14503BA	† Motorola
	MC14503BC	Motorola
	CD4503BC	National
	CD4503BM	† National
	MN4503B	† Panasonic
	HEF40097B	Signetics
5XXX	TC5012B	Toshiba
Hex Three-State, Inverting		
AHCT	KS74AHCT366	Samsung
	KS74AHCT368	Samsung
HC	**GD74HC366**	**GoldStar (3439)**
	GD74HC368	**GoldStar (3439)**
	CD54HC366	† Harris
	CD54HC368	† Harris
	CD74HC366	Harris
	CD74HC368	Harris
	HD74HC366	Hitachi
	HD74HC368	Hitachi
	MC54HC366	† Motorola
	MC54HC368	† Motorola
	MC74HC366	Motorola
	MC74HC368	Motorola
	MM54HC366	† National
	MM54HC368	† National
	MM74HC366	National
	MM74HC368	National
	MN74HC366	Panasonic
	MN74HC368	Panasonic
	M74HC366	SGS-Thomson
	M74HC368	SGS-Thomson

(Continued)

Function	Device	Source
Hex Three-State, Inverting		
HC		(Cont'd)
	LR74HC366	Sharp
	LR74HC368	Sharp
	74HC366	Signetics
	74HC368	Signetics
	SN54HC366	† TI
	SN54HC368	† TI
	SN74HC366	TI
	SN74HC368	TI
	TC74HC366A	**Toshiba (3674)**
	TC74HC368A	**Toshiba (3674)**
HCT	**GD74HCT366**	**GoldStar (3439)**
	GD74HCT368	**GoldStar (3439)**
	CD54HCT366	† Harris
	CD54HCT368	† Harris
	CD74HCT366	Harris
	CD74HCT368	Harris
	KS74HCTLS366	Samsung
	KS74HCTLS368	Samsung
	74HCT366	Signetics
	74HCT368	Signetics
Hex Three-State, Non-Inverting		
4XXX	TC4503B	Toshiba
Octal Buffer/ Line Driver with Parity, Inverting, Three-State		
ACT	74ACT11655	TI
Octal Buffer/Line Driver		
C	MM54C941	‡ Micrel
	MM54C941	† National
	MM74C941	National
Octal Buffer/Line Driver, Inverting, Three-State		
ACT	**TC74ACT240**	**Toshiba (3674)**
HC	M74HC540	Mitsubishi
Octal Buffer/Line Driver, Non-Inverting, Three-State		
ACT	**TC74ACT244**	**Toshiba (3674)**
FCT	IDT54FCT540	† IDT
	IDT54FCT540A	† IDT
	IDT54FCT540AT	† IDT
	IDT54FCT540CT	† IDT
	IDT54FCT540T	† IDT
	IDT54FCT541	† IDT
	IDT54FCT541A	† IDT
	IDT54FCT541CT	† IDT
	IDT54FCT541T	† IDT
	IDT74FCT540	IDT
	IDT74FCT540A	IDT
	IDT74FCT540AT	IDT
	IDT74FCT540CT	IDT
	IDT74FCT540T	IDT
	IDT74FCT541	IDT
	IDT74FCT541A	IDT
	IDT74FCT541AT	IDT
	IDT74FCT541CT	IDT
	IDT74FCT541T	IDT
Octal Buffer/Line Driver/Receiver, Inverting		
HCT	M74HCT240-1	Mitsubishi
Octal Buffer/Line Driver/Receiver, Three State, Inverting		
HC	M74HC240-1	Mitsubishi
Octal Buffer/Line Driver/Receiver, Three State, Non-Inverting		
HC	M74HC244-1	Mitsubishi
HCT	M74HCT241-1	Mitsubishi
	M74HCT244-1	Mitsubishi
Octal Buffer/Line Driver with Parity Inverting, Three-State		
AC	74AC11655	TI
Octal Buffer/Line Driver with Parity, Non-Inverting, Three-State		
AC	74AC11656	TI
ACT	74ACT11656	TI
Octal Buffer/Line Driver, Three State		
ACT	54ACT540	† National
	54ACT541	† National

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL–CMOS (Cont'd)

Buffers (Cont'd)

Function	Device	Source	Line
Octal Buffer/Line Driver, Three State			
ACT		(Cont'd)	
	74ACT540	National	
	74ACT541	National	
	V54ACT465	**† VTC (3712)**	
	V54ACT467	**† VTC (3712)**	
	V74ACT465	**VTC (3712)**	5
	V74ACT467	**VTC (3712)**	
AHCT	KS74AHCT465	Samsung	
	KS74AHCT467	Samsung	
HC	M74HC541	Mitsubishi	
HCT	**GD74HCT541**	**GoldStar (3439)**	10
	CD54HCT541	† Harris	
	CD74HCT541	Harris	
	54HCT541SOS	‡ Marconi	
	74HCT541	Marconi	
	MC54HCT541	† Motorola	15
	MM54HCT541	† National	
	MM74HCT541	National	
	P54PCT240A	† Performance	
	P54PCT241A	† Performance	
	P54PCT244A	† Performance	20
	P74PCT240A	Performance	
	P74PCT241A	Performance	
	P74PCT244A	Performance	
	MV74HCT541	Plessey	
	KS74HCTLS541	Samsung	25
	M74HCT541	SGS-Thomson	
	74HCT541	Signetics	
	SN54HCT541	TI	
	SN74HCT541	◊ TI	
Octal Buffer/Line Driver, Three State, Inverting			
AC	CD54AC540	† Harris	30
	CD74AC540	Harris	
	54AC540	† National	
	74AC540	National	
	TC74AC540	**Toshiba (3674)**	
ACT	CD54ACT540	† Harris	35
	CD74ACT540	Harris	
AHCT	KS74AHCT540	Samsung	
HC	**GD74HC540**	**GoldStar (3439)**	
	CD54HC540	† Harris	
	CD74HC540	Harris	40
	MC54HC540	† Motorola	
	MC74HC540	Motorola	
	M74HC540	SGS-Thomson	
	74HC540	Signetics	
	SN54HC540	† TI	45
	SN74HC540	TI	
	TC74HC540A	**Toshiba (3674)**	
HCT	**GD74HCT540**	**GoldStar (3439)**	
	CD54HCT540	† Harris	
	CD74HCT540	Harris	50
	54HCT540SOS	‡ Marconi	
	74HCT540	Marconi	
	MC54HCT540	† Motorola	
	MC74HCT540	Motorola	
	MM54HCT540	† National	55
	MM74HCT540	National	
	MV74HCT540	Plessey	
	KS74HCTLS540	Samsung	
	M74HCT540	SGS-Thomson	
	74HCT540	Signetics	60
	TC74HCT540A	**Toshiba (3674)**	
Octal Buffer/Line Driver, Three State, Non-Inverting			
AC	CD54AC541	† Harris	
	CD74AC541	Harris	
	54AC541	† National	
	74AC541	National	65
	TC74AC541	**Toshiba (3674)**	
ACT	CD54ACT541	† Harris	
	CD74ACT541	Harris	
	V54ACT541	**† VTC (3712)**	
	V74ACT541	**VTC (3712)**	70
		(Continued)	

Function	Device	Source	Line
Octal Buffer/Line Driver, Three State, Non-Inverting		(Cont'd)	
HC	CD54HC541	† Harris	
	CD74HC541	Harris	
	HD74HC540	Hitachi	
	HD74HC541	Hitachi	
	MC54HC541	† Motorola	75
	MC74HC541	Motorola	
	M74HC541	SGS-Thomson	
	74HC541	Signetics	
Octal Buffer/Line Driver, Three-State			
AC	74AC11543	TI	
ACT	74ACT11543	TI	80
HCTS	HCTS540MS	‡ Harris	
Octal Bus Buffer			
ACT	**TC74ACT540**	**◊ Toshiba (3674)**	
	TC74ACT541	**◊ Toshiba (3674)**	
Octal Bus Buffer, Three-State			
ACT	**TC74ACT241**	**◊ Toshiba (3674)**	
Octal Bus Driver, High Voltage, Inverting, Three-State			
FCT	IDT54FCT240AT		
		◊† IDT	85
	IDT54FCT240CT		
		◊† IDT	
	IDT54FCT240T	◊† IDT	
	IDT74FCT240AT	◊ IDT	
	IDT74FCT240CT	◊ IDT	
	IDT74FCT240T	◊ IDT	90
HC	74HCT240	Signetics	
Octal Bus Driver, High Voltage, Non-Inverting, Three-State, Complementary Controls			
HC	M74HC241HV	SGS-Thomson	
Octal Bus Driver, Inverting, Three-State			
AC	CD54AC240	Harris	
	CD74AC240	Harris	
HC	54HC240	† Signetics	95
	74HC240	Signetics	
HCT	54HCT240	† Signetics	
Octal Bus Driver, Non-Inverting, Three State, Complementary Controls			
AC	CD54AC241	† Harris	
	CD54AC244	† Harris	
	CD74AC241	Harris	100
	CD74AC244	Harris	
Octal Bus Driver, Non-Inverting, Three-State, Complementary Controls			
FCT	IDT54FCT241AT		
		◊† IDT	
	IDT54FCT241CT		
		◊† IDT	
	IDT54FCT241T	◊† IDT	
	IDT74FCT241AT	◊ IDT	105
	IDT74FCT241CT	◊ IDT	
	IDT74FCT241T	◊ IDT	
HC	74HC241	Signetics	
HCT	74HCT241	Signetics	
Octal, Three-State			
HC	MM54HC540	† National	110
	MM54HC541	† National	
	MM74HC540	National	
	MM74HC541	National	
Nine Wide Schmitt Trigger, Open Drain			
HC	HC74HC9114	Motorola	
7-Line High Voltage			
5XXX	TC5066B	Toshiba	115
	TC5067B	Toshiba	
10-Bit			
AC	74AC11827	TI	
10-Bit Buffer/Line Driver, Inverting			
	AM29C828	AMD	
AC	**V74FCT828A**	**† VTC (3712)**	
FCT	IDT54FCT828A	◊† IDT	120
	IDT54FCT828AT		
		◊† IDT	
		(Continued)	

Function	Device	Source	Line
10-Bit Buffer/Line Driver, Inverting			
FCT		(Cont'd)	
	IDT54FCT828B	◊† IDT	
	IDT54FCT828BT		
		◊† IDT	
	IDT54FCT828CT		
		◊† IDT	
	IDT74FCT828A	◊ IDT	125
	IDT74FCT828AT	◊ IDT	
	IDT74FCT828B	◊ IDT	
	IDT74FCT828BT	◊ IDT	
	IDT74FCT828CT	◊ IDT	
	V54FCT828A	**† VTC (3712)**	130
10-Bit Buffer/Line Driver, Three-State			
ACT	54ACT827	† National	
	74ACT827	National	
10-Bit Buffer/Line Driver, Three-State, Inverting			
AC	74AC11828	TI	
10-Bit Buffer/Line Driver, Three-State Non-Inverting			
	AM29C827	AMD	
AC	**V74FCT827A**	**† VTC (3712)**	135
C	IDT54FCT827A	◊† IDT	
FCT	IDT54FCT827AT		
		◊† IDT	
	IDT54FCT827B	◊† IDT	
	IDT54FCT827BT		
		◊† IDT	
	IDT54FCT827CT		
		◊† IDT	140
	IDT74FCT827A	◊ IDT	
	IDT74FCT827AT	◊ IDT	
	IDT74FCT827BT	◊ IDT	
	IDT74FCT827CT	◊ IDT	
	V54FCT827A	**† VTC (3712)**	145
HCT	IDT74FCT827B	◊ IDT	
10-Bit (bus interface)			
PCT	P54PCT827A	◊‡ Performance	
	P54PCT827B	◊‡ Performance	
	P74PCT827A	◊ Performance	
	P74PCT827B	◊ Performance	150
10-Bit, Inverting (bus interface)			
PCT	P54PCT828A	◊‡ Performance	
	P54PCT828B	◊‡ Performance	
	P74PCT828A	◊ Performance	
	P74PCT828B	◊ Performance	
10-Wide Buffer/Line Driver, Three-State			
AC	74AC11827	Signetics	155
ACT	74ACT11827	Signetics	
10-Bit Buffer/Line Driver, Inverting			
ACT	74ACT11828	TI	
	V54ACT828	**† VTC (3712)**	
	V74ACT828	**VTC (3712)**	
10-Bit Buffer/Line Driver, Non-Inverting			
ACT	74ACT11827	TI	160
	V54ACT827	**† VTC (3712)**	
	V74ACT827	**VTC (3712)**	

Inverters

Function	Device	Source	Line
Dual Complementary Pair Plus Inverter			
4XXX	**GD4007UB**	**‡ GoldStar (3431)**	
	CD4007UB	‡ Harris	
	CD4007UBE	Harris	165
	CD4007A	‡ Micrel	
	CD4007UB	‡ Micrel	
	MC14007UBA	† Motorola	
	MC14007UBC	Motorola	
	CD4007C	National	170
	CD4007M	† National	
	MN4007UB	◊† Panasonic	
	HCC4007UB	† SGS-Thomson	
	HCF4007UB	SGS-Thomson	
	HEF4007UB	Signetics	175
	TC4007UB	Toshiba	
Dual Unbuffered	NJU74HC7203	◊ NJR	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL–CMOS (Cont'd)

Inverters (Cont'd)

Function	Device	Source
Hex	NJU4069UB	NJR
	NJU74HC04	◊ NJR
	NJU74HC05	◊ NJR
AC	CD54AC04	† Harris
	CD74AC04	Harris
	54AC04	† National
	74AC04	National
	74AC11004	Signetics
	SN54AC11004	† TI
	74AC11004	TI
	TC74AC04	**Toshiba (3674)**
ACT	CD54ACT04	† Harris
	CD74ACT04	Harris
	54ACT04	† National
	74ACT04	National
	74ACT11004	Signetics
	SN54ACT11004	◊† TI
	74ACT11004	TI
	TC74ACT04	**Toshiba (3674)**
AHCT	KS74AHCT04	Samsung
C	MM54C04	‡ Micrel
	MM54C04	† National
	MM74C04	National
HC	**GD74HC04**	**GoldStar (3439)**
	CD54HCU04	† Harris
	CD54HC04	† Harris
	CD74HCU04	Harris
	CD74HC04	Harris
	HD74HC04	Hitachi
	M74HCU04	Mitsubishi
	MC54HC04	† Motorola
	MC74HC04A	◊ Motorola
	MM54HC04	† National
	MM74HC04	National
	BU74HCU04	ROHM
	M74HC04	SGS-Thomson
	LR74HC04	Sharp
	74HC04	Signetics
	SN54HC04	† TI
	SN74HC04	TI
	TC74HCU04A	**Toshiba (3674)**
	TC74HC04A	**Toshiba (3674)**
HCT	GD74HCT04	GoldStar
	CD54HCT04	† Harris
	CD74HCT04	Harris
	MC54HCT04A	† Motorola
	MC74HCT04A	Motorola
	MM54HCT04	† National
	MM74HCT04	National
	MM74HCT34	National
	KS74HCTLS04	Samsung
	M74HCT04	SGS-Thomson
	74HCT04	Signetics
	SN54HCT04	† TI
	TC74HCT04A	**Toshiba (3674)**
4XXX	**GD4069UB**	**‡ GoldStar (3431)**
	CD4069UB	‡ Harris
	CD4069UBE	Harris
	CD4069A	‡ Micrel
	CD4069UB	‡ Micrel
	MC14069UBA	† Motorola
	MC14069UBC	Motorola
	CD4069C	National
	CD4069M	† National
	MN4069UB	◊† Panasonic
	HCC4069UB	† SGS-Thomson
	HCF4069UB	◊ SGS-Thomson
	HEF4069UB	† Signetics
	TC4069UB	Toshiba
Hex Inverter Buffer, Three-State		
	54ACT368	◊† National
	74ACT368	National
Hex Inverter (Open Drain)		
AC	**TC74AC05**	**◊ Toshiba (3674)**
Hex, Open Collector		
AC	CD54AC05	† Harris
	CD74AC05	Harris
ACT	CD54ACT05	† Harris
	CD74ACT05	Harris
AHCT	KS74AHCT05	Samsung
HC	**GD74HC05**	**GoldStar (3439)**
	SN54HC05	† TI
	SN74HC05	TI
HCT	**GD74HCT05**	**GoldStar (3439)**
	MM54HCT05	† National
	KS74HCTLS05	Samsung
Hex (open drain)		
HC	MM54HC05	† National
	MM74HC05	National
Hex Schmitt Inverter		
ACT	**TC74ACT14**	**◊ Toshiba (3674)**
Hex Schmitt Trigger		
	NJU74HC14	◊ NJR
AC	74AC11014	Signetics
	TC74AC14	**◊ Toshiba (3674)**
ACT	74ACT11014	Signetics
AHCT	KS74AHCT14	Samsung
HC	M74HC14	Mitsubishi
	TC74HC14A	**Toshiba (3674)**
HCTLS	KS74HCTLS14	Samsung
4XXX	MC14106	Motorola
Hex Unbuffered	NJU74HCU04	◊ NJR
HC	**GD74HCU04**	**GoldStar (3439)**
	MC54HCU04	† Motorola
	MC74HCU04	Motorola
	MM54HCU04	† National
	MM74HCU04	National
	M74HCU04	SGS-Thomson
	74HCU04	Signetics
	SN54HCU04	TI
	SN74HCU04	TI
Hex Three-State	MM70C96	‡ Micrel
	MM70C98	‡ Micrel
	MM70C98	† National
	MM80C96	National
	MM80C98	National
4XXX	GD40098B	GoldStar
	HEF40098B	Signetics
Octal Inverter/Line Driver, Three-State		
ACT	**V54ACT466**	**† VTC (3712)**
	V54ACT466	**VTC (3712)**
	V54ACT466	**† VTC (3712)**
	V54ACT466	**VTC (3712)**
	V54ACT468	**† VTC (3712)**
	V54ACT468	**VTC (3712)**
	V74ACT466	**VTC (3712)**
	V74ACT466	**VTC (3712)**
	V74ACT468	**VTC (3712)**
AHCT	KS74AHCT466	Samsung
	KS74AHCT468	Samsung
Octal Inverter/Line Driver,Three-State		
ACT	**V54ACT468**	**† VTC (3712)**
	V54ACT468	**VTC (3712)**
	V74ACT468	**VTC (3712)**
Octal Schmitt Trigger Buffer/Line Driver		
HC	74HC7541	Signetics
HCT	74HCT7541	Signetics
Octal Schmitt Trigger Buffer/Line Driver, Inverting		
HC	74HC7540	Signetics
HCT	74HCT7540	Signetics
Nine Wide Schmitt Trigger Buffer, Inverting		
HC	74HC9114	Signetics
HCT	74HCT9114	Signetics
Nine-Wide Schmitt Trigger Buffer		
HC	74HC9115	Signetics
HCT	74HCT9115	Signetics
Nine-Wide Schmitt Trigger Buffer/Line Driver		
HC	74HC9015	Signetics
HCT	74HCT9015	Signetics
Nine-Wide Schmitt Trigger Buffer/Line Driver, Inverting		
HC	74HC9014	Signetics
HCT	74HCT9014	Signetics

Bus-Oriented Circuits

Function	Device	Source
NuBus Controller, 16-Bit		
ACT	SN74ACT2441	TI
NuBus Interface Controller		
ACT	SN74ACT2440	TI
Test & Maintenance Bus Interface		
CMOS	HTW2000	◊°† Honeywell
Quad Bus Transceiver, THree-State		
HCTLS	KS74HCTLS242	Samsung
	KS74HCTLS243	Samsung
Quad Bus Transceiver, Three-State		
AHCT	KS74AHCT242	Samsung
	KS74AHCT243	Samsung
Hex Bus Drivers, Three-State		
HCTLS	KS74HCTLS365A	Samsung
	KS74HCTLS366A	Samsung
	KS74HCTLS367A	Samsung
	KS74HCTLS368A	Samsung
Octal Bidirectional Transceiver		
AC	MC74AC646	◊ Motorola
Octal Bidirectional Transceiver, Three-State		
ACQ	54ACQ245	† National
	74ACQ245	National
ACTQ	54ACTQ245	† National
	74ACTQ245	National
Octal Buffer/Line Driver w/9-Bit Parity Generator/Checker, Three-State, Inverting		
AC	74AC11655	Signetics
	74AC11656	Signetics
ACT	74ACT11655	Signetics
	74ACT11656	Signetics
Octal Buffer/Line Driver with Parity Generator Checker, Inverting		
4XXX	MC14559BA	† Motorola
	MC14559BC	Motorola
Octal Buffer/Line Driver, Three-State		
AC	74AC11241	Signetics
	74AC11244	Signetics
ACQ	54ACQ240	† National
	54ACQ244	† National
	74ACQ240	National
	74ACQ244	National
ACT	74ACT11241	Signetics
	74ACT11244	Signetics
ACTQ	54ACTQ240	† National
	54ACTQ244	† National
	74ACTQ240	National
	74ACTQ244	National
FCT	CD54FCT241	† Harris
	CD54FCT244	† Harris
	CD54FCT541	† Harris
	CD74FCT241	Harris
	CD74FCT244	Harris
	CD74FCT541	Harris
Octal Buffer/Line Driver, Three-State, Inverting		
AC	54AC240	† National
	74AC240	National
	74AC11240	**Signetics (3597)**
	74AC11240	TI
	TC74AC240	**Toshiba (3674)**
ACT	CD54ACT240	† Harris
	CD74ACT240	Harris
	54ACT240	† National
	74ACT240	National
	74ACT11240	**Signetics (3597)**

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source	Line
Octal Buffer/Line Driver, Three-State, Inverting			
ACT (Cont'd)			
	74ACT11240	TI	
	V54ACT240	**VTC (3712)**	
	V74ACT240	**VTC (3712)**	
AHCT	KS74AHCT240	Samsung	
BCT	SN54BCT240	† TI	5
	SN74BCT240	TI	
C	MM54C240	‡ Micrel	
	MM54C240	† National	
	MM74C240	National	
FCT	CD54FCT240	† Harris	10
	CD54FCT540	† Harris	
	CD74FCT240	Harris	
	CD74FCT540	Harris	
	IDT54FCT240	◊† IDT	
	IDT54FCT240A	◊† IDT	15
	IDT54FCT240C	◊† IDT	
	IDT74FCT240	◊ IDT	
	IDT74FCT240A	◊ IDT	
	IDT74FCT240C	◊ IDT	
	V54FCT240	**◊† VTC (3712)**	20
	V74FCT240	**◊† VTC (3712)**	
HC	**GD74HC240**	**GoldStar (3439)**	
	CD54HC240	† Harris	
	CD74HC240	Harris	
	HD74HC240	Hitachi	25
	M74HC240	Mitsubishi	
	MC54HC240	† Motorola	
	MC74HC240	Motorola	
	MM54HC240	† National	
	MM74HC240	National	30
	MN74HC240	Panasonic	
	M74HC240	SGS-Thomson	
	LR74HC240	Sharp	
	SN54HC240	† TI	
	SN74HC240	TI	35
	TC74HC240A	**Toshiba (3674)**	
	TC74HC7240A	**Toshiba (3674)**	
HCT	**GD74HCT240**	**GoldStar (3439)**	
	CD54HCT240	† Harris	
	CD74HCT240	Harris	40
	HD74HCT240	Hitachi	
	54HCT240SOS	‡ Marconi	
	74HCT240	Marconi	
	M74HCT240	Mitsubishi	
	MC54HCT240	† Motorola	45
	MC54HCT240A	† Motorola	
	MC74HCT240	Motorola	
	MC74HCT240A	Motorola	
	MM54HCT240	† National	
	MM74HCT240	National	50
	MV74HCT240	Plessey	
	KS74HCTLS240	Samsung	
	M74HCT240	SGS-Thomson	
	SN54HCT240	† TI	
	SN74HCT240	◊ TI	55
	TC74HCT240A	**Toshiba (3674)**	
PCT	P54PCT240	Performance	
	P54PCT240A	Performance	
	P74PCT240	Performance	
	P74PCT240A	◊ Performance	60
4XXX	HEF40240B	Signetics	
Octal Buffer/Line Driver, Three-State, Inverting (dual)			
AC	DPLAC240Y	Dense-Pac	
ACT	DPLACT240Y	Dense-Pac	
	V54ACT540	**† VTC (3712)**	
	V74ACT540	**VTC (3712)**	65
BCT	SN54BCT540	† TI	
FCT	DPLFCT240Y	Dense-Pac	
HC	DPLHC240Y	Dense-Pac	
	DPLXXX240Y	Dense-Pac	
		(Continued)	

Function	Device	Source	Line
Octal Buffer/Line Driver, Three-State, Inverting (dual) (Cont'd)			
HCT	DPLHCT240Y	Dense-Pac	70
	SN54HCT540	† TI	
	SN74HCT540	◊ TI	
Octal Buffer/Line Driver, Three-State, Non-Inverting (Data Flow-Thru Pinout			
	CD4541BC	National	
	CD4541BM	† National	
AC	DPLAC244Y	Dense-Pac	75
	54AC241	† National	
	54AC244	† National	
	74AC241	National	
	74AC244	National	
	74AC11241	TI	80
	74AC11244	TI	
	TC74AC241	**Toshiba (3674)**	
	TC74AC244	**Toshiba (3674)**	
ACT	DPLACT244Y	Dense-Pac	
	CD54ACT241	† Harris	85
	CD54ACT244	† Harris	
	CD74ACT241	Harris	
	CD74ACT244	Harris	
	54ACT241	† National	
	54ACT244	† National	90
	74ACT241	National	
	74ACT244	National	
	74ACT11241	TI	
	74ACT11244	TI	
	V54ACT241	**† VTC (3712)**	95
	V54ACT244	**† VTC (3712)**	
	V74ACT241	**VTC (3712)**	
AHCT	DPLAHCT244Y	Dense-Pac	
	KS74AHCT241	Samsung	
	KS74AHCT244	Samsung	100
	KS74AHCT541	Samsung	
BCT	SN54BCT241	† TI	
	SN54BCT244	† TI	
	SN74BCT241	TI	
	SN74BCT244	TI	105
C	MM54C244	‡ Micrel	
	MM54C244	National	
	MM74C244	National	
FCT	DPLFCT244Y	Dense-Pac	
	IDT54FCT241	† IDT	110
	IDT54FCT241A	† IDT	
	IDT54FCT241C	† IDT	
	IDT54FCT244	◊† IDT	
	IDT54FCT244A	◊† IDT	
	IDT54FCT244AT	◊† IDT	115
	IDT54FCT244C	◊† IDT	
	IDT54FCT244CT	◊† IDT	
	IDT54FCT244T	◊† IDT	
	IDT74FCT244	◊ IDT	
	IDT74FCT244A	◊ IDT	120
	IDT74FCT244AT	◊ IDT	
	IDT74FCT244C	◊ IDT	
	IDT74FCT244CT	◊ IDT	
	IDT74FCT244T	◊ IDT	
	V54FCT241	**† VTC (3712)**	125
	V54FCT244	**◊† VTC (3712)**	
	V74FCT244	**◊† VTC (3712)**	
HC	DPLHC244Y	Dense-Pac	
	DPLXXX244Y	Dense-Pac	
	GD74HC241	**GoldStar (3439)**	130
	GD74HC244	**GoldStar (3439)**	
	GD74HC541	**GoldStar (3439)**	
	CD54HC241	† Harris	
	CD54HC244	† Harris	
	CD74HC241	Harris	135
	CD74HC244	Harris	
	HD74HC241	Hitachi	
	HD74HC244	Hitachi	
	M74HC241	Mitsubishi	
		(Continued)	

Function	Device	Source	Line
Octal Buffer/Line Driver, Three-State, Non-Inverting			
HC (Cont'd)			
	M74HC244	Mitsubishi	140
	MC54HC241	† Motorola	
	MC54HC244	† Motorola	
	MC74HC241	Motorola	
	MC74HC244	Motorola	
	MM54HC241	† National	145
	MM54HC244	† National	
	MM74HC241	National	
	MM74HC244	National	
	MN74HC241	Panasonic	
	MN74HC244	Panasonic	150
	HCF4541B	SGS-Thomson	
	M74HC241	SGS-Thomson	
	M74HC244	SGS-Thomson	
	LR74HC241	Sharp	
	LR74HC244	Sharp	155
	LR74HC541	Sharp	
	54HC244	Signetics	
	74HC244	Signetics	
	SN54HC241	† TI	
	SN54HC244	† TI	160
	SN54HC541	† TI	
	SN74HC241	TI	
	SN74HC244	TI	
	SN74HC541	TI	
	TC74HC241A	**Toshiba (3674)**	165
	TC74HC244A	**Toshiba (3674)**	
	TC74HC541A	**Toshiba (3674)**	
	TC74HC7241A	**Toshiba (3674)**	
	TC74HC7244A	**Toshiba (3674)**	
HCT	DPLHCT244Y	Dense-Pac	170
	GD74HCT241	**GoldStar (3439)**	
	GD74HCT244	**GoldStar (3439)**	
	CD54HCT241	† Harris	
	CD54HCT244	† Harris	
	CD74HCT241	Harris	175
	CD74HCT244	Harris	
	HD74HCT241	Hitachi	
	HD74HCT244	Hitachi	
	IDT74FCT241	† IDT	
	IDT74FCT241A	† IDT	180
	IDT74FCT241C	† IDT	
	54HCT241SOS	‡ Marconi	
	54HCT244SOS	‡ Marconi	
	74HCT241	Marconi	
	74HCT244	Marconi	185
	M74HCT241	Mitsubishi	
	M74HCT244	Mitsubishi	
	MC54HCT241	† Motorola	
	MC54HCT241A	† Motorola	
	MC54HCT244	† Motorola	190
	MC54HCT244A	† Motorola	
	MC74HCT241	Motorola	
	MC74HCT241A	Motorola	
	MC74HCT244	Motorola	
	MC74HCT244A	† Motorola	195
	MM54HCT241	† National	
	MM54HCT244	† National	
	MM74HCT241	National	
	MM74HCT244	National	
	MV74HCT241	Plessey	200
	MV74HCT244	Plessey	
	KS74HCTLS241	Samsung	
	KS74HCTLS244	Samsung	
	M74HCT241	SGS-Thomson	
	M74HCT244	SGS-Thomson	205
	54HCT244	Signetics	
	74HCT244	Signetics	
	SN54HCT241	† TI	
	SN54HCT244	† TI	
	SN74HCT241	◊ TI	210
	SN74HCT244	◊ TI	
	TC74HCT241A	**Toshiba (3674)**	
	TC74HCT244A	**Toshiba (3674)**	
	TC74HCT541A	**Toshiba (3674)**	
	V74ACT244	**VTC (3712)**	215
	V74FCT241	**† VTC (3712)**	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—CMOS (Cont'd)

Function	Device	Source	Line
Bus-Oriented Circuits (Cont'd)			
Octal Buffer/Line Driver, Three-State, Non-Inverting (Cont'd)			
PCT	P54PCT241	◊‡ Performance	
	P54PCT241A	◊‡ Performance	
	P54PCT244	◊‡ Performance	
	P54PCT244A	◊‡ Performance	
	P74PCT241	◊ Performance	5
	P74PCT241A	◊ Performance	
	P74PCT244	◊ Performance	
	P74PCT244A	◊ Performance	
4XXX	HEF40244B	Signetics	
Octal Buffers and Line Drivers, Three-State			
HCTLS	KS74HCTLS465	Samsung	10
	KS74HCTLS466	Samsung	
	KS74HCTLS467	Samsung	
	KS74HCTLS468	Samsung	
Octal Bus Buffer, Three-State			
	NJU74HC240	◊ NJR	
	NJU74HC241	◊ NJR	15
	NJU74HC244	◊ NJR	
Octal Bus Tranceiver, Three-State			
	NJU74HC245	◊ NJR	
	NJU74HC643	◊ NJR	
Octal Bus Transceiver			
	NJU74HC620	◊ NJR	
	NJU74HC623	◊ NJR	20
	NJU74HC645	◊ NJR	
AC	**TC74AC623**	**◊ Toshiba (3674)**	
ACT	**TC74ACT646**	**◊ Toshiba (3674)**	
	TC74ACT648	**Toshiba (3674)**	
HC	M74HC7240	◊ SGS-Thomson	25
	M74HC7241	◊ SGS-Thomson	
	M74HC7244	◊ SGS-Thomson	
	M74HC7640	◊ SGS-Thomson	
	M74HC7643	SGS-Thomson	
	M74HC7645	◊ SGS-Thomson	30
	SN54HC620	◊† TI	
HCT	MC54HCT640A	◊† Motorola	
	MC74HCT640A	◊ Motorola	
Octal Bus Transceiver, Non-Inv.			
HCT	MC74HCT245A	◊ Motorola	
Octal Bus Transceiver/Register			
AC	CD54AC647	† Harris	35
	CD74AC647	Harris	
ACT	CD54ACT647	† Harris	
	CD74ACT647	Harris	
Octal Bus Transceiver/Register, Inverting			
AC	CD54AC649	† Harris	
	CD74AC649	Harris	40
ACT	CD54ACT649	† Harris	
	CD74ACT649	Harris	
Octal Bus Transceiver/Register, Open Drain			
FCT	CD54FCT653	† Harris	
	CD74FCT653	Harris	
Octal Bus Transceiver/Register with Direction Pin, Three-State, Non-Inverting			
AC	CD54AC646	† Harris	45
	CD54AC648	† Harris	
	CD74AC646	Harris	
	CD74AC648	Harris	
	54AC646	† National	
	54AC648	† National	50
	74AC646	National	
	74AC648	National	
	74AC11646	TI	
	74AC11648	TI	
	TC74AC646	**Toshiba (3674)**	55
	TC74AC648	**Toshiba (3674)**	
ACT	CD54ACT646	† Harris	
	CD54ACT648	† Harris	
	CD74ACT646	Harris	
		(Continued)	

Function	Device	Source	Line
Octal Bus Transceiver/Register with Direction Pin, Three-State, Inverting			
ACT		(Cont'd)	
	CD74ACT648	Harris	60
	54ACT646	† National	
	74ACT646	National	
	74ACT11646	TI	
	74ACT11648	TI	
AHCT	KS74AHCT646	Samsung	65
	KS74AHCT648	Samsung	
BCT	SN54BCT646	† TI	
	SN54BCT648	† TI	
	SN74BCT646	TI	
	SN74BCT648	TI	70
FCT	IDT54FCT646	† IDT	
	IDT54FCT646A	† IDT	
	IDT54FCT646AT	† IDT	
	IDT54FCT646T	† IDT	
	IDT54FCT648	† IDT	75
	IDT54FCT648A	† IDT	
	IDT74FCT646	IDT	
	IDT74FCT646A	IDT	
	IDT74FCT646AT	IDT	
	IDT74FCT646T	IDT	80
	IDT74FCT648	IDT	
	IDT74FCT648A	IDT	
HC	**GD74HC646**	**GoldStar (3439)**	
	GD74HC648	**GoldStar (3439)**	
	CD54HC646	† Harris	85
	CD54HC648	† Harris	
	CD74HC646	Harris	
	CD74HC648	Harris	
	MC54HC646	† Motorola	
	MC54HC648	† Motorola	90
	MC74HC646	Motorola	
	MC74HC648	Motorola	
	MM54HC646	† National	
	MM54HC648	† National	
	MM74HC646	National	95
	MM74HC648	National	
	M74HC646	SGS-Thomson	
	M74HC648	SGS-Thomson	
	74HC646	Signetics	
	74HC648	Signetics	100
	SN74HC646	TI	
	SN74HC648	TI	
	TC74HC646A	**Toshiba (3674)**	
	TC74HC648A	**Toshiba (3674)**	
HCT	**GD74HCT646**	**GoldStar (3439)**	105
	GD74HCT648	**GoldStar (3439)**	
	CD54HCT646	† Harris	
	CD54HCT648	† Harris	
	CD74HCT646	Harris	
	CD74HCT648	Harris	110
	KS74HCTLS646	Samsung	
	KS74HCTLS648	Samsung	
	M74HCT646	SGS-Thomson	
	M74HCT648	SGS-Thomson	
	74HCT646	Signetics	115
	74HCT648	Signetics	
	SN74HCT646	◊ TI	
	SN74HCT648	◊ TI	
	TC74HCT646A	**Toshiba (3674)**	
	TC74HCT648A	**Toshiba (3674)**	120
PCT	P54PCT646	◊‡ Performance	
	P54PCT646A	◊‡ Performance	
	P54PCT648	◊‡ Performance	
	P54PCT648A	◊‡ Performance	
	P74PCT646	◊ Performance	125
	P74PCT646A	◊ Performance	
	P74PCT648	◊ Performance	
	P74PCT648A	◊ Performance	
Octal Bus Transceiver/Register with Open Drain			
FCT	CD54FCT647	† Harris	
	CD74FCT647	Harris	130

Function	Device	Source	Line
Octal Bus Transceiver/Register with Open Drain, Inverting			
FCT	CD54FCT649	† Harris	
	CD74FCT649	Harris	
Octal Bus Transceiver/Register with Dual Enable, Three-State, Non-Inverting			
AC	74AC11470	TI	
	74AC11471	TI	
	74AC11651	TI	135
	74AC11652	TI	
ACT	74ACT11470	TI	
	74ACT11471	TI	
	74ACT11651	TI	
	74ACT11652	TI	140
AHCT	KS74AHCT652	Samsung	
BCT	SN54BCT651	† TI	
	SN54BCT652	† TI	
	SN74BCT651	TI	
	SN74BCT652	TI	145
FCT	IDT54FCT651	† IDT	
	IDT54FCT651A	† IDT	
	IDT54FCT652	† IDT	
	IDT54FCT652A	† IDT	
	IDT74FCT651	IDT	150
	IDT74FCT651A	IDT	
	IDT74FCT652	IDT	
	IDT74FCT652A	IDT	
HC	M74HC651	SGS-Thomson	
	M74HC652	SGS-Thomson	155
	SN74HC651	TI	
	SN74HC652	TI	
	TC74HC651A	**Toshiba (3674)**	
	TC74HC652A	**Toshiba (3674)**	
HCT	M74HCT651	SGS-Thomson	160
	M74HCT652	SGS-Thomson	
	SN74HCT651	◊ TI	
	SN74HCT652	◊ TI	
	TC74HCT651A	**Toshiba (3674)**	
	TC74HCT652A	**Toshiba (3674)**	165
PCT	P54PCT651	◊‡ Performance	
	P54PCT651A	◊‡ Performance	
	P54PCT652	◊‡ Performance	
	P54PCT652A	◊‡ Performance	
	P74PCT651	◊ Performance	170
	P74PCT651A	◊ Performance	
	P74PCT652	◊ Performance	
	P74PCT652A	◊ Performance	
Octal Bus Transceiver/Register, Three-State			
FCT	CD54FCT646	† Harris	
	CD54FCT652	† Harris	175
	CD74FCT646	Harris	
	CD74FCT652	Harris	
HC	CD54HC651	† Harris	
	CD54HC652	† Harris	
	CD74HC651	Harris	180
	CD74HC652	Harris	
HCT	CD54HCT651	† Harris	
	CD54HCT652	† Harris	
	CD74HCT651	Harris	
	CD74HCT652	Harris	185
Octal Bus Transceiver/Register, Three-State; Inverting			
AC	CD54AC651	† Harris	
	CD74AC651	Harris	
ACT	CD54ACT651	† Harris	
	CD74ACT651	Harris	
Octal Bus Transceiver/Register, Three-State, Inverting			
FCT	CD54FCT648	† Harris	190
	CD54FCT651	† Harris	
	CD74FCT648	Harris	
	CD74FCT651	Harris	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL–CMOS (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source	Line
Octal Bus Transceiver with Direction Pin, Three-State, Inverting (dual)			
AC	DPLAC640Y	Dense-Pac	
	74AC11640	TI	
	TC74AC640	**Toshiba (3674)**	
ACT	DPLACT640Y	Dense-Pac	
	SN54ACT11640	† TI	5
	74ACT11640	TI	
	TC74ACT640	**Toshiba (3674)**	
	V54ACT640	**† VTC (3712)**	
	V74ACT640	**VTC (3712)**	
AHCT	KS74AHCT640	Samsung	10
BCT	SN54BCT640	† TI	
FCT	IDT54FCT640	◊† IDT	
	IDT54FCT640A	◊† IDT	
	IDT54FCT640AT	◊† IDT	
	IDT54FCT640CT	◊† IDT	15
	IDT54FCT640T	◊† IDT	
	IDT74FCT640	◊ IDT	
	IDT74FCT640A	◊ IDT	
	IDT74FCT640AT	◊ IDT	
	IDT74FCT640CT	◊ IDT	20
	IDT74FCT640T	◊ IDT	
	V54FCT640	**◊† VTC (3712)**	
	V74FCT640	**◊† VTC (3712)**	
HC	DPLHC640Y	Dense-Pac	
	DPLXXX640Y	Dense-Pac	25
	GD74HC640	GoldStar	
	CD54HC640	† Harris	
	CD74HC640	Harris	
	HD74HC640	Hitachi	
	M74HC640	Mitsubishi	30
	M74HC640-1	Mitsubishi	
	MC54HC640	Motorola	
	MC74HC640	Motorola	
	MM54HC640	† National	
	MM74HC640	National	35
	M74HC640	SGS-Thomson	
	LR74HC640	Sharp	
	74HC640	Signetics	
	SN54HC640	TI	
	SN74HC640	TI	40
	TC74HC640A	**Toshiba (3674)**	
HCT	DPLHCT640Y	Dense-Pac	
	GD74HCT640	**GoldStar (3439)**	
	CD54HCT640	† Harris	
	CD74HCT640	Harris	45
	M74HCT640-1	Mitsubishi	
	MC54HCT640	† Motorola	
	MC74HCT640	Motorola	
	MM54HCT640	† National	
	MM74HCT640	National	50
	KS74HCTLS640	Samsung	
	M74HCT640	SGS-Thomson	
	74HCT640	Signetics	
	SN74HCT640	◊ TI	
	TC74HCT640A	**Toshiba (3674)**	55
	US74HCT640	Universal	
PCT	P54PCT640	◊‡ Performance	
	P54PCT640A	◊‡ Performance	
	P74PCT640	◊ Performance	
	P74PCT640A	◊ Performance	60
Octal Bus Transceiver with Parity			
HCTLS	KS74HCTLS658	Samsung	
	KS74HCTLS659	Samsung	
	KS74HCTLS664	Samsung	
	KS74HCTLS665	Samsung	
Octal Bus Transceiver with Parity, Three-State			
AHCT	KS74AHCT658	Samsung	65
	KS74AHCT659	Samsung	
Octal Bus Transceiver with Registers, Three-State			
AHCT	KS74AHCT651	Samsung	
HCTLS	KS74HCTLS651	Samsung	
	KS74HCTLS652	Samsung	
Octal Bus Transceiver with Storage, Open-Collector			
FCT	IDT54FCT621AT	◊† IDT	70
	IDT54FCT621CT	◊† IDT	
	IDT54FCT621T	◊† IDT	
	IDT54FCT622AT	◊† IDT	
	IDT54FCT622CT	◊† IDT	
	IDT54FCT622T	◊† IDT	75
	IDT74FCT621AT	◊ IDT	
	IDT74FCT621CT	◊ IDT	
	IDT74FCT621T	◊ IDT	
	IDT74FCT622AT	◊ IDT	
	IDT74FCT622CT	◊ IDT	80
	IDT74FCT622T	◊ IDT	
Octal Bus Transceiver with Dual Enable, Three-State, Non-Inverting	CD54AC623	Harris	
AC	CD74AC623	Harris	
	74AC11620	TI	
	74AC11623	TI	85
	TC74AC620	**Toshiba (3674)**	
ACT	CD54ACT623	† Harris	
	CD74ACT623	Harris	
	74ACT11620	TI	
	74ACT11623	TI	90
	V54ACT620	**† VTC (3712)**	
	V54ACT623	**† VTC (3712)**	
	V74ACT620	**VTC (3712)**	
	V74ACT623	**VTC (3712)**	
BCT	SN54BCT623	† TI	95
	SN74BCT620	TI	
	SN74BCT623	TI	
FCT	IDT54FCT620AT	◊† IDT	
	IDT54FCT620CT	◊† IDT	
	IDT54FCT620T	◊† IDT	100
	IDT54FCT623AT	◊† IDT	
	IDT54FCT623CT	◊† IDT	
	IDT54FCT623T	◊† IDT	
	IDT74FCT620AT	◊ IDT	
	IDT74FCT620CT	◊ IDT	105
	IDT74FCT620T	◊ IDT	
	IDT74FCT623AT	◊ IDT	
	IDT74FCT623CT	◊ IDT	
	IDT74FCT623T	◊ IDT	
HC	HD74HC620	Hitachi	110
	HD74HC623	Hitachi	
	MM54HC620	† National	
	MM54HC623	† National	
	MM74HC620	National	
	MM74HC623	National	115
	M74HC620	SGS-Thomson	
	M74HC623	SGS-Thomson	
	SN54HC623	† TI	
	SN74HC620	TI	
	SN74HC623	TI	120
	TC54HC620	Toshiba	
	TC74HC620A	**Toshiba (3674)**	
	TC74HC623A	**Toshiba (3674)**	
HCT	MC54HCT623	† Motorola	
	SN74HCT620	TI	125
	SN74HCT623	TI	
Octal Bus Transceiver with 8-Bit Parity Generator/Checker, Three-State, Non-Inverting			
AC	74AC11657	TI	
ACT	54ACT657	† National	
	74ACT657	National	
	74ACT11657	‡ TI	130

(Continued)

Function	Device	Source	Line
Octal Bus Transceiver with 8-bit Parity Generator (Cont'd)			
PCT	P54PCT657	◊‡ Performance	
	P54PCT657A	◊‡ Performance	
	P74PCT657	◊ Performance	
	P74PCT657A	◊ Performance	
Octal Bus Transceiver, Three-State			
	NJU74HC640	◊ NJR	135
FCT	CD54FCT245	† Harris	
	CD54FCT623	† Harris	
	CD74FCT245	Harris	
	CD74FCT623	Harris	
HCTLS	KS74HCTLS245	Samsung	140
	KS74HCTLS645	Samsung	
HCTS	HCTS245MS	‡ Harris	
Octal Bus Transceiver, Three-State Inputs/Outputs			
HCT	MV74HCT545	Plessey	
PCT	P54PCT545	◊‡ Performance	
	P54PCT545A	◊‡ Performance	145
	P74PCT545	◊ Performance	
	P74PCT545A	◊ Performance	
Octal Bus Transceiver, Three-State, Inverting			
FCT	CD54FCT640	† Harris	
	CD74FCT640	Harris	
HC	**GD74HC242**	**GoldStar (3439)**	150
	CD54HC242	† Harris	
	CD74HC242	Harris	
	HD74HC242	Hitachi	
	M74HC242	Mitsubishi	
	MC54HC242	† Motorola	155
	MC74HC242	Motorola	
	MM54HC242	† National	
	MM74HC242	National	
	MN74HC242	Panasonic	
	M74HC242	SGS-Thomson	160
	LR74HC242	Sharp	
	74HC242	Signetics	
	SN54HC242	† TI	
	SN74HC242	TI	
	TC74HC242A	**Toshiba (3674)**	165
HCT	**GD74HCT242**	**GoldStar (3439)**	
	CD54HCT242	† Harris	
	CD74HCT242	Harris	
	HD74HCT242	Hitachi	
	74HCT242	Signetics	170
	SN74HCT242	◊ TI	
Octal Bus Transceiver, Three-State, Non-Inverting (dual)			
AC	DPLAC245Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
AC	CD54AC245	† Harris	
	CD74AC245	Harris	
	54AC245	† National	175
	74AC245	National	
	54AC11245	† TI	
	74AC11245	TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
AC	74AC11643	TI	
Octal Bus Transceiver, Three-State, Non-Inverting			
AC	**TC74AC245**	**Toshiba (3674)**	180
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
AC	**TC74AC643**	**Toshiba (3674)**	
ACT	DPLACT245Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
ACT	CD54ACT245	† Harris	
	CD74ACT245	Harris	
	54ACT245	† National	185
	74ACT245	National	
	54ACT11245	† TI	
	74ACT11245	TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
ACT	74ACT11643	TI	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—CMOS (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source	Line
Octal Bus Transceiver, Three-State, Non-Inverting			
ACT	**TC74ACT245**	**Toshiba (3674)**	
	V54ACT245	**† VTC (3712)**	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
ACT	**V54ACT643**	**† VTC (3712)**	
Octal Bus Transceiver, Three-State, Non-Inverting			
ACT	**V54ACT645**	**† VTC (3712)**	
	V74ACT245	**VTC (3712)**	5
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
ACT	**V74ACT643**	**VTC (3712)**	
Octal Bus Transceiver, Three-State, Non-Inverting			
ACT	**V74ACT645**	**VTC (3712)**	
AHCT	KS74AHCT245	Samsung	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
AHCT	KS74AHCT643	Samsung	
Octal Bus Transceiver, Three-State, Non-Inverting			
AHCT	KS74AHCT645	Samsung	10
BCT	SN54BCT245	† TI	
	SN74BCT1245	TI	
	SN74BCT245	TI	
FCT	DPLFCT245Y	† Dense-Pac	
	IDT54FCT245	◊† IDT	15
	IDT54FCT245A	◊† IDT	
	IDT54FCT245AT	◊† IDT	
	IDT54FCT245C	◊† IDT	
	IDT54FCT245CT	◊† IDT	
	IDT54FCT245T	◊† IDT	20
	IDT54FCT645	◊† IDT	
	IDT54FCT645A	◊† IDT	
	IDT74FCT245	◊ IDT	
	IDT74FCT245A	◊ IDT	
	IDT74FCT245AT	◊ IDT	25
	IDT74FCT245C	◊ IDT	
	IDT74FCT245CT	◊ IDT	
	IDT74FCT245T	◊ IDT	
	IDT74FCT645	◊ IDT	
	IDT74FCT645A	◊ IDT	30
	V54FCT245	**◊† VTC (3712)**	
	V54FCT645	**◊† VTC (3712)**	
	V74FCT245	**◊† VTC (3712)**	
	V74FCT645	**◊† VTC (3712)**	
Octal Bus Transceiver, Three-State, Non-Inverting (dual)			
HC	DPLHC245Y	Dense-Pac	35
	DPLXXX245Y	Dense-Pac	
	DPLXXX645Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	**GD74HC243**	**GoldStar (3439)**	
	GD74HC245	**GoldStar (3439)**	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	**GD74HC643**	**GoldStar (3439)**	40
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	CD54HC243	† Harris	
	CD54HC245	† Harris	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	CD54HC643	† Harris	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	CD74HC243	Harris	
	CD74HC245	Harris	45
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	CD74HC643	Harris	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	HD74HC245	Hitachi	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	HD74HC643	Hitachi	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	M74HC243	Mitsubishi	
	M74HC245	Mitsubishi	50
	M74HC245-1	Mitsubishi	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	M74HC643	Mitsubishi	
	M74HC643-1	Mitsubishi	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	M74HC645	Mitsubishi	
	M74HC645-1	Mitsubishi	55
	MC54HC243	† Motorola	
	MC54HC245	† Motorola	
	MC74HC243	Motorola	
	MC74HC245	Motorola	
	MM54HC243	† National	60
	MM54HC245A	† National	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	MM54HC643	† National	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	MM74HC243	National	
	MM74HC245A	National	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	MM74HC643	National	65
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	MN74HC243	Panasonic	
	MN74HC245	Panasonic	
	M74HC243	SGS-Thomson	
	M74HC245	SGS-Thomson	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	M74HC643	SGS-Thomson	70
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	LR74HC243	Sharp	
	LR74HC245	Sharp	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	LR74HC643	Sharp	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	74HC243	Signetics	
	74HC245	Signetics	75
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	74HC643	Signetics	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	SN54HC243	† TI	
	SN54HC245	† TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	SN54HC643	† TI	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	SN54HC645	† TI	80
	SN74HC243	TI	
	SN74HC245	TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	SN74HC643	TI	
Octal Bus Transceiver, Three-State, Non-Inverting			
HC	SN74HC645	TI	
	TC74HC243A	**Toshiba (3674)**	85
	TC74HC245A	**Toshiba (3674)**	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HC	**TC74HC643A**	**Toshiba (3674)**	
HCT	DPLHCT245Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	**GD74HCT243**	**GoldStar (3439)**	
	GD74HCT245	**GoldStar (3439)**	90
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	**GD74HCT643**	**GoldStar (3439)**	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	CD54HCT243	† Harris	
	CD54HCT245	† Harris	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	CD54HCT643	† Harris	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	CD74HCT243	Harris	95
	CD74HCT245	Harris	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	CD74HCT643	Harris	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	HD74HCT243	Hitachi	
	HD74HCT245	Hitachi	
	54HCT245SOS	‡ Marconi	100
	74HCT245	Marconi	
	M74HCT245-1	Mitsubishi	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	M74HCT643-1	Mitsubishi	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	M74HCT645-1	Mitsubishi	
	MC54HCT245	† Motorola	105
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	MC54HCT643	† Motorola	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	MC74HCT245	Motorola	
	MM54HCT245	† National	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	MM54HCT643	† National	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	MM74HCT245	◊ National	110
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	MM74HCT643	National	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	P54PCT245A	◊‡ Performance	
	P74PCT245A	◊ Performance	
	MV74HCT245	Plessey	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	KS74HCTLS643	Samsung	115
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	M74HCT245	SGS-Thomson	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	M74HCT643	SGS-Thomson	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	74HCT243	Signetics	
	74HCT245	Signetics	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	74HCT643	Signetics	120
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	SN54HCT245	† TI	
	SN74HCT243	◊ TI	
	SN74HCT245	◊ TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	SN74HCT643	◊ TI	
Octal Bus Transceiver, Three-State, Non-Inverting			
HCT	SN74HCT645	◊ TI	125
	TC74HCT245A	**Toshiba (3674)**	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
HCT	**TC74HCT643A**	**Toshiba (3674)**	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source	Line
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
PCT	P54PCT643	◊‡ Performance	
	P54PCT643A	◊‡ Performance	
Octal Bus Transceiver, Three-State, Non-Inverting			
PCT	P54PCT645	◊‡ Performance	
	P54PCT645A	◊‡ Performance	
	P74PCT245	◊ Performance	5
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
PCT	P74PCT643	◊ Performance	
	P74PCT643A	◊ Performance	
Octal Bus Transceiver, Three-State, Non-Inverting			
PCT	P74PCT645	◊ Performance	
	P74PCT645A	◊ Performance	
4XXX	HEF40245B	Signetics	10
Octal Bus Transceiver, Three-State, True/Inverting			
FCT	CD54FCT643	† Harris	
	CD74FCT643	Harris	
Octal Bus Transciever, Non-Inv.			
HCT	MC54HCT245A	◊† Motorola	
Octal Latched Transceiver with Dual Enable, Three-State			
AC	74AC11543	Signetics	
	74AC11544	Signetics	15
ACT	74ACT11543	Signetics	
	74ACT11544	Signetics	
Octal Register-Transceiver, Three-State			
FCT	CD54FCT543	† Harris	
	CD74FCT543	Harris	
Octal Register-Transceiver, Three-State, Inverting			
FCT	CD54FCT544	† Harris	20
	CD74FCT544	Harris	
Octal Registered Transceiver with Dual Enable, Three-State, Inverting			
AC	74AC11544	TI	
ACT	54ACT543	† National	
	54ACT544	† National	
	74ACT543	National	25
	74ACT544	National	
	74ACT11544	TI	
BCT	SN54BCT543	† TI	
	SN54BCT544	† TI	
	SN74BCT543	TI	30
	SN74BCT544	TI	
FCT	IDT54FCT543	† IDT	
	IDT54FCT543A	† IDT	
	IDT74FCT543	IDT	
	IDT74FCT543A	IDT	35
PCT	P54PCT543	◊‡ Performance	
	P54PCT543A	◊‡ Performance	
	P54PCT544	◊‡ Performance	
	P54PCT544A	◊‡ Performance	
	P74PCT543	◊ Performance	40
	P74PCT543A	◊ Performance	
	P74PCT544	◊ Performance	
	P74PCT544A	◊ Performance	
Octal Transceiver/Register w/Direction Pin, Three-State			
AC	74AC11646	Signetics	
	74AC11648	Signetics	45
ACT	74ACT11646	Signetics	
	74ACT11648	Signetics	
Octal Transceiver/Register w/Dual Enable, Three-State, Inverting			
AC	74AC11651	Signetics	
	74AC11652	Signetics	
ACT	74ACT11651	Signetics	50
	74ACT11652	Signetics	
Octal Transceiver/Register with Dual Enable, Three-State			
AC	74AC11470	Signetics	
	74AC11471	Signetics	
ACT	74ACT11470	Signetics	
	74ACT11471	Signetics	55
Octal Transceiver w/Direction Pin, Three-State, Inverting			
AC	74AC11640	Signetics	
ACT	74ACT11640	Signetics	
Octal Transceiver w/Dual Enable, Three-State			
AC	74AC11623	Signetics	
ACT	74ACT11623	Signetics	
Octal Transceiver w/Dual Enable, Three-State, Inverting			
AC	74AC11620	Signetics	60
ACT	74ACT11620	Signetics	
Octal Transceiver w/8-Bit Parity Generator/Checker			
AC	74AC11657	Signetics	
ACT	74ACT11657	Signetics	
Octal Transceiver with Direction Pin, Three-State			
AC	74AC11245	Signetics	
ACT	74ACT11245	Signetics	65
Octal Transceiver, Three-State, True/Inverting			
AC	74AC11643	Signetics	
ACT	74ACT11643	Signetics	
8-Bit Bus Interface D-Type Latches, Three-State			
AHCT	KS74AHCT845	Samsung	
	KS74AHCT846	Samsung	
8-Bit Bus Interface Registers, Three-State			
HCTLS	KS74HCTLS825	Samsung	70
	KS74HCTLS826	Samsung	
	KS74HCTLS845	Samsung	
	KS74HCTLS846	Samsung	
8-Bit Bus Transceiver with Parity Checker/Generator			
PCT	P54PCT833A	◊‡ Performance	
	P54PCT833B	◊‡ Performance	75
	P74PCT833A	◊ Performance	
	P74PCT833B	◊ Performance	
9-Bit Bus Interface Register, Three-State, Non-Inverting			
FCT	IDT54FCT823A	◊† IDT	
	IDT54FCT823B	◊† IDT	
	IDT74FCT823A	◊ IDT	80
	IDT74FCT823B	◊ IDT	
	V54FCT823A	**◊† VTC (3712)**	
	V74FCT823A	**◊† VTC (3712)**	
9-Bit Bus Interface Registers, Three-State			
HCTLS	KS74HCTLS823	Samsung	
	KS74HCTLS824	Samsung	85
	KS74HCTLS843	Samsung	
	KS74HCTLS844	Samsung	
9-Bit Bus Transceiver/Register with Dual Enable, Three-State, Non-Inverting			
AC	74AC11474	TI	
	74AC11475	TI	
ACT	74ACT11474	TI	90
	74ACT11475	TI	
9-Bit Bus Transceiver with Latched 8-Bit Parity Error, Three-State	LC8951	Sanyo	
9-Bit Bus Transceiver with Dual Enable, Three-State, Non-Inverting			
AC	74AC11472	TI	
	74AC11473	TI	
ACT	74ACT11472	TI	95
	74ACT11473	TI	
9-Bit Bus Transceiver, Three-State, Inverting			
AC	74AC11864	TI	
ACT	74ACT11864	TI	
	V54ACT864	**† VTC (3712)**	
	V74ACT864	**VTC (3712)**	100
BCT	SN74BCT29864	TI	
FCT	IDT54FCT864A	◊† IDT	
	IDT54FCT864B	◊† IDT	
	IDT74FCT864A	◊ IDT	
		(Continued)	

Function	Device	Source	Line
9-Bit Bus Transceiver, Three-State, Inverting			
FCT		(Cont'd)	
	V54FCT864A	**◊† VTC (3712)**	105
	V74FCT864A	**◊† VTC (3712)**	
9-Bit Bus Transceiver, Three-State, Non-Inverting			
	AM29C863	AMD	
AC	74AC11863	TI	
ACT	74ACT11863	TI	
	V54ACT863	**† VTC (3712)**	110
	V74ACT863	**VTC (3712)**	
BCT	SN54BCT29863	† TI	
	SN74BCT29863	TI	
FCT	IDT54FCT863A	◊† IDT	
	IDT54FCT863B	◊† IDT	115
	IDT74FCT863A	◊ IDT	
	V54FCT863A	**◊† VTC (3712)**	
	V74FCT863A	**◊† VTC (3712)**	
9-Wide Latched Transceiver with Dual Enable, Three-State			
AC	74AC11472	Signetics	
	74AC11473	Signetics	120
ACT	74ACT11472	Signetics	
	74ACT11473	Signetics	
9-Wide Transceiver/Register with Dual Enable, Three-State			
AC	74AC11474	Signetics	
	74AC11475	Signetics	
ACT	74ACT11474	Signetics	125
	74ACT11475	Signetics	
10-Bit Buffer/Line Driver, Three-State			
FCT	CD54FCT827A	† Harris	
	CD74FCT827A	Harris	
10-Bit Buffer/Line Driver, Three-State, Inverting			
BCT	SN74BCT29828A	TI	
FCT	CD54FCT828A	† Harris	130
	CD74FCT828A	Harris	
10-Bit Buffer/Line Driver, Three-State, Non-Inverting			
BCT	SN74BCT29827A	TI	
10-Bit Bus Interface Register, Three-State, Inverting			
FCT	**V54FCT822A**	**◊† VTC (3712)**	
	V74FCT822A	**◊† VTC (3712)**	
10-Bit Bus Interface Register, Three-State, Non-Inverting			
FCT	IDT54FCT821A	◊† IDT	135
	IDT54FCT821AT	◊† IDT	
	IDT54FCT821B	◊† IDT	
	IDT54FCT821BT	◊† IDT	
	IDT54FCT821C	◊† IDT	
	IDT54FCT821CT	◊† IDT	140
	IDT74FCT821A	◊ IDT	
	IDT74FCT821AT	◊ IDT	
	IDT74FCT821AT	◊† IDT	
	IDT74FCT821B	◊ IDT	
	IDT74FCT821C	◊ IDT	145
	IDT74FCT821CT	◊† IDT	
	V54FCT821A	**◊† VTC (3712)**	
	V74FCT821A	**◊† VTC (3712)**	
10-Bit Bus Interface Registers, Three-State			
HCTLS	KS74HCTLS821	Samsung	
	KS74HCTLS822	Samsung	150
	KS74HCTLS841	Samsung	
	KS74HCTLS842	Samsung	
10-Bit Bus Transceiver, Three-State, Inverting			
AC	74AC11862	TI	
ACT	74ACT11862	TI	
	V54ACT862	**† VTC (3712)**	155
	V74ACT862	**VTC (3712)**	
BCT	SN74BCT29862	TI	
FCT	IDT74FCT862A	◊ IDT	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—CMOS (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source	Line
10-Bit Bus Transceiver, Three-State, Inverting			
FCT			(Cont'd)
	V54FCT862A	**◊† VTC**	**(3712)**
	V74FCT862A	**◊† VTC**	**(3712)**
10-Bit Bus Transceiver, Three-State, Non-Inverting			
	AM29C861	AMD	
AC	74AC11861	TI	
ACT	74ACT11861	TI	5
	V54ACT861	**† VTC**	**(3712)**
	V74ACT861	**VTC**	**(3712)**
BCT	SN54BCT29861	† TI	
	SN74BCT29861	TI	
FCT	IDT54FCT861A	◊† IDT	10
	IDT54FCT861B	◊† IDT	
	IDT74FCT861A	◊ IDT	
	V54FCT861A	**◊† VTC**	**(3712)**
	V74FCT861A	**◊† VTC**	**(3712)**

Counters, Binary

Function	Device	Source	Line
Asynchronous Presettable 4-Bit with Single Clock			
AC	74AC11191	Signetics	15
ACT	74ACT11191	Signetics	
Clock Generator with 4-Bit Counter			
5XXX	TC5018	Toshiba	
Divide by 2, 8 or 16			
C	MM74C93	National	
Divider with 4-Bit Counter			
5XXX	TC5027B	Toshiba	
Presettable Synchronous, Asynchronous Clear			
AC	CD54AC161	† Harris	20
	CD74AC161	Harris	
	54AC161	† National	
	74AC161	National	
	74AC11161	TI	
	TC74AC161	**Toshiba (3674)**	25
ACT	CD54ACT161	† Harris	
	CD74ACT161	Harris	
	54ACT161	† National	
	74ACT161	National	
	74ACT11161	TI	30
AHCT	KS74AHCT161	Samsung	
C	MM54C161	‡ Micrel	
	MM54C161	† National	
	MM74C161	National	
Cell	SN74161A-Cell	° TI	35
FCT	IDT54FCT161	◊† IDT	
	IDT54FCT161A	◊† IDT	
	IDT74FCT161	◊ IDT	
	IDT74FCT161A	◊ IDT	
HC	**GD74HC161A**	**GoldStar (3439)**	40
	CD54HC161	† Harris	
	CD74HC161	Harris	
	HD74HC161	Hitachi	
	MC54HC161	† Motorola	
	MC74HC161	Motorola	45
	MM54HC161	† National	
	MM74HC161	National	
	MN74HC161	◊ Panasonic	
	M74HC161	SGS-Thomson	
	LR74HC161	Sharp	50
	74HC161	Signetics	
	SN54HC161	† TI	
	SN74HC161	TI	
	TC74HC161A	**Toshiba (3674)**	
	US74HC161	Universal	55
HCT	**GD74HCT161A**	**GoldStar (3439)**	
	CD54HCT161	† Harris	
	CD74HCT161	Harris	
	KS74HCTLS161	Samsung	
	74HCT161	Signetics	60

(Continued)

Function	Device	Source	Line
Presettable Synchronous, Asynchronous Clear			
			(Cont'd)
PCT	P54PCT161	◊‡ Performance	
	P54PCT161A	◊‡ Performance	
	P54PCT163	◊‡ Performance	
	P54PCT163A	◊‡ Performance	
	P74PCT161	◊ Performance	65
	P74PCT161A	◊ Performance	
	P74PCT163	◊ Performance	
	P74PCT163A	◊ Performance	
4XXX	GD40161B	GoldStar	
	CD40161B	† Harris	70
	CD40161BE	Harris	
	CD40161B	‡ Micrel	
	MC14161BA	† Motorola	
	MC14161BC	Motorola	
	CD40161BC	National	75
	CD40161BM	† National	
	MN40161B	◊† Panasonic	
	HCC40161B	† SGS-Thomson	
	HCF40161B	◊ SGS-Thomson	
	HEF40161B	Signetics	80
	TC40161B	Toshiba	
Presettable Synchronous, Synchronous Clear			
AC	CD54AC163	† Harris	
	CD74AC163	Harris	
	54AC163	† National	
	74AC163	National	85
	74AC11163	TI	
	TC74AC163	**Toshiba (3674)**	
ACT	CD54ACT163	† Harris	
	CD74ACT163	Harris	
	54ACT163	† National	90
	74ACT163	National	
	74ACT11163	TI	
AHCT	KS74AHCT163	Samsung	
C	MM54C163	‡ Micrel	
	MM54C163	† National	95
	MM74C163	National	
Cell	SN74163A	° TI	
FCT	IDT54FCT163	◊† IDT	
	IDT54FCT163A	◊† IDT	
	IDT74FCT163	◊ IDT	100
	IDT74FCT163A	◊ IDT	
HC	**GD74HC163**	**GoldStar (3439)**	
	CD54HC163	† Harris	
	CD74HC163	Harris	
	HD74HC163	Hitachi	105
	MC54HC163	† Motorola	
	MC74HC163	Motorola	
	MM54HC163	† National	
	MM74HC163	National	
	MN74HC163	◊ Panasonic	110
	M74HC163	SGS-Thomson	
	LR74HC163	Sharp	
	74HC163	Signetics	
	SN54HC163	TI	
	SN74HC163	TI	115
	TC74HC163A	**Toshiba (3674)**	
	US74HC163	Universal	
HCT	**GD74HCT163**	**GoldStar (3439)**	
	CD54HCT163	† Harris	
	CD74HCT163	Harris	120
	KS74HCTLS163	Samsung	
	74HCT163	Signetics	
4XXX	GD40163B	GoldStar	
	CD40163B	† Harris	
	CD40163BE	Harris	125
	CD40163B	‡ Micrel	
	MC14163BA	† Motorola	
	MC14163BC	Motorola	
	CD40163BC	National	
	CD40163BM	† National	130
	F40163BC	National	
	F40163BM	National	
	HCC40163B	† SGS-Thomson	

(Continued)

Function	Device	Source	Line
Presettable Synchronous, Synchronous Clear			
4XXX			(Cont'd)
	HCF40163	SGS-Thomson	
	HEF40163B	Signetics	135
	TC40163B	Toshiba	
Presettable Synchronous, Up/Down			
HC	M74HC191	Mitsubishi	
	HCF40193B	SGS-Thomson	
Presettable Up/Down			
AC	CD54AC191	† Harris	
	CD54AC193	† Harris	140
	CD74AC191	Harris	
	CD74AC193	Harris	
	54AC191	† National	
	74AC191	National	
	74AC11168	TI	145
	74AC11191	TI	
	74AC11193	TI	
	74AC11569	TI	
ACT	CD54ACT191	† Harris	
	CD54ACT193	† Harris	150
	CD74ACT191	Harris	
	CD74ACT193	Harris	
	74ACT11168	TI	
	74ACT11191	TI	
	74ACT11193	TI	155
	74ACT11569	TI	
	74ACT11579	TI	
C	MM54C193	‡ Micrel	
	MM54C193	† National	
	MM74C193	National	160
FCT	IDT54FCT191	◊† IDT	
	IDT54FCT191A	◊† IDT	
	IDT74FCT191	◊ IDT	
	IDT74FCT191A	◊ IDT	
HC	**GD74HC191**	**GoldStar (3439)**	165
	GD74HC193	**GoldStar (3439)**	
	CD54HC191	† Harris	
	CD54HC193	† Harris	
	CD54HC4516	† Harris	
	CD74HC191	Harris	170
	CD74HC193	Harris	
	CD74HC4516	Harris	
	HD74HC191	Hitachi	
	HD74HC193	Hitachi	
	MM54HC191	† National	175
	MM54HC193	† National	
	MM74HC191	National	
	MM74HC193	National	
	MN74HC193	◊ Panasonic	
	M74HC191	SGS-Thomson	180
	M74HC193	SGS-Thomson	
	74HC191	Signetics	
	74HC193	Signetics	
	74HC4516	Signetics	
	TC74HC193A	**Toshiba (3674)**	185
	US74HC191	Universal	
	US74HC193	Universal	
HCT	**GD74HCT191**	**GoldStar (3439)**	
	GD74HCT193	**GoldStar (3439)**	
	CD54HCT191	† Harris	190
	CD54HCT193	† Harris	
	CD54HCT4516	† Harris	
	CD74HCT191	Harris	
	CD74HCT193	Harris	
	CD74HCT4516	Harris	195
	MM54HCT191	† National	
	MM54HCT193	† National	
	MM74HCT191	National	
	MM74HCT193	National	
	74HCT191	Signetics	200
	74HCT193	Signetics	
	74HCT4516	Signetics	
4XXX	GD40193B	GoldStar	
	GD4516B	† GoldStar	
	CD40193B	† Harris	205

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL–CMOS (Cont'd)

Counters, Binary (Cont'd)

Function	Device	Source	Line
Presettable Up/Down			
4XXX		(Cont'd)	
	CD40193BE	Harris	
	CD4516B	† Harris	
	CD4516BE	Harris	
	CD40193B	‡ Micrel	
	CD4516B	‡ Micrel	5
	MC14516BA	† Motorola	
	MC14516BC	Motorola	
	CD40193BC	National	
	CD40193BM	† National	
	CD4516BC	National	10
	CD4516BM	† National	
	MN4516B	† Panasonic	
	HCC4516B	† SGS-Thomson	
	HCF4516B	SGS-Thomson	
	HEF40193B	Signetics	15
	HEF4516B	Signetics	
	TC40193B	Toshiba	
	TC4516B	Toshiba	
Presettable 8-Bit Down			
HC	**TC74HC40103A**	**Toshiba (3674)**	
4XXX	CD40103B	† Harris	20
	CD40103BE	Harris	
	HCC40103B	† SGS-Thomson	
	HCF40103B	SGS-Thomson	
	TC40103B	Toshiba	
Programmable Divide-by-N, 4-Bit			
4XXX	**GD4526B**	**GoldStar (3431)**	25
	MC14526BA	† Motorola	
	MC14526BC	Motorola	
	CD4526BC	National	
	CD4526BM	† National	
	HEF4526B	Signetics	30
	TC4526B	Toshiba	
Programmable Divider			
HC	M74HC7292	SGS-Thomson	
	M74HC7294	SGS-Thomson	
Ripple Carry/Binary Counter/Dividers			
	NJU4020B	NJR	
	NJU4040B	NJR	35
Synchronous, Asynchronous Clear, Up/Down			
FCT	IDT54FCT193	◊† IDT	
	IDT54FCT193A	◊† IDT	
	IDT74FCT193	◊ IDT	
	IDT74FCT193A	◊ IDT	
HC	M74HC193	Mitsubishi	40
Synchronous Presetable 8-Bit, Asynchronous Reset			
AC	74AC11461	Signetics	
ACT	74ACT11461	Signetics	
Synchronous Presettable 4-Bit Up/Down w/Sync/Async Reset			
AC	74AC11569	Signetics	
ACT	74ACT11569	Signetics	
Synchronous Presettable 4-Bit Binary Counter, Asynchronous Reset			
AC	74AC11161	Signetics	45
	74AC11163	Signetics	
ACT	74ACT11161	Signetics	
	74ACT11163	Signetics	
Synchronous Presettable 8-Bit, Synchronous Reset			
AC	74AC11463	Signetics	
ACT	74ACT11463	Signetics	50
Synchronous Binary Counter			
ACT	**TC74ACT161**	**◊ Toshiba (3674)**	
	TC74ACT163	**◊ Toshiba (3674)**	
Synchronous 4-Bit			
HCTLS	KS74HCTLS161A	Samsung	
	KS74HCTLS163A	Samsung	
Synchronous 4-Bit Up/Down			
AHCT	KS74AHCT169	Samsung	55

Function	Device	Source	Line
Synchronous 8-Bit Up/Down Counter			
AC	74AC11469	TI	
ACT	74ACT11469	TI	
Synchronous 8-Bit w/Input Registers, Async Reset			
AC	74AC11592	Signetics	
	74AC11593	Signetics	
ACT	74ACT11592	Signetics	60
	74ACT11593	Signetics	
Synchronous 8-Bit w/Output Registers, Async Reset			
AC	74AC11590	Signetics	
ACT	74ACT11590	Signetics	
Synchronous 8-Bit Binary Counter			
AC	74AC11461	TI	
	74AC11463	TI	65
ACT	74ACT11461	TI	
	74ACT11463	TI	
Up/Down, Synchronous, 4-Bit			
HC	HD74HC669	Hitachi	
Dual	NJU74HC393	◊ NJR	
HC	CD54HC4520	† Harris	70
	CD74HC4520	Harris	
	TC74HC4520A	**Toshiba (3674)**	
HCT	CD54HCT4520	† Harris	
	CD74HCT4520	Harris	
Dual Synchronous			
AHCT	KS74AHCT393	Samsung	75
Cell	SN74393	° TI	
HC	HD74HC4520	Hitachi	
	MC54HC393	† Motorola	
	MC74HC393	Motorola	
	M74HC393	SGS-Thomson	80
	LR74HC393	Sharp	
	74HC4520	Signetics	
	SN54HC393	† TI	
	SN74HC393	TI	
HCT	74HCT4520	Signetics	85
4XXX	**GD4520B**	**GoldStar (3431)**	
	CD4520B	† Harris	
	CD4520BE	Harris	
	CD4520B	‡ Micrel	
	MC14520BA	† Motorola	90
	MC14520BC	Motorola	
	CD4520BC	National	
	CD4520BM	† National	
	MN4520B	◊† Panasonic	
	HCC4520B	† SGS-Thomson	95
	HCF4520B	◊ SGS-Thomson	
	HEF4520B	Signetics	
	TC4520B	Toshiba	
Dual BCD Programmable			
HC	M74HC40102	SGS-Thomson	
Dual 4-Bit			
HC	**GD74HC393**	**GoldStar (3439)**	100
	CD54HC393	† Harris	
	CD74HC393	Harris	
	HD74HC393	Hitachi	
	MM54HC393	† National	
	MM74HC393	National	105
	MN74HC393	◊ Panasonic	
	M74HC4520	SGS-Thomson	
	74HC393	Signetics	
	TC74HC393A	**Toshiba (3674)**	
HCT	**GD74HCT393**	**GoldStar (3439)**	110
	CD54HCT393	† Harris	
	CD74HCT393	Harris	
	KS74HCTLS393	Samsung	
	74HCT393	Signetics	
Decade			
HC	HCF40110B	SGS-Thomson	115
4-Bit	MM54C93	† National	
HC	M74HC691	SGS-Thomson	
	M74HC693	SGS-Thomson	
	M74HC699	SGS-Thomson	

Function	Device	Source	Line
4-Bit Presettable (CMOS/SOS)			
HCTS	HCTS161MS	‡ Harris	120
4-Bit, Ripple			
HC	**GD74HC93**	**GoldStar (3439)**	
	CD54HC93	† Harris	
	CD74HC93	Harris	
	HD74HC93	Hitachi	
	74HC93	Signetics	125
HCT	**GD74HCT93**	**GoldStar (3439)**	
	CD54HCT93	† Harris	
	CD74HCT93	Harris	
	74HCT93	Signetics	
4-Bit Synchronous with Output Registers, Asynchronous Clear			
HC	**TC74HC691A**	**Toshiba (3674)**	130
4-Bit Synchronous with Output Registers, Synchronous Clear			
HC	**TC74HC693A**	**Toshiba (3674)**	
4-Bit Synchronous Binary Up/Down with Output Registers			
HC	**TC74HC697A**	**Toshiba (3674)**	
	TC74HC699A	**Toshiba (3674)**	
4-Bit Up/Down, Asynchronous Load			
	SN74191	° TI	
	SN74193	° TI	135
AHCT	KS74AHCT191	Samsung	
HC	SN54HC191	† TI	
	SN54HC193	† TI	
	SN74HC191	TI	
	SN74HC193	TI	140
	TC74HC191A	**Toshiba (3674)**	
HCT	KS74HCTLS191	Samsung	
4-Bit Up/Down Synchronous			
AC	54AC169	† National	
	74AC169	National	
	74AC11169	TI	145
ACT	74ACT11169	TI	
5, 6, 7, 8, 9-Stage			
5XXX	TC5048	Toshiba	
7-Stage			
HC	CD54HC4024	† Harris	
	CD74HC4024	Harris	
	HD74HC4024	Hitachi	150
	M74HC4024	Mitsubishi	
	MC54HC4024	† Motorola	
	MC74HC4024	Motorola	
	M74HC4024	SGS-Thomson	
	LR74HC4024	Sharp	155
	74HC4024	Signetics	
	SN54HC4024	† TI	
	SN74HC4024	TI	
	TC74HC4024A	**Toshiba (3674)**	
HCT	CD54HCT4024	† Harris	160
	CD74HCT4024	Harris	
	74HCT4024	Signetics	
4XXX	**GD4024B**	**‡ GoldStar (3431)**	
	CD4024B	‡ Harris	
	CD4024BE	Harris	165
	CD4024A	‡ Micrel	
	CD4024B	‡ Micrel	
	MC14024BA	† Motorola	
	MC14024BC	Motorola	
	CD4024BC	National	170
	CD4024BM	† National	
	MN4024B	◊† Panasonic	
	HCC4024B	† SGS-Thomson	
	HCF4024B	◊ SGS-Thomson	
	HEF4024B	Signetics	175
	TC4024B	Toshiba	
7-Stage Counter	GD4727B	GoldStar	
	GD4737B	GoldStar	
7-Stage Ripple Counter			
AC	54AC4024	† National	
	74AC4024	National	180

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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DIGITAL—CMOS (Cont'd)

Counters, Binary (Cont'd)

Function	Device	Source
8-Bit		
AC	**TC74AC393**	**Toshiba (3674)**
ACT	74ACT11269	TI
HC	M74HC590	SGS-Thomson
	M74HC592	SGS-Thomson
	M74HC593	SGS-Thomson
8-Bit Bidirectional		
AC	54AC269	† National
	74AC269	National
8-Bit, Down		
HC	CD54HC40103	† Harris
	CD74HC40103	Harris
	M74HC40103	SGS-Thomson
	74HC40103	Signetics
HCT	CD54HCT40103	† Harris
	CD74HCT40103	Harris
	74HCT40103	Signetics
8-Bit Synchronous		
AC	74AC11579	TI
8-Bit Synchronous Directional		
ACT	74ACT11867	TI
	74ACT11869	TI
8-Bit with Bidirectional Input Register/Counter Output		
HCTLS	KS74HCTLS593	Samsung
8-Bit with Input Registers		
AC	74AC11592	TI
	74AC11593	TI
ACT	74ACT11592	TI
	74ACT11593	TI
AHCT	KS74AHCT592	Samsung
	KS74AHCT593	Samsung
HC	HD74HC592	Hitachi
	HD74HC593	Hitachi
	TC74HC592	**Toshiba (3674)**
8-Bit with Output Registers		
AC	74AC11590	TI
ACT	74ACT11590	TI
AHCT	KS74AHCT590	Samsung
	KS74AHCT591	Samsung
HC	**GD74HC590**	**GoldStar (3439)**
	HD74HC590	Hitachi
	SN54HC590A	† TI
	SN74HC590A	TI
	TC74HC590	**Toshiba (3674)**
HCT	**GD74HCT590**	**GoldStar (3439)**
8-Bit with Register		
HCTLS	KS74HCTLS592	Samsung
8-Bit with Three-State Output Register		
HCTLS	KS74HCTLS590	Samsung
	KS74HCTLS591	Samsung
12-Bit	NJU74HC4040	◊ NJR
12-Bit Asynchronous		
HC	SN54HC4040	◊† TI
12-Stage		
HC	CD54HC4040	† Harris
	CD74HC4040	Harris
	HD74HC4040	Hitachi
	M74HC4040	Mitsubishi
	MC54HC4040	† Motorola
	MC74HC4040	Motorola
	MM54HC4040	† National
	MM74HC4040	National
	MN74HC4040	◊ Panasonic
	M74HC4040	SGS-Thomson
	74HC4040	Signetics
	SN74HC4040	TI
	TC74HC4040A	**Toshiba (3674)**
HCT	CD54HCT4040	† Harris
	CD74HCT4040	Harris
	74HCT4040	Signetics

(Continued)

Function	Device	Source
12-Stage (Cont'd)		
4XXX	**GD4040B**	**† GoldStar (3431)**
	CD4040B	† Harris
	CD4040BE	Harris
	CD4040A	‡ Micrel
	CD4040B	‡ Micrel
	MC14040BA	† Motorola
	MC14040BC	Motorola
	CD4040BC	National
	CD4040BM	† National
	MN4040B	◊† Panasonic
	HCC4040B	† SGS-Thomson
	HCF4040B	◊ SGS-Thomson
	HEF4040B	Signetics
	TC4040B	Toshiba
14, 15, 16-Stage (with reset)		
5XXX	TC5036	Toshiba
14-Bit	NJU74HC4020	◊ NJR
14-Bit Asynchronous		
HC	SN54HC4020	◊† TI
14-Stage		
HC	CD54HC4020	† Harris
	CD74HC4020	Harris
	HD74HC4020	Hitachi
	M74HC4020	Mitsubishi
	MC54HC4020	† Motorola
	MC74HC4020	Motorola
	MM54HC4020	† National
	MM74HC4020	National
	M74HC4020	SGS-Thomson
	74HC4020	Signetics
	SN74HC4020	TI
	TC74HC4020A	**Toshiba (3674)**
HCT	CD54HCT4020	† Harris
	CD74HCT4020	Harris
	74HCT4020	Signetics
4XXX	**GD4020B**	**‡ GoldStar (3431)**
	CD4020B	‡ Harris
	CD4020BE	Harris
	CD4020A	‡ Micrel
	CD4020B	‡ Micrel
	MC14020BA	† Motorola
	MC14020BC	Motorola
	CD4020BC	National
	CD4020BM	† National
	HCC4020B	† SGS-Thomson
	HCF4020B	◊ SGS-Thomson
	HEF4020B	Signetics
	TC4020B	Toshiba
14-Stage Ripple Counter with Oscillator		
AC	CD54AC7060	† Harris
	CD74AC7060	Harris
ACT	CD54ACT7060	† Harris
	CD74ACT7060	Harris
14-Stage with Oscillator		
HC	CD54HC4060	† Harris
	CD74HC4060	Harris
	HD74HC4060	Hitachi
	MC54HC4060	† Motorola
	MC74HC4060	Motorola
	MM54HC4060	† National
	MM74HC4060	National
	M74HC4060	SGS-Thomson
	74HC4060	† Signetics
	SN74HC4060	TI
	TC74HC4060A	**Toshiba (3674)**
HCT	CD54HCT4060	Harris
	CD74HCT4060	Harris
	74HCT4060	† Signetics
4XXX	CD4060B	† Harris
	CD4060BE	Harris
	MC14060B	◊ Motorola
	CD4060BC	National
	CD4060BM	† National
	HCC4060B	† SGS-Thomson

(Continued)

Function	Device	Source
14-Stage with Oscillator 4XXX (Cont'd)		
	HCF4060B	SGS-Thomson
	HEF4060B	Signetics
16-Bit Synchronous		
FCT	IDT49FCT661	IDT
4-Stage Synch Counter		
AC	**TC74AC169**	**◊ Toshiba (3674)**

Counters, Binary Count Up/Down

Function	Device	Source
Asynchronous Presettable 4-Bit with Dual Clock		
AC	74AC11193	Signetics
ACT	74ACT11193	Signetics
Presettable BCD Counter with 1 Asynchronous Reset		
HC	M74HC160	Mitsubishi
Presettable BCD Up/Down Counter		
HC	M74HC190	Mitsubishi
Presettable BCD Up/Down Counter with Reset		
HC	M74HC192	Mitsubishi
Synchronous	NJU74HC192	◊ NJR
HCT	MM54HCT192	† National
	MM74HCT192	National
Synchronous Presettable 4-Bit		
AC	74AC11169	Signetics
ACT	74ACT11169	Signetics
Synchronous Presettable 8-Bit		
AC	74AC11269	Signetics
	74AC11469	Signetics
ACT	74ACT11269	Signetics
	74ACT11469	Signetics
Synchronous, with Mode Control		
HCT	MM54HCT190	† National
	MM74HCT190	National
Synchronous 4-Bit		
HCTLS	KS74HCTLS169	Samsung
Synchronous 4-Bit Decade		
HCTLS	KS74HCTLS168	Samsung
Binary Up-Down Counter		
AC	**TC74AC191**	**◊ Toshiba (3674)**
4-Bit Synchronous, Presettable		
HCTS	HCTS191MS	‡ Harris
8-Bit w/Sync/Async Reset		
AC	74AC11579	Signetics
ACT	74ACT11579	Signetics

Counters, Decade

Function	Device	Source
Asynchronous Presettable BCD Decade Up/Down with Dual Clock		
AC	74AC11192	Signetics
ACT	74ACT11192	Signetics
Asynchronous Presettable Decade Up/Down with Single Clock		
AC	74AC11190	Signetics
ACT	74ACT11190	Signetics
Counter/Divider, 7 Segment Display Output and Display Enable		
4XXX	CD4026B	† Harris
	CD4026BE	Harris
	CD4033B	† Harris
	CD4033BE	Harris
	HCC4026B	† SGS-Thomson
	HCF4026B	SGS-Thomson
	HCF4033B	SGS-Thomson
Counter/Divider, 10 Line Output		
HC	CD54HC4017	† Harris
	CD74HC4017	Harris
	HD74HC4017	Hitachi
	MC54HC4017	† Motorola
	MC74HC4017	Motorola
	MM54HC4017	† National
	MM74HC4017	National
	M74HC4017	SGS-Thomson

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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DIGITAL—CMOS (Cont'd)

Counters, Decade (Cont'd)

Function	Device	Source	Line
Counter/Divider, 10 Line Output			
HC		(Cont'd)	
	74HC4017	Signetics	
	SN74HC4017	TI	
	TC74HC4017A	**Toshiba (3674)**	
HCT	CD54HCT4017	† Harris	
	CD74HCT4017	Harris	5
	74HCT4017	Signetics	
4XXX	**GD4017B**	**‡ GoldStar (3431)**	
	CD4017B	‡ Harris	
	CD4017A	‡ Micrel	
	CD4017B	‡ Micrel	10
	MC14017BA	† Motorola	
	MC14017BC	Motorola	
	CD4017BC	National	
	CD4017BM	† National	
	MN4017B	◊† Panasonic	15
	HCC4017B	† SGS-Thomson	
	HCF4017B	◊ SGS-Thomson	
	HEF4017B	Signetics	
	TC4017B	Toshiba	
Counter/Latch/Display Driver			
	ICM7208	Harris	20
Presettable Fully Synchronous, Synchronous Clear			
AC	74AC11162	TI	
ACT	74ACT11162	TI	
AHCT	KS74AHCT162	Samsung	
C	MM54C162	‡ Micrel	
	MM54C162	† National	25
	MM74C162	National	
HC	**GD74HC162**	**GoldStar (3439)**	
	CD54HC162	† Harris	
	CD74HC162	Harris	
	HD74HC162	Hitachi	30
	MC54HC162	† Motorola	
	MC74HC162	Motorola	
	MM54HC162	† National	
	MM74HC162	National	
	M74HC162	SGS-Thomson	35
	LR74HC162	Sharp	
	74HC162	Signetics	
	SN74HC162	TI	
	TC74HC162A	**Toshiba (3674)**	
	US74HC162	Universal	40
HCT	**GD74HCT162**	**GoldStar (3439)**	
	CD54HCT162	† Harris	
	CD74HCT162	Harris	
	KS74HCTLS162	Samsung	
	74HCT162	Signetics	45
4XXX	GD40162B	GoldStar	
	CD40162B	† Harris	
	CD40162BE	Harris	
	CD40162B	‡ Micrel	
	MC14162BA	† Motorola	50
	MC14162BC	Motorola	
	CD40162BC	National	
	CD40162BM	† National	
	HCF40162B	◊ SGS-Thomson	
	HEF40162B	Signetics	55
	TC40162B	Toshiba	
Presettable (sets to 0 or 9, divides by 2, 5 or 10)			
C	MM54C90	† National	
Presettable (sets to 0 or 9, divides by 2, 5 or 10)			
C	MM74C90	National	
Presettable Synchronous, Asynchronous Clear			
AC	74AC11160	TI	
	TC74AC160	**Toshiba (3674)**	60
ACT	74ACT11160	TI	
AHCT	KS74AHCT160	Samsung	
C	MM54C160	‡ Micrel	
	MM54C160	† National	
	MM74C160	National	65
		(Continued)	

Function	Device	Source	Line
Presettable Synchronous, Asynchronous Clear		(Cont'd)	
HC	CD54HC160	† Harris	
	CD74HC160	Harris	
	HD74HC160	Hitachi	
	MC54HC160	† Motorola	
	MC74HC160	Motorola	70
	MM54HC160	† National	
	MM74HC160	National	
	MN74HC160	◊ Panasonic	
	M74HC160	SGS-Thomson	
	LR74HC160	Sharp	75
	SN54HC160	† TI	
	SN74HC160	TI	
	TC74HC160A	**Toshiba (3674)**	
	US74HC160	Universal	
HCT	CD54HCT160	† Harris	80
	CD74HCT160	Harris	
	KS74HCTLS160	Samsung	
4XXX	**GD40160B**	**GoldStar (3431)**	
	CD40160B	† Harris	
	CD40160BE	Harris	85
	CD40160B	‡ Micrel	
	MC14160BA	† Motorola	
	MC14160BC	Motorola	
	CD40160BC	National	
	CD40160BM	† National	90
	HCC40160B	† SGS-Thomson	
	HCF40160B	◊ SGS-Thomson	
	HEF40160B	Signetics	
	TC40160B	Toshiba	
Presettable Synchronous BCD Decade Up/Down Counter			
AHCT	KS74AHCT190	Samsung	95
	KS74AHCT192	Samsung	
HCTLS	KS74HCTLS190	Samsung	
	KS74HCTLS192	Samsung	
Presettable Up/Down			
AC	74AC11192	TI	
ACT	74ACT11192	TI	100
AHCT	KS74AHCT193	Samsung	
C	MM54C192	‡ Micrel	
	MM54C192	† National	
	MM74C192	National	
HC	**GD74HC192**	**GoldStar (3439)**	105
	CD54HC192	† Harris	
	CD74HC192	Harris	
	HD74HC192	Hitachi	
	MM54HC192	† National	
	MM74HC192	National	110
	MN74HC192	◊ Panasonic	
	M74HC192	SGS-Thomson	
	74HC192	Signetics	
	SN54HC192	† TI	
	SN74HC192	TI	115
	TC74HC192A	**Toshiba (3674)**	
	US74HC192	Universal	
HCT	**GD74HCT192**	**GoldStar (3439)**	
	CD54HCT192	† Harris	
	CD74HCT192	Harris	120
	74HCT192	Signetics	
	74HCT4510	Signetics	
4XXX	**GD40192B**	**GoldStar (3431)**	
	GD4510B	† GoldStar	
	CD40192B	† Harris	125
	CD40192BE	Harris	
	CD4510B	† Harris	
	CD4510BE	Harris	
	CD40192B	‡ Micrel	
	CD4510B	‡ Micrel	130
	MC14510BA	† Motorola	
	MC14510BC	Motorola	
	CD40192BC	National	
	CD40192BM	† National	
	CD4510BC	National	135
	CD4510BM	† National	
		(Continued)	

Function	Device	Source	Line
Presettable Up/Down			
4XXX		(Cont'd)	
	HCC40192B	† SGS-Thomson	
	HCC4510B	† SGS-Thomson	
	HCF40192B	SGS-Thomson	
	HCF4510B	SGS-Thomson	140
	HEF40192B	Signetics	
	HEF4510B	Signetics	
	TC40192B	Toshiba	
	TC4510B	Toshiba	
Presettable Up/Down with mode control			
HC	**GD74HC190**	**GoldStar (3439)**	145
	74HC190	Signetics	
HCT	**GD74HCT190**	**GoldStar (3439)**	
	74HCT190	Signetics	
Presettable 2-Decade Down, BCD			
HC	CD54HC40102	† Harris	
	CD74HC40102	Harris	150
	74HC40102	Signetics	
	TC74HC40102A	**Toshiba (3674)**	
HCT	CD54HCT40102	† Harris	
	CD74HCT40102	Harris	
	74HCT40102	Signetics	155
4XXX	CD40102B	† Harris	
	CD40102BE	Harris	
	HCC40102B	† SGS-Thomson	
	HCF40102B	SGS-Thomson	
	TC40102B	Toshiba	160
Programmable Divide-by-N, 4-Bit			
4XXX	GD4522B	GoldStar	
	MC14522BA	† Motorola	
	MC14522BC	Motorola	
	CD4522BC	National	
	CD4522BM	† National	165
	HEF4522B	Signetics	
	TC4522B	Toshiba	
Synchronous Presettable BCD Decade Counter, Asynchronous Reset			
AC	74AC11160	Signetics	
ACT	74ACT11160	Signetics	
Synchronous Presettable BCD Decade Counter, Synchronous Reset			
AC	74AC11162	Signetics	170
ACT	74ACT11162	Signetics	
Synchronous Presettable BCD Decade Up/Down Counter w/Sync/Async Reset			
AC	74AC11568	Signetics	
ACT	74ACT11568	Signetics	
Synchronous Up/Down BCD Decade Counter			
AC	74AC11168	Signetics	
ACT	74ACT11168	Signetics	175
Synchronous with Asynchronous Clear			
	NJU74HC161	◊ NJR	
Synchronous with Output Registers, Asynchronous Clear			
HC	**TC74HC690A**	**Toshiba (3674)**	
Synchronous with Output Registers, Synchronous Clear			
HC	**TC74HC692A**	**Toshiba (3674)**	
Synchronous with Synchronous Clear			
	NJU74HC162	◊ NJR	
	NJU74HC163	◊ NJR	180
Synchronous Decade Counter with Asynchronous Clear			
	NJU74HC160	◊ NJR	
Synchronous 4-Bit			
HCTLS	KS74HCTLS162A	Samsung	
Synchronous 4-Bit Up/Down Decade Counter			
AHCT	KS74AHCT168	Samsung	
Up/Down Counter/Decoder/Latch/Driver (direct 7-segment driver)			
4XXX	CD40110B	† Harris	
	CD40110BE	Harris	185

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL–CMOS (Cont'd)

Counters, Decade (Cont'd)

Function	Device	Source	Line
Up/Down, Programmable			
HC	CD54HC4510	† Harris	
	CD74HC4510	Harris	
	74HC4510	Signetics	
HCT	CD54HCT4510	† Harris	
	CD74HCT4510	Harris	5
	HCT4510	Signetics	
Up/Down, Synchronous			
AC	74AC11190	TI	
ACT	74ACT11190	TI	
HC	CD54HC190	† Harris	
	CD74HC190	Harris	10
	HD74HC190	Hitachi	
	HD74HC668	Hitachi	
	MM54HC190	† National	
	MM74HC190	National	
	M74HC190	SGS-Thomson	15
	M74HC696	SGS-Thomson	
	M74HC698	SGS-Thomson	
	SN54HC190	† TI	
	SN74HC190	TI	
	TC74HC190A	**Toshiba (3674)**	20
	US74HC190	Universal	
HCT	CD54HCT190	† Harris	
	CD74HCT190	Harris	
Up/Down, Synchronous with Output Registers			
HC	**TC74HC696A**	**Toshiba (3674)**	
	TC74HC698A	**Toshiba (3674)**	25
Up/Down, Three-State			
AC	74AC11568	TI	
ACT	74ACT11568	TI	
BCD Decade Counter, Synchronous			
HCS	HCS160MS	‡ Harris	
Dual	NJU74HC390	◊ NJR	
HC	**GD74HC390**	**GoldStar (3439)**	30
	CD54HC390	† Harris	
	CD74HC390	Harris	
	HD74HC390	Hitachi	
	HD74HC490	Hitachi	
	MC54HC390	† Motorola	35
	MM54HC390	† National	
	MM74HC390	National	
	MN74HC390	◊ Panasonic	
	LR74HC390	Sharp	
	74HC390	Signetics	40
	SN54HC390	† TI	
	SN74HC390	TI	
	SN74HC490	TI	
	TC74HC390A	**Toshiba (3674)**	
HCT	**GD74HCT390**	**GoldStar (3439)**	45
	CD54HCT390	† Harris	
	CD74HCT390	Harris	
	74HCT390	Signetics	
Dual Synchronous			
HC	CD54HC4518	† Harris	
	CD74HC4518	Harris	50
	HD74HC4518	Hitachi	
	MC74HC390	Motorola	
	M74HC390	SGS-Thomson	
	M74HC4518	SGS-Thomson	
	74HC4518	Signetics	55
	TC74HC4518A	**Toshiba (3674)**	
HCT	CD54HCT4518	† Harris	
	CD74HCT4518	Harris	
	74HCT4518	Signetics	
4XXX	GD4518B	† GoldStar	60
	CD4518B	† Harris	
	CD4518BE	Harris	
	CD4518B	‡ Micrel	
	MC14518BA	† Motorola	
	MC14518BC	Motorola	65
	CD4518BC	National	
	CD4518BM	† National	

(Continued)

Function	Device	Source	Line
Dual Synchronous			
4XXX		(Cont'd)	
	MN4518B	◊† Panasonic	
	HCC4518B	† SGS-Thomson	
	HCF4518B	SGS-Thomson	70
	HEF4518B	Signetics	
	TC4518B	Toshiba	
Dual 4-Bit			
AHCT	KS74AHCT390	Samsung	
HCTLS	KS74HCTLS390	Samsung	
Dual 4-Bit	NJU74HC490	◊ NJR	75
Decade Counter			
HC	M74HC690	SGS-Thomson	
	M74HC692	SGS-Thomson	
3– 1/2 Digit Counter to BCD Driver			
	HC6010	Hughes	
HCT	HC4010	Hughes	
3-Decade Multiplexed Output			
4XXX	GD4553B	GoldStar	80
	MC14553BA	† Motorola	
	MC14553BC	Motorola	
4– 1/2 Digit Up Counter/Decoder/Driver			
	ICM7224	Harris	
	ICM7225	Harris	
	ICM7224	◊ Maxim	85
	ICM7225	◊ Maxim	
4– 1/2 Digit Up-Down Counter/Latch/Decoder Driver, LCD			
C	MM74C946	National	
4– 1/2-Digit, Programmable			
	TC9122	Toshiba	
4-bit BCD			
ACT	MC74ACT162	◊ Motorola	
4-Digit, Multiplexed Output, Left Digit Counts to 2-(Maximum count 1999.)			
C	MM74C928	National	90
4-Digit, Multiplexed Output, Second Digit Counts to 6 (Maximum count 9599.)			
C	MM74C927	National	
4-Digit Up/Down, Counter/Latch/Decoder Driver, LCD			
C	MM74C945	◊ Maxim	
	MM74C947	◊ Maxim	
	MM74C945	National	
	MM74C947	National	95
4-Digit Up/Down Counter/Latch/Display Driver			
	ICM7217	Harris	
	ICM7217A	Harris	
	ICM7217B	Harris	
	ICM7217C	Harris	
	ICM7217	◊ Maxim	100
	ICM7217A	◊ Maxim	
	ICM7217B	◊ Maxim	
	ICM7217C	◊ Maxim	
4-Decade			
4XXX	HEF4737	Signetics	
5XXX	TC5001	Toshiba	105
	TC5037	Toshiba	
	TC5051	Toshiba	
	TC5052	Toshiba	
	TC5053	Toshiba	
	TC5054	Toshiba	110
4-Decade Divide-by-N			
HC	CD54HC4059	† Harris	
	CD74HC4059	Harris	
	74HC4059	Signetics	
HCT	CD54HCT4059	† Harris	
	CD74HCT4059	Harris	115
	74HCT4059	Signetics	
4XXX	CD4059A	† Harris	
	CD4059AE	Harris	
	HEF4059B	Signetics	
4-Decade Divider	**RDD104**	**LSI Comp (3527)**	120

Function	Device	Source	Line
4-Decade, Multiplexed Output (The 926 gives carry at 6000.)			
C	MM74C925	National	
	MM74C926	National	
5-Decade, Multiplexed Output			
4XXX	GD4534B	† GoldStar	
	MC14534BA	† Motorola	
	MC14534BC	Motorola	125
	HEF4534B	† Signetics	
6-Bit, Universal, to 999999			
5XXX	TC5070	Toshiba	
6-Digit			
5XXX	TC5032	Toshiba	
8-Bit			
AC	**TC74AC162**	**Toshiba (3674)**	
	TC74AC390	**Toshiba (3674)**	130

Counters, Miscellaneous

Function	Device	Source	Line
Divide-by-8 Counter/Divider, Decoded Output			
HC	**TC74HC4022A**	**Toshiba (3674)**	
4XXX	GD4022B	‡ GoldStar	
	CD4022B	‡ Harris	
	CD4022BE	Harris	
	CD4021A	‡ Micrel	135
	CD4021B	‡ Micrel	
	CD4022A	‡ Micrel	
	CD4022B	‡ Micrel	
	MC14022BA	† Motorola	
	MC14022BC	Motorola	140
	CD4022BC	National	
	CD4022BM	† National	
	HCC4022B	† SGS-Thomson	
	HCF4022B	◊ SGS-Thomson	
	HEF4022B	Signetics	145
	TC4022B	Toshiba	
Divide-by-60, BCD Output (industrial time base generator)			
4XXX	GD4566B	† GoldStar	
	MC14566BA	† Motorola	
	MC14566BC	Motorola	
Frequency Counter			
	ICM7216	Harris	150
	ICM7226	Harris	
Phase Comparator and Programmable Counter			
4XXX	MC14568BA	† Motorola	
	MC14568BC	Motorola	
Presettable Divide-by-N			
4XXX	GD4018B	‡ GoldStar	
	CD4018B	‡ Harris	155
	CD4018BE	Harris	
	CD4018A	‡ Micrel	
	CD4018B	‡ Micrel	
	MC14018BA	† Motorola	
	MC14018BC	Motorola	160
	CD4018BC	National	
	CD4018BM	† National	
	HCC4018B	† SGS-Thomson	
	HCF4018B	◊ SGS-Thomson	
	HEF4018B	Signetics	165
	TC4018B	Toshiba	
Presettable Up/Down Binary or Decade			
4XXX	GD4029B	† GoldStar	
	CD4029B	† Harris	
	CD4029BE	Harris	
	CD4029A	‡ Micrel	170
	CD4029B	‡ Micrel	
	MC14029BA	† Motorola	
	MC14029BC	Motorola	
	CD4029BC	National	
	CD4029BM	† National	175
	MN4029B	◊† Panasonic	
	HCC4029B	† SGS-Thomson	
	HCF4029B	◊ SGS-Thomson	
	HEF4029B	Signetics	
	TC4029B	Toshiba	180

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Counters, Miscellaneous (Cont'd)

Function	Device	Source	Line
Binary/Decade with Two Reset Functions			
5XXX	TC5026B	Toshiba	
Dual Programmable Divide-by-N Binary/Decade			
4XXX	MC14569BC	† Motorola	
Octal Counter/Divider			
HC	HD74HC4022	Hitachi	
	M74HC4022	SGS-Thomson	
	SN74HC7022	TI	5
Decade Up/Down Counter			
HC	HCC40110B	SGS-Thomson	
8-Bit Synchronous Directional Counter			
AC	74AC11867	TI	
	74AC11869	TI	

Decoders

Function	Device	Source	Line
LCD, 4-Digit, Microprocessor Interface			
	ICM7211AM	◊ Maxim	
	ICM7211M	◊ Maxim	10
LCD, 4-Digit, Multiplexed BCD to LCD Decoder/Driver, AC Drive	ICM7211	◊ Maxim	
	ICM7211A	◊ Maxim	
LED, 4-Digit BCD or Binary to 7-Segment Decoder/Driver, Data and Digit Select Input Latches for μP Interface	ICM7212AM	◊ Maxim	
	ICM7212M	◊ Maxim	
N-Bit (for I/O interface)			
	CDP1853	Harris	15
	CDP1853C	Harris	
	HB1853	† Hughes	
	HB1853C	† Hughes	
HC	HC1853	◊ Hughes	
	HC1853C	◊ Hughes	20
BCD-to-Decimal			
AHCT	KS74AHCT42	Samsung	
C	MM54C42	‡ Micrel	
	MM54C42	† National	
	MM74C42	National	
HC	**GD74HC42**	**GoldStar (3439)**	25
	CD54HC42	† Harris	
	CD74HC42	Harris	
	HD74HC42	Hitachi	
	MC54HC42	† Motorola	
	MC74HC42	Motorola	30
	MM54HC42	† National	
	MM74HC42	National	
	MN74HC42	◊ Panasonic	
	M74HC4028	SGS-Thomson	
	M74HC42	SGS-Thomson	35
	LR74HC42	Sharp	
	74HC42	Signetics	
	SN54HC42	† TI	
	SN74HC42	TI	
	TC74HC4028A	**Toshiba (3674)**	40
	TC74HC42A	**Toshiba (3674)**	
HCT	**GD74HCT42**	**GoldStar (3439)**	
	CD54HCT42	† Harris	
	CD74HCT42	Harris	
	74HCT42	Signetics	45
HCTLS	KS74HCTLS42	Samsung	
4XXX	**GD4028B**	**‡ GoldStar (3431)**	
	CD4028B	‡ Harris	
	CD4028BE	Harris	
	CD4028A	‡ Micrel	50
	CD4028B	‡ Micrel	
	MC14028BA	† Motorola	
	MC14028BC	Motorola	
	CD4028BC	National	
	CD4028BM	† National	55
	MN4028B	◊† Panasonic	
	HCC4028B	† SGS-Thomson	
	HCF4028B	◊ SGS-Thomson	
		(Continued)	

Function	Device	Source	Line
BCD-to-Decimal			
4XXX		(Cont'd)	
	HEF4028B	Signetics	
	TC4028B	Toshiba	60
BCD-to-7 Segment Decoder/Driver			
4XXX	MC14547BA	◊† Motorola	
	MC14547BC	◊ Motorola	
BCD-to-7-Segment			
C	MM54C48	† National	
	MM74C48	National	
5XXX	TC5002B	Toshiba	65
Dual Binary to 1 of 4 Decoder/Demultiplexer (high)			
4XXX	**GD4555B**	**GoldStar (3431)**	
	CD4555B	† Harris	
	CD4555BE	Harris	
	CD4556B	† Harris	
	CD4556BE	Harris	70
	MC14555BA	† Motorola	
	MC14555BC	Motorola	
	MC14556BA	† Motorola	
	MC14556BC	Motorola	
	MN4556B	◊† Panasonic	75
	HCC4555B	† SGS-Thomson	
	HCC4556B	† SGS-Thomson	
	HCF4555B	◊ SGS-Thomson	
	HCF4556B	◊ SGS-Thomson	
	HEF4555B	Signetics	80
	HEF4556B	Signetics	
	TC4555B	Toshiba	
	TC4556B	Toshiba	
Dual 1-of-4 Data Selectors/Multiplexers			
AHCT	KS74AHCT153	Samsung	
Dual 1-of-4 Decoder Demultiplexer			
HC	M74HC139-1	Mitsubishi	85
	BU74HC139	ROHM	
Dual 1-of-4 Decoder/Demultiplexer			
HCT	M74HCT139-1	Mitsubishi	
Dual 2-Line to 4-Line Decoder			
HC	**GD74HC155**	**GoldStar (3439)**	
Dual 2-Line to 4-Line Decoder/Demultiplexer			
AC	CD54AC139	† Harris	
	CD74AC139	Harris	90
	54AC139	† National	
	74AC139	National	
	74AC11139	TI	
	74AC11239	TI	
	TC74AC139	**Toshiba (3674)**	95
ACT	CD54ACT139	† Harris	
	CD74ACT139	Harris	
	54ACT139	† National	
	74ACT139	National	
	74ACT11139	TI	100
	74ACT11239	TI	
AHCT	KS74AHCT139	Samsung	
	KS74AHCT155	Samsung	
	KS74AHCT239	Samsung	
Cell	SN74155	° TI	105
FCT	IDT54FCT139	◊† IDT	
	IDT54FCT139A	◊† IDT	
	IDT74FCT139	◊ IDT	
	IDT74FCT139A	◊ IDT	
HC	**GD74HC139**	**GoldStar (3439)**	110
	CD54HC139	† Harris	
	CD74HC139	Harris	
	HD74HC139	Hitachi	
	HD74HC155	Hitachi	
	MC54HC139A	† Motorola	115
	MC74HC139A	Motorola	
	MC74HC155	Motorola	
	MM54HC139	† National	
	MM74HC139	National	
	MN74HC139	◊ Panasonic	120
	M74HC139	SGS-Thomson	
	M74HC155	SGS-Thomson	
	LR74HC139	Sharp	
		(Continued)	

Function	Device	Source	Line
Dual 2-Line to 4-Line Decoder/Demultiplexer			
HC		(Cont'd)	
	74HC139	Signetics	
	SN54HC139	† TI	125
	SN74HC139	TI	
	SN74HC239	TI	
	TC74HC139A	**Toshiba (3674)**	
	TC74HC155A	**Toshiba (3674)**	
HCT	**GD74HCT139**	**GoldStar (3439)**	130
	GD74HCT155	**GoldStar (3439)**	
	CD54HCT139	† Harris	
	CD74HCT139	Harris	
	54HCT139SOS	‡ Marconi	
	54HCT239SOS	‡ Marconi	135
	74HCT139	Marconi	
	74HCT239	Marconi	
	MM54HCT139	† National	
	MM54HCT155	† National	
	MM74HCT139	National	140
	MM74HCT155	National	
	MV74HCT139	Plessey	
	KS74HCTLS139	Samsung	
	KS74HCTLS155	Samsung	
	KS74HCTLS239	Samsung	145
	74HCT139	Signetics	
	SN74HCT139	TI	
PCT	P54PCT139	◊‡ Performance	
	P54PCT139A	◊‡ Performance	
	P74PCT139	◊ Performance	150
	P74PCT139A	◊ Performance	
SC	MV74SC239	Plessey	
Dual 2-to-4 Line Decoder/Demultiplexer			
HC	MM54HC155	† National	
	MM74HC155	National	
Dual 2 To 4 Line Decoder			
ACT	**TC74ACT139**	**◊ Toshiba (3674)**	155
Dual 2-Line to 4-Line Decoder/Demultiplexer			
HC	M74HC155	Mitsubishi	
Dual 2-to-4 Line	NJU74HC139	◊ NJR	
	NJU74HC239	◊ NJR	
Dual 2-to-4 Line Decoder/Demultiplexer			
HCTS	HCTS139MS	‡ Harris	
1 of 10 Decoder			
HC	M74HC42	Mitsubishi	160
1 of 8 Decoder/Demultiplexer and Address Latch			
HC	M74HC237	Mitsubishi	
1-of-8 Data Selectors/Multiplexers			
AHCT	KS74AHCT151	Samsung	
1-of-8 Decoder/Demultiplexer			
HC	M74HC138-1	Mitsubishi	
	BU74HC138	ROHM	
1-of-8 Decoder/Demultiplexer (LSTTL compatible inputs)			
HCT	M74HCT138-1	Mitsubishi	165
	MC54HCT138A	† Motorola	
	MC74HCT138A	Motorola	
3-Line to 8-Line			
HCT	M74HCT138	SGS-Thomson	
3-Line to 8-Line Decoder			
ACT	**TC74ACT138**	**Toshiba (3674)**	
HC	M74HC238	SGS-Thomson	170
	74HC237	Signetics	
HCT	74HCT237	Signetics	
3-Line to 8-Line Decoder/Demultiplexer			
AC	CD54AC138	† Harris	
	CD54AC238	† Harris	
	CD74AC138	Harris	175
	CD74AC238	Harris	
	54AC138	† National	
	74AC138	National	
	74AC11138	TI	
	74AC11138	TI	180
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL–CMOS (Cont'd)

Decoders (Cont'd)

Function	Device	Source
3-Line to 8-Line Decoder/Demultiplexer		
AC		(Cont'd)
	74AC11238	TI
	TC74AC138	**Toshiba (3674)**
ACT	CD54ACT138	† Harris
	CD54ACT238	† Harris
	CD74ACT138	Harris
	CD74ACT238	Harris
	54ACT138	† National
	74ACT138	National
	74ACT11138	TI
	74ACT11238	TI
AHCT	KS74AHCT138	Samsung
C	HS54C138RH	‡ Harris
FCT	IDT54FCT138	◊† IDT
	IDT54FCT138A	◊† IDT
	IDT54FCT138AT	◊† IDT
	IDT54FCT138CT	◊† IDT
	IDT54FCT138T	◊† IDT
	IDT74FCT138	◊ IDT
	IDT74FCT138A	◊ IDT
	IDT74FCT138AT	◊ IDT
	IDT74FCT138CT	◊ IDT
	IDT74FCT138T	◊ IDT
HC	**GD74HC138**	**GoldStar (3439)**
	CD54HCT238	† Harris
	CD54HC138	† Harris
	CD54HC238	† Harris
	CD74HCT238	Harris
	CD74HC138	Harris
	CD74HC238	Harris
	HD74HC138	Hitachi
	HD74HC238	Hitachi
	MC54HC138A	† Motorola
	MC74HC138A	Motorola
	MM54HC138	† National
	MM74HC138	National
	MN74HC138	◊ Panasonic
	KS74HCTLS238	Samsung
	M74HC138	SGS-Thomson
	LR74HC138	Sharp
	74HC138	Signetics
	74HC238	Signetics
	SN54HC138	† TI
	SN74HC138	TI
	TC74HC138A	**Toshiba (3674)**
HCT	**GD74HCT138**	**GoldStar (3439)**
	CD54HCT138	† Harris
	CD74HCT138	Harris
	HD74HCT138	Hitachi
	54HCT138SOS	‡ Marconi
	54HCT238SOS	‡ Marconi
	74HCT138	Marconi
	74HCT238	Marconi
	MM54HCT138	† National
	MM74HCT138	National
	MV74HCT138	Plessey
	MV74HCT238	Plessey
	KS74HCTLS138	Samsung
	M74HCT137	SGS-Thomson
	74HCT138	Signetics
	74HCT238	Signetics
	SN54HCT138	† TI
	SN74HCT138	TI
	TC74HCT138A	**Toshiba (3674)**
PCT	P54PCT138	◊‡ Performance
	P54PCT138A	◊‡ Performance
	P74PCT138	◊ Performance
	P74PCT138A	◊ Performance
3-Line to 8-Line Decoder/Demultiplexer, Non-Inverting		
AC	74AC11238	TI
AHCT	KS74AHCT238	Samsung
HC	SN54HC237	† TI

(Continued)

Function	Device	Source
3-Line to 8-Line Decoder/Demultiplexer, Non-Inverting		
HC		(Cont'd)
	SN54HC238	† TI
	SN74HC237	TI
	SN74HC238	TI
	TC74HC237A	**Toshiba (3674)**
	TC74HC238A	**Toshiba (3674)**
HCT	HD74HCT238	Hitachi
	SN54HCT237	† TI
	SN54HCT237	† TI
	SN54HCT238	† TI
	SN54HCT238	† TI
	SN74HCT237	TI
	SN74HCT238	TI
3-Line to 8-Line Decoder/Demultiplexer with Input Latches, Inverting		
HC	**GD74HC137**	**GoldStar (3439)**
	CD54HC137	† Harris
	CD54HC237	† Harris
	CD74HC137	Harris
	CD74HC237	Harris
	HD74HC137	Hitachi
	HD74HC237	Hitachi
	M74HC137	Mitsubishi
	MC54HC137	† Motorola
	MC54HC237	† Motorola
	MC74HC137	Motorola
	MC74HC237	Motorola
	MM54HC137	† National
	MM54HC237	† National
	MM74HC137	National
	MM74HC237	National
	M74HC137	SGS-Thomson
	M74HC237	SGS-Thomson
	LR74HC137	Sharp
	74HC137	Signetics
	SN54HC137	† TI
	SN74HC137	TI
	TC74HC137A	**Toshiba (3674)**
HCT	**GD74HCT137**	**GoldStar (3439)**
	CD54HCT137	† Harris
	CD54HCT237	† Harris
	CD74HCT137	Harris
	CD74HCT237	Harris
	54HCT137SOS	‡ Marconi
	54HCT237SOS	‡ Marconi
	74HCT137	Marconi
	74HCT237	Marconi
	MV74HCT137	Plessey
	MV74HCT237	Plessey
	74HCT137	Signetics
	SN54HCT137	† TI
	SN54HCT137	† TI
	SN74HCT137	TI
	TC74HCT137	**Toshiba (3674)**
SC	MV74SC137	Plessey
	MV74SC237	Plessey
3-Line to 8-Line Decoder/Latch		
HC	M74HC131	SGS-Thomson
	TC74HC131A	**Toshiba (3674)**
3-to-8 Line	NJU74HC138	◊ NJR
	NJU74HC238	◊ NJR
3-to-8 Line Decoder with Address Latch		
	NJU74HC137	◊ NJR
3-to-8 Line Encoder		
HC	SN54HC151	◊† TI
3-to-8 Line with Address Latch		
	NJU74HC237	◊ NJR
3–8 Line Decoder/Demultiplexer		
AC	SN54AC11238	† TI
4-Bit Latch/4-to-16-Line Decoder (high)		
HC	CD54HC4514	† Harris
	CD54HC4515	† Harris
	CD74HC4514	Harris
	CD74HC4515	Harris

(Continued)

Function	Device	Source
4-Bit Latch/4-to-16-Line Decoder (high)		
HC		(Cont'd)
	HD74HC4514	Hitachi
	MC54HC4514	† Motorola
	MC74HC4514	Motorola
	MM54HC4514	† National
	MM74HC4514	National
	M74HC4514	SGS-Thomson
	74HC4514	Signetics
	74HC4515	Signetics
HCT	CD54HCT4514	† Harris
	CD54HCT4515	† Harris
	CD74HCT4514	Harris
	CD74HCT4515	Harris
	74HCT4514	Signetics
	74HCT4515	Signetics
4XXX	GD4514B	† GoldStar
	GD4515B	† GoldStar
	CD4514B	† Harris
	CD4514BE	Harris
	CD4515B	† Harris
	CD4515BE	Harris
	CD4514B	‡ Micrel
	CD4515B	‡ Micrel
	MC14514BA	† Motorola
	MC14514BC	Motorola
	MC14515BA	† Motorola
	MC14515BC	Motorola
	CD4514BC	National
	CD4514BM	† National
	CD4515BC	National
	CD4515BM	† National
	HCC4514B	† SGS-Thomson
	HCC4515B	† SGS-Thomson
	HCF4514B	SGS-Thomson
	HCF4515B	SGS-Thomson
	HEF4514B	Signetics
	HEF4515B	Signetics
	TC4514B	Toshiba
	TC4515B	Toshiba
4-Line to 16-Line Decoder/Demultiplexer, Inverting		
HC	HD74HC4515	Hitachi
	SN74HC4515	TI
	TC74HC4515A	**Toshiba (3674)**
4-Line to 16-Line Decoder/Demultiplexer, Non-Inverting		
HC	LR74HC4514	Sharp
	SN74HC4514	TI
	TC74HC4514A	**Toshiba (3674)**
4-Line-to-16-Line Decoder/Demultiplexer		
AHCT	KS74AHCT154	Samsung
C	MM54C154	† National
	MM74C154	National
HC	**GD74HC154**	**GoldStar (3439)**
	CD54HC154	† Harris
	CD74HC154	Harris
	HD74HC154	Hitachi
	MC54HC154	† Motorola
	MC74HC154	Motorola
	MM54HC154	† National
	MM74HC154	National
	MN74HC154	◊ Panasonic
	M74HC154	SGS-Thomson
	74HC154	Signetics
	SN74HC154	TI
	TC74HC154A	**Toshiba (3674)**
	US74HC154	Universal
HCT	CD54HCT154	† Harris
	CD74HCT154	Harris
	74HCT154	Signetics
8-Line to 3-Line Priority Encoder		
HC	M74HC148	Mitsubishi
	M74HC148	SGS-Thomson
	SN54HC148	◊† TI
	TC74HC148A	**Toshiba (3674)**
HCT	**GD74HCT154**	**GoldStar (3439)**

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—CMOS (Cont'd)

Decoders (Cont'd)

Function	Device	Source
8-Line to 3 Line Priority Encoders		
HCTLS	KS74HCTLS148	Samsung
8-Line to 8-Line Priority Encoder		
HC	MM54HC149	† National
	MM74HC149	National
HCT	MM54HCT149	† National
	MM74HCT149	National
10-Line to 4-Line Priority Encoder		
HC	**GD74HC147**	**GoldStar (3439)**
	CD54HC147	† Harris
	CD74HC147	Harris
	HD74HC147	Hitachi
	MC54HC147	† Motorola
	MC74HC147	Motorola
	M74HC147	SGS-Thomson
	74HC147	Signetics
HCT	**GD74HCT147**	**GoldStar (3439)**
	CD54HCT147	† Harris
	CD74HCT147	Harris
	74HCT147	Signetics
10-Line Decimal to 4-Line BCD Priority Encoder		
HC	M74HC147	Mitsubishi

Drivers

Function	Device	Source
Display Driver (50 V high voltage, LCD)		
	MIC8030	**Micrel (3540)**
Display Driver (100 V high voltage LCD)		
	MIC8031	**Micrel (3540)**
LCD, Dot Matrix	HC0538A	Hughes
	HC0539A	Hughes
	HC0540	Hughes
	HC0550	Hughes
	HC0551	Hughes
	HC0607	Hughes
LCD, BCD-to-7-Segment Decoder/Driver with "Display Frequency Output"		
4XXX	CD4055B	† Harris
	CD4055BE	Harris
	CD4056B	† Harris
	CD4056BE	Harris
	HCC4055B	† SGS-Thomson
	HCC4056B	† SGS-Thomson
	HCF4055B	◊ SGS-Thomson
	HCF4056B	◊ SGS-Thomson
	TC4055B	Toshiba
	TC4056B	Toshiba
LCD, BCD-to-7-Segment Latch/Decoder/Driver		
HC	CD54HC4543	† Harris
	CD74HC4543	Harris
	HD74HC4543	Hitachi
	M74HC4543	SGS-Thomson
	LR74HC4543	Sharp
	74HC4543	Signetics
	TC74HC4543A	**Toshiba (3674)**
HCT	CD54HCT4543	† Harris
	CD74HCT4543	Harris
	74HCT4543	Signetics
4XXX	GD4543B	GoldStar
	MC14543BA	◊† Motorola
	MC14543BC	◊ Motorola
	CD4543BC	National
	CD4543BM	† National
	HEF4543B	Signetics
	TC4543B	Toshiba
LCD, 4-Digit, Multiplexed BCD to LCD Decoder/Driver, AC Drive	ICM7211	Harris
	ICM7211A	Harris
	ICM7211AM	Harris
	ICM7211M	Harris
LCD, 4-Digit Serial Input		
	HC0438A	Hughes
LCD, 4-Line		
4XXX	CD4054B	† Harris
	CD4054BE	Harris
	HCC4054B	† SGS-Thomson
	HCF4054B	◊ SGS-Thomson
	TC4054B	Toshiba
LED, 4-Digit Multiplexed BCD or Binary to 7-Segment Decoder/Driver	ICM7212	◊ Maxim
	ICM7212A	◊ Maxim
LED, 4-Digit BCD or Binary to 7-Segment Decoder/Driver, Data and Digit Select Input Latches for μP Interface	ICM7212AM	Harris
LED, 4-Digit, 17-Segment Alphanumeric Display with Memory, Decoder		
C	MM74C956	National
BCD (hexadecimal) to 7-Segment Latch/Decoder/Driver		
4XXX	MC14495	◊ Motorola
BCD-to-7-Segment Latch/Decoder/Driver		
HC	CD54HC4511	† Harris
	CD74HC4511	Harris
	HD74HC4511	Hitachi
	MC54HC4511	† Motorola
	MC74HC4511	Motorola
	MM54HC4511	† National
	MM74HC4511	National
	M74HC4511	SGS-Thomson
	LR74HC4511	Sharp
	74HC4511	Signetics
	TC74HC4511A	**Toshiba (3674)**
HCT	CD54HCT4511	† Harris
	CD74HCT4511	Harris
	74HCT4511	Signetics
4XXX	**GD4511B**	**† GoldStar (3431)**
	CD4511B	† Harris
	CD4511BE	Harris
	MC14511BA	◊† Motorola
	MC14511BC	◊ Motorola
	MC14513BA	◊† Motorola
	MC14513BC	◊ Motorola
	CD4511BC	National
	CD4511BM	† National
	MN4511B	◊† Panasonic
	HCC4511B	† SGS-Thomson
	HCF4511B	◊ SGS-Thomson
	HEF4511B	Signetics
	TC4511B	Toshiba
5XXX	TC5022B	Toshiba
	TC5068B	Toshiba
	TC5069B	Toshiba
BCD-to-7-Segment Latch/Decoder/LCD Driver		
HC	MM54HC4543	† National
	MM74HC4543	National
Dual High Voltage, Source 250 mA		
C	MM74C908	National
	MM74C918	National
Dual 1-Line to 4-Line Clock Driver W/ 3-State Outputs		
AC	74AC11208	TI
ACT	74ACT11208	TI
Dual 1-to-4 Clock Line Driver, Three-State		
AC	74AC11208	Signetics
ACT	74ACT11208	Signetics
Triple 4-Input AND/NAND Drivers		
AC	74AC11800	TI
ACT	74ACT11800	TI
Triple 4-Input OR/NOR Line Driver		
AC	74AC11802	TI
ACT	74ACT11802	TI
Hex		
HC	SN54HC367	◊† TI
Hex Inverting Clock Driver/Buffers		
AC	74AC11204	TI
Hex 2-Input AND Driver		
HC	SN74HC808	TI
Hex 2-Input NAND Driver		
HC	SN74HC804	TI
Hex 2-Input NOR Driver		
HC	SN74HC805	TI
Hex 2-Input OR Driver		
HC	SN74HC832	TI
Octal Buffer/Line Driver		
AC	SN54AC11240	† TI
	SN54AC11241	† TI
	SN54AC11244	† TI
ACT	SN54ACT11240	† TI
	SN54ACT11241	† TI
	SN54ACT11244	† TI
Octal Line Driver, Three-State, Inverting		
HC	BU74HC240	ROHM
Octal Line Driver, Three-State, Non-Inverting		
HC	BU74HC244	ROHM
4-Digit Display (stores segment and address data, drives 7–8 segment digits)		
C	MM74C911	National
6-Digit BCD Display (stores segment and address data, drives 7–8 segment digits)		
C	MM74C912	National
6-Digit Hex Display (stores segment and address data, drives 7-segment digits)		
C	MM74C917	National
7-Segment to BCD Converter/Driver		
C	MM74C915	National
10-Bit Buffer/Driver, Three-State, Non-Inverting		
AC	74AC11827	TI

Flip-Flops, D-Type

Function	Device	Source
Dual		
AC	CD54AC74	† Harris
	CD74AC74	Harris
	54AC74	† National
	74AC74	National
Dual		
AC	SN54AC11074	† TI
Dual		
AC	74AC11074	TI
	TC74AC74	**◊ Toshiba (3674)**
ACT	CD54ACT74	† Harris
	CD74ACT74	Harris
	54ACT74	† National
	74ACT74	National
	SN54ACT11074	† TI
	74ACT11074	TI
AHCT	KS74AHCT74	Samsung
C	MM54C74	† National
	MM74C74	National
HC	**GD74HC74**	**GoldStar (3439)**
	CD54HC74	† Harris
	CD74HC74	Harris
	HD74HC74	Hitachi
	M74HC74	Mitsubishi
	MC54HC74A	† Motorola
	MC74HC74A	Motorola
	MM54HC74	† National
	MM74HC74	National
	MN74HC74	Panasonic
	BU74HC74	ROHM
	M74HC74	SGS-Thomson
	LR74HC74	Sharp
	74HC74	Signetics
	SN54HC74	† TI
	SN74HC74	TI
	TC74HC74A	**Toshiba (3674)**
HCT	**GD74HCT74**	**GoldStar (3439)**
	CD54HCT74	† Harris
	CD74HCT74	Harris
	MM54HCT74	† National
	MM74HCT74	National

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL–CMOS (Cont'd)

Flip-Flops, D-Type (Cont'd)

Function	Device	Source	Line
Dual			
HCT		(Cont'd)	
	KS74HCTLS74	Samsung	
	M74HCT74	SGS-Thomson	
	74HCT74	Signetics	
	SN74HCT74	TI	
	TC74HCT74A	**Toshiba (3674)**	5
4XXX	**GD4013B**	**‡ GoldStar (3431)**	
	CD4013B	‡ Harris	
	CD4013BE	Harris	
	CD4013A	‡ Micrel	
	CD4013B	‡ Micrel	10
	MC14013BA	† Motorola	
	MC14013BC	Motorola	
	CD4013BC	National	
	CD4013BM	† National	
	MN4013B	◊† Panasonic	15
	HCC4013B	† SGS-Thomson	
	HCF4013B	◊ SGS-Thomson	
	HEF4013B	Signetics	
	TC4013B	Toshiba	
Dual D-F/F w/Preset and Clear			
ACT	**TC74ACT74**	**◊ Toshiba (3674)**	20
Dual D-Type	NJU4013B	NJR	
Dual D-Type with Set and Reset (LSTTL compatible inputs)			
HCT	MC54HCT74A	† Motorola	
	MC74HCT74A	Motorola	
Dual, Positive-Edge Triggered with Preset and Clear			
HCTLS	KS74HCTLS74A	Samsung	
Dual with Preset and Clear			
	NJU74HC74	◊ NJR	25
Dual with Set/Reset			
4XXX	CD4013A	† Harris	
Dual with Set/Reset, Positive-Edge Triggered			
AC	74AC11074	Signetics	
ACT	74ACT11074	Signetics	
Dual 4-Bit			
ACT	74ACT11874	TI	
	V54ACT874	**† VTC (3712)**	30
	V54ACT876	**† VTC (3712)**	
	V54ACT878	**† VTC (3712)**	
	V54ACT879	**† VTC (3712)**	
	V74ACT874	**VTC (3712)**	
	V74ACT876	**VTC (3712)**	35
	V74ACT878	**VTC (3712)**	
	V74ACT879	**VTC (3712)**	
Dual 4-Bit Edge-Triggered, Non-Inverting			
AC	74AC11874	TI	
Quad	SN74175	° TI	
AC	CD54AC175	† Harris	40
	CD74AC175	Harris	
	54AC175	† National	
	74AC175	National	
	74AC11175	TI	
	TC74AC175	**Toshiba (3674)**	45
ACT	CD54ACT175	† Harris	
	CD74ACT175	Harris	
	54ACT175	† National	
	74ACT175	National	
	74ACT11175	TI	50
	TC74ACT175	**◊ Toshiba (3674)**	
AHCT	KS74AHCT175	Samsung	
C	MM54C175	‡ Micrel	
	MM54C175	† National	
	MM74C175	National	55
HC	**GD74HC175**	**GoldStar (3439)**	
	CD54HC175	† Harris	
	CD74HC175	Harris	
	HD74HC175	Hitachi	
	MC54HC175	† Motorola	60
	MC74HC175	Motorola	
		(Continued)	

Function	Device	Source	Line
Quad			
HC		(Cont'd)	
	MM54HC175	† National	
	MM74HC175	National	
	M74HC175	SGS-Thomson	
	LR74HC175	Sharp	65
	74HC175	Signetics	
	SN54HC175	† TI	
	SN74HC175	TI	
	TC74HC175A	**Toshiba (3674)**	
	US74HC175	Universal	70
HCT	**GD74HCT175**	**GoldStar (3439)**	
	CD54HCT175	† Harris	
	CD74HCT175	Harris	
	KS74HCTLS175	Samsung	
	74HCT175	Signetics	75
4XXX	GD40175B	GoldStar	
	CD40175B	† Harris	
	CD40175BE	Harris	
	MC14175BA	† Motorola	
	MC14175BC	Motorola	80
	CD40175B	National	
	HEF40175B	Signetics	
	TC40175B	Toshiba	
Quad D-Type with Enable			
	NJU74HC379	◊ NJR	
Quad with Clear	NJU74HC175	◊ NJR	85
Quad with Data Enable			
AC	74AC11379	Signetics	
ACT	74ACT11379	Signetics	
Quad with Enable			
AC	74AC11379	TI	
ACT	74ACT11379	TI	
HC	SN54HC379	† TI	90
	SN74HC379	TI	
Quad with Reset, Positive-Edge Triggered			
AC	74AC11175	Signetics	
ACT	74ACT11175	Signetics	
Quad Three-State			
AHCT	KS74AHCT173	Samsung	
C	MM54C173	‡ Micrel	95
	MM54C173	† National	
	MM74C173	National	
Cell	SN74173-Cell	° TI	
HC	**GD74HC173**	**GoldStar (3439)**	
	CD54HC173	† Harris	100
	CD74HC173	Harris	
	HD74HC173	Hitachi	
	MC54HC173	† Motorola	
	MC74HC173	Motorola	
	MM54HC173	† National	105
	MM74HC173	National	
	M74HC173	SGS-Thomson	
	LR74HC173	Sharp	
	74HC173	Signetics	
	SN54HC173	† TI	110
	SN74HC173	TI	
	TC74HC173A	**Toshiba (3674)**	
	US74HC173	Universal	
HCT	**GD74HCT173**	**GoldStar (3439)**	
	CD54HCT173	† Harris	115
	CD74HCT173	Harris	
	74HCT173	Signetics	
4XXX	GD4076B	† GoldStar	
	CD4076B	† Harris	
	CD4076BE	Harris	120
	CD4076B	‡ Micrel	
	MC14076BA	Motorola	
	MC14076BC	Motorola	
	CD4076BC	National	
	CD4076BM	† National	125
	MN4076B	◊† Panasonic	
	HCC4076B	† SGS-Thomson	
	HCF4076B	◊ SGS-Thomson	
		(Continued)	

Function	Device	Source	Line
Quad Three-State			
4XXX		(Cont'd)	
	HEF4076B	Signetics	
	TC4076B	Toshiba	130
Hex			
AC	CD54AC174	† Harris	
	CD74AC174	Harris	
	54AC174	† National	
	74AC174	† National	
	74AC11174	TI	135
	TC74AC174	**† Toshiba (3674)**	
ACT	CD54ACT174	† Harris	
	CD74ACT174	Harris	
	54ACT174	† National	
	74ACT174	† National	140
	74ACT11174	TI	
	TC74ACT174	**◊ Toshiba (3674)**	
AHCT	KS74AHCT174	Samsung	
C	MM54C174	‡ Micrel	
	MM54C174	† National	145
	MM74C174	National	
HC	**GD74HC174**	**† GoldStar (3439)**	
	CD54HC174	† Harris	
	CD74HC174	† Harris	
	HD74HC174	† Hitachi	150
	MC54HC174	† Motorola	
	MC74HC174	† Motorola	
	MM54HC174	† National	
	MM74HC174	National	
	MN74HC174	◊† Panasonic	155
	M74HC174	† SGS-Thomson	
	LR74HC174	Sharp	
	74HC174	† Signetics	
	SN54HC174	† TI	
	SN74HC174	TI	160
	SN74174	° TI	
	TC74HC174A	**Toshiba (3674)**	
	US74HC174	† Universal	
HCT	**GD74HCT174**	**† GoldStar (3439)**	
	CD54HCT174	† Harris	165
	CD74HCT174	Harris	
	MC54HCT174A	◊† Motorola	
	MC74HCT174A	◊ Motorola	
	KS74HCTLS174	Samsung	
	74HCT174	† Signetics	170
4XXX	GD40174B	GoldStar	
	CD40174B	† Harris	
	CD40174BE	Harris	
	CD40174B	‡ Micrel	
	MC14174BA	† Motorola	175
	MC14174BC	Motorola	
	CD40174BC	National	
	CD40174BM	† National	
	HCC40174B	† SGS-Thomson	
	HCF40174B	◊ SGS-Thomson	180
	HEF40174B	Signetics	
	TC40174B	Toshiba	
Hex D-Type with Common Clock and Reset			
HC	MC54HC174A	† Motorola	
	MC74HC174A	Motorola	
Hex D-Type with Enable			
	NJU74HC378	◊ NJR	185
Hex with Clear	NJU74HC174	◊ NJR	
Hex with Enable			
AC	74AC11378	TI	
ACT	74ACT11378	TI	
HC	SN54HC378	† TI	
	SN74HC378	TI	190
Hex with Enable, Positive-Edge Triggered			
AC	74ACT11378	Signetics	
	74AC11378	Signetics	
Hex with Reset, Positive-Edge Triggered			
AC	74AC11174	Signetics	
ACT	74ACT11174	Signetics	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Flip-Flops, D-Type (Cont'd)

Function	Device	Source
Octal		
AC	MC74AC377	◊ Motorola
	SN54AC11374	† TI
	SN54AC11534	† TI
	TC74AC377	**◊ Toshiba (3674)**
ACT	SN54ACT11374	† TI
	SN54ACT11534	◊† TI
	TC74ACT374	**Toshiba (3674)**
	TC74ACT377	**◊ Toshiba (3674)**
	TC74ACT574	**◊ Toshiba (3674)**
HC	M74HC377	SGS-Thomson
HCT	M74HCT564	SGS-Thomson
	M74HCT574	SGS-Thomson
Octal D-Type F/F		
ACT	**TC74ACT564**	**◊ Toshiba (3674)**
Octal D-Type Flip-Flops W/ Enable		
AC	74AC11377	TI
ACT	74ACT11377	TI
Octal D-Type with Clear		
	NJU74HC273	◊ NJR
Octal D-Type with Enable		
	NJU74HC377	◊ NJR
Octal D-Type, Three-State		
	NJU74HC374	◊ NJR
HCT	**TC74HCT534A**	**Toshiba (3674)**
Octal D-Type, Three-State, Inverting		
ACT	**TC74ACT534**	**Toshiba (3674)**
HC	M74HC374-1	Mitsubishi
	M74HC534-1	Mitsubishi
HCT	M74HCT374-1	Mitsubishi
	M74HCT534-1	Mitsubishi
Octal Edge Triggered with Clear		
AC	74AC11273	TI
ACT	74ACT11273	TI
Octal Edge-Triggered with Clear		
AC	CD74AC273	Harris
	54AC273	† National
	74AC273	National
	TC74AC273	**Toshiba (3674)**
ACT	CD54ACT273	† Harris
	CD74ACT273	Harris
	54ACT273	† National
	74ACT273	National
AHCT	KS74AHCT273	Samsung
Cell	SN74273-Cell	° TI
FCT	DPLFCT273Y	† Dense-Pac
	IDT54FCT273	◊† IDT
	IDT54FCT273A	◊† IDT
	IDT54FCT273AT	◊† IDT
	IDT54FCT273C	◊† IDT
	IDT54FCT273CT	◊† IDT
	IDT54FCT273T	◊† IDT
	IDT74FCT273	◊ IDT
	IDT74FCT273A	◊ IDT
	IDT74FCT273AT	◊ IDT
	IDT74FCT273C	◊ IDT
	IDT74FCT273CT	◊ IDT
	IDT74FCT273T	◊ IDT
HC	**GD74HC273**	**GoldStar (3439)**
	CD54HC273	† Harris
	CD74HC273	Harris
	HD74HC273	Hitachi
	M74HC273	Mitsubishi
	M74HC273-1	Mitsubishi
	MC54HC273	† Motorola
	MC74HC273	Motorola
	MM54HC273	† National
	MM74HC273	National
	MN74HC273	◊ Panasonic
	M74HC273	SGS-Thomson

(Continued)

Function	Device	Source
Octal Edge-Triggered with Clear		
HC		(Cont'd)
	LR74HC273	Sharp
	74HC273	Signetics
	SN54HC273	† TI
	SN74HC273	TI
	TC74HC273A	**Toshiba (3674)**
HCT	**GD74HCT273**	**GoldStar (3439)**
	CD54HCT273	† Harris
	CD74HCT273	Harris
	M74HCT273-1	Mitsubishi
	MM54HCT273	† National
	MM74HCT273	National
	P74PCT273A	◊ Performance
	KS74HCTLS273	Samsung
	74HCT273	Signetics
PCT	P54PCT273	◊‡ Performance
	P54PCT273A	◊‡ Performance
	P74PCT273	◊ Performance
Octal Edge-Triggered with Clear (dual)		
AC	DPLAC273X	Dense-Pac
HC	DPLHC273X	Dense-Pac
HCT	DPLHCT273X	Dense-Pac
Octal Edge-Triggered with Clear (dual package)		
HC	DPLXXX273X	Dense-Pac
Octal, Inv.		
HCT	MC54HCT534A	◊† Motorola
	MC74HCT534A	◊ Motorola
Octal, Non-Inv.		
HCT	MC54HCT374A	◊† Motorola
	MC54HCT574A	◊† Motorola
	MC74HCT374A	◊ Motorola
	MC74HCT574A	◊ Motorola
Octal, Positive Edge-Triggered, Three-State		
AC	**74AC11374**	**Signetics (3598)**
ACT	CD54ACT374	† Harris
	CD54ACT574	† Harris
	CD54ACT574A	† Harris
	CD74ACT374	Harris
	74ACT11374	**Signetics (3598)**
Octal, Positive Edge-Triggered, Three-State, Inverting		
AC	74AC11534	Signetics
ACT	74ACT11534	Signetics
Octal, Positive-Edge Triggered with Data Enable		
FCT	CD54FCT377	† Harris
	CD74FCT377	† Harris
Octal, Positive-Edge Triggered, Three-State		
FCT	CD54FCT374	† Harris
	CD54FCT574	† Harris
	CD74FCT374	Harris
	CD74FCT574	Harris
Octal, Positive-Edge Triggered, Three-State, Inverting		
FCT	CD54FCT534	† Harris
	CD54FCT564	† Harris
	CD74FCT534	Harris
	CD74FCT564	Harris
Octal w/Master Reset		
HCTS	HCTS273MS	‡ Harris
Octal w/Reset and Enable, Positive Edge-Triggered, Three-State		
AC	74AC11825	Signetics
	74AC11826	Signetics
ACT	74ACT11825	Signetics
	74ACT11826	Signetics
Octal with Clock Enable		
HCTLS	KS74HCTLS377	Samsung
Octal with Enable		
AC	54AC377	† National
	74AC377	National
	74AC11377	Signetics
ACT	54ACT377	† National
	74ACT377	National
	74ACT11377	Signetics

(Continued)

Function	Device	Source
Octal with Enable		(Cont'd)
AHCT	KS74AHCT377	Samsung
FCT	IDT54FCT377	◊† IDT
	IDT54FCT377A	◊† IDT
	IDT54FCT377AT	◊† IDT
	IDT54FCT377CT	◊† IDT
	IDT54FCT377T	◊† IDT
	IDT54FCT521	◊† IDT
	IDT54FCT521B	◊† IDT
	IDT54FCT521C	◊† IDT
	IDT74FCT377	◊ IDT
	IDT74FCT377A	◊ IDT
	IDT74FCT377AT	◊ IDT
	IDT74FCT377CT	◊ IDT
	IDT74FCT377T	◊ IDT
	IDT74FCT521	◊ IDT
	IDT74FCT521C	◊ IDT
HC	**GD74HC377**	**GoldStar (3439)**
	CD54HC377	† Harris
	CD74HC377	Harris
	HD74HC377	Hitachi
	74HC377	Signetics
	SN54HC377	† TI
	SN74HC377	TI
	TC74HC377A	**Toshiba (3674)**
HCT	**GD74HCT377**	**GoldStar (3439)**
	CD54HCT377	† Harris
	CD74HCT377	Harris
	74HCT377	Signetics
PCT	P54PCT377	◊‡ Performance
	P54PCT377A	◊‡ Performance
	P74PCT377	◊ Performance
	P74PCT377A	◊ Performance
Octal with Reset		
AC	74AC11273	Signetics
ACT	74ACT11273	Signetics
Octal with Reset, Positive-Edge Triggered		
FCT	CD54FCT273	† Harris
	CD74FCT273	Harris
Octal, Three-State		
	54FCT534	† National
	74FCT534	National
	NJU74HC534	◊ NJR
ACQ	54ACQ374	† National
	54ACQ534	† National
	54ACQ564	† National
	74ACQ374	National
	74ACQ534	National
	74ACQ564	National
	74ACQ574	National
ACT	54ACQ574	† National
ACTQ	54ACTQ374	† National
	54ACTQ534	† National
	54ACTQ564	† National
	54ACTQ574	† National
	74ACTQ374	National
	74ACTQ534	National
	74ACTQ564	National
	74ACTQ574	National
Octal Three-State, Inverting		
AC	CD54AC534	† Harris
	CD54AC564	† Harris
	CD74AC534	Harris
	CD74AC564	Harris
	74AC11534	TI
	TC74AC534	**Toshiba (3674)**
	TC74AC564	**Toshiba (3674)**
ACT	CD54ACT534	† Harris
	CD54ACT564	† Harris
	CD74ACT534	Harris
	CD74ACT564	Harris
	54ACT534	† National
	54ACT564	† National
	74ACT534	National

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DIGITAL

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL–CMOS (Cont'd)

Flip-Flops, D-Type (Cont'd)

Function	Device	Source	Line
Octal Three-State, Inverting			
ACT		(Cont'd)	
	74ACT564	National	
	74ACT11534	TI	
	74ACT11826	TI	
	V54ACT534	**† VTC (3712)**	
	V54ACT564	**† VTC (3712)**	5
	V54ACT576	**† VTC (3712)**	
	V54ACT826	**† VTC (3712)**	
	V74ACT534	**VTC (3712)**	
	V74ACT564	**VTC (3712)**	
	V74ACT576	**VTC (3712)**	10
	V74ACT826	**VTC (3712)**	
AHCT	KS74AHCT534	Samsung	
	KS74AHCT564	Samsung	
FCT	IDT54FCT534	◊† IDT	
	IDT54FCT534A	◊† IDT	15
	IDT54FCT534AT	◊† IDT	
	IDT54FCT534CT	◊† IDT	
	IDT54FCT534T	◊† IDT	
	IDT74FCT534	◊ IDT	
	IDT74FCT534A	◊ IDT	20
	IDT74FCT534AT	◊ IDT	
	IDT74FCT534CT	◊ IDT	
	IDT74FCT534T	◊ IDT	
	V54FCT534	**◊† VTC (3712)**	
	V54FCT826A	**† VTC (3712)**	25
	V74FCT534	**◊† VTC (3712)**	
	V74FCT826A	**† VTC (3712)**	
HC	**GD74HC534**	**GoldStar (3439)**	
	GD74HC564	**GoldStar (3439)**	
	CD54HC534	† Harris	30
	CD54HC564	† Harris	
	CD74HC534	Harris	
	CD74HC564	Harris	
	HD74HC534	Hitachi	
	HD74HC564	Hitachi	35
	MC54HC534	† Motorola	
	MC54HC564	† Motorola	
	MC74HC534	Motorola	
	MC74HC564	Motorola	
	MM54HC534	† National	40
	MM54HC564	† National	
	MM74HC534	National	
	MM74HC564	National	
	M74HC534	SGS-Thomson	
	M74HC564	SGS-Thomson	45
	LR74HC534	Sharp	
	LR74HC564	Sharp	
	74HC534	Signetics	
	74HC564	Signetics	
	SN54HC534	† TI	50
	SN54HC564	† TI	
	SN74HC534	TI	
	SN74HC564	TI	
	TC74HC534A	**Toshiba (3674)**	
	TC74HC564A	**Toshiba (3674)**	55
HCT	**GD74HCT534**	**GoldStar (3439)**	
	GD74HCT564	**GoldStar (3439)**	
	CD54HCT534	† Harris	
	CD54HCT564	† Harris	
	CD74HCT534	Harris	60
	CD74HCT564	Harris	
	HD74HCT534	Hitachi	
	54HCT534SOS	‡ Marconi	
	54HCT564SOS	‡ Marconi	
	74HCT534	Marconi	65
	74HCT564	Marconi	
	MC54HCT534	† Motorola	
	MC74HCT534	Motorola	
	MM54HCT534	† National	
	MM74HCT534	◊ National	70
	MV74HCT534	Plessey	
		(Continued)	

Function	Device	Source	Line
Octal Three-State, Inverting			
HCT		(Cont'd)	
	MV74HCT564	Plessey	
	KS74HCTLS534	Samsung	
	KS74HCTLS564	Samsung	
	M74HCT534	SGS-Thomson	75
	74HCT534	Signetics	
	74HCT564	Signetics	
	SN74HCT534	◊ TI	
	SN74HCT564	◊ TI	
	TC74HCT564A	**Toshiba (3674)**	80
PCT	P54PCT534	◊‡ Performance	
	P74PCT534	◊ Performance	
Octal Three-State, Inverting with Clear			
ACT	**V54ACT577**	**† VTC (3712)**	
	V74ACT577	**VTC (3712)**	
Octal Three-State, Non-Inverting			
AC	CD54AC374	† Harris	85
	CD54AC574	† Harris	
	CD74AC374	Harris	
	CD74AC574	Harris	
	54AC374	† National	
	54AC574	† National	90
	74AC374	National	
	74AC574	National	
	74AC11374	TI	
	TC74AC374	**Toshiba (3674)**	
	TC74AC574	**Toshiba (3674)**	95
ACT	CD74ACT574	Harris	
	54ACT374	† National	
	54ACT574	† National	
	54ACT825	† National	
	74ACT374	National	100
	74ACT574	National	
	74ACT11374	TI	
	V54ACT374	**† VTC (3712)**	
	V54ACT574	**† VTC (3712)**	
	V54ACT825	**† VTC (3712)**	105
	V74ACT374	**VTC (3712)**	
	V74ACT574	**VTC (3712)**	
AHCT	KS74AHCT374	Samsung	
	KS74AHCT574	Samsung	
BCT	SN54BCT374	† TI	110
	SN74BCT374	TI	
C	MM54C374	‡ Micrel	
	MM54C374	† National	
	MM74C374	National	
FCT	DPLFCT574Y	† Dense-Pac	115
	IDT54FCT374	◊† IDT	
	IDT54FCT374A	◊† IDT	
	IDT54FCT374AT	◊† IDT	
	IDT54FCT374C	◊† IDT	
	IDT54FCT374CT	◊† IDT	120
	IDT54FCT374T	◊† IDT	
	IDT54FCT574	◊† IDT	
	IDT54FCT574A	◊† IDT	
	IDT54FCT574AT	◊† IDT	
	IDT54FCT574C	◊† IDT	125
	IDT54FCT574CT	◊† IDT	
	IDT54FCT574T	◊† IDT	
	IDT54FCT825A	◊† IDT	
	IDT54FCT825B	◊† IDT	
	IDT74FCT374	◊ IDT	130
	IDT74FCT374A	◊ IDT	
	IDT74FCT374AT	◊ IDT	
	IDT74FCT374C	◊ IDT	
	IDT74FCT374CT	◊ IDT	
	IDT74FCT374T	◊ IDT	135
	IDT74FCT574	◊ IDT	
	IDT74FCT574A	◊ IDT	
	IDT74FCT574AT	◊ IDT	
	IDT74FCT574C	◊ IDT	
		(Continued)	

Function	Device	Source	Line
Octal Three-State, Non-Inverting			
FCT		(Cont'd)	
	IDT74FCT574CT	◊ IDT	140
	IDT74FCT574T	◊ IDT	
	IDT74FCT825A	◊ IDT	
	IDT74FCT825B	◊ IDT	
	V54FCT374	**◊† VTC (3712)**	
	V54FCT574	**◊† VTC (3712)**	145
	V54FCT825A	**◊† VTC (3712)**	
	V74FCT374	**◊† VTC (3712)**	
	V74FCT574	**◊† VTC (3712)**	
	V74FCT825A	**◊† VTC (3712)**	
HC	**GD74HC374**	**GoldStar (3439)**	150
	GD74HC574	**GoldStar (3439)**	
	CD54HC374	† Harris	
	CD54HC574	† Harris	
	CD74HC374	Harris	
	CD74HC574	Harris	155
	HD74HC374	Hitachi	
	HD74HC574	Hitachi	
	MC54HC374	† Motorola	
	MC54HC574	† Motorola	
	MC74HC374	Motorola	160
	MC74HC574	Motorola	
	MM54HC374	† National	
	MM54HC574	† National	
	MM74HC374	National	
	MM74HC574	National	165
	MN74HC374	Panasonic	
	M74HC374	SGS-Thomson	
	M74HC574	SGS-Thomson	
	LR74HC374	Sharp	
	LR74HC574	Sharp	170
	74HC374	Signetics	
	74HC574	Signetics	
	SN54HC374	† TI	
	SN54HC574	† TI	
	SN74HC574	TI	175
	TC74HC374A	**Toshiba (3674)**	
	TC74HC574A	**Toshiba (3674)**	
HCT	**GD74HCT374**	**GoldStar (3439)**	
	GD74HCT574	**GoldStar (3439)**	
	CD54HCT374	† Harris	180
	CD54HCT574	† Harris	
	CD74HCT374	Harris	
	CD74HCT574	Harris	
	HD74HCT374	Hitachi	
	54HCT374SOS	‡ Marconi	185
	54HCT574SOS	‡ Marconi	
	74HCT374	Marconi	
	74HCT574	Marconi	
	MC54HCT374	† Motorola	
	MC74HCT374	Motorola	190
	MM54HCT374	† National	
	MM74HCT374	National	
	MV74HCT374	Plessey	
	MV74HCT574	Plessey	
	KS74HCTLS374	Samsung	195
	KS74HCTLS574	Samsung	
	M74HCT374	SGS-Thomson	
	74HCT374	Signetics	
	74HCT574	Signetics	
	SN54HCT374	† TI	200
	SN74HCT374	◊ TI	
	SN74HCT574	◊ TI	
	SN74HC374	TI	
	TC74HCT374A	**Toshiba (3674)**	
	TC74HCT574A	**Toshiba (3674)**	205
PCT	P54PCT374	◊‡ Performance	
	P54PCT374A	◊‡ Performance	
	P54PCT534A	◊‡ Performance	
	P54PCT574	◊‡ Performance	
	P54PCT574A	◊‡ Performance	210
	P74PCT374	◊ Performance	
	P74PCT374A	◊ Performance	
	P74PCT534A	◊ Performance	
	P74PCT574	◊ Performance	
	P74PCT574A	◊ Performance	215
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Flip-Flops, D-Type (Cont'd)

Function	Device	Source	Line
Octal Three-State, Non-Inverting (Cont'd)			
SC	MV74SC374	Plessey	
	MV74SC574	Plessey	
4XXX	HEF40374B	Signetics	
Octal, Three-State, Non-Inverting (dual)			
AC	DPLAC574X	Dense-Pac	
ACT	DPLACT574X	Dense-Pac	5
AHCT	DPLAHCT574X	Dense-Pac	
HC	DPLHC574X	Dense-Pac	
HCT	DPLHCT574X	Dense-Pac	
Octal Three-State, Non-Inverting (dual package)			
HC	DPLXXX574X	Dense-Pac	
Octal Three-State, Non-Inverting, mult. enable			
ACT	74ACT825	National	10
	74ACT11825	TI	
	V74ACT825	**VTC (3712)**	
Octal Three-State, Non-Inverting with clear			
ACT	**V54ACT575**	**† VTC (3712)**	
	V74ACT575	**VTC (3712)**	
8-Bit D-Type			
AC	54AC825	† National	15
	74AC825	National	
8-Bit Parallel, Inverting			
AC	74AC11826	TI	
8-Bit Parallel, Non-Inverting			
AC	74AC11825	TI	
9-Bit D-Type, Three-State			
AC	54AC823	† National	
	74AC823	National	20
9-Bit Parallel, Inverting			
AC	74AC11824	TI	
9-Bit Parallel, Non-Inverting			
AC	74AC11823	TI	
9-Bit, Positive-Edge Triggered, Three-State			
FCT	CD54FCT823A	† Harris	
	CD74FCT823A	Harris	
9-Bit, Positive-Edge Triggered, Three-State, Inverting			
FCT	CD54FCT824A	† Harris	25
	CD74FCT824A	Harris	
9-Bit Three-State, Inverting			
FCT	IDT54FCT824A	◊† IDT	
	IDT54FCT824B	◊† IDT	
	IDT74FCT824A	◊ IDT	
	IDT74FCT824B	◊ IDT	30
	V54FCT824A	**◊† VTC (3712)**	
	V74FCT824A	**◊† VTC (3712)**	
9-Bit Three-State, Non-Inverting			
ACT	54ACT823	† National	
	74ACT823	National	
	74ACT11823	TI	35
	V54ACT823	**† VTC (3712)**	
	V74ACT823	**VTC (3712)**	
9-Bit Three-State, Inverting			
ACT	74ACT11824	TI	
	V54ACT824	**† VTC (3712)**	
	V74ACT824	**VTC (3712)**	40
9-Wide w/Reset and Enable, Positive Edge-Triggered, Three-State			
AC	74AC11823	Signetics	
	74AC11824	Signetics	
ACT	74ACT11823	Signetics	
	74ACT11824	Signetics	
10-Bit D-Type, Three-State			
AC	54AC821	† National	45
	74AC821	National	
10-Bit Parallel, Inverting			
AC	74AC11822	TI	
10-Bit Parallel, Non-Inverting			
AC	74AC11821	TI	
10-Bit, Positive-Edge Triggered, Three-State			
FCT	CD54FCT821A	† Harris	
	CD74FCT821A	Harris	50
10-Bit, Positive-Edge Triggered, Three-State, Inverting			
FCT	CD54FCT822A	† Harris	
	CD74FCT822A	Harris	
10-Bit Three-State, Inverting			
ACT	74ACT11822	TI	
	V54ACT822	**† VTC (3712)**	
	V74ACT822	**VTC (3712)**	55
10-Bit Three-State, Non-Inverting			
ACT	54ACT821	† National	
	74ACT821	National	
	74ACT11821	TI	
	V54ACT821	**† VTC (3712)**	
	V74ACT821	**VTC (3712)**	60
10-Wide, Positive Edge-Triggered, Three-State			
AC	74AC11821	Signetics	
10-Wide, Positive Edge-Triggered, Three-State, Inverting			
AC	74AC11822	Signetics	
10-Wide, Positive Edge-Triggered, Three-State			
ACT	74ACT11821	Signetics	
10-Wide, Positive Edge-Triggered, Three-State, Inverting			
ACT	74ACT11822	Signetics	
10-Bit			
AC	**TC74AC821**	**Toshiba (3674)**	65
ACT	**TC74ACT821**	**Toshiba (3674)**	
8-Bit			
AC	**TC74AC825**	**Toshiba (3674)**	
ACT	**TC74ACT825**	**Toshiba (3674)**	
9-Bit			
AC	**TC74AC823**	**Toshiba (3674)**	
ACT	**TC74ACT823**	**Toshiba (3674)**	70

Flip-Flops, J-K Type

Function	Device	Source	Line
AND-Gated Master-Slave			
HC	HCF4095B	SGS-Thomson	
4XXX	CD4095BE	Harris	
	CD4096B	† Harris	
	CD4096BE	Harris	
	HCF4096B	◊ SGS-Thomson	75
Dual			
AC	CD54AC109	† Harris	
	CD74AC109	Harris	
	54AC109	† National	
	74AC109	National	
	74AC11109	TI	80
ACT	CD54ACT109	† Harris	
	CD74ACT109	Harris	
	MC74ACT109	◊ Motorola	
	74ACT109	National	
	74ACT11109	TI	85
AHCT	KS74AHCT109	Samsung	
C	MM54C76	† National	
	MM74C76	National	
HC	**TC74HC112A**	**Toshiba (3674)**	
4XXX	**GD4027B**	**‡ GoldStar (3431)**	90
	CD4027B	‡ Harris	
	CD4027BE	Harris	
	CD4027A	‡ Micrel	
	CD4027B	‡ Micrel	
	MC14027BA	† Motorola	95
	MC14027BC	Motorola	
	CD4027BC	National	
	CD4027BM	† National	
	MN4027B	◊† Panasonic	
	HCC4027B	† SGS-Thomson	100
	HCF4027B	◊ SGS-Thomson	
	HEF4027B	Signetics	
	TC4027B	Toshiba	
Dual J-K			
AC	SN54AC11109	† TI	
	TC74AC109	**◊ Toshiba (3674)**	105
		(Continued)	
Dual J-K		(Cont'd)	
ACT	SN54ACT11109	† TI	
Dual J-K F/F w/Preset and Clear			
ACT	**TC74ACT109**	**◊ Toshiba (3674)**	
	TC74ACT112	**◊ Toshiba (3674)**	
Dual J-K with Preset and Clear			
HCT	MM54HCT76	† National	
Dual J-K with Reset			
HC	BU74HC73	ROHM	110
Dual J-K with Set/Reset			
HC	BU74HC76	ROHM	
Dual J-K with Set/Reset, Negative-Edge Triggered			
AC	74AC11112	Signetics	
ACT	74ACT11112	Signetics	
Dual J-K with Set/Reset, Positive-Edge Triggered			
AC	74AC11109	Signetics	
ACT	74ACT11109	Signetics	115
Dual Negative Edge-Triggered			
AC	54AC112	† National	
	74AC112	National	
ACT	54ACT112	† National	
	74ACT112	National	
Dual Negative Edge-Triggered, Separate Preset and Clock			
HC	**GD74HC113**	**GoldStar (3439)**	120
	HD74HC113	Hitachi	
	M74HC113	Mitsubishi	
	MC54HC113	† Motorola	
	MC74HC113	Motorola	
	MM54HC113	† National	125
	MM74HC113	National	
	M74HC113	SGS-Thomson	
	LR74HC113	Sharp	
	SN54HC113	† TI	
	SN74HC113	TI	130
	TC74HC113A	**Toshiba (3674)**	
HCT	**GD74HCT113**	**GoldStar (3439)**	
Dual Negative Edge-Triggered with Clear			
AHCT	KS74AHCT107	Samsung	
	KS74AHCT73	Samsung	
C	MM54C107	† National	135
	MM54C73	† National	
	MM74C107	National	
	MM74C73	National	
HC	**GD74HC107**	**GoldStar (3439)**	
	GD74HC73	**GoldStar (3439)**	140
	CD54HC107	† Harris	
	CD54HC73	† Harris	
	CD74HC107	Harris	
	CD74HC73	Harris	
	HD74HC107	Hitachi	145
	HD74HC73	Hitachi	
	M74HC73	Mitsubishi	
	MC54HC107	† Motorola	
	MC54HC73	† Motorola	
	MC74HC107	Motorola	150
	MC74HC73	Motorola	
	MM54HC107	† National	
	MM54HC73	† National	
	MM74HC107	National	
	MM74HC73	National	155
	MN74HC107	Panasonic	
	M74HC107	SGS-Thomson	
	M74HC73	SGS-Thomson	
	LR74HC107	Sharp	
	74HC107	Signetics	160
	74HC73	Signetics	
	SN54HC107	† TI	
	SN74HC107	TI	
	SN74HC73	TI	
	TC74HC107A	**Toshiba (3674)**	165
	TC74HC73A	**Toshiba (3674)**	
HCT	**GD74HCT107**	**GoldStar (3439)**	
	GD74HCT73	**GoldStar (3439)**	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Flip-Flops, J-K Type (Cont'd)

Function	Device	Source	Line
Dual Negative Edge-Triggered with Clear			
HCT		(Cont'd)	
	CD54HCT107	† Harris	
	CD54HCT73	† Harris	
	CD74HCT107	Harris	
	CD74HCT73	Harris	
	KS74HCTLS107	Samsung	5
	KS74HCTLS73	Samsung	
	74HCT107	Signetics	
	74HCT73	Signetics	
Dual Negative Edge-Triggered with Preset and Clear			
AC	CD54AC112	† Harris	
	CD74AC112	Harris	10
	74AC11112	TI	
	TC74AC112	**Toshiba (3674)**	
ACT	CD54ACT112	† Harris	
	CD74ACT112	Harris	
	74ACT11112	TI	15
AHCT	KS74AHCT112	Samsung	
HC	**GD74HC112**	**GoldStar (3439)**	
	GD74HC76	**GoldStar (3439)**	
	CD54HC112	† Harris	
	CD74HC112	Harris	20
	HD74HC112	Hitachi	
	HD74HC76	Hitachi	
	M74HC76	Mitsubishi	
	MC54HC112	† Motorola	
	MC54HC76	† Motorola	25
	MC74HC112	Motorola	
	MC74HC76	Motorola	
	MM54HC112	† National	
	MM54HC76	† National	
	MM74HC112	National	30
	MM74HC76	National	
	MN74HC112	Panasonic	
	MN74HC76	Panasonic	
	M74HC112	SGS-Thomson	
	M74HC76	SGS-Thomson	35
	LR74HC112	Sharp	
	LR74HC76	Sharp	
	74HC112	Signetics	
	SN54HC112	† TI	
	SN74HC112	TI	40
	SN74HC76	TI	
	TC74HC76A	**Toshiba (3674)**	
HCT	**GD74HCT112**	**GoldStar (3439)**	
	GD74HCT76	**GoldStar (3439)**	
	CD54HCT112	† Harris	45
	CD74HCT112	Harris	
	MM54HCT112	† National	
	MM74HCT112	National	
	MM74HCT76	National	
	KS74HCTLS112	Samsung	50
	KS74HCTLS76	Samsung	
	74HCT112	Signetics	
Dual Negative Edge-Triggered with Preset, Common Clock and Common Clear			
HC	HD74HC114	Hitachi	
	M74HC114	Mitsubishi	
	SN54HC114	† TI	55
	SN74HC114	TI	
Dual, Negative-Edge Triggered with Clear			
HCTLS	KS74HCTLS107A	Samsung	
	KS74HCTLS73A	Samsung	
Dual, Negative-Edge Triggered with Preset and Clear			
AHCT	KS74AHCT76	Samsung	
	KS74AHCT78	Samsung	60
HCTLS	KS74HCTLS112A	Samsung	
	KS74HCTLS76A	Samsung	
	KS74HCTLS78A	Samsung	
Dual Positive Edge-Triggered with Preset and Clear			
HC	**GD74HC109**	**GoldStar (3439)**	
	CD54HC109	† Harris	65
	CD74HC109	Harris	

(Continued)

Function	Device	Source	Line
Dual Positive Edge-Triggered with Preset and Clear			
HC		(Cont'd)	
	HD74HC109	Hitachi	
	MC54HC109	† Motorola	
	MC74HC109	Motorola	
	MM54HC109	† National	70
	MM74HC109	National	
	MN74HC109	Panasonic	
	M74HC109	SGS-Thomson	
	LR74HC109	Sharp	
	74HC109	Signetics	75
	SN54HC109	† TI	
	SN74HC109	TI	
	TC74HC109A	**Toshiba (3674)**	
HCT	**GD74HCT109**	**GoldStar (3439)**	
	CD54HCT109	† Harris	80
	CD74HCT109	Harris	
	MM54HCT109	† National	
	MM74HCT109	National	
	KS74HCTLS109	Samsung	
	74HCT109	Signetics	85
Dual, Positive-Edge Triggered with Preset and Clear			
HCTLS	KS74HCTLS109A	Samsung	
Dual with Preset	NJU74HC113	◊ NJR	
Dual with Preset and Clear			
	NJU74HC109	◊ NJR	
	NJU74HC112	◊ NJR	
	NJU74HC114	◊ NJR	90

Gates, AND

Function	Device	Source	Line
Dual 4-Input	NJU74HC21	◊ NJR	
AC	74AC11021	Signetics	
	SN54AC11021	† TI	
	74AC11021	TI	
ACT	74ACT11021	Signetics	95
	SN54ACT11021	† TI	
	74ACT11021	TI	
AHCT	KS74AHCT21	Samsung	
HC	**GD74HC21**	**GoldStar (3439)**	
	CD54HC21	† Harris	100
	CD74HC21	Harris	
	HD74HC21	Hitachi	
	M74HC21	SGS-Thomson	
	74HC21	Signetics	
	SN54HC21	† TI	105
	SN74HC21	TI	
	TC74HC21A	**Toshiba (3674)**	
	US74HC21	Universal	
HCT	**GD74HCT21**	**GoldStar (3439)**	
	CD54HCT21	† Harris	110
	CD74HCT21	Harris	
	74HCT21	Signetics	
HCTLS	KS74HCTLS21	Samsung	
4XXX	GD4082B	‡ GoldStar	
	CD4082B	‡ Harris	115
	CD4082BE	Harris	
	CD4082B	‡ Micrel	
	MC14082BA	† Motorola	
	MC14082BC	Motorola	
	CD4082BC	National	120
	CD4082BM	† National	
	HCC4082B	† SGS-Thomson	
	HCF4082B	◊ SGS-Thomson	
	HEF4082B	Signetics	
	TC4082B	Toshiba	125
Triple 3-Input	NJU74HC11	◊ NJR	
AC	54AC11	† National	
	74AC11	National	
	74AC11011	Signetics	
	74AC11011	TI	130
	TC74AC11	**Toshiba (3674)**	
ACT	74ACT11011	Signetics	
	74ACT11011	TI	

(Continued)

Function	Device	Source	Line
Triple 3-Input		(Cont'd)	
AHCT	KS74AHCT11	Samsung	
HC	**GD74HC11**	**GoldStar (3439)**	135
	CD54HC11	† Harris	
	CD74HC11	Harris	
	HD74HC11	Hitachi	
	MC54HC11	† Motorola	
	MC74HC11	Motorola	140
	MM54HC11	† National	
	MM74HC11	National	
	MN74HC11	◊ Panasonic	
	M74HC11	SGS-Thomson	
	LR74HC11	Sharp	145
	74HC11	Signetics	
	SN54HC11	† TI	
	SN74HC11	TI	
	TC74HC11A	**Toshiba (3674)**	
HCT	**GD74HCT11**	**GoldStar (3439)**	150
	CD54HCT11	† Harris	
	CD74HCT11	Harris	
	KS74HCTLS11	Samsung	
	74HCT11	Signetics	
4XXX	GD4073B	‡ GoldStar	155
	CD4073B	‡ Harris	
	CD4073BE	Harris	
	CD4073B	‡ Micrel	
	MC14073BA	† Motorola	
	MC14073BC	Motorola	160
	CD4073BC	National	
	CD4073BM	† National	
	MN4073B	◊† Panasonic	
	HCC4073B	† SGS-Thomson	
	HCF4073B	SGS-Thomson	165
	HEF4073B	Signetics	
	TC4073B	Toshiba	
Triple 3-Input Positive			
AC	SN54AC11011	† TI	
ACT	SN54ACT11011	† TI	
Triple 4-Input AND/NAND			
AC	74AC11800	Signetics	170
ACT	74ACT11800	Signetics	
Quad 2-Input	NJU74HC08	◊ NJR	
AC	CD54AC08	† Harris	
	CD74AC08	Harris	
	54AC08	† National	175
	74AC08	National	
	74AC11008	Signetics	
	SN54AC11008	† TI	
	74AC11008	TI	
	TC74AC08	**Toshiba (3674)**	180
ACT	CD54ACT08	† Harris	
	CD74ACT08	Harris	
	54ACT08	† National	
	74ACT11008	Signetics	
	SN54ACT11008	† TI	185
	74ACT11008	TI	
AHCT	KS74AHCT08	Samsung	
C	MM54C08	† National	
	MM74C08	National	
HC	**GD74HC08**	**GoldStar (3439)**	190
	CD54HC08	† Harris	
	CD74HC08	Harris	
	HD74HC08	Hitachi	
	M74HC09	Mitsubishi	
	MC54HC08A	† Motorola	195
	MC74HC08A	Motorola	
	MM54HC08	† National	
	MM74HC08	National	
	MN74HC08	◊ Panasonic	
	BU74HC08	ROHM	200
	M74HC08	SGS-Thomson	
	LR74HC08	Sharp	
	74HC08	Signetics	
	SN54HC08	† TI	
	SN74HC08	TI	205

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Gates, AND (Cont'd)

Function	Device	Source
Quad 2-Input		
HC		(Cont'd)
	SN74HC7001	TI
	TC74HC08A	**Toshiba (3674)**
HCT	GD74HCT08	GoldStar
	CD54HCT08	† Harris
	CD74HCT08	Harris
	MM54HCT08	† National
	MM74HCT08	National
	KS74HCTLS08	Samsung
	74HCT08	Signetics
	SN74HCT08	TI
4XXX	**GD4081B**	**GoldStar (3431)**
	CD4081B	‡ Harris
	CD4081BE	Harris
	CD4081B	‡ Micrel
	MC14081BA	† Motorola
	MC14081BC	Motorola
	CD4081BC	National
	CD4081BM	† National
	MN4081B	◊† Panasonic
	HCC4081B	† SGS-Thomson
	HCF4081B	◊ SGS-Thomson
	HEF4081B	Signetics
	TC4081B	Toshiba
Quad 2-Input, Open Collector		
AHCT	KS74AHCT09	Samsung
HC	**GD74HC09**	**GoldStar (3439)**
	HD74HC09	Hitachi
	SN54HC09	† TI
	SN74HC09	◊ TI
HCT	GD74HCT09	GoldStar
	KS74HCTLS09	Samsung
Quad 2-Input (open drain)		
	NJU74HC09	◊ NJR
Quad 2-Input with Schmitt Trigger Inputs		
	NJU74HC7001	◊ NJR
Quad 2-Input		
ACT	**TC74ACT08**	**◊ Toshiba (3674)**

Gates, NAND

Function	Device	Source
Dual 2-Input (Driver)		
4XXX	CD40107B	† Harris
	CD40107BE	Harris
	HCC40107B	† SGS-Thomson
	HCF40107B	SGS-Thomson
	TC40107B	Toshiba
Dual 4-Input	NJU74HC20	◊ NJR
AC	CD54AC20	† Harris
	CD74AC20	Harris
	54AC20	† National
	74AC20	National
	74AC11013	Signetics
	74AC11020	Signetics
	74AC11020	TI
	TC74AC20	**Toshiba (3674)**
ACT	CD54ACT20	† Harris
	CD74ACT20	Harris
	74ACT11013	Signetics
	74ACT11020	Signetics
	74ACT11020	TI
AHCT	KS74AHCT20	Samsung
	KS74AHCT22	Samsung
C	MM54C20	† National
	MM74C20	National
HC	**GD74HC20**	**GoldStar (3439)**
	CD54HC20	† Harris
	CD74HC20	Harris
	HD74HC01	Hitachi
	HD74HC20	Hitachi
	M74HC20	Mitsubishi
	MC54HC20	† Motorola
		(Continued)

Function	Device	Source
Dual 4-Input		
HC		(Cont'd)
	MC74HC20	Motorola
	MN74HC20	◊ Panasonic
	M74HC20	SGS-Thomson
	LR74HC20	Sharp
	74HC20	Signetics
	SN54HC20	† TI
	SN74HC20	TI
	TC74HC20A	**Toshiba (3674)**
	US74HC20	Universal
HCT	**GD74HCT20**	**GoldStar (3439)**
	CD54HCT20	† Harris
	CD74HCT20	Harris
	74HCT20	Signetics
HCTLS	KS74HCTLS20	Samsung
	KS74HCTLS22	Samsung
4XXX	**GD4012B**	**‡ GoldStar (3431)**
	CD4012B	‡ Harris
	CD4012BE	Harris
	CD4012UB	† Harris
	CD4012A	‡ Micrel
	CD4012B	‡ Micrel
	MC14012BA	† Motorola
	MC14012BC	Motorola
	MC14012UBA	† Motorola
	MC14012UBC	Motorola
	CD4012A	National
	CD4012BC	National
	CD4012BM	† National
	MN4012B	◊† Panasonic
	HCC4012B	† SGS-Thomson
	HCF4012B	◊ SGS-Thomson
	HEF4012B	Signetics
	TC4012B	Toshiba
Dual 4-Input Positive		
AC	SN54AC11020	† TI
ACT	SN54ACT11020	† TI
Triple 3-Input	NJU74HC10	◊ NJR
AC	CD54AC10	† Harris
	CD74AC10	Harris
	54AC10	† National
	74AC10	National
	74AC11010	Signetics
	74AC11010	TI
	TC74AC10	**Toshiba (3674)**
ACT	CD54ACT10	† Harris
	CD74ACT10	Harris
	74ACT11010	Signetics
	74ACT11010	TI
AHCT	KS74AHCT10	Samsung
	KS74AHCT12	Samsung
C	MM54C10	† National
	MM74C10	National
HC	**GD74HC10**	**GoldStar (3439)**
	CD54HC10	† Harris
	CD74HC10	Harris
	HD74HC10	Hitachi
	MC54HC10	† Motorola
	MC74HC10	Motorola
	MM54HC10	† National
	MM54HC20	† National
	MM74HC10	National
	MM74HC20	National
	MN74HC10	◊ Panasonic
	M74HC10	SGS-Thomson
	LR74HC10	Sharp
	74HC10	Signetics
	SN54HC10	† TI
	SN74HC10	TI
	TC74HC10A	**Toshiba (3674)**
HCT	**GD74HCT10**	**GoldStar (3439)**
	CD54HCT10	† Harris
	CD74HCT10	Harris
	KS74HCTLS10	Samsung
		(Continued)

Function	Device	Source
Triple 3-Input		
HCT		(Cont'd)
	KS74HCTLS12	Samsung
	74HCT10	Signetics
4XXX	GD4023B	‡ GoldStar
	CD4023AE	Harris
	CD4023B	‡ Harris
	CD4023BE	Harris
	CD4023UBE	† Harris
	CD4023A	‡ Micrel
	CD4023B	‡ Micrel
	MC14023BA	† Motorola
	MC14023BC	Motorola
	MC14023UBA	† Motorola
	MC14023UBC	Motorola
	CD4023BC	National
	CD4023BM	† National
	MN4023B	◊† Panasonic
	HCC4023B	† SGS-Thomson
	HCF4023B	◊ SGS-Thomson
	HEF4023B	Signetics
	TC4023B	Toshiba
Triple 3-Input Positive		
AC	SN54AC11010	† TI
ACT	SN54ACT11010	† TI
Triple 3-Input		
ACT	**TC74ACT10**	**◊ Toshiba (3674)**
Quad 2-Input	NJU4011B	NJR
	NJU74HC00	◊ NJR
	NJU74HC03	◊ NJR
AC	CD54AC00	† Harris
	CD74AC00	Harris
	54AC00	† National
	74AC00	National
	74AC11000	Signetics
	74AC11000	TI
	TC74AC00	**Toshiba (3674)**
ACT	CD54ACT00	† Harris
	CD74ACT00	Harris
	MC74ACT132	◊ Motorola
	54ACT00	† National
	74ACT00	National
	74ACT11000	Signetics
	74ACT11000	TI
	TC74ACT00	**Toshiba (3674)**
AHCT	KS74AHCT00	Samsung
	KS74AHCT01	Samsung
C	MM54C00	† National
	MM74C00	National
HC	**GD74HC00**	**GoldStar (3439)**
	CD54HC00	† Harris
	CD74HC00	Harris
	HD74HC00	Hitachi
	MC54HC00A	† Motorola
	MC74HC00A	Motorola
	MM54HC00	† National
	MM74HC00	National
	BU74HC00	ROHM
	M74HC00	SGS-Thomson
	LR74HC00	Sharp
	74HC00	Signetics
	SN54HC00	† TI
	SN74HC00	TI
	TC74HC00A	**Toshiba (3674)**
HCT	**GD74HCT00**	**GoldStar (3439)**
	CD54HCT00	† Harris
	CD74HCT00	Harris
	M74HCT00	Mitsubishi
	MM54HCT00	† National
	MM54HCT03	† National
	MM74HCT00	National
	MM74HCT03	National
	KS74HCTLS00	Samsung
	74HCT00	Signetics
	SN74HCT00	TI
		(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Gates, NAND (Cont'd)

Function	Device	Source	Line
Quad 2-Input (Cont'd)			
4XXX	**GD4011B**	**‡ GoldStar (3431)**	
	CD4011A	† Harris	
	CD4011B	‡ Harris	
	CD4011BE	Harris	
	CD4011UB	† Harris	5
	CD4011UBE	Harris	
	CD4011A	‡ Micrel	
	CD4011B	‡ Micrel	
	MC14011BA	† Motorola	
	MC14011BC	Motorola	10
	MC14011UBA	† Motorola	
	MC14011UBC	Motorola	
	CD4011AC	National	
	CD4011AM	† National	
	CD4011BC	National	15
	CD4011BM	† National	
	MN4011B	◊† Panasonic	
	HCC4011B	† SGS-Thomson	
	HCF4011B	◊ SGS-Thomson	
	HEF4011B	Signetics	20
	HEF4011UB	Signetics	
	TC4011B	Toshiba	
	TC4011UB	Toshiba	
Quad 2-Input NAND Schmitt Trigger			
AC	74AC11132	TI	
Quad 2-Input, Open Collector			
HC	**GD74HC03**	**GoldStar (3439)**	25
	CD54HC03	† Harris	
	CD74HC03	Harris	
	74HC03	Signetics	
HCT	GD74HCT03	GoldStar	
	CD54HCT03	† Harris	30
	CD74HCT03	Harris	
	74HCT03	Signetics	
Quad 2-Input (open drain)			
AHCT	KS74AHCT03	Samsung	
HC	MC54HC03	† Motorola	
	MC74HC03	Motorola	35
	MM54HC03	† National	
	MM74HC03	National	
	M74HC03	SGS-Thomson	
	LR74HC03	Sharp	
	SN54HC03	† TI	40
	SN74HC01	TI	
	SN74HC03	TI	
	TC74HC03A	**Toshiba (3674)**	
HCT	KS74HCTLS01	Samsung	
	KS74HCTLS03	Samsung	45
5XXX	TC5029B	Toshiba	
Quad 2-Input Positive			
AC	SN54AC11000	† TI	
ACT	SN54ACT11000	† TI	
Quad 2-Input Schmitt			
	NJU74HC132	◊ NJR	
Quad 2-Input Schmitt Trigger			
	NJU4093B	NJR	50
AC	74AC11132	Signetics	
ACT	74ACT11132	Signetics	
HC	M74HC132	Mitsubishi	
Quad 2-Input with Schmitt Trigger Inputs			
AHCT	KS74AHCT132	Samsung	
8-Input			
AC	74AC11030	Signetics	55
	74AC11030	TI	
ACT	74ACT11030	Signetics	
	74ACT11030	TI	
AHCT	KS74AHCT30	Samsung	
C	MM54C30	† National	60
	MM74C30	National	
HC	**GD74HC30**	**GoldStar (3439)**	
	CD54HC30	† Harris	
		(Continued)	

Function	Device	Source	Line
8-Input HC (Cont'd)			
	CD74HC30	Harris	
	HD74HC30	Hitachi	65
	M74HC30	Mitsubishi	
	MC54HC30	† Motorola	
	MC74HC30	Motorola	
	MM54HC30	† National	
	MM74HC30	National	70
	MN74HC30	◊ Panasonic	
	M74HC30	SGS-Thomson	
	LR74HC30	Sharp	
	74HC30	Signetics	
	SN54HC30	† TI	75
	SN74HC30	TI	
	TC74HC30A	**Toshiba (3674)**	
HCT	**GD74HCT30**	**GoldStar (3439)**	
	CD54HCT30	† Harris	
	CD74HCT30	Harris	80
	74HCT30	Signetics	
HCTLS	KS74HCTLS30	Samsung	
4XXX	GD4068B	† GoldStar	
	CD4068B	† Harris	
	CD4068BE	Harris	85
	MC14068BA	† Motorola	
	MC14068BC	Motorola	
	HCC4068B	† SGS-Thomson	
	HCF4068B	◊ SGS-Thomson	
	HEF4068B	Signetics	90
	TC4068B	Toshiba	
8-Input Positive			
AC	SN54AC11030	† TI	
ACT	SN54ACT11030	† TI	
13-Input			
AHCT	KS74AHCT133	Samsung	
HC	**GD74HC133**	**GoldStar (3439)**	95
	HD74HC133	Hitachi	
	MC54HC133	† Motorola	
	MC74HC133	Motorola	
	MM54HC133	† National	
	MM74HC133	National	100
	MN74HC133	◊ Panasonic	
	M74HC133	SGS-Thomson	
	LR75HC133	Sharp	
	SN54HC133	† TI	
	SN74HC133	TI	105
	TC74HC133A	**Toshiba (3674)**	
HCT	**GD74HCT133**	**GoldStar (3439)**	
HCTLS	KS74HCTLS133	Samsung	

Gates, AND-OR

Function	Device	Source	Line
Dual			
HCTLS	KS74HCTLS58	Samsung	
Dual AND-OR			
AHCT	KS74AHCT58	Samsung	110
Quad Select			
4XXX	GD4019B	‡ GoldStar	
	CD4019B	‡ Harris	
	CD4019BE	Harris	
	CD4019A	‡ Micrel	
	CD4019B	‡ Micrel	115
	CD4019BC	National	
	CD4019BM	† National	
	HCC4019B	† SGS-Thomson	
	HCF4019B	◊ SGS-Thomson	
	HEF4019B	Signetics	120
	TC4019B	Toshiba	
Quad 2-Input	NJU4019B	NJR	
2-Wide, 2-Input/2-Wide, 3-Input			
	NJU74HC58	◊ NJR	
HC	**GD74HCT58**	**GoldStar (3439)**	
	MC54HC58	† Motorola	125
	MC74HC58	Motorola	
	MM54HC58	† National	
		(Continued)	

Function	Device	Source	Line
2-Wide, 2-Input/2-Wide, 3-Input HC (Cont'd)			
	MM74HC58	National	
	LR74HC58	Sharp	

Gates, AND-OR-Invert

Function	Device	Source	Line
Dual			
HCTLS	KS74HCTLS51	Samsung	130
Dual 2-Wide 2-Input			
4XXX	GD4085B	‡ GoldStar	
	CD4085B	‡ Harris	
	CD4085BE	Harris	
	MC14506BA	† Motorola	
	MC14506BC	Motorola	135
	MN4085B	◊† Panasonic	
	HCC4085B	† SGS-Thomson	
	HCF4085B	◊ SGS-Thomson	
	HEF4085B	Signetics	
	TC4085B	Toshiba	140
Dual 2-Wide 2-Input, 2-Wide 3-Input			
AC	74AC11051	Signetics	
ACT	74ACT11051	Signetics	
2-Wide, 2-Input/2-wide, 3-Input			
	NJU74HC51	◊ NJR	
AC	74AC11051	TI	
ACT	74ACT11051	TI	145
AHCT	KS74AHCT51	Samsung	
HC	**GD74HC51**	**GoldStar (3439)**	
	HD74HC51	Hitachi	
	M74HC51	Mitsubishi	
	MC54HC51	† Motorola	150
	MC74HC51	Motorola	
	MM54HC51	† National	
	MM74HC51	National	
	MN74HC51	◊ Panasonic	
	M74HC51	SGS-Thomson	155
	LR74HC51	Sharp	
	SN54HC51	† TI	
	SN74HC51	TI	
	TC74HC51A	**Toshiba (3674)**	
2-2-3-4 Input			
AC	74AC11064	Signetics	160
ACT	74ACT11064	Signetics	
4-Wide 2-Input Expandable			
4XXX	GD4086B	‡ GoldStar	
	CD4086B	‡ Harris	
	CD4086BE	Harris	
	HCC4086B	† SGS-Thomson	165
	HCF4086B	SGS-Thomson	
	HEF4086B	Signetics	
	TC4086B	Toshiba	
4-2-3-2 Input			
AC	MC74AC64	◊ Motorola	
ACT	MC74ACT64	◊ Motorola	170

Gates, OR

Function	Device	Source	Line
Dual 4-Input	NJU74HC4072	◊ NJR	
HC	M74HC4072	SGS-Thomson	
	TC74HC4072A	**Toshiba (3674)**	
4XXX	GD4072B	‡ GoldStar	
	CD4072B	‡ Harris	175
	CD4072BE	Harris	
	CD4072B	‡ Micrel	
	MC14072BA	† Motorola	
	MC14072BC	Motorola	
	CD4072BC	National	180
	CD4072BM	† National	
	MN4072B	◊† Panasonic	
	HCC4072B	† SGS-Thomson	
	HCF4072B	◊ SGS-Thomson	
	HEF4072B	Signetics	185
	TC4072B	Toshiba	
Triple 3-Input			
HC	CD54HC4075	† Harris	
	CD74HC4075	Harris	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—CMOS (Cont'd)

Gates, OR (Cont'd)

Function	Device	Source	Line
Triple 3-Input			
HC		(Cont'd)	
	M74HC4075	Mitsubishi	
	MC54HC4075	† Motorola	
	MC74HC4075	Motorola	
	MM54HC266	† National	
	MM54HC4075	† National	5
	MM74HC266	National	
	MM74HC4075	National	
	MN74HC4075	◊ Panasonic	
	M74HC4075	SGS-Thomson	
	LR74HC4075	Sharp	10
	74HC4075	Signetics	
	SN54HC4075	† TI	
	SN74HC4075	TI	
	TC74HC4075A	**Toshiba (3674)**	
HCT	CD54HCT4075	† Harris	15
	CD74HCT4075	Harris	
	74HCT4075	Signetics	
4XXX	GD4075B	‡ GoldStar	
	CD4075B	‡ Harris	
	CD4075BE	Harris	20
	CD4075B	‡ Micrel	
	MC14075BA	† Motorola	
	MC14075BC	Motorola	
	CD4075BC	National	
	CD4075BM	† National	25
	MN4075B	◊† Panasonic	
	HCC4075B	† SGS-Thomson	
	HCF4075B	◊ SGS-Thomson	
	HEF4075B	Signetics	
	TC4075B	Toshiba	30
Triple 4-Input OR/NOR			
AC	74AC11802	Signetics	
ACT	74ACT11802	Signetics	
Quad 2-Input	NJU74HC32	◊ NJR	
AC	CD54AC32	† Harris	
	CD74AC32	Harris	35
	54AC32	† National	
	74AC32	National	
	74AC11032	Signetics	
	SN54AC11032	◊† TI	
	74AC11032	TI	40
	TC74AC32	**Toshiba (3674)**	
ACT	CD54ACT32	† Harris	
	CD74ACT32	Harris	
	54ACT32	† National	
	74ACT32	National	45
	74ACT11032	Signetics	
	SN54ACT11032	◊† TI	
	74ACT11032	TI	
AHCT	KS74AHCT32	Samsung	
C	MM54C32	† National	50
	MM74C32	National	
HC	**GD74HC32**	**GoldStar (3439)**	
	CD54HC32	† Harris	
	CD74HC32	Harris	
	HD74HC32	Hitachi	55
	M74HC32	Mitsubishi	
	MC54HC32A	† Motorola	
	MC74HC32A	Motorola	
	MM54HC32	† National	
	MM74HC32	National	60
	MN74HC32	◊ Panasonic	
	M74HC32	SGS-Thomson	
	LR74HC32	Sharp	
	74HC32	Signetics	
	SN54HC32	† TI	65
	SN74HC32	TI	
	SN74HC7032	TI	
	TC74HC32A	**Toshiba (3674)**	
HCT	**GD74HCT32**	**GoldStar (3439)**	
	CD54HCT32	† Harris	70
	CD74HCT32	Harris	
Quad 2-Input.			
HCT	MC54HCT32A	◊† Motorola	
Quad 2-Input			
HCT	MC74HCT32A	◊ Motorola	
	MM54HCT32	† National	
	MM74HCT32	National	75
	74HCT32	Signetics	
	SN74HCT32	TI	
HCTLS	KS74HCTLS32	Samsung	
HCTS	HCTS32MS	‡ Harris	
4XXX	**GD4071B**	**‡ GoldStar (3431)**	80
	CD4071B	‡ Harris	
	CD4071BE	Harris	
	CD4071B	‡ Micrel	
	MC14071BA	† Motorola	
	MC14071BC	Motorola	85
	CD4071BC	National	
	CD4071BM	† National	
	MN4071B	◊† Panasonic	
	HCC4071B	† SGS-Thomson	
	HCF4071B	◊ SGS-Thomson	90
	HEF4071B	Signetics	
	TC4071B	Toshiba	
Quad 2-Input with Schmitt Trigger Inputs			
	NJU74HC7032	◊ NJR	
Quad 2-Input			
ACT	**TC74ACT32**	**◊ Toshiba (3674)**	
Quadruple 2-Input Exlusive-OR Gate			
AC	74AC11086	TI	95
ACT	74ACT11086	TI	

Gates, NOR

Function	Device	Source	Line
Dual 3-Input plus Inverter			
4XXX	CD4000A	‡ Micrel	
	MC14000UBA	† Motorola	
	MC14000UBC	Motorola	
	CD4000C	National	100
	CD4000M	† National	
	HCC4000B	† SGS-Thomson	
	HCF4000B	◊ SGS-Thomson	
	HEF4000B	Signetics	
	TC4000B	Toshiba	105
Dual 4-Input	NJU74HC4002	◊ NJR	
HC	CD54HC4002	† Harris	
	CD74HC4002	Harris	
	M74HC4002	Mitsubishi	
	MC54HC4002	† Motorola	110
	MC74HC4002	Motorola	
	MM54HC4002	† National	
	MM74HC4002	National	
	MN74HC4002	◊ Panasonic	
	M74HC4002	SGS-Thomson	115
	LR74HC4002	Sharp	
	74HC4002	Signetics	
	SN54HC4002	† TI	
	SN74HC4002	TI	
	TC74HC4002A	**Toshiba (3674)**	120
HCT	CD54HCT4002	† Harris	
	CD74HCT4002	Harris	
	74HCT4002	Signetics	
4XXX	GD4002B	‡ GoldStar	
	CD4002B	‡ Harris	125
	CD4002BE	Harris	
	CD4002A	‡ Micrel	
	CD4002B	‡ Micrel	
	MC14002BA	† Motorola	
	MC14002BC	Motorola	130
	MC14002UBA	† Motorola	
	MC14002UBC	Motorola	
	CD4002A	National	
	CD4002BC	National	
	CD4002BM	† National	135
	MN4002B	◊† Panasonic	
	HCC4002B	† SGS-Thomson	
	HCF4002B	◊ SGS-Thomson	
		(Continued)	
Dual 4-Input			
4XXX		(Cont'd)	
	HEF4002B	Signetics	
	TC4002B	Toshiba	140
Triple 3-Input	NJU74HC27	◊ NJR	
AC	74AC11027	Signetics	
	SN54AC11027	† TI	
	74AC11027	TI	
ACT	74ACT11027	Signetics	145
	SN54ACT11027	† TI	
	74ACT11027	TI	
AHCT	KS74AHCT27	Samsung	
HC	**GD74HC27**	**GoldStar (3439)**	
	CD54HC27	† Harris	150
	CD74HC27	Harris	
	HD74HC27	Hitachi	
	M74HC27	Mitsubishi	
	MC54HC27	† Motorola	
	MC74HC27	Motorola	155
	MM54HC27	† National	
	MM74HC27	National	
	MN74HC27	◊ Panasonic	
	M74HC27	SGS-Thomson	
	LR74HC27	Sharp	160
	74HC27	Signetics	
	SN54HC27	† TI	
	SN74HC27	TI	
	TC74HC27A	**Toshiba (3674)**	
HCT	**GD74HCT27**	**GoldStar (3439)**	165
	CD54HCT27	† Harris	
	CD74HCT27	Harris	
	74HCT27	Signetics	
HCTLS	KS74HCTLS27	Samsung	
4XXX	**GD4025B**	**‡ GoldStar (3431)**	170
	CD4025B	‡ Harris	
	CD4025BE	Harris	
	CD4025UBE	† Harris	
	CD4025A	‡ Micrel	
	CD4025B	‡ Micrel	175
	MC14025BA	† Motorola	
	MC14025BC	Motorola	
	MC14025UBA	† Motorola	
	MC14025UBC	Motorola	
	CD4025A	National	180
	CD4025BC	National	
	CD4025BM	† National	
	MN4025B	◊† Panasonic	
	HCC4025B	† SGS-Thomson	
	HCF4025B	◊ SGS-Thomson	185
	HEF4025B	Signetics	
	TC4025B	Toshiba	
Quad 2-Input	NJU4001B	NJR	
	NJU74HC02	◊ NJR	
	NJU74HC36	◊ NJR	190
AC	CD54AC02	† Harris	
	CD74AC02	† Harris	
	54AC02	† National	
	74AC02	National	
	74AC11002	Signetics	195
	SN54AC11002	† TI	
	74AC11002	TI	
	TC74AC02	**Toshiba (3674)**	
ACT	CD54ACT02	† Harris	
	CD74ACT02	Harris	200
	74ACT11002	Signetics	
	SN54ACT11002	† TI	
	74ACT11002	TI	
	TC74ACT02	**Toshiba (3674)**	
AHCT	KS74AHCT02	Samsung	205
C	MM54C02	† National	
	MM74C02	National	
HC	**GD74HC02**	**GoldStar (3439)**	
	CD54HC02	† Harris	
	CD74HC02	Harris	210
	HD74HC02	Hitachi	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Gates, NOR (Cont'd)

Function	Device	Source	Line
Quad 2-Input			
HC		(Cont'd)	
	MC54HC02A	† Motorola	
	MC74HC02A	Motorola	
	MM54HC02	† National	
	MM74HC02	National	
	MN74HC02	◊ Panasonic	5
	BU74HC02	ROHM	
	M74HC02	SGS-Thomson	
	LR74HC02	Sharp	
	74HC02	Signetics	
	SN54HC02	† TI	10
	SN74HC02	TI	
	SN74HC7002	TI	
	TC74HC02A	**Toshiba (3674)**	
HCT	GD74HCT02	GoldStar	
	CD54HCT02	† Harris	15
	CD74HCT02	Harris	
	KS74HCTLS02	Samsung	
	74HCT02	Signetics	
	SN74HCT02	TI	
4XXX	GD4001B	‡ GoldStar	20
	CD4001A	† Harris	
	CD4001B	‡ Harris	
	CD4001BE	Harris	
	CD4001UB	† Harris	
	CD4001UBE	Harris	25
	CD4001A	‡ Micrel	
	CD4001B	‡ Micrel	
	MC14001BA	† Motorola	
	MC14001BC	Motorola	
	MC14001UBA	† Motorola	30
	MC14001UBC	Motorola	
	CD4001A	National	
	CD4001BC	National	
	CD4001BM	† National	
	MN4001B	◊† Panasonic	35
	HCC4001B	† SGS-Thomson	
	HCF4001B	◊ SGS-Thomson	
	HEF4001B	Signetics	
	HEF4001UB	Signetics	
	TC4001B	Toshiba	40
	TC4001UB	Toshiba	
Quad 2-Input Exclusive NOR			
AC	74AC11810	TI	
ACT	74ACT11810	TI	
Quad 2-Input with Schmitt Trigger Inputs			
	NJU74HC7002	◊ NJR	
8-Input			
HC	M74HC4078	Mitsubishi	45
	MC54HC4078	† Motorola	
	MC74HC4078	Motorola	
	MM54HC4078	† National	
	MM74HC4078	National	
	MN74HC4078	◊ Panasonic	50
	M74HC4078	SGS-Thomson	
	LR74HC4078	Sharp	
	SN54HC4078A	† TI	
	SN74HC4078A	TI	
	TC74HC4078A	**Toshiba (3674)**	55
4XXX	GD4078B	† GoldStar	
	CD4078B	† Harris	
	CD4078BE	Harris	
	MC14078BA	† Motorola	
	MC14078BC	Motorola	60
	MN4078B	◊† Panasonic	
	HCC4078B	† SGS-Thomson	
	HCF4078B	◊ SGS-Thomson	
	HEF4078B	Signetics	
	TC4078B	Toshiba	65

Gates, Exclusive OR

Function	Device	Source	Line
Quad			
AC	CD54AC86	† Harris	
	CD74AC86	Harris	
	74AC86	National	
	TC74AC86	**Toshiba (3674)**	
ACT	CD54ACT86	† Harris	70
	CD74ACT86	Harris	
	TC74ACT86	**◊ Toshiba (3674)**	
AHCT	KS74AHCT86	Samsung	
C	MM54C86	‡ Micrel	
	MM54C86	† National	75
	MM74C86	National	
HC	**GD74HC386**	**GoldStar (3439)**	
	GD74HC86	**GoldStar (3439)**	
	CD54HC86	† Harris	
	CD74HC86	Harris	80
	HD74HC386	Hitachi	
	HD74HC86	Hitachi	
	M74HC86	Mitsubishi	
	MC54HC86	† Motorola	
	MC74HC86	Motorola	85
	MM54HC86	† National	
	MM74HC86	National	
	MN74HC86	◊ Panasonic	
Quad			
HC	BU74HC86	ROHM	
Quad			
HC	M74HC386	SGS-Thomson	90
	M74HC86	SGS-Thomson	
	LR74HC86	Sharp	
	74HC86	Signetics	
	SN54HC386	† TI	
	SN54HC86	† TI	95
	SN74HC386	TI	
	SN74HC86	TI	
	TC74HC386A	**Toshiba (3674)**	
	TC74HC86A	**Toshiba (3674)**	
HCT	**GD74HCT386**	**GoldStar (3439)**	100
	GD74HCT86	**GoldStar (3439)**	
	CD54HCT86	† Harris	
	CD74HCT86	Harris	
	KS74HCTLS86	Samsung	
	M74HCT86	SGS-Thomson	105
	74HCT86	Signetics	
4XXX	**GD4030B**	**‡ GoldStar (3431)**	
	GD4070B	**‡ GoldStar (3431)**	
	CD4030B	‡ Harris	
	CD4030BE	Harris	110
	CD4070B	‡ Harris	
	CD4070BE	Harris	
	CD4030A	‡ Micrel	
	CD4070B	‡ Micrel	
	MC14070BA	† Motorola	115
	MC14070BC	Motorola	
	CD4030A	National	
	CD4070BC	National	
	CD4070BM	† National	
	MN4030B	◊† Panasonic	120
	MN4070B	† Panasonic	
	HCC4030B	† SGS-Thomson	
	HCC4070B	† SGS-Thomson	
	HCF4030B	◊ SGS-Thomson	
	HCF4070B	◊ SGS-Thomson	125
	HEF4030B	Signetics	
	HEF4070B	Signetics	
	TC4030B	Toshiba	
Quad 2-Input	NJU74HC86	◊ NJR	
AC	74AC11086	Signetics	130
	74AC11086	TI	
ACT	74ACT11086	Signetics	
	74ACT11086	TI	

Gates, Exclusive NOR

Function	Device	Source	Line
Quad			
AHCT	KS74AHCT266	Samsung	
4XXX	GD4077B	‡ GoldStar	135
	CD4077B	‡ Harris	
	CD4077BE	Harris	
	MC14077BA	† Motorola	
	MC14077BC	Motorola	
	HCC4077B	† SGS-Thomson	140
	HCF4077B	◊ SGS-Thomson	
	HEF4077B	Signetics	
	TC4077B	Toshiba	
Quad 2-Input	NJU4030B	NJR	
	NJU74HC266	◊ NJR	145
AC	74AC11810	Signetics	
ACT	74ACT11810	Signetics	
HC	**GD74HC266**	**GoldStar (3439)**	
	CD54HC7266	† Harris	
	CD74HC7266	Harris	150
	M74HC266	Mitsubishi	
	M74HC266A	Mitsubishi	
	MC54HC266	† Motorola	
	MC54HC7266	† Motorola	
	MC74HC7266	Motorola	155
	MM54HC7266	† National	
	MM74HC7266	National	
	MN74HC266	◊ Panasonic	
	BU74HC266	ROHM	
	M74HC266	SGS-Thomson	160
	M74HC7266	SGS-Thomson	
	LR74HC266	Sharp	
	74HC7266	Signetics	
	SN54HC266	† TI	
	SN74HC266	TI	165
	SN74HC7266	TI	
	TC74HC7266A	**Toshiba (3674)**	
HCT	**GD74HCT266**	**GoldStar (3439)**	
	KS74HCTLS266	Samsung	

Gates, Miscellaneous

Function	Device	Source	Line
Dual 5-Input Majority Logic			
4XXX	MC14530BA	† Motorola	170
	MC14530BC	Motorola	
	TC4530B	Toshiba	
Triple (dual 4-input NAND and 2-input OR/NOR)			
4XXX	MC14501UBA	† Motorola	
	MC14501UBC	Motorola	
	TC4501B	Toshiba	175
Hex Function (quad inverter plus 2-input NOR gate plus 2-input NAND gate)			
4XXX	MC14572A	† Motorola	
	MC14572C	Motorola	
	TC4572B	Toshiba	
8-Input Expandable Multifunction			
4XXX	CD4048BE	Harris	
	CD4048A	‡ Micrel	180
	CD4048B	‡ Micrel	
	CD4048BC	National	
	CD4048BM	† National	
	HCC4048B	† SGS-Thomson	
	HCF4048B	◊ SGS-Thomson	185

Latches

Function	Device	Source	Line
Dual 4-Bit			
HC	HCF4508B	SGS-Thomson	
4XXX	CD4508B	† Harris	
	CD4508BE	Harris	
	MC14508BA	† Motorola	
	MC14508BC	Motorola	190
	HCC4508B	† SGS-Thomson	
	HEF4508B	Signetics	
	TC4508B	Toshiba	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—CMOS (Cont'd)

Latches (Cont'd)

Function	Device	Source	Line
Dual 4-Bit Addressable			
4XXX	GD4723B	† GoldStar	
	CD4723BC	National	
	CD4723BM	National	
	F4723BC	National	
Dual 4-Bit D-Type, Three-State			
AC	74AC11873	TI	5
ACT	74ACT11873	TI	
Quad, Bistable			
HC	HD74HC375	Hitachi	
	M74HC77	SGS-Thomson	
	SN74HC375	TI	
	TC74HC375A	**Toshiba (3674)**	10
Quad Bistable Transparent			
AHCT	KS74AHCT75	Samsung	
HCTLS	KS74HCTLS75A	Samsung	
Quad Clocked D			
4XXX	**GD4042B**	**† GoldStar (3431)**	
	CD4042AE	Harris	
	CD4042B	† Harris	15
	CD4042BE	Harris	
	CD4042A	‡ Micrel	
	CD4042B	‡ Micrel	
	MC14042BA	† Motorola	
	MC14042BC	Motorola	20
	CD4042BC	National	
	CD4042BM	† National	
	HCC4042B	† SGS-Thomson	
	HCF4042B	◊ SGS-Thomson	
	HEF4042B	Signetics	25
	TC4042B	Toshiba	
Quad D-Type			
AHCT	KS74AHCT77	Samsung	
HC	M74HC375	SGS-Thomson	
HCTLS	KS74HCTLS77	Samsung	
Quad NAND R/S			
4XXX	GD4044B	GoldStar	30
	CD4044B	Harris	
	CD4044A	‡ Micrel	
	CD4044B	‡ Micrel	
	MC14044BA	† Motorola	
	MC14044BC	Motorola	35
	CD4044A	National	
	CD4044BC	National	
	CD4044BM	† National	
	HCC4044B	† SGS-Thomson	
	HCF4044B	◊ SGS-Thomson	40
	HEF4044B	Signetics	
	TC4044B	Toshiba	
Quad NOR R/S			
4XXX	GD4043B	† GoldStar	
	CD4043B	† Harris	
	CD4043BE	Harris	45
	CD4043A	‡ Micrel	
	CD4043B	‡ Micrel	
	MC14043BA	† Motorola	
	MC14043BC	Motorola	
	CD4043A	National	50
	CD4043BC	National	
	CD4043BM	† National	
	HCC4043B	† SGS-Thomson	
	HCF4043B	◊ SGS-Thomson	
	HEF4043B	Signetics	55
	TC4043B	Toshiba	
Quad R-S			
HC	M74HC279	SGS-Thomson	
Quad Set-Reset			
HC	**TC74HC279A**	**Toshiba (3674)**	
Octal D-Type			
HC	M74HC563	SGS-Thomson	
HCT	M74HC573	SGS-Thomson	60
Octal D-Type, Inverting			
HC	M74HC533	Mitsubishi	
	M74HC534	Mitsubishi	
Octal D-Type, Inverting, Three State			
HC	**TC74HC533A**	**Toshiba (3674)**	
Octal D-Type Latch			
AC	SN54AC11373	† TI	
ACT	**TC74ACT563**	**◊ Toshiba (3674)**	65
	TC74ACT573	**◊ Toshiba (3674)**	
BCT	SN74BCT533	TI	
Octal D-Type Latch, Three-State			
	NJU74HC373	◊ NJR	
Octal D-Type Latch, Three-State (BiCMOS)			
BCT	SN74BCT373	TI	
Octal D-Type, Non-Inverting, Three-State			
HC	BU74HC373	ROHM	70
Octal D-Type, Transparent			
AC	SN54AC11533	† TI	
ACT	SN54ACT11533	† TI	
Octal D-Type Transparent, Three-State			
AC	**74AC11373**	**Signetics (3598)**	
ACT	**74ACT11373**	**Signetics (3598)**	
Octal D-Type Transparent, Three-State, Inverting			
AC	74AC11533	Signetics	75
ACT	74ACT11533	Signetics	
HC	M74HC533-1	Mitsubishi	
Octal D-Type Transparent, Three-State, Inverting (LSTTL compatible inputs)			
HCT	M74HCT533-1	Mitsubishi	
Octal D-Type Transparent, Three-State, Non-Inverting			
HC	M74HC373-1	Mitsubishi	
HCT	M74HCT373-1	Mitsubishi	80
Octal D-Type, Three-State			
	MM54C373	† National	
	MM74C373	National	
	NJU74HC533	◊ NJR	
ACT	**TC74ACT373**	**Toshiba (3674)**	
HC	**TC74HC373A**	**Toshiba (3674)**	85
Octal D-Type, Three-State, Inverting			
ACT	**TC74ACT533**	**Toshiba (3674)**	
HCT	**TC74HCT533A**	**Toshiba (3674)**	
Octal Inverting Transparent Latch, Three-State			
AC	CD54AC563	† Harris	
	CD74AC563	Harris	
ACT	CD54ACT563	† Harris	90
	CD74ACT563	Harris	
Octal, Transparent.			
HCT	MC54HCT373A	◊† Motorola	
Octal, Transparent			
HCT	MC74HCT373A	◊ Motorola	
	MC74HCT533A	◊ Motorola	
	MC74HCT573A	◊ Motorola	95
Octal Transparent, D-Type with Readback, Non-Inverting, Three-State			
AHCT	KS74AHCT793	Samsung	
HC	MC54HC7793	† Motorola	
Octal Transparent, D-Type, Three State			
AC	CD54AC373	† Harris	
	CD54AC573	† Harris	
	CD74AC373	Harris	100
	CD74AC573	Harris	
	54AC373	† National	
	74AC373	National	
	74AC11373	TI	
	TC74AC373	**Toshiba (3674)**	105
	TC74AC573	**Toshiba (3674)**	
ACT	CD54ACT373	† Harris	
	CD54ACT573	† Harris	
	CD74ACT373	Harris	
	CD74ACT573	Harris	110
	54ACT373	† National	
	54ACT573	† National	
		(Continued)	
Octal Transparent, D-Type, Three State			
ACT		(Cont'd)	
	74ACT373	National	
	74ACT573	National	
	74ACT11373	TI	115
	V54ACT373	**† VTC (3712)**	
	V54ACT573	**† VTC (3712)**	
	V74ACT373	**VTC (3712)**	
	V74ACT573	**VTC (3712)**	
AHCT	KS74AHCT373	Samsung	120
	KS74AHCT573	Samsung	
FCT	IDT54FCT373	◊† IDT	
	IDT54FCT373A	◊† IDT	
	IDT54FCT373AT	◊† IDT	
	IDT54FCT373C	◊† IDT	125
	IDT54FCT373CT	◊† IDT	
	IDT54FCT373T	◊† IDT	
	IDT54FCT573	◊† IDT	
	IDT54FCT573A	◊† IDT	
	IDT54FCT573AT	◊† IDT	130
	IDT54FCT573C	◊† IDT	
	IDT54FCT573CT	◊† IDT	
	IDT54FCT573T	◊† IDT	
	IDT74FCT373	◊ IDT	
	IDT74FCT373A	◊ IDT	135
	IDT74FCT373AT	◊ IDT	
	IDT74FCT373C	◊ IDT	
	IDT74FCT373CT	◊ IDT	
	IDT74FCT373T	◊ IDT	
	IDT74FCT573	◊ IDT	140
	IDT74FCT573A	◊ IDT	
	IDT74FCT573AT	◊ IDT	
	IDT74FCT573C	◊ IDT	
	IDT74FCT573CT	◊ IDT	
	IDT74FCT573T	◊ IDT	145
	V54FCT373	**◊† VTC (3712)**	
	V54FCT573	**◊† VTC (3712)**	
	V74FCT373	**◊† VTC (3712)**	
	V74FCT573	**◊† VTC (3712)**	
HC	**GD74HC373**	**GoldStar (3439)**	150
	GD74HC573	**GoldStar (3439)**	
	CD54HC373	† Harris	
	CD54HC573	† Harris	
	CD74HC373	Harris	
	CD74HC573	Harris	155
	HD74HC373	Hitachi	
	HD74HC573	Hitachi	
	MC54HC373	† Motorola	
	MC54HC573	† Motorola	
	MC74HC373	Motorola	160
	MC74HC573	Motorola	
	MM54HC373	† National	
	MM54HC573	† National	
	MM74HC373	National	
	MM74HC573	National	165
	MN74HC373	Panasonic	
	M74HC373	SGS-Thomson	
	M74HC573	SGS-Thomson	
	LR74HC373	Sharp	
	74HC373	Signetics	170
	74HC573	Signetics	
	SN54HC373	† TI	
	SN54HC573	† TI	
	SN74HC373	TI	
	SN74HC573	TI	175
	TC74HC573A	**Toshiba (3674)**	
HCT	**GD74HCT373**	**GoldStar (3439)**	
	GD74HCT573	**GoldStar (3439)**	
	CD54HCT373	† Harris	
	CD54HCT573	† Harris	180
	CD74HCT373	Harris	
	CD74HCT573	Harris	
	HD74HCT373	Hitachi	
	54HCT373SOS	‡ Marconi	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL–CMOS (Cont'd)

Latches (Cont'd)

Function	Device	Source
Octal Transparent, D-Type, Three State		
HCT (Cont'd)		
	54HCT573SOS	‡ Marconi
	74HCT373	Marconi
	74HCT573	Marconi
	MC54HCT373	† Motorola
	MC74HCT373	Motorola
	MM54HCT373	† National
	MM74HCT373	National
	MV74HCT373	Plessey
	MV74HCT573	Plessey
	KS74HCTLS373	Samsung
	KS74HCTLS573	Samsung
	M74HCT373	SGS-Thomson
	74HCT373	Signetics
	74HCT573	Signetics
	SN54HCT373	† TI
	SN74HCT373	◊ TI
	SN74HCT573	◊ TI
	TC74HCT373A	**Toshiba (3674)**
	TC74HCT573A	**Toshiba (3674)**
PCT	P54PCT373	◊‡ Performance
	P54PCT573	◊‡ Performance
	P54PCT573A	◊‡ Performance
	P74PCT373	◊ Performance
	P74PCT573	◊ Performance
	P74PCT573A	Performance
SC	MV74SC573	Plessey
4XXX	HEF40373B	Signetics
Octal Transparent, D-Type, Three State (dual package)		
HC	DPLXXX373X	Dense-Pac
	DPLXXX573X	Dense-Pac
Octal Transparent, D-Type, Three-State		
BCT	SN54BCT373	† TI
FCT	DPLFCT373Y	† Dense-Pac
	DPLFCT573Y	† Dense-Pac
Octal Transparent D-Type, Three-State (dual)		
AC	DPLAC373Y	Dense-Pac
ACT	DPLACT373Y	Dense-Pac
	DPLACT573Y	Dense-Pac
HC	DPLHC373Y	Dense-Pac
	DPLHC573Y	Dense-Pac
HCT	DPLHCT373Y	Dense-Pac
	DPLHCT573Y	Dense-Pac
Octal, Transparent, Inv.		
HCT	MC54HCT533A	◊† Motorola
Octal, Transparent, Non-Inv.		
HCT	MC54HCT573A	◊† Motorola
Octal Transparent with Readback, Non-Inverting, Three-State		
HC	MC54HC793	† Motorola
Octal Transparent, Three-State		
	74ACQ533	National
ACQ	54ACQ373	† National
	54ACQ533	† National
	74ACQ373	National
ACTQ	54ACTQ373	† National
	54ACTQ533	† National
	74ACTQ373	National
	74ACTQ533	National
PCT	P54PCT373A	◊‡ Performance
	P54PCT533A	◊‡ Performance
	P74PCT373A	◊ Performance
	P74PCT533A	◊ Performance
Octal Transparent, Three-State, Inverted Output		
AC	CD54AC533	† Harris
	CD74AC533	Harris
	TC74AC533	**Toshiba (3674)**
	TC74AC563	**Toshiba (3674)**
ACT	CD54ACT533	† Harris
	CD74ACT533	Harris
	54ACT563	† National

(Continued)

Function	Device	Source
Octal Transparent, Three-State, Inverted Output		
ACT (Cont'd)		
	74ACT563	National
	74ACT11533	TI
	V54ACT533	**† VTC (3712)**
	V54ACT563	**† VTC (3712)**
	V54ACT580	**† VTC (3712)**
	V74ACT533	**VTC (3712)**
	V74ACT563	**VTC (3712)**
	V74ACT580	**VTC (3712)**
AHCT	KS74AHCT533	Samsung
	KS74AHCT563	Samsung
BCT	SN54BCT533	† TI
FCT	IDT54FCT533	◊† IDT
	IDT54FCT533A	◊† IDT
	IDT54FCT533AT	◊† IDT
	IDT54FCT533CT	◊† IDT
	IDT54FCT533T	◊† IDT
	IDT74FCT533	◊ IDT
	IDT74FCT533A	◊ IDT
	IDT74FCT533AT	◊ IDT
	IDT74FCT533CT	◊ IDT
	IDT74FCT533T	◊ IDT
	V54FCT533	**◊† VTC (3712)**
	V74FCT533	**◊† VTC (3712)**
HC	**GD74HC533**	**GoldStar (3439)**
	GD74HC563	GoldStar
	CD54HC533	† Harris
	CD54HC563	† Harris
	CD74HC533	Harris
	CD74HC563	Harris
	HD74HC533	Hitachi
	HD74HC563	Hitachi
	MC54HC533	† Motorola
	MC54HC563	† Motorola
	MC74HC533	Motorola
	MC74HC563	Motorola
	MM54HC533	† National
	MM54HC563	† National
	MM74HC533	National
	MM74HC563	National
	M74HC533	SGS-Thomson
	LR74HC533	Sharp
	LR74HC563	Sharp
	74HC533	Signetics
	74HC563	Signetics
	SN54HC533	† TI
	SN54HC563	† TI
	SN74HC533	TI
	SN74HC563	TI
	TC74HC563A	**Toshiba (3674)**
HCT	**GD74HCT533**	**GoldStar (3439)**
	GD74HCT563	**GoldStar (3439)**
	CD54HCT533	† Harris
	CD54HCT563	† Harris
	CD74HCT533	Harris
	CD74HCT563	Harris
	HD74HCT533	Hitachi
	54HCT533SOS	‡ Marconi
	54HCT563SOS	‡ Marconi
	74HCT533	Marconi
	74HCT563	Marconi
	MC54HCT533	† Motorola
	MC74HCT533	Motorola
	MM54HCT533	† National
	MM74HCT533	National
	MV74HCT533	Plessey
	MV74HCT563	Plessey
	KS74HCTLS533	Samsung
	KS74HCTLS563	Samsung
	M74HCT533	SGS-Thomson
	M74HCT563	SGS-Thomson
	74HCT533	Signetics
	74HCT563	Signetics
	SN74HCT533	◊ TI

(Continued)

Function	Device	Source
Octal Transparent, Three-State, Inverted Output		
HCT (Cont'd)		
	SN74HCT563	◊ TI
	TC74HCT563A	**Toshiba (3674)**
PCT	P54PCT533	Performance
	P74PCT533	◊ Performance
SC	MV74SC533	Plessey
	MV74SC563	Plessey
Octal with Readback		
HCTLS	KS74HCTLS793	Samsung
Octal, Three-State		
ACQ	54ACQ563	† National
	74ACQ563	National
ACTQ	54ACTQ563	† National
	74ACTQ563	National
Octal Three-State, Inverting		
BCT	SN54BCT534	† TI
4-Bit Bistable		
HC	**GD74HC75**	**GoldStar (3439)**
	CD54HC75	† Harris
	CD74HC75	Harris
	HD74HC75	Hitachi
	M74HC75	Mitsubishi
	MC54HC75	† Motorola
	MC74HC75	Motorola
	MM54HC75	† National
	MM74HC75	National
	MN74HC75	Panasonic
	M74HC75	SGS-Thomson
	LR74HC75	Sharp
	74HC75	Signetics
	SN54HC75	† TI
	SN74HC75	TI
	TC74HC75A	**Toshiba (3674)**
HCT	CD54HCT75	† Harris
	CD74HCT75	Harris
	74HCT75	Signetics
4-Bit D-Type	NJU74HC375	◊ NJR
HC	HD74HC77	Hitachi
	SN74HC77	TI
	TC74HC77A	**Toshiba (3674)**
8-Bit Addressable Input, Parallel Output, Three-State		
4XXX	MC14598BA	† Motorola
	MC14598BC	Motorola
8-Bit Addressable Latch		
	NJU74HC259	◊ NJR
8-Bit Addressable (serial in, parallel out)		
AHCT	KS74AHCT259	Samsung
Cell	SN74259	° TI
HC	**GD74HC259**	**GoldStar (3439)**
	CD54HC259	† Harris
	CD74HC259	Harris
	HD74HC259	Hitachi
	M74HC259	Mitsubishi
	MC54HC259	† Motorola
	MC74HC259	Motorola
	MM54HC259	† National
	MM74HC259	National
	M74HC259	SGS-Thomson
	LR74HC259	Sharp
	74HC259	Signetics
	SN54HC259	† TI
	SN74HC259	TI
	SN74HC4724	TI
	TC74HC259A	**Toshiba (3674)**
HCT	**GD74HCT259**	**GoldStar (3439)**
	CD54HCT259	† Harris
	CD74HCT259	Harris
	KS74HCTLS259	Samsung
	74HCT259	Signetics
4XXX	GD4724B	GoldStar
	CD4099B	‡ Harris
	CD4099BE	Harris
	CD4724B	† Harris

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Latches (Cont'd)

Function	Device	Source
8-Bit Addressable (serial in, parallel out)		
4XXX		(Cont'd)
	CD4724BE	Harris
	CD4099B	‡ Micrel
	CD4724B	‡ Micrel
	MC14099BA	† Motorola
	MC14099BC	Motorola
	CD4099BC	National
	CD4099BM	† National
	CD4724BC	National
	CD4724BM	† National
	HCC4099B	† SGS-Thomson
	HCF4099B	SGS-Thomson
	HEF4724B	Signetics
	TC4099B	Toshiba
8-Bit, Bus Compatible, Three-State, Internal Counter		
4XXX	MC14597BA	† Motorola
	MC14597BC	Motorola
8-Bit, Bus Compatible, Three-State, Binary Address		
4XXX	MC14599BA	† Motorola
	MC14599BC	Motorola
8-Bit, Transparent		
AC	54AC843	† National
	74AC843	National
8-Bit Transparent, D-Type, Three-State		
ACT	SN54ACT11373	† TI
8-Bit Transparent, D-Type, Three-State, Inverting		
AC	74AC11533	TI
	74AC11846	TI
BCT	SN54BCT29846	† TI
FCT	IDT54FCT845B	◊† IDT
	IDT74FCT846A	◊ IDT
	IDT74FCT846B	◊ IDT
	V54FCT845A	**◊† VTC (3712)**
	V54FCT846A	**◊† VTC (3712)**
	V74FCT846A	**◊† VTC (3712)**
8-Bit Transparent, D-Type, Three-State, Non-Inverting		
AC	74AC11845	TI
FCT	IDT54FCT845A	◊† IDT
	IDT74FCT845A	◊ IDT
	IDT74FCT845B	◊ IDT
PCT	P54PCT845A	◊‡ Performance
	P54PCT845B	◊‡ Performance
	P74PCT845A	◊ Performance
	P74PCT845B	◊ Performance
8-Bit Transparent, Three-State		
AC	54AC845	† National
	74AC845	National
ACT	54ACT845	† National
	74ACT845	National
8-Bit, Three-State, Non-Inverting		
ACT	74ACT11845	TI
9-Bit Interface, D-Type, Three-State		
	AM29C843	AMD
9-Bit Transparent, D-Type, Three-State, Inverting		
AC	74AC11844	TI
AHCT	KS74AHCT844	Samsung
BCT	SN54BCT29844	† TI
FCT	IDT54FCT844B	◊† IDT
	IDT74FCT844B	◊ IDT
	V54FCT844A	**◊† VTC (3712)**
	V74FCT844A	**◊† VTC (3712)**
9-Bit Transparent, D-Type, Three-State, Non-Inverting		
AC	74AC11843	TI
AHCT	KS74AHCT843	Samsung
BCT	SN54BCT29843	† TI
FCT	IDT54FCT843B	◊† IDT
	IDT74FCT843B	◊ IDT
	V54FCT843A	**◊† VTC (3712)**
	V74FCT843A	**◊† VTC (3712)**
PCT	P54PCT843A	◊‡ Performance
	P54PCT843B	◊‡ Performance

(Continued)

Function	Device	Source
9-Bit Transparent, D-Type, Three-State, Non-Inverting		
PCT		(Cont'd)
	P74PCT843A	◊ Performance
	P74PCT843B	◊ Performance
10-Bit Transparent, D-Type, Inverting		
HC	M74HC842-1	Mitsubishi
HCT	M74HCT842-1	Mitsubishi
10-Bit Transparent, D-Type, Non-Inverting		
HC	M74HC841-1	Mitsubishi
HCT	M74HCT841-1	Mitsubishi
10-Bit Transparent, D-Type, Three-State, Inverting		
AC	74AC11842	TI
AHCT	KS74AHCT842	Samsung
BCT	SN54BCT29842	† TI
FCT	IDT54FCT844A	◊† IDT
	IDT74FCT844A	◊ IDT
	V54FCT842A	**◊† VTC (3712)**
	V74FCT842A	**◊† VTC (3712)**
10-Bit Transparent, D-Type, Three-State, Non-Inverting		
	AM29C841	AMD
AC	74AC11841	TI
AHCT	KS74AHCT841	Samsung
BCT	SN54BCT29841	† TI
FCT	IDT54FCT841A	◊† IDT
	IDT54FCT841AT	◊† IDT
	IDT54FCT841B	◊† IDT
	IDT54FCT841BT	◊† IDT
	IDT54FCT841C	◊† IDT
	IDT54FCT841CT	◊† IDT
	IDT74FCT841A	◊ IDT
	IDT74FCT841AT	◊ IDT
	IDT74FCT841B	◊ IDT
	IDT74FCT841BT	◊ IDT
	IDT74FCT841C	◊ IDT
	IDT74FCT841CT	◊ IDT
	V54FCT841A	**◊† VTC (3712)**
	V74FCT841A	**◊† VTC (3712)**
PCT	P54PCT841A	◊‡ Performance
	P54PCT841B	◊‡ Performance
	P74PCT841A	◊ Performance
	P74PCT841B	◊ Performance
16-Bit Addressable		
	LT74TC16	◊° LSTI
16-Bit Bidirectional Latch with Byte Swap		
FCT	IDT49FCT601	IDT
32-Bit Addressable		
	LT54TC32	◊°† LSTI
	LT74TC32	◊° LSTI
10-Bit Transparent		
AC	**TC74AC841**	**Toshiba (3674)**
ACT	**TC74ACT841**	**Toshiba (3674)**
10-Bit Transparent, D-Type, Three-State, Inverting		
ACT	74ACT11842	TI
	V54ACT842	**† VTC (3712)**
	V74ACT842	**VTC (3712)**
10-Bit Transparent, D-Type, Three-State, Non-Inverting		
ACT	54ACT841	† National
	74ACT841	National
	74ACT11841	TI
	V54ACT841	**† VTC (3712)**
	V74ACT841	**VTC (3712)**
4-Bit Bistable		
HCT	**GD74HCT75**	**GoldStar (3439)**
8-Bit Transparent, D-Type, Three-State, Inverting		
ACT	74ACT11846	TI
	V54ACT846	**† VTC (3712)**
	V74ACT846	**VTC (3712)**
8-Bit Transparent, D-Type, Three-State, Non-Inverting		
ACT	54ACT843	† National
	74ACT843	National
	V54ACT845	**† VTC (3712)**
	V74ACT845	**VTC (3712)**

Function	Device	Source
9-Bit Transparent		
AC	**TC74AC843**	**Toshiba (3674)**
ACT	**TC74ACT843**	**Toshiba (3674)**
9-Bit Transparent, D-Type, Three-State, Inverting		
ACT	74ACT11844	TI
	V54ACT844	**† VTC (3712)**
	V74ACT844	**VTC (3712)**
9-Bit Transparent, D-Type, Three-State, Non-Inverting		
ACT	74ACT11843	TI
	V54ACT843	**† VTC (3712)**
	V74ACT843	**VTC (3712)**

Memories

Function	Device	Source
Cache Data RAM (2Kx16x2 static RAM)		
C	MS82C308-35	◊ Mosel
	MS82C308-45	◊ Mosel
	MS82C308-55	◊ Mosel
Cache Data RAM (2-way 4Kx18/8Kx18)		
ACT	SN74ACT2140	TI
Cache Tag RAM, Open Drain (1012x12)		
ACT	SN74ACT2153-25	◊ TI
	SN74ACT2153-28	◊ TI
Cache Tag RAM, Open Drain (2048x8)		
ACT	SN74ACT2154A-20	◊ TI
	SN74ACT2154A-25	◊ TI
Cache Tag RAM, 2x8Kx4 (2-way)		
ACT	SN74ACT2160	TI
Cache Tag RAM, 8Kx9		
ACT	SN74ACT2159	TI
Cache Tag RAM, 8Kx9 (totem-pole output)		
ACT	SN74ACT2158	TI
Cache Tag RAM, 16Kx4 (for 68030 processor)		
ACT	SN74ACT2156	TI
Cache Tag RAM, 16Kx5		
ACT	SN74ACT2164	TI
Cache Tag RAM, 512x8		
	TMS2150	TI
Cache Tag RAM (1024x12)		
ACT	SN74ACT2151-25	◊ TI
	SN74ACT2151-28	◊ TI
Cache Tag RAM (16392x5)		
ACT	SN74ACT2163-20	◊ TI
	SN74ACT2163-25	◊ TI
Cache Tag RAM (2048x16)		
ACT	SN74ACT2157-22	◊ TI
	SN74ACT2157-25	◊ TI
Cache Tag RAM (2048x8)		
ACT	SN74ACT2152A-20	◊ TI
	SN74ACT2152A-25	◊ TI
Cache Tag RAM (512x9)		
ACT	SN74ACT2150A-20	◊ TI
	SN74ACT2150A-30	◊ TI
Cache Tag RAM, 68030 Interface (2048x8)		
ACT	SN74ACT2155-22	◊ TI
	SN74ACT2155-28	◊ TI
EEPROM, 128x8 (with I^2C bus interface)		
	PCF8581	Signetics
	PCF8581C	Signetics

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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DIGITAL—CMOS (Cont'd)

Memories (Cont'd)

Function	Device	Source
FIFO Register (4-bit by 16-word)		
HC	**TC74HC40105A**	**Toshiba (3674)**
FIFO, 4x16 Expandable		
HCT	74HCT7030	Signetics
FIFO (64x9)		
AC	54AC2708	† National
	74AC2708	National
ACT	54ACT2708	† National
	74ACT2708	National
FIFO, 512x9	CY7C420-25	◊† Cypress
	CY7C421-25	◊† Cypress
FIFO, 1024x9	CY7C424-25	◊† Cypress
	CY7C425-25	◊† Cypress
FIFO, 2048x9	CY7C428-25	◊† Cypress
	CY7C429-25	◊† Cypress
FIFO, 4096x9	CY7C432-25	◊† Cypress
	CY7C433-25	◊† Cypress
First-In, First-Out (FIFO) Memory, 512x9		
ACT	54ACT725	† National
	74ACT725	National
RAM, 16x4, Three-State		
	MM54C989	† National
	MM74C989	National
Register File, Dual-Access (4-port)		
	AM29C334	AMD
Register File, 3 Port (8x8)		
	LRF07C	◊ LogicDev
	LRF07M	◊† LogicDev
Dual-Port RAM, 256 Bytes		
HC	MCM68HC34	Motorola
Octal Memory Driver (BiCMOS)		
BCT	SN74BCT2240	TI
	SN74BCT2241	TI
	SN74BCT2244	TI
4-Bit x 16 FIFO Register		
HC	CD54HC40105	† Harris
	CD74HC40105	Harris
	74HC40105	Signetics
HCT	CD54HCT40105	† Harris
	CD74HCT40105	Harris
	74HCT40105	Signetics
8-Bit PIPO Register		
HC	M74HC323	SGS-Thomson
8-Bit SIPO Shift Register		
HC	M74HC4094	SGS-Thomson
10-Bit Memory Driver (BiCMOS)		
BCT	SN74BCT2827A	TI
	SN74BCT2828A	TI
16-Bit FIFO (4x4)		
4XXX	CD40105B	† Harris
	CD40105BE	Harris
	HCC40105B	† SGS-Thomson
	HCF40105B	SGS-Thomson
16-Bit Multiport Register File (4x4 read while write RAM)		
4XXX	MC14580BA	† Motorola
	MC14580BC	Motorola
	HCC40208B	† SGS-Thomson
	HCF40208B	SGS-Thomson
16-Bit (4x4) Register File		
AHCT	KS74AHCT670	Samsung
HC	CD54HC670	† Harris
	CD74HC670	Harris
	M74HC670	SGS-Thomson
	74HC670	Signetics
	TC74HC670A	**Toshiba (3674)**
HCT	**GD74HCT670**	**GoldStar (3439)**
	CD54HCT670	† Harris
	CD74HCT670	Harris
	74HCT670	Signetics
64-Bit FIFO (16x4)		
4XXX	**GD4703B**	**GoldStar (3431)**
64-Bit Multiport Register File (8x8) with 5 Ports		
	LRF08C	◊† LogicDev
	LRF08M	◊† LogicDev
64-Bit Program Stack (16x4 LIFO)		
4XXX	GD4706B	GoldStar
64-Bit RAM (16x4)		
	CY7C189C	◊ Cypress
	CY7C190C	◊ Cypress
	CY7C190M	◊ Cypress
C	MM54C89	‡ Micrel
	MM54C89	† National
	MM74C89	National
4XXX	GD4725B	GoldStar
	CD40114B	† Harris
64-Bit RAM (16x4 clocked RAM, three state output register)		
4XXX	GD4710B	GoldStar
64-Bit RAM (64x1)		
4XXX	HEF4505B	Signetics
64x4-Bit FIFO, Three-State		
HC	CD54HC7030	† Harris
	CD74HC7030	Harris
HCT	CD54HCT7030	† Harris
	CD74HCT7030	Harris
65x56-Bit FIFO		
AC	CD54AC7402	† Harris
	CD74AC7402	Harris
ACT	CD54ACT7402	† Harris
	CD74ACT7402	Harris
256-Bit RAM (256x1)		
C	MM54C200	‡ Micrel
	MM54C200	† National
	MM74C200	National
4XXX	GD4720B	GoldStar
	HEF4720B	Signetics
256-Bit RAM (32x8)		
	CDP1824	† Harris
	CDP1824C	† Harris
	HB1824	† Hughes
	HB1824C	† Hughes
HC	HC1824	◊ Hughes
	HC1824C	◊ Hughes
256-Bit RAM (64x4)		
C	MM54C910	† National
	MM74C910	National
4XXX	MCM14552A	† Motorola
	MCM14552C	Motorola
1024x9-Bit Parallel In/Out FIFO		
AC	CD54AC7202	† Harris
	CD74AC7202	Harris
ACT	CD54ACT7202	† Harris
	CD74ACT7202	Harris

Multiplexers (Digital)

Function	Device	Source
Presettable Fully Synchronous, Synchronous Clear		
HC	M74HC162	Mitsubishi
Dual 1-of-4 Data Selector/Multiplexer, Three-State		
HCTLS	KS74HCTLS353	Samsung
Dual 1-of-4 Data Selectors/Multiplexers, Three-State		
AHCT	KS74AHCT253	Samsung
	KS74AHCT353	Samsung
HCTLS	KS74HCTLS153	Samsung
	KS74HCTLS253	Samsung
Dual 2-to-4 Line Decoder/Demultiplexer		
AC	74ACT11139	Signetics
	74AC11139	Signetics
	74AC11239	Signetics
ACT	74ACT11239	Signetics
Dual 4:1 Multiplexer		
HCT	**TC74HCT352A**	**Toshiba (3674)**
Dual 4:1 Multiplexer, Three-State		
HC	**TC74HC353A**	**Toshiba (3674)**
Dual 4-Channel		
AC	CD54AC153	† Harris
	CD74AC153	Harris
	54AC153	† National
	74AC153	National
	74AC11153	TI
ACT	CD54ACT153	† Harris
	CD74ACT153	Harris
	54ACT153	† National
	74ACT153	National
	74ACT11153	TI
Cell	SN74153	° TI
HC	CD54HC153	† Harris
	CD74HC153	Harris
	HD74HC153	Hitachi
	M74HC253	Mitsubishi
	MC54HC153	† Motorola
	MC74HC153	Motorola
	MM54HC153	† National
	MM74HC153	National
	M74HC153	SGS-Thomson
	LR74HC153	Sharp
	SN54HC153	† TI
	SN74HC153	TI
	US74HC153	Universal
HCT	CD54HCT153	† Harris
	CD74HCT153	Harris
	MM54HCT153	† National
	MM74HCT153	National
4XXX	GD4539B	GoldStar
	MC14539BA	† Motorola
	MC14539BC	Motorola
	MN4539B	◊ Panasonic
	HEF4539B	Signetics
	TC4539B	Toshiba
Dual 4-Channel, Inverting		
AC	74AC11352	TI
ACT	74ACT11352	TI
	74ACT11353	TI
HC	M74HC352	SGS-Thomson
	SN74HC352	TI
Dual 4-Channel, Inverting, Three-State		
AC	74AC11353	TI
Dual 4-Channel Multiplexer/Demultiplexer		
HC	M74HC4052	Mitsubishi
Dual 4-Channel, Three-State		
AC	CD54AC253	Harris
	CD74AC253	Harris
	54AC253	† National
	74AC253	National
	74AC11253	TI
	TC74AC253	**Toshiba (3674)**
ACT	CD54ACT253	Harris
	CD74ACT253	Harris
	54ACT253	† National
	74ACT253	National
	74ACT11253	TI
HC	**GD74HC253**	**GoldStar (3439)**
	CD54HC253	Harris
	CD74HC253	Harris
	HD74HC253	Hitachi
	HD74HC257	Hitachi
	MC54HC253	† Motorola
	MC74HC253	Motorola
	MM54HC253	† National
	MM74HC253	National
	M74HC253	SGS-Thomson
	LR74HC253	Sharp
	SN54HC253	† TI

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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DIGITAL—CMOS (Cont'd)

Multiplexers (Digital) (Cont'd)

Function	Device	Source
Dual 4-Channel, Three-State		
HC		(Cont'd)
	SN74HC253	TI
	TC74HC253	**Toshiba (3674)**
HCT	**GD74HCT253**	**GoldStar (3439)**
	CD54HCT253	Harris
	CD74HCT253	Harris
	MM54HCT253	† National
	MM74HCT253	National
Dual 4-Channel, Three-State, Inverting		
HC	HD74HC353	Hitachi
	M74HC353	SGS-Thomson
	SN74HC353	TI
Dual 4-Input Multiplexer		
AC	74AC11153	Signetics
ACT	74ACT11153	Signetics
Dual 4-Input Multiplexer, Inverting		
AC	74AC11352	Signetics
ACT	74ACT11352	Signetics
Dual 4-Input Multiplexer, Three-State		
AC	74AC11253	Signetics
ACT	74ACT11253	Signetics
Dual 4-Input Multiplexer, Three-State, Inverting		
AC	74AC11353	Signetics
ACT	74ACT11353	Signetics
Dual 4-Line to 1-Line Data Selector/Multiplexer		
HCTLS	KS74HCTLS352	Samsung
Dual 4-Line to 1-Line Data Selectors/Multiplexers		
AHCT	KS74AHCT352	Samsung
Dual 4-to-1 Data Selector/Multiplexer		
ACT	SN54ACT11253	◊† TI
	SN54ACT11257	◊† TI
	SN54ACT11353	◊† TI
Dual 4-Channel	NJU74HC153	◊ NJR
	NJU74HC253	◊ NJR
	NJU74HC352	◊ NJR
	NJU74HC353	◊ NJR
AC	**TC74AC153**	**◊ Toshiba (3674)**
Dual 4-Channel Multiplexer		
ACT	**TC74ACT153**	**◊ Toshiba (3674)**
Triple 2-Channel Multiplexer/Demultiplexer		
HC	M74HC4053	Mitsubishi
Quad 1-of-2 Data Selector/Multiplexer		
ACT	74ACT11158	TI
Quad 2:1 Multiplexer		
AC	**TC74AC157**	**Toshiba (3674)**
Quad 2:1 Multiplexer, Three-State		
HCT	**TC74HCT257A**	**Toshiba (3674)**
	TC74HCT258A	**Toshiba (3674)**
Quad 2-Channel		
HC	M74HC258	SGS-Thomson
Quad 2-Channel, Inverting		
HC	MM54HC258	† National
	MM74HC258	National
Quad 2-Input		
HC	M74HC257	Mitsubishi
HCT	MM54HCT157	† National
	MM74HCT157	National
Quad 2-Input Data Selector		
AC	CD54AC157	† Harris
	CD74AC157	Harris
	54AC157	† National
	74AC157	National
	74AC11157	TI
ACT	CD54ACT157	† Harris
	CD74ACT157	Harris
	54ACT157	† National
	74ACT157	National
	74ACT11157	TI

(Continued)

Function	Device	Source
Quad 2-Input Data Selector		(Cont'd)
AHCT	KS74AHCT157	Samsung
C	MM54C157	† National
	MM74C157	National
FCT	IDT54FCT157AT	◊† IDT
	IDT54FCT157CT	◊† IDT
	IDT54FCT157T	◊† IDT
	IDT74FCT157AT	◊ IDT
	IDT74FCT157CT	◊ IDT
	IDT74FCT157T	◊ IDT
HC	**GD74HC157**	**GoldStar (3439)**
	CD54HC157	† Harris
	CD74HC157	Harris
	HD74HC157	Hitachi
	MC54HC157A	† Motorola
	MC74HC157A	Motorola
	MM54HC157	† National
	MM54HC158	† National
	MM74HC157	National
	MM74HC158	National
	MN74HC157	◊ Panasonic
	M74HC157	SGS-Thomson
	LR74HC157	Sharp
	74HC157	Signetics
	SN54HC157	† TI
	SN74HC157	TI
	TC74HC157A	**Toshiba (3674)**
	US74HC157	Universal
HCT	**GD74HCT157**	**GoldStar (3439)**
	CD54HCT157	† Harris
	CD74HCT157	Harris
	KS74HCTLS157	Samsung
	M74HCT157	SGS-Thomson
	74HCT157	Signetics
PCT	P54PCT157	◊‡ Performance
	P54PCT157A	◊‡ Performance
	P74PCT157	◊ Performance
	P74PCT157A	◊ Performance
Quad 2-Input Data Selector, Inverting		
AC	CD54AC158	† Harris
	CD74AC158	Harris
	54AC158	† National
	74AC158	National
	74AC11158	TI
	TC74AC158	**Toshiba (3674)**
ACT	CD54ACT158	† Harris
	CD74ACT158	Harris
	54ACT158	† National
	74ACT158	National
AHCT	KS74AHCT158	Samsung
HC	**GD74HC158**	**GoldStar (3439)**
	GD74HC160	**GoldStar (3439)**
	CD54HC158	† Harris
	CD74HC158	Harris
	HD74HC158	Hitachi
	MC54HC158	† Motorola
	MC74HC158	Motorola
	MN74HC158	◊ Panasonic
	M74HC158	SGS-Thomson
	LR74HC158	Sharp
	74HC158	Signetics
	74HC160	Signetics
	SN54HC158	† TI
	SN74HC158	TI
	TC74HC158A	**Toshiba (3674)**
	US74HC158	Universal
HCT	**GD74HCT158**	**GoldStar (3439)**
	GD74HCT160	**GoldStar (3439)**
	CD54HCT158	† Harris
	CD74HCT158	Harris
	KS74HCTLS158	Samsung
	M74HCT158	SGS-Thomson
	74HCT158	Signetics
	74HCT160	Signetics

(Continued)

Function	Device	Source
Quad 2-Input Data Selector, Inverting		(Cont'd)
PCT	P54PCT158	◊‡ Performance
	P54PCT158A	◊‡ Performance
	P74PCT158	◊ Performance
	P74PCT158A	◊ Performance
Quad 2-Input Data Selector, Three-State		
AC	CD54AC257	† Harris
	CD74AC257	Harris
	54AC257	† National
	74AC257	National
	74AC11257	TI
	TC74AC257	**Toshiba (3674)**
ACT	CD54ACT257	† Harris
	CD74ACT257	Harris
	54ACT257	† National
	74ACT257	National
	74ACT11257	TI
AHCT	KS74AHCT257	Samsung
FCT	IDT54FCT257AT	◊† IDT
	IDT54FCT257CT	◊† IDT
	IDT54FCT257T	◊† IDT
	IDT74FCT257A	◊ IDT
	IDT74FCT257AT	◊ IDT
	IDT74FCT257CT	◊ IDT
	IDT74FCT257T	◊ IDT
HC	**GD74HC257**	**GoldStar (3439)**
	CD54HC257	† Harris
	CD74HC257	Harris
	MC54HC257	† Motorola
	MC74HC257	Motorola
	MM54HC257	† National
	MM74HC257	National
	M74HC257	SGS-Thomson
	LR74HC257	Sharp
	74HC257	Signetics
	SN54HC257	† TI
	SN74HC257	TI
	TC74HC257A	**Toshiba (3674)**
HCT	**GD74HCT257**	**GoldStar (3439)**
	CD54HCT257	† Harris
	CD74HCT257	Harris
	KS74HCTLS257	Samsung
	M74HCT257	SGS-Thomson
	74HCT257	Signetics
PCT	P54PCT257	◊‡ Performance
	P54PCT257A	◊‡ Performance
	P74PCT257	◊ Performance
	P74PCT257A	◊ Performance
4XXX	CD40257B	† Harris
	CD40257BE	Harris
	HCC40257B	† SGS-Thomson
	HCF40257B	◊ SGS-Thomson
Quad 2-Input, Inverting		
HCT	MM54HCT158	† National
	MM74HCT158	National
Quad 2-Input, Inverting, Three-State		
AC	CD74AC258	Harris
	54AC258	† National
	74AC258	National
	74AC11258	TI
	TC74AC258	**Toshiba (3674)**
ACT	CD54ACT258	† Harris
	CD74ACT258	Harris
	54ACT258	† National
	74ACT258	National
	74ACT11258	TI
AHCT	KS74AHCT258	Samsung
HC	**GD74HC258**	**GoldStar (3439)**
	CD54HC258	† Harris
	CD74HC258	Harris
	HD74HC258	Hitachi
	74HC258	Signetics
	SN54HC258	† TI

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Multiplexers (Digital) (Cont'd)

Function	Device	Source	Line
Quad 2-Input, Inverting, Three-State			
HC		(Cont'd)	
	SN74HC258	TI	
	TC74HC258A	**Toshiba (3674)**	
HCT	**GD74HCT258**	**GoldStar (3439)**	
	CD54HCT258	† Harris	
	CD74HCT258	Harris	5
	KS74HCTLS258	Samsung	
	M74HCT258	SGS-Thomson	
	74HCT258	Signetics	
PCT	P54PCT258	◊‡ Performance	
	P54PCT258A	◊‡ Performance	10
	P74PCT258	◊ Performance	
	P74PCT258A	◊ Performance	
Quad 2-Input Multiplexer			
AC	74AC11157	Signetics	
ACT	74ACT11157	Signetics	
Quad 2-Input Multiplexer, Inverting			
AC	74AC11158	Signetics	15
ACT	74ACT11158	Signetics	
Quad 2-Input Multiplexer, Three-State			
AC	74AC11257	Signetics	
ACT	74ACT11257	Signetics	
Quad 2-Input Multiplexer, Three-State, Inverting			
AC	74AC11258	Signetics	
ACT	74ACT11258	Signetics	20
Quad 2-Input with Output Register			
PCT	P54PCT398	◊‡ Performance	
	P54PCT398A	◊‡ Performance	
	P74PCT398	◊ Performance	
	P74PCT398A	◊ Performance	
Quad 2-Input, with Storage			
AHCT	KS74AHCT399	Samsung	25
Cell	SN74298	° TI	
HC	**GD74HC298**	**GoldStar (3439)**	
	HD74HC298	Hitachi	
	MM54HC298	† National	
	MM74HC298	National	30
	M74HC298	SGS-Thomson	
	SN74HC298	TI	
	TC74HC298A	**Toshiba (3674)**	
HCT	**GD74HCT298**	**GoldStar (3439)**	
Quad 2-Port Register			
ACT	54ACT399	† National	35
	74ACT399	National	
Quad 2-Channel			
ACT	**TC74ACT257**	**◊ Toshiba (3674)**	
	TC74ACT258	**◊ Toshiba (3674)**	
Quad 2-Channel Multiplexer			
ACT	**TC74ACT157**	**◊ Toshiba (3674)**	
Quad 2-Channel Multiplexer (10 V)			
ACT	**TC74ACT158**	**◊ Toshiba (3674)**	40
Quad 2-Channel, Three-State, Inverting			
HCT	MM54HCT258	† National	
	MM74HCT258	National	
Quad 2-Channel, Three-State, Non-Inverting			
HCT	MM54HCT257	† National	
	MM74HCT257	National	
Quad 2-Input Data Selector, Inverting			
HC	M74HC160	Mitsubishi	45
Octal 2-Channel, Three-State, Non-Inverting			
HC	SN74HC604	TI	
Octal 2-Channel, Three-State, Non-Inverting			
HC	M74HC604	Mitsubishi	
1-of-8 Data Selectors/Multiplexers			
HCTLS	KS74HCTLS151	Samsung	
1-of-8 Data Selectors/Multiplexers, Three-State			
AHCT	KS74AHCT251	Samsung	
HCTLS	KS74HCTLS251	Samsung	50

Function	Device	Source	Line
1-Of-16 Data Generator/Multiplexer W/ 3-State Outputs			
AC	74AC11150	TI	
ACT	74ACT11150	TI	
1-Of-16 Data Generators/Multiplexers W/ 3-State Outputs			
AC	74AC11250	TI	
ACT	74ACT11250	TI	
2-to-4 Decoder/Demultiplexer			
AC	74AC11139	TI	55
2-to-4 Decoder/Demultiplexer, Dual			
AC	74AC11239	TI	
3-to-8 Line Decoder/Demultiplexer			
AC	74AC11138	Signetics	
	74AC11238	Signetics	
	SN54AC11138	◊† TI	
ACT	74ACT11138	Signetics	60
	74ACT11238	Signetics	
	SN54ACT11138	◊† TI	
4-Bit AND/OR Selector			
4XXX	GD4519B	GoldStar	
	MC14519BA	† Motorola	
	MC14519BC	Motorola	65
	CD4519BC	National	
	CD4519BM	† National	
	HEF4519B	Signetics	
	TC4519B	Toshiba	
4-Line to 16-Line Decoder/Demultiplexer			
AC	74AC11154	TI	70
ACT	74ACT11154	TI	
HCTLS	KS74HCTLS154	Samsung	
4-to-16 Line Decoder/Demultiplexer			
AC	74AC11154	Signetics	
ACT	74ACT11154	Signetics	
8-Channel	NJU74HC151	◊ NJR	75
AC	CD54AC151	† Harris	
	CD74AC151	Harris	
	54AC151	† National	
	74AC151	National	
	74AC11151	TI	80
	TC74AC151	**Toshiba (3674)**	
ACT	CD54ACT151	† Harris	
	CD74ACT151	Harris	
	54ACT151	† National	
	74ACT151	National	85
	74ACT11151	TI	
C	MM54C151	† National	
	MM74C151	National	
Cell	SN74151-Cell	° TI	
FCT	IDT54FCT151AT	◊† IDT	90
	IDT54FCT151CT	◊† IDT	
	IDT54FCT151T	◊† IDT	
	IDT74FCT151AT	◊ IDT	
	IDT74FCT151CT	◊ IDT	
	IDT74FCT151T	◊ IDT	95
HC	**GD74HC151**	**GoldStar (3439)**	
	CD54HC151	† Harris	
	CD74HC151	Harris	
	HD74HC151	Hitachi	
	M74HC251	Mitsubishi	100
	MC54HC151	† Motorola	
	MC74HC151	Motorola	
	MM54HC151	† National	
	MM74HC151	National	
	MN74HC151	◊ Panasonic	105
	M74HC151	SGS-Thomson	
	LR74HC151	Sharp	
	74HC151	Signetics	
	SN54HC151	† TI	
	SN74HC151	TI	110
	TC74HC151A	**Toshiba (3674)**	
		(Continued)	

Function	Device	Source	Line
8-Channel		(Cont'd)	
HCT	**GD74HCT151**	**GoldStar (3439)**	
	CD54HCT151	† Harris	
	CD74HCT151	Harris	
	MM54HCT151	† National	115
	MM74HCT151	National	
	74HCT151	Signetics	
8-Channel Data Selector			
HC	HD74HC152	Hitachi	
	SN54HC152	† TI	
	SN74HC152	TI	120
4XXX	GD4512B	† GoldStar	
	CD4512B	† Harris	
	CD4512BE	Harris	
	CD4512B	‡ Micrel	
	MC14512A	† Motorola	125
	MC14512C	Motorola	
	CD4512BC	National	
	CD4512BM	† National	
	MN4512B	◊† Panasonic	
	HCC4512B	† SGS-Thomson	130
	HCF4512B	◊ SGS-Thomson	
	HEF4512B	Signetics	
	TC4512B	Toshiba	
8-Channel Differential Multiplexer/Demultiplexer			
4XXX	MC14067BA	† Motorola	
	MC14067BC	Motorola	135
8-Channel Multiplexer/Demultiplexer			
HC	M74HC4051	Mitsubishi	
8-Channel with Latch, Three-State			
HC	MM54HC354	† National	
	MM54HC356	† National	
	MM74HC354	National	
	MM74HC356	National	140
8-Channel, Three State			
HC	MM54HC251	† National	
	MM74HC251	National	
8-Channel, Three-State			
AC	CD54AC251	† Harris	
	CD74AC251	Harris	
	54AC251	† National	145
	74AC251	National	
	74AC11251	TI	
	TC74AC251	**Toshiba (3674)**	
	74AC251	Toshiba	
ACT	CD54ACT251	† Harris	150
	54ACT251	† National	
	74ACT251	National	
	74ACT11251	TI	
Cell	SN74251	° TI	
FCT	IDT54FCT251AT	◊† IDT	155
	IDT54FCT251CT	◊† IDT	
	IDT54FCT251T	◊† IDT	
	IDT74FCT251AT	◊ IDT	
	IDT74FCT251CT	◊ IDT	
	IDT74FCT251T	◊ IDT	160
HC	**GD74HC153**	**GoldStar (3439)**	
	GD74HC251	**GoldStar (3439)**	
	GD74HC354	**GoldStar (3439)**	
	GD74HC356	**GoldStar (3439)**	
	CD54HC251	† Harris	165
	CD54HC354	† Harris	
	CD54HC356	† Harris	
	CD74HC251	Harris	
	CD74HC354	Harris	
	CD74HC356	Harris	170
	HD74HC251	Hitachi	
	HD74HC354	Hitachi	
	HD74HC356	Hitachi	
	MC54HC251	† Motorola	
	MC54HC354	† Motorola	175
	MC74HC251	Motorola	
	MC74HC354	Motorola	
	M74HC251	SGS-Thomson	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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DIGITAL—CMOS (Cont'd)

Multiplexers (Digital) (Cont'd)

Function	Device	Source	Line
8-Channel, Three-State			
HC		(Cont'd)	
	M74HC354	SGS-Thomson	
	M74HC356	SGS-Thomson	
	LR74HC251	Sharp	
	LR74HC354	Sharp	
	LR74HC356	Sharp	5
	74HC153	Signetics	
	74HC251	Signetics	
	74HC354	Signetics	
	74HC356	Signetics	
	SN54HC251	† TI	10
	SN74HC251	TI	
	SN74HC354	TI	
	SN74HC356	TI	
	TC74HC153A	**Toshiba (3674)**	
	TC74HC251A	**Toshiba (3674)**	15
	TC74HC354A	**Toshiba (3674)**	
	TC74HC356A	**Toshiba (3674)**	
HCT	**GD74HCT153**	**GoldStar (3439)**	
	GD74HCT251	**GoldStar (3439)**	
	GD74HCT354	**GoldStar (3439)**	20
	GD74HCT356	**GoldStar (3439)**	
	CD54HCT251	† Harris	
	CD54HCT354	† Harris	
	CD54HCT356	† Harris	
	CD74HCT251	Harris	25
	CD74HCT354	Harris	
	CD74HCT356	Harris	
	MM54HCT251	† National	
	MM74HCT251	National	
	74HCT153	Signetics	30
	74HCT251	Signetics	
	74HCT354	Signetics	
	74HCT356	Signetics	
8-Input Multiplexer			
AC	74AC11151	Signetics	
ACT	74ACT11151	Signetics	35
8-Input Multiplexer, Three-State			
AC	74AC11251	Signetics	
ACT	74ACT11251	Signetics	
8-Input, Three-State			
ACT	CD74ACT251	Harris	
10-Line to 4-Line Priority Encoder			
HC	MM54HC147	National	
	MM74HC147	National	40
10-Line to 4-Line BCD Priority Encoder			
HC	MM54HC147	† National	
	MM74HC147	National	
16-Bit	LT74TV16	° LSTI	
16-Channel Multiplexer/Demultiplexer			
4XXX	MC14097BA	† Motorola	
	MC14097BC	Motorola	45
16-Input Demultiplexer			
	LT74TC16	◊° LSTI	
16-Input Multiplexer, Three-State			
AC	74AC11150	Signetics	
ACT	74ACT11150	Signetics	
16-Input Multiplexer, Three-State, Inverting			
AC	74AC11250	Signetics	
ACT	74ACT11250	Signetics	50
16-Line to 1-Line Multiplexer			
	MM54C150	† National	
32-Bit	LT74TV32	° LSTI	
32-Bit Demultiplexer			
	LT54TC32	◊°† LSTI	
8-Channel Multiplexer			
ACT	**TC74ACT151**	**◊ Toshiba (3674)**	
8-Channel Multiplexer, Three-State			
ACT	**TC74ACT251**	**◊ Toshiba (3674)**	55

Multivibrators

Function	Device	Source	Line
Monostable/Astable, Retriggerable			
4XXX	GD4047B	† GoldStar	
	CD4047B	† Harris	
	CD4047BE	Harris	
	CD4047B	‡ Micrel	
	CD4047BC	National	60
	CD4047BM	† National	
	HCC4047B	† SGS-Thomson	
	HCF4047B	SGS-Thomson	
	HEF4047B	Signetics	
	TC4047B	Toshiba	65
Monostable, Dual Precision			
	CD14538B	Harris	
Dual Monostable			
AHCT	KS74AHCT123	† Samsung	
	KS74AHCT423	† Samsung	
C	MM54C221	† National	
	MM74C221	National	70
HC	**GD74HC221**	**GoldStar (3439)**	
	GD74HC423	**GoldStar (3439)**	
	CD54HC221	† Harris	
	CD54HC423	† Harris	
	CD54HC4538	† Harris	75
	CD74HC221	Harris	
	CD74HC423	Harris	
	CD74HC4538	Harris	
	HD74HC221	Hitachi	
	HD74HC423	Hitachi	80
	HD74HC4538	Hitachi	
	MC54HC4538	† Motorola	
	MC74HC423A	Motorola	
	MC74HC4538	Motorola	
	MM54HC221A	† National	85
	MM54HC423A	† National	
	MM54HC4538	† National	
	MM74HC221A	National	
	MM74HC423A	National	
	MM74HC4538	National	90
	MN74HC221	◊ Panasonic	
	M74HC123	SGS-Thomson	
	M74HC221	SGS-Thomson	
	M74HC221A	SGS-Thomson	
	M74HC423	SGS-Thomson	95
	M74HC423A	SGS-Thomson	
	M74HC4538	SGS-Thomson	
	74HC221	Signetics	
	74HC423	Signetics	
	74HC4538	Signetics	100
	TC74HC123	**Toshiba (3674)**	
	TC74HC123A	**Toshiba (3674)**	
	TC74HC221	**Toshiba (3674)**	
	TC74HC423	**Toshiba (3674)**	
	TC74HC423A	**Toshiba (3674)**	105
	TC74HC4538A	**Toshiba (3674)**	
	US74HC221	Universal	
HCT	**GD74HCT221**	**GoldStar (3439)**	
	GD74HCT423	**GoldStar (3439)**	
	CD54HCT221	† Harris	110
	CD54HCT423	† Harris	
	CD54HCT4538	† Harris	
	CD74HCT221	Harris	
	CD74HCT423	Harris	
	CD74HCT4538	Harris	115
	74HCT221	Signetics	
	74HCT423	Signetics	
	74HCT4538	Signetics	
4XXX	GD4538B	GoldStar	
	CD4538BE	Harris	120
	MC14538BA	† Motorola	
	MC14538BC	Motorola	
	CD4538BC	National	
	CD4538BM	† National	
	MN4528B	◊ Panasonic	125
	MN4538B	◊ Panasonic	

(Continued)

Function	Device	Source	Line
Dual Monostable			
4XXX		(Cont'd)	
	HEF4538B	Signetics	
	TC4538B	Toshiba	
Dual Monostable Retriggerable			
	NJU74HC123	◊ NJR	
HC	**GD74HC123**	**GoldStar (3439)**	130
	CD54HC123	† Harris	
	CD74HC123	Harris	
	HD74HC123	Hitachi	
	M74HC123A	Mitsubishi	
	MM54HC123	† National	135
	MM54HC123A	† National	
	MM74HC123	National	
	MM74HC123A	National	
	MN74HC123	◊ Panasonic	
	M74HC123A	SGS-Thomson	140
	74HC123	Signetics	
HCT	**GD74HCT123**	**GoldStar (3439)**	
	CD54HCT123	† Harris	
	CD74HCT123	Harris	
	74HCT123	Signetics	145
4XXX	**GD4528B**	**GoldStar (3431)**	
	CD4098B	‡ Harris	
	CD4098BE	Harris	
	CD4528B	‡ Micrel	
	MC14528BA	† Motorola	150
	MC14528BC	Motorola	
	CD4528BC	National	
	CD4528BM	† National	
	HCC4098B	† SGS-Thomson	
	HCF4098B	◊ SGS-Thomson	155
	HEF4528B	Signetics	
	TC4528B	Toshiba	
Dual Precision Monostable			
	NJU4538B	NJR	

Oscillators/Dividers

Function	Device	Source	Line
Divider, Divide by 5/6			
	RED5/6	**LSI Comp (3527)**	
Divider, Divide by 6			
	D6	LSI Comp	160
Divider, Divide by 50/60			
	RED50/60	**LSI Comp (3527)**	
Divider, Divide by 60			
	D60	LSI Comp	
Divider, Divide by 100/120			
	RED100/120	**LSI Comp (3527)**	
Divider, Divide by 300/360			
	RED300/360	**LSI Comp (3527)**	
Divider, Divide by 3000/3600			
	RED3000/3600	**LSI Comp (3527)**	165
Divider, Divide by 3600			
	D3600	LSI Comp	
Oscillator/Divider (programmable timer)			
4XXX	CD4541B	† Harris	
	CD4541BE	Harris	
	MC14541BA	† Motorola	
	MC14541BC	Motorola	170
	HEF4541B	Signetics	
Oscillator/16-Stage Divider			
	SCL5602	Allegro Micro	
Oscillator/17-Stage Divider			
	SCL5415	Allegro Micro	
	SCL5603	Allegro Micro	
Oscillator/2^0 to 2^{24} Divider (programmable timer)			
4XXX	CD4536B	† Harris	175
	CD4536BE	Harris	
	MC14536BA	† Motorola	
	MC14536BC	Motorola	
Oscillator/2^8 Divider (2–5 V supplies)			
	ICM7209	Harris	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL–CMOS (Cont'd)

Oscillators/Dividers (Cont'd)

Function	Device	Source	Line
Oscillator/2^{12} and 2^{17} Divider, also 2^{17}x10 (0.01 and 0.1 output, 6.4 MHz crystal, 3–5 V supply)	ICM7207	Harris	
Oscillator/2^{12} and 2^{20} Divider, also 2^{20}x10 (0.1 and 1 second output with 5.2 MHz crystal, 5 V supply)	ICM7207A	Harris	
Oscillator/2^{12}, 2^{18}, 2^{21}, and 2^{17} Divider (also 2^{21}x60, 2–5 V supplies)	ICM7213	Harris	
Oscillator/2^{16} Divider/Buffer	SCL5411	Allegro Micro	
Oscillator/2^{21} Divider/Buffer			
4XXX	GD4045B	† GoldStar	5
	CD4045B	† Harris	
	CD4045BE	Harris	
	HCC4045B	† SGS-Thomson	
	HCF4045B	◊ SGS-Thomson	
Oscillator/2^{23} Divider	SCL5419	Allegro Micro	10
Oscillator/2^{24} Divider			
4XXX	GD4521B	GoldStar	
	MC14521BA	† Motorola	
	MC14521BC	Motorola	
	HEF4521B	Signetics	
	TC4521B	Toshiba	15
Oscillator/32768 Hz Divider	MM5368	National	
	MM5369	National	

Shift Registers

Function	Device	Source	Line
Parallel D-Type Register, 6-Bit with Enable			
AC	54AC378	◊† National	
	74AC378	◊ National	
Phase-Locked Loop with In-Lock Detector			
HC	CD54HC7046	† Harris	20
	CD74HC7046	Harris	
HCT	CD54HCT7046	† Harris	
	CD74HCT7046	Harris	
Pipeline Register (BiCMOS)			
BCT	SN74BCT29818	TI	
Register File, 4x4, Three-State			
AC	**TC74AC670**	**Toshiba (3674)**	25
Shadow Register			
BCT	SN74BCT819	TI	
Static Shift Register			
HC	HCC4517B	SGS-Thomson	
Dual 4-Bit Serial In/Parallel Out			
HC	CD54HC4015	† Harris	
	CD74HC4015	Harris	
	74HC4015	Signetics	30
HCT	CD54HCT4015	† Harris	
	CD74HCT4015	Harris	
	74HCT4015	Signetics	
4XXX	**GD4015B**	**‡ GoldStar (3431)**	
	CD4015BE	Harris	35
	CD4015A	‡ Micrel	
	CD4015B	‡ Micrel	
	MC14015BA	Motorola	
	MC14015BC	Motorola	
	CD4015AC	National	40
	CD4015BC	National	
	CD4015BM	National	
	MN4015B	◊ Panasonic	
	HCC4015B	SGS-Thomson	
	HCF4015B	◊ SGS-Thomson	45
	HEF4015B	Signetics	
	TC4015B	Toshiba	
Dual 64-Bit Static			
4XXX	CD4517B	† Harris	
	CD4517BE	Harris	
	MC14517BA	† Motorola	50
	MC14517BC	Motorola	
		(Continued)	

Function	Device	Source	Line
Dual 64-Bit Static			
4XXX		(Cont'd)	
	HCF4517B	† SGS-Thomson	
	HEF4517B	Signetics	
5XXX	TC5050	Toshiba	
Quad Dual-Port Register			
FCT	IDT54FCT399	† IDT	55
	IDT54FCT399A	† IDT	
	IDT74FCT399	IDT	
	IDT74FCT399A	IDT	
PCT	P54PCT399	◊‡ Performance	
	P54PCT399A	◊‡ Performance	60
	P74PCT399	◊ Performance	
	P74PCT399A	◊ Performance	
Quad 64-Bit Static, Separate Clock			
4XXX	GD4731B	GoldStar	
	HEF4731B	Signetics	
	HEF4731V	† Signetics	65
Octal Register with Readback			
AHCT	KS74AHCT794	Samsung	
4-Bit Bidirectional			
AC	74AC11194	TI	
ACT	74ACT11194	TI	
C	MM54C95	† National	
	MM74C95	National	70
Cell	SN74194A	° TI	
HC	**GD74HC194**	**GoldStar (3439)**	
	CD54HC194	† Harris	
	CD74HC194	Harris	
	HD74HC194	Hitachi	75
	M74HC194	Mitsubishi	
	MC54HC194	† Motorola	
	MC74HC194	Motorola	
	MM54HC194	† National	
	MM74HC194	National	80
	M74HC194	SGS-Thomson	
	LR74HC194	Sharp	
	74HC194	Signetics	
	SN54HC194	† TI	
	SN74HC194	TI	85
	TC74HC194A	**Toshiba (3674)**	
	US74HC194	Universal	
HCT	**GD74HCT194**	**GoldStar (3439)**	
	CD54HCT194	† Harris	
	CD74HCT194	Harris	90
	KS74HCTLS193	Samsung	
	74HCT194	Signetics	
4XXX	GD40194B	GoldStar	
	MC14194BA	† Motorola	
	MC14194BC	Motorola	95
	HCC40194B	† SGS-Thomson	
	HCF40194B	SGS-Thomson	
	TC40194B	Toshiba	
4-Bit Bidirectional Universal			
AC	74AC11194	Signetics	
ACT	74ACT11194	Signetics	100
AHCT	KS74AHCT194	Samsung	
	KS74AHCT195	Samsung	
HCTLS	KS74HCTLS194	Samsung	
	KS74HCTLS195	Samsung	
4XXX	CD40104B	† Harris	105
4-Bit Bidirectional Universal, Three State			
HC	CD54HC40104	† Harris	
	CD74HC40104	Harris	
	74HC40104	Signetics	
HCT	CD74HCT40104	Harris	
	74HCT40104	Signetics	110
4-Bit D-Type, Three-State			
HCTLS	KS74HCTLS173	Samsung	
4-Bit Paralle-In/Parallel-Out	NJU74HC194	◊ NJR	
4-Bit Parallel	NJU74HC195	◊ NJR	

Function	Device	Source	Line
4-Bit Parallel In/Parallel Out			
4XXX	GD4035B	† GoldStar	
	CD40194B	Harris	115
	CD4035B	† Harris	
	CD4035BE	Harris	
	CD4035A	‡ Micrel	
	CD4035B	‡ Micrel	
	MC14035BA	† Motorola	120
	MC14035BC	Motorola	
	CD4035BC	National	
	CD4035BM	† National	
	MN4035B	◊† Panasonic	
	HCC40104B	† SGS-Thomson	125
	HCC4035B	† SGS-Thomson	
	HCF40104B	SGS-Thomson	
	HCF4035B	◊ SGS-Thomson	
	HEF40194B	Signetics	
	HEF4035B	Signetics	130
	TC40104B	Toshiba	
	TC4035B	Toshiba	
4-Bit Parallel with Clear			
C	MM54C195	† National	
	MM74C195	National	
Cell	SN74195A-Cell	° TI	135
HC	**GD74HC195**	**GoldStar (3439)**	
	CD54HC195	† Harris	
	CD74HC195	Harris	
	HD74HC195	Hitachi	
	HD74HC95	Hitachi	140
	M74HC195	Mitsubishi	
	MC54HC195	† Motorola	
	MC74HC195	Motorola	
	MM54HC195	† National	
	MM74HC195	National	145
	M74HC195	SGS-Thomson	
	LR74HC195	Sharp	
	74HC195	Signetics	
	SN54HC195	† TI	
	SN74HC195	TI	150
	TC74HC195A	**Toshiba (3674)**	
	US74HC195	Universal	
HCT	**GD74HCT195**	**GoldStar (3439)**	
	CD54HCT195	† Harris	
	CD74HCT195	Harris	155
	74HCT195	Signetics	
4XXX	GD40195B	GoldStar	
	CD40195BC	National	
	CD40195BM	† National	
	HEF40195B	Signetics	160
4-Bit, Three-State			
AC	54AC350	† National	
	74AC350	National	
ACT	54ACT350	† National	
	74ACT350	National	
4x4 Multiport			
4XXX	CD40108B	† Harris	165
	CD40208BE	† Harris	
4x4 Multiport Register			
HC	HCC40108B	SGS-Thomson	
	HCF40108B	SGS-Thomson	
8-Bit (asynchronous parallel or synchronous serial operation) Parallel In/Serial Out			
4XXX	**GD4021B**	**‡ GoldStar (3431)**	
	CD4021BE	Harris	170
	MC14021BA	† Motorola	
	MC14021BC	Motorola	
	CD4021A	National	
	CD4021BC	National	
	CD4021BM	† National	175
	HCC4021B	† SGS-Thomson	
	HCF4021B	SGS-Thomson	
	HEF4021B	Signetics	
	TC4021B	Toshiba	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Shift Registers (Cont'd)

Function	Device	Source	Line
8-Bit Bidirectional Parallel/Serial Input/Output Bus Register			
4XXX	GD4034B	† GoldStar	
	CD4034B	† Harris	
	CD4034BE	Harris	
	CD4034B	‡ Micrel	
	MC14034BA	† Motorola	5
	MC14034BC	Motorola	
	CD4034BC	National	
	CD4034BM	† National	
	HCC4034B	† SGS-Thomson	
	HCF4034B	SGS-Thomson	10
	TC4034B	Toshiba	
8-Bit Bus Interface Register, Three State			
AHCT	KS74AHCT825	Samsung	
	KS74AHCT826	Samsung	
PCT	P54PCT825A	◊‡ Performance	
	P54PCT825B	◊‡ Performance	15
	P74PCT825A	◊ Performance	
	P74PCT825B	◊ Performance	
8-Bit Bus Interface Register, Three-State			
BCT	SN54BCT29825	† TI	
	SN54BCT29826	† TI	
8-Bit Bus Register, Shift and Store			
HC	CD54HC4094	Harris	20
	CD74HC4094	Harris	
	74HC4094	Signetics	
	TC74HC4094A	**Toshiba (3674)**	
HCT	CD54HCT4094	† Harris	
	CD74HCT4094	Harris	25
	74HCT4094	Signetics	
4XXX	CD4094B	† Harris	
	CD4094BE	Harris	
	CD4094B	‡ Micrel	
	MC14094BA	† Motorola	30
	MC14094BC	Motorola	
	HCC4094B	† SGS-Thomson	
	HCF4094B	◊ SGS-Thomson	
	HEF4094B	Signetics	
	TC4094B	Toshiba	35
8-Bit Parallel In/Serial Out			
AC	**TC74AC166**	**Toshiba (3674)**	
AHCT	KS74AHCT165	Samsung	
C	MM54C165	† National	
	MM74C165	National	
Cell	SN74165	° TI	40
HC	**GD74HC165**	**GoldStar (3439)**	
	GD74HC166	**GoldStar (3439)**	
	CD54HC165	† Harris	
	CD74HC165	Harris	
	HD74HC165	Hitachi	45
	MC54HC165	† Motorola	
	MC74HC165	Motorola	
	MM54HC165	† National	
	MM74HC165	National	
	M74HC165	SGS-Thomson	50
	LR74HC165	Sharp	
	74HC165	Signetics	
	74HC166	Signetics	
	SN54HC165	† TI	
	SN74HC165	TI	55
	TC74HC165A	**Toshiba (3674)**	
	US74HC165	Universal	
HCT	**GD74HCT165**	**GoldStar (3439)**	
	GD74HCT166	**GoldStar (3439)**	
	CD54HCT165	† Harris	60
	CD74HCT165	Harris	
	KS74HCTLS165	Samsung	
	74HCT165	Signetics	
	74HCT166	Signetics	
8-Bit Parallel with serial protocol channel			
	IDT49FCT818	IDT	65
8-Bit Parallel-In/Serial-Out			
	NJU74HC165	◊ NJR	
8-Bit Parallel-In/Serial-Out with Clear			
	NJU74HC166	◊ NJR	
8-Bit Serial In/Parallel Out			
AC	CD54AC164	† Harris	
	CD74AC164	Harris	
	TC74AC164	**Toshiba (3674)**	70
ACT	CD54ACT164	† Harris	
	CD74ACT164	Harris	
AHCT	KS74AHCT164	Samsung	
C	MM54C164	† National	
	MM74C164	National	75
Cell	SN74164-Cell	° TI	
HC	**GD74HC164**	**GoldStar (3439)**	
	CD54HC164	† Harris	
	CD74HC164	Harris	
	HD74HC164	Hitachi	80
	MC54HC164	† Motorola	
	MC74HC164	Motorola	
	MM54HC164	† National	
	MM74HC164	National	
	M74HC164	SGS-Thomson	85
	LR74HC164	Sharp	
	74HC164	Signetics	
	SN54HC164	† TI	
	SN74HC164	TI	
	TC74HC164A	**Toshiba (3674)**	90
	US74HC164	Universal	
HCT	**GD74HCT164**	**GoldStar (3439)**	
	CD54HCT164	† Harris	
	CD74HCT164	Harris	
	MM54HCT164	† National	95
	MM74HCT164	National	
	KS74HCTLS164	Samsung	
	M74HCT164	SGS-Thomson	
	74HCT164	Signetics	
8-Bit Serial In/Parallel Out Register with Output Latches			
AHCT	KS74AHCT595	Samsung	100
	KS74AHCT596	Samsung	
HC	HD74HC323	Hitachi	
	HD74HC595	Hitachi	
	MM54HC595	† National	
	MM74HC595	National	105
	M74HC595	SGS-Thomson	
	LR74HC595	Sharp	
	SN54HC595	† TI	
	SN74HC594	TI	
	SN74HC595	TI	110
	TC74HC323A	**Toshiba (3674)**	
	TC74HC595A	**Toshiba (3674)**	
8-Bit Serial In/Parallel Out with Output Latches			
ACT	74ACT11323	TI	
8-Bit Serial/Parallel-In, Serial Out			
AHCT	KS74AHCT166	Samsung	
Cell	SN74166	° TI	115
HC	**GD74HC322**	**GoldStar (3439)**	
	CD54HC166	† Harris	
	CD74HC166	Harris	
	HD74HC166	Hitachi	
	MM54HC166	† National	120
	MM74HC166	National	
	M74HC166	SGS-Thomson	
	SN54HC166	† TI	
	SN74HC166	TI	
	TC74HC166A	**Toshiba (3674)**	125
HCT	**GD74HCT322**	**GoldStar (3439)**	
	CD54HCT166	† Harris	
	CD74HCT166	Harris	
	MM54HCT166	† National	
	MM74HCT166	National	130
	KS74HCTLS166	Samsung	
8-Bit Serial/Parallel-In, Serial-Out Register with Input Latches			
AHCT	KS74AHCT597	Samsung	
HC	CD54HC597	† Harris	
	CD74HC597	Harris	
	HD74HC597	Hitachi	135
	MC54HC597	† Motorola	
	MC74HC597	Motorola	
	MM54HC597	† National	
	MM74HC597	National	
	M74HC597	SGS-Thomson	140
	LR74HC597	Sharp	
	74HC597	Signetics	
	TC74HC597A	**Toshiba (3674)**	
HCT	CD54HCT597	† Harris	
	CD74HCT597	Harris	145
	74HCT597	Signetics	
8-Bit Serial-In/Parallel-Out			
	NJU74HC164	◊ NJR	
AC	54AC164	† National	
	74AC164	National	150
ACT	54ACT164	† National	
	74ACT164	National	
8-Bit Synchronous Parallel In/Serial Out			
HC	HD74HC589	Hitachi	
	MC54HC589	† Motorola	
	MC74HC589	Motorola	
	MM54HC589	† National	155
	MM74HC589	National	
4XXX	GD4014B	‡ GoldStar	
	CD4014B	‡ Harris	
	CD4014BE	Harris	
	CD4014A	‡ Micrel	160
	CD4014B	‡ Micrel	
	MC14014BA	† Motorola	
	MC14014BC	Motorola	
	CD4014A	National	
	CD4014BC	National	165
	CD4014BM	† National	
	HCC4014B	† SGS-Thomson	
	HCF4014B	◊ SGS-Thomson	
	HEF4014B	Signetics	
	TC4014B	Toshiba	170
8-bit Universal Shift/Storage Register with Asynchronous Reset			
AC	74AC11299	Signetics	
	74AC11323	Signetics	
ACT	74ACT11299	Signetics	
	74ACT11323	Signetics	
8-Bit Universal, Three-State with Synchronous Reset			
AC	CD54AC323	† Harris	175
	CD74AC323	Harris	
ACT	CD54ACT323	† Harris	
	CD74ACT323	Harris	
8-Bit with Input Latches			
HC	74HC7597	Signetics	
HCT	74HCT7597	Signetics	180
HCTLS	KS74HCTLS597	Samsung	
8-Bit with Output Latch			
HC	M74HC595	Mitsubishi	
8-Bit with Output Latches			
HCTLS	KS74HCTLS595	Samsung	
	KS74HCTLS596	Samsung	
8-Bit, Three-State			
AC	CD54AC299	† Harris	185
	CD74AC299	Harris	
	54AC299	† National	
	74AC299	National	
	74AC11299	TI	
	74AC11323	TI	190
	TC74AC299	**Toshiba (3674)**	
ACT	CD54ACT299	† Harris	
	CD74ACT299	Harris	
	54ACT299	† National	

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† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—CMOS (Cont'd)

Shift Registers (Cont'd)

Function	Device	Source
8-Bit, Three-State		
ACT		(Cont'd)
	74ACT299	National
	74ACT11299	TI
AHCT	KS74AHCT299	† Samsung
FCT	IDT54FCT299	◊† IDT
	IDT54FCT299A	◊† IDT
	IDT74FCT299	◊ IDT
	IDT74FCT299A	◊ IDT
HC	**GD74HC299**	**GoldStar (3439)**
	CD54HC299	† Harris
	CD74HC299	Harris
	MC54HC299	† Motorola
	MC74HC299	Motorola
	MM54HC299	† National
	MM74HC299	National
	M74HC299	SGS-Thomson
	LR74HC299	Sharp
	74HC299	Signetics
	SN74HC299	TI
	TC74HC299A	**Toshiba (3674)**
HCT	**GD74HCT299**	**GoldStar (3439)**
	CD54HCT299	† Harris
	CD74HCT299	Harris
	KS74HCTLS299	† Samsung
	74HCT299	Signetics
PCT	P54PCT299	◊‡ Performance
	P54PCT299A	◊‡ Performance
	P74PCT299	◊ Performance
	P74PCT299A	◊ Performance
8-Bit, Three-State, Synchronous Clear		
AC	**TC74AC323**	**Toshiba (3674)**
ACT	54ACT323	† National
	74ACT323	National
HC	MM54HC245	† National
	MM74HC245	National
9-Bit Bus Interface Register,		
BCT	SN54BCT29824	† TI
9-Bit Bus Interface Register, Three State		
AHCT	KS74AHCT823	Samsung
	KS74AHCT824	Samsung
PCT	P54PCT823A	◊‡ Performance
	P54PCT823B	◊‡ Performance
	P74PCT823A	◊ Performance
	P74PCT823B	◊ Performance
9-Bit Bus Interface Register, Three-State		
AC	SN54BCT29823	† TI
9-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)	AM29C823	AMD
10-Bit Bus Interface Register, Three State		
AHCT	KS74AHCT821	Samsung
	KS74AHCT822	Samsung
PCT	P54PCT821A	◊‡ Performance
	P54PCT821B	◊‡ Performance
	P74PCT821A	◊ Performance
	P74PCT821B	◊ Performance
10-Bit Bus Interface Register, Three-State		
BCT	SN54BCT29821	† TI
10-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)	AM29C821	AMD
10-Bit Serial-In/Parallel-Out		
ACT	74ACT11898	TI
16-Bit	LT74TC16	◊°† LSTI
	LT74TV16	◊°† LSTI
16-Bit Serial In/Parallel Out		
HC	HD74HC674	Hitachi
16-Bit Serial In/Parallel Out with Stored Parallel Output		
HC	HD74HC673	Hitachi
16-Bit with Serial Protocol Channel (SPC)		
FCT	IDT49FCT618	IDT
18-Bit Static (4, 5, 8, 9, 10, 12, 13, 14, 16, 17, 18-bits)		
4XXX	GD4006B	† GoldStar
	CD4006B	† Harris
	CD4006BE	Harris
	CD4006A	‡ Micrel
	MC14006BA	† Motorola
	MC14006BC	Motorola
	CD4006A	National
	CD4006BC	National
	CD4006BM	† National
	HCC4006B	† SGS-Thomson
	HCF4006B	◊ SGS-Thomson
	HEF4006B	Signetics
	TC4006B	Toshiba
30-Bit Static		
4XXX	MV4330	Plessey
32-Bit	LT54TC32	◊°† LSTI
	LT54TV32	◊°† LSTI
32-Bit Bidirectional Serial In/Serial Out		
4XXX	CD40100B	† Harris
	CD40100BE	Harris
	HCC40100B	† SGS-Thomson
	HCF40100B	◊ SGS-Thomson
32-Bit Serial In/Parallel Out		
4XXX	MD4332B	† Mitel
	MV4332	Plessey
64-Bit Static		
4XXX	GD4031B	† GoldStar
	CD4031B	† Harris
	CD4031BE	Harris
	CD4031A	‡ Micrel
	CD4031B	‡ Micrel
	CD4031BC	National
	CD4031BM	† National
	HCC4031B	† SGS-Thomson
	HCF4031B	SGS-Thomson
	HEF4031B	Signetics
64-Bit Variable Length		
4XXX	GD4557B	GoldStar
	MC14557BA	† Motorola
	MC14557BC	Motorola
	HEF4557B	Signetics
128-Bit Static (16-bit increments)		
4XXX	MC14562BA	† Motorola
	MC14562BC	Motorola
8-Bit SIPO Shipt Register		
ACT	**TC74ACT164**	◊ **Toshiba (3674)**

Translators

Function	Device	Source
Quad Inverting High Voltage Up/Down Level Shifter (low to high or high to low translation)		
C	HI8504	Holt
Quad Level Shifter (low to high voltage)		
4XXX	CD40109B	† Harris
	CD40109BE	Harris
	HCC40109B	† SGS-Thomson
	HCF40109B	◊ SGS-Thomson
Quad Voltage Up Level Translator		
4XXX	GD4104B	GoldStar
	HEF4104B	Signetics
Hex Level Shifter (CMOS or TTL to CMOS)		
4XXX	MC14504BA	† Motorola
	MC14504BC	Motorola
Hex Level Shifter (low-to-high voltage)		
5XXX	TC5020B	Toshiba
Octal Bidirectional Level Shifter (CMOS/TTL)		
	HS3374RH	‡ Harris
4XXX	CD40116D	Harris
8-Bit Bidirectional CMOS/TTL Interface Level Converter		
4XXX	CD40116E	† Harris

Miscellaneous

Function	Device	Source
Microprocessor, 1-Bit, Industrial Control Unit		
4XXX	MC14500B	Motorola
Addressable Asynchronous Receiver/Transmitter		
4XXX	MC14469	◊ Motorola
Advanced System Architecture Control Circuit (ACC) for VMEBUS interface		
CMOS	**CA91C014ACC**	**† Newbridge (3569)**
Analog Multiplexer/Demultiplexer (dual 4-channel)		
HC	**TC74HC4052A**	**Toshiba (3674)**
Analog Multiplexer/Demultiplexer (triple 2-channel)		
HC	**TC74HC4053A**	**Toshiba (3674)**
Analog Multiplexer/Demultiplexer (8-channel)		
HC	**TC74HC4051A**	**Toshiba (3674)**
ARINC 629 Terminal Device (30 MHz)		
	L63500A0GC-30	LSI Logic
	L63500A0GM-30	† LSI Logic
Bit Rate Generator		
	HD4702	Harris
4XXX	GD4702B	GoldStar
	MC14411	Motorola
	F4702BC	National
	F4702BM	† National
Bus Interface Latch		
FCT	IDT54FCT843A	◊† IDT
	IDT74FCT843A	◊ IDT
Bus Multiplexer, Tri-Port (10-bit x 3-port)		
FCT	IDT49FCT804	IDT
	IDT49FCT804A	IDT
Clock Generator		
CMOS	Bt438/883	† Brooktree
Code Identification System		
	CT15530	Marconi
Color Space Converter		
	Bt281	Brooktree
Comparator, Linear, Quad		
C	MM54C909	† National
	MM74C909	National
Comparator Phase		
C	MM74C932	National
Comparator, Dual with Dual Op Amp		
4XXX	MC14574	Motorola
Comparator, Quad		
4XXX	MC14575	Motorola
Controller, 16-Bit Programmable		
ACT	SN74ACT29116	TI
Converter (converts 2-wire serial port to 3-wire serial port)	DS1209S-B1	◊ Dallas
Coordinate Transformer		
	TMC2330	TRWLSI
Counter/Timer, Programmable		
	GD4722B	GoldStar
Crossbar Switch		
ACT	SN74ACT8841	TI
D/A Converter, 8-Bit, 165 MSPS		
	HDAC10180B	† Signal Proc
Delay Line, Programmable 8-Bit (0.25 ns steps)		
	DS1020-025	◊ **Dallas (3357)**
Delay Line, Programmable 8-Bit (0.50 ns steps)		
	DS1020-050	◊ **Dallas (3357)**
Delay Line, Programmable 8-Bit (2 ns steps)		
	DS1020-200	◊ **Dallas (3357)**
Delay Line (three independent 10 nanosecond delays)		
	DS1013-10	◊ **Dallas (3357)**
Delay Line (three independent 100 nanosecond delays)		
	DS1013-100	◊ **Dallas (3357)**
Delay Line (three independent 15 nanosecond delays)		
	DS1013-15	◊ **Dallas (3357)**

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—CMOS (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source	Line
Delay Line (three independent 20 nanosecond delays)	**DS1013-20**	◊ **Dallas (3357)**	
Delay Line (three independent 25 nanosecond delays)	**DS1013-25**	◊ **Dallas (3357)**	
Delay Line (three independent 30 nanosecond delays)	**DS1013-30**	◊ **Dallas (3357)**	
Delay Line (three independent 40 nanosecond delays)	**DS1013-40**	◊ **Dallas (3357)**	
Delay Line (three independent 50 nanosecond delays)	**DS1013-50**	**Dallas (3357)**	5
Delay Line (three independent 60 nanosecond delays)	**DS1013-60**	◊ **Dallas (3357)**	
Delay Line (three independent 70 nanosecond delays)	**DS1013-70**	◊ **Dallas (3357)**	
Delay Line (three independent 75 nanosecond delays)	**DS1013-75**	◊ **Dallas (3357)**	
Delay Line (three independent 80 nanosecond delays)	**DS1013-80**	◊ **Dallas (3357)**	
Delay Line (three independent 90 nanosecond delays)	**DS1013-90**	◊ **Dallas (3357)**	10
Delay Line, 5 Taps	**DS1000**	◊ **Dallas (3357)**	
Delay Line (5 taps: 100,200,300,400 and 500 ns)	**DS1005-500**	◊ **Dallas (3357)**	
Delay Line (5 taps: 10,20,30,40 and 50 ns)	**DS1005-50**	◊ **Dallas (3357)**	
Delay Line (5 taps: 12,24,36,48 and 60 ns)	**DS1005-60**	◊ **Dallas (3357)**	
Delay line, 8-Bit Programmable (0.25 ns steps)	**DS1020-25**	**Dallas (3357)**	15
Delay Line, 8-Bit Programmable (0.5 ns steps)	**DS1020-50**	**Dallas (3357)**	
Delay Line 2-in–1 (independent delays to outputs)	**DS1012-1**	◊ **Dallas (3357)**	
	DS1012-2	◊ **Dallas (3357)**	
	DS1012-3	◊ **Dallas (3357)**	
	DS1012-4	◊ **Dallas (3357)**	20
	DS1012-5	◊ **Dallas (3357)**	
Delay Line (5 taps: 100,200,300,400 and 500 ns)	**DS1000-500**	◊ **Dallas (3357)**	
Delay Line (5 taps: 10,20,30,40 and 50 ns)	**DS1000-50**	◊ **Dallas (3357)**	
Delay Line (5 taps: 12,24,36,48 and 60 ns)	**DS1000-60**	◊ **Dallas (3357)**	
Delay Line (5 taps: 15,30,45,60 and 75 ns)	**DS1000-75**	◊ **Dallas (3357)**	25
	DS1005-75	◊ **Dallas (3357)**	
Delay Line (5 taps: 20,40,60,80 and 100 ns)	**DS1000-100**	◊ **Dallas (3357)**	
	DS1005-100	◊ **Dallas (3357)**	
Delay Line (5 taps: 25,50,75,100 and 125 ns)	**DS1000-125**	◊ **Dallas (3357)**	
	DS1005-125	◊ **Dallas (3357)**	30
Delay Line (5 taps: 30,60,90,120 and 150 ns)	**DS1000-150**	◊ **Dallas (3357)**	
	DS1005-150	◊ **Dallas (3357)**	
Delay Line (5 taps: 35,70,105,140 and 175 ns)	**DS1000-175**	◊ **Dallas (3357)**	
	DS1005-175	◊ **Dallas (3357)**	
Delay Line (5 taps: 40,80,120,160 and 200 ns)	**DS1000-200**	◊ **Dallas (3357)**	35
	DS1005-200	◊ **Dallas (3357)**	
Delay Line (5 taps: 50,100,150,200 and 250 ns)	**DS1000-250**	◊ **Dallas (3357)**	
	DS1005-250	◊ **Dallas (3357)**	
Delay Line (7-in–1, custom set at factory)	**DS1007**	◊ **Dallas (3357)**	
Delay Line,Programmable 8-Bit (1 ns steps)	**DS1020-100**	◊ **Dallas (3357)**	40
Diagnostic Scan Register			
PCT	P29PCT818	◊‡ Performance	
	P29PCT818A	◊‡ Performance	
	P29PCT818B	◊‡ Performance	
Digital Address Register File (DARF) (for VMEBUS interface)			
CMOS	**CA91C015DARF † Newbridge (3569)**		
Digital Audio Companding Processor (Voice and Audio Compression/Expansion)			
CMOS	ca16c001	Newbridge	45
Digital Frequency Synthesizer			
CMOS	CA89C440	° Newbridge	
Digital Mixer (two 12-bit multipliers, an adder and a cascadable accumulator)	TMC2249	TRWLSI	
Direct Digital Synthesizer (AKA numerically controlled oscillator, 50 MHz sampling rate)			
	Q2334C-50	Qualcomm	
	Q2334I-20	Qualcomm	
Direction Discriminator			
HCT	THCT2000	TI	50
Error Correction Code (ECC), Corrects 3 Errors and Detects 4 Errors	SRT24-12-03	◊‡ SpaceResearch	
Error Detection and Correction Unit, 32-Bit			
C	IDT49C465	IDT	
Error Detection/Correction Unit, 32-Bit			
PCT	P54PCT632U	† Performance	
	P54PCT633U	† Performance	
	P54PCT634U	† Performance	55
	P54PCT635U	† Performance	
	P74PCT632U	Performance	
	P74PCT633U	Performance	
	P74PCT634U	Performance	
	P74PCT635U	Performance	60
FFT Processor Chipset (30 MHz)	**L64280-30**	**LSI Logic (3536)**	
	L64281-30	**LSI Logic (3536)**	
Filter, Digital PLL (Phase-Locked Loop)			
HC	74HC297	Signetics	
HCT	74HCT297	Signetics	
Floating Point Multiplier (32/34-bit)	TMC3201	TRWLSI	65
Forward Error Correction Circuit (FEC), Implements MIL-STD–188–144A and Fed. Std. 1045 Functions	SRT-141A/1045	◊† SpaceResearch	
HSYNC GenLock Controller			
CMOS	Bt261	Brooktree	
Latched Transceiver			
AC	74AC11853	TI	
	74AC11854	TI	
ACT	74ACT11853	TI	70
	74ACT11854	TI	
Logarithmic Gain/Attenuator (serial interface)tor	ML204	MicroLinear	
Matrix Multiplier	TMC2250	TRWLSI	
Microsequencer 16-Bit			
ACT	SN74ACT8818A	TI	
Modulated Numerically Controlled Oscillator (60 MHz, 32-bit frequency resolution, 12-bit sine or cosine output)	**STEL1175**	**STEL (3663)**	75
Monostable Multivibrator with Schmitt Trigger Inputs			
AHCT	KS74AHCT121	Samsung	
Monostable Multivibrator, Dual			
4XXX	CD4538B	Harris	
Monostable Multivibrators with Schmitt Trigger Inputs			
HCTLS	KS74HCTLS121	Samsung	
Multifunction Circuit, 6-Section			
HC	SN74HC7008	TI	
Multilevel Pipeline Register			
	LPR520C	◊† LogicDev	80
	LPR520M	◊† LogicDev	
	LPR521C	◊† LogicDev	
	LPR521M	◊† LogicDev	
	L29C520C	◊ LogicDev	
	L29C520M	◊† LogicDev	85
	L29C521C	◊ LogicDev	
	L29C521M	◊† LogicDev	
Numerically Controlled Oscillator	ST1172A	STEL	
Numerically Controlled Oscillator (50 MHz, 16-bit frequency resolution, 12-bit sine or cosine output)	**STEL1174**	**STEL (3663)**	
Numerically Controlled Oscillator (50 MHz, 32-bit frequency resolution, 8-bit sine and cosine output or 12-bit phase output)	**STEL1172B**	**STEL (3663)**	90
Numerically Controlled Oscillator (50 MHz, 48-bit frequency resolution, 12-bit sine or cosine output)	**STEL1173**	**STEL (3663)**	
	STEL1173RH	**‡ STEL (3663)**	
Op Amp, Linear, Quad			
4XXX	MC14573	Motorola	
PC Mouse Controller	5720	Commodore	
Phase-Locked Loop			
HC	CD54HC297	† Harris	95
	CD54HC4046	† Harris	
	CD74HC297	Harris	
	CD74HC4046	Harris	
	MC54HC4046A	◊† Motorola	
	MM54HC4046	† National	100
	MM74HC4046	National	
	74HC4046A	Signetics	
	74HC7046A	Signetics	
HCT	CD54HCT297	† Harris	
	CD54HCT4046	† Harris	105
	CD74HCT297	Harris	
	CD74HCT4046	Harris	
	74HCT4046A	Signetics	
	74HCT7046A	Signetics	
4XXX	GD4046B	† GoldStar	110
	CD4046B	† Harris	
	CD4046BE	Harris	
	CD4046B	‡ Micrel	
	MC14046BA	† Motorola	
	MC14046BC	Motorola	115
	CD4046BC	National	
	CD4046BM	† National	
	HCC4046B	† SGS-Thomson	
	HCF4046B	SGS-Thomson	
	HEF4046B	Signetics	120
Phase-Locked Loop w/VCO			
HC	CD54HC4046A	† Harris	
	CD54HC7046A	† Harris	
	CD74HC4046A	Harris	
	CD74HC7046A	Harris	
HCT	CD54HCT4046A	† Harris	125
	CD54HCT7046A	† Harris	
	CD74HCT4046A	Harris	
	CD74HCT7046A	Harris	
	MC74HC4046A	Motorola	
	MH74HC4046A	◊ Motorola	130
Pipeline Register			
AC	74AC11818	TI	
	74AC11819	TI	
ACT	74ACT11818	TI	
	74ACT11819	TI	
BCT	SN54BCT29818	† TI	135
PLL Frequency Synthesizer (parallel input)	IMI145151	◊°† IMI	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL–CMOS (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
PLL Frequency Synthesizer (4-bit data bus input)		
	IMI145145	◊°† IMI
	IMI145146	◊°† IMI
Priority Encoder, 8-to-3 Line		
HCT	MM54HCT148	† National
	MM74HCT148	National
Priority Encoder, 10-to-4 Line		
HCT	MM54HCT147	† National
	MM74HCT147	National
Programmable Delay Timer with Oscillator		
HC	74HC5555	Signetics
HCT	74HCT5555	Signetics
Programmable Digital Delay Timer		
	LS7210	**LSI Comp (3526)**
Programmable Frequency Divider/Digital Timer		
HC	M74HC292	SGS-Thomson
	M74HC294	SGS-Thomson
Programmable Frequency Dividers/Timers		
HC	HD74HC292	Hitachi
	HD74HC294	Hitachi
	TC74HC7292A	**Toshiba (3674)**
	TC74HC7294A	**Toshiba (3674)**
Programmable Timer		
HC	HCF4536B	SGS-Thomson
Programmable Video Sync Generator		
ACT	54ACT715	† National
	74ACT715	National
Rate Multiplier, Binary		
4XXX	CD4089B	† Harris
	CD4089BE	Harris
	CD4089BC	National
	CD4089BM	† National
	HCC4089B	† SGS-Thomson
	HCF4089B	SGS-Thomson
Rate Multiplier, BCD		
4XXX	GD4527B	GoldStar
	CD4527B	† Harris
	CD4527BE	Harris
	MC14527BA	† Motorola
	MC14527BC	Motorola
	CD4527BC	National
	CD4527BM	† National
	HCC4527B	† SGS-Thomson
	HCF4527B	SGS-Thomson
	HEF4527B	Signetics
	TC4527B	Toshiba
Reed-Solomon Error Correcting Codec (30 MHz)		
	L64710-30	**LSI Logic (3536)**
Register File, 4x4, Three-State		
HC	**GD74HC670**	**GoldStar (3439)**
	HD74HC670	Hitachi
Register, 8-Bit Multiplexed (with I/O readback)		
ACT	74ACT11979	TI
Register, 8x9-Bit Multiplexed (with I/O readback)		
ACT	74ACT11987	TI
	74ACT11988	TI
Register, 16x8-Bit Multiplexed (with I/O readback)		
ACT	74ACT11980	TI
	74ACT11981	TI
Registered Transceiver		
AC	74AC11833	TI
	74AC11834	TI
ACT	74ACT11833	TI
	74ACT11834	TI
Shift Register, Variable Length		
	TMC2011	TRWLSI
Successive Approximation Register		
C	MM54C905	‡ Micrel
	MM54C905	† National
	MM74C905	National
Successive Approximation Register, Cascadable		
4XXX	MC14549BA	† Motorola
	MC14549BC	Motorola
Switch Eliminator (logic to replace manual digital switches)		
	DS1223	Dallas
	DS1290	Dallas
	DS1291	Dallas
	DS1292	Dallas
	DS1293	Dallas
Terminator, Dual Programmable 4-Bit		
4XXX	TC40117B	Toshiba
Testable Functional Circuit (provides the circuit functionality of various logic devices: multiplexers, decoders, shift registers, addressable latches; TC ± driver, TV ± receiver)		
	LT54TC32	◊°† LSTI
	LT54TV32	◊°† LSTI
	LT74TC32	◊° LSTI
	LT74TV32	◊° LSTI
Timekeeper, Internal Lithium Source		
	DS1216E	Dallas
Timer		
5XXX	TC5043	Toshiba
Timer/Divider, Programmable		
HC	**TC74HC7292**	**Toshiba (3674)**
	TC74HC7294	**Toshiba (3674)**
Timer, 6-Bit Universal, to "595999"		
5XXX	TC5072	Toshiba
Timer, 6-Bit Universal, to "995959"		
5XXX	TC5071	Toshiba
Timer, 6-Digit Universal		
5XXX	TC5070	Toshiba
	TC5071	Toshiba
	TC5072	Toshiba
Touch Switch	TC9130	Toshiba
	TC9135	Toshiba
Video Data Compression and Expansion Controller		
	TC35190	Toshiba
Video Shift Register, High Speed (30 MHz)		
	L64212-30	**LSI Logic (3536)**
Video Shift Register, High Speed (40 MHz)		
	L64212-40	**LSI Logic (3536)**
Single Chip Transceiver (provides AES/EBU ansi s4.40 interface for Digital Audio Data)		
CMOS	CA16C440	Newbridge
Dual D-Type Flip-Flop, 2-Input NAND/NOR Combination		
HC	SN74HC7074	TI
Dual Differential Line Driver		
	MM78C30	‡ Micrel
	MM78C30	† National
	MM88C30	National
Dual Retriggerable Monostable Multivibrators		
HCTLS	KS74HCTLS123	Samsung
	KS74HCTLS423	Samsung
Dual Schmitt Trigger		
AC	74AC11013	TI
ACT	74ACT11013	TI
4XXX	GD4583B	GoldStar
	MC14583BA	† Motorola
	MC14583BC	Motorola
	TC4583B	Toshiba
Dual 4-Bit Terminator		
4XXX	CD40117B	Harris
Dual 4-Channel Analog Multiplexer/Demultiplexer		
HC	74HC4052	Signetics
HCT	74HCT4052	Signetics
Dual 4-Input NAND Schmitt Trigger		
AHCT	KS74AHCT13	Samsung
Triple 2-Channel Analog Multiplexer/Demultiplexer		
HC	74HC4053	Signetics
HCT	74HCT4053	Signetics
Quad Bilateral Switch		
	NJU74HC4066	◊ NJR
4XXX	CD4016AE	† Harris
Quad Precision Timer/Driver (inputs cause outputs to switch state for 100 clock pulses)		
4XXX	MC14415	Motorola
	MC14415E	† Motorola
Quad Single Ended Line Driver		
	MM78C29	‡ Micrel
	MM78C29	† National
	MM88C29	National
Quad 2-Input NAND Schmitt Trigger		
HC	**GD74HC132**	**GoldStar (3439)**
	CD54HC132	† Harris
	CD74HC132	Harris
	HD74HC132	Hitachi
	MC54HC132A	† Motorola
	MC74HC132A	Motorola
	MM54HC132	† National
	MM74HC132	National
	M74HC132	SGS-Thomson
	LR74HC132	Sharp
	74HC132	Signetics
	SN54HC132	† TI
	SN74HC132	TI
	TC74HC132A	**Toshiba (3674)**
HCT	**GD74HCT132**	**GoldStar (3439)**
	CD54HCT132	† Harris
	CD74HCT132	Harris
	KS74HCTLS132	Samsung
	74HCT132	Signetics
4XXX	**GD4093B**	**† GoldStar (3431)**
	CD4093B	† Harris
	CD4093BE	Harris
	CD4093B	‡ Micrel
	MC14093BA	† Motorola
	MC14093BC	Motorola
	CD4093BC	National
	CD4093BM	† National
	MN4093B	◊† Panasonic
	HCC4093B	† SGS-Thomson
	HCF4093B	◊ SGS-Thomson
	HEF4093B	Signetics
	TC4093B	Toshiba
Quad 2-Port Registers		
HCTLS	KS74HCTLS399	Samsung
Quad 2-Input NAND Schmitt Trigger		
AC	74AC11132	TI
ACT	74ACT11132	TI
Hex Contact Bounce Eliminator		
4XXX	MC14490	Motorola
Hex Inverting Logic Level Down Converter		
HCTLS	KS74HCTLS4049	Samsung
Hex Inverting Logic Level Down Converters		
AHCT	KS74AHCT4049	Samsung
Hex Logic Level Down Converter		
HCTLS	KS74HCTLS4050	Samsung
Hex Logic Level Down Converters		
AHCT	KS74AHCT4050	Samsung
Hex Schmitt Trigger		
	TC584B	Toshiba
AC	54AC14	† National
	74AC14	National
ACT	54ACT14	† National
	74ACT14	National
C	MM54C14	‡ Micrel
	MM54C914	‡ Micrel
	MM54C14	† National
	MM54C914	† National
	MM74C14	National
	MM74C914	National
HC	**GD74HC14**	**GoldStar (3439)**
	CD54HC14	† Harris
	CD74HC14	Harris

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL–CMOS (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
Hex Schmitt Trigger		
HC		(Cont'd)
	HD74HC14	Hitachi
	MC54HC14	† Motorola
	MC74HC14	Motorola
	MN74HC14	◊ Panasonic
	M74HC14	SGS-Thomson
	LR74HC14	Sharp
	74HC14	Signetics
	SN54HC14	† TI
	SN74HC14	TI
HCT	**GD74HCT14**	**GoldStar (3439)**
	CD54HCT14	† Harris
	CD74HCT14	Harris
	74HCT14	Signetics
4XXX	**GD40014B**	**GoldStar (3431)**
	CD40106B	† Harris
	CD40106BE	Harris
	CD40106B	‡ Micrel
	CD4584B	‡ Micrel
	MC14584BA	† Motorola
	MC14584BC	Motorola
	CD40106BC	National
	CD40106BM	† National
	CD4584BC	National
	CD4584BM	† National
	HCC40106B	† SGS-Thomson
	HCF40106B	◊ SGS-Thomson
	HEF40106B	Signetics
	TC4584B	Toshiba
Hex Schmitt Trigger Inverter		
AC	74AC11014	TI
ACT	74ACT11014	TI
HC	MM54HC14	† National
	MM74HC14	National
HCT	MC54HCT14A	† Motorola
	MC74HCT14A	Motorola
Octal Register Transceiver		
PCT	29PCT52A	◊‡ Performance
	29PCT52B	◊‡ Performance
	29PCT53A	◊‡ Performance
	29PCT53B	◊‡ Performance
Octal Registers with Readback		
HCTLS	KS74HCTLS794	Samsung
Three Port Register File (16 words x 9-bits)		
	TMC3200	TRWLSI
2 of 8 Keyboard to Binary Encoder		
4XXX	MC14419	Motorola
3-/4-Input NAND/NOR Combination		
HC	SN74HC7006	TI
4-Bit Binary Counter/Clock Generator		
5XXX	TC5018B	Toshiba
4x4x2 Crosspoint Switch		
	M22101	SGS-Thomson
	M22102	SGS-Thomson
6-Section Multifunction (Inverter, NOR, Flip-Flop)		
	SN74HC7076	TI
6-Section Multifunction (NAND, Invert, Flip-Flop)		
	SN74HC7075	TI
8-Bit Diagnostic/Pipe-Line Register		
AC	74AC11818	Signetics
ACT	74ACT11818	Signetics
8-Bit Diagnostic/Pipe-Line Register w/Parity Even Output		
AC	74AC11819	Signetics
ACT	74ACT11819	Signetics
8-Bit Diagnostic Pipeline Register		
ACT	54ACT818	† National
	74ACT818	National
8-Bit I/O Port	CDP1852C	† Harris
	CDP1872C	† Harris

(Continued)

Function	Device	Source
8-Bit I/O Port		(Cont'd)
	CDP1874C	† Harris
	CDP1875C	† Harris
	HB1852	† Hughes
	HB1852C	† Hughes
HC	HC1852	◊ Hughes
	HC1852C	◊ Hughes
8-Bit Metastable-Resistant Flip-Flops		
AC	74AC11476	TI
	74AC11477	TI
	74AC11478	TI
ACT	74ACT11476	TI
	74ACT11477	TI
	74ACT11478	TI
8-Bit Priority Encoder		
4XXX	GD4532B	GoldStar
	CD4532B	† Harris
	CD4532BE	Harris
	MC14532BA	† Motorola
	MC14532BC	Motorola
	HCC4532B	† SGS-Thomson
	HCF4532B	SGS-Thomson
	HEF4532B	Signetics
	TC4532B	Toshiba
8-Bit Transceiver with Parity		
FCT	IDT54FCT833A	† IDT
	IDT54FCT833B	† IDT
	IDT54FCT853A	† IDT
	IDT54FCT853B	† IDT
	IDT74FCT833A	IDT
	IDT74FCT833B	IDT
	IDT74FCT853A	IDT
	IDT74FCT853B	IDT
	IDT74FCT854A	IDT
	IDT74FCT854B	IDT
PCT	P54PCT853A	◊‡ Performance
	P54PCT853B	◊‡ Performance
8-Bit Universal Transceiver/Port Controller		
ACT	74ACT11877	TI
8-Bit Universal Transceiver/Port Controllers		
AC	74AC11852	TI
	74AC11856	TI
	74AC11877	TI
8-Channel Analog Multiplexer/Demultiplexer		
HC	74HC4051	Signetics
HCT	74HCT4051	Signetics
8-Line to 3-Line Priority Encoder		
HC	MM54HC148	† National
	MM74HC148	National
9-Bit Odd/Even Parity Generator/Checker		
AC	74AC11280	TI
AHCT	KS74AHCT280	Samsung
HC	**GD74HC280**	**GoldStar (3439)**
	LR74HC280	Sharp
	SN54HC180	† TI
	SN54HC280	† TI
	SN74HC180	TI
	SN74HC280	TI
	TC74HC280A	**Toshiba (3674)**
9-Bit Parity Generator/Checker with Parity I/O Port		
AC	74AC11286	TI
10-Line to 4-Line DCD Priority Encoder		
HC	**TC74HC147A**	**Toshiba (3674)**
4XXX	CD40147B	† Harris
	CD40147BE	Harris
12-Bit Parity Tree		
4XXX	MC14531BA	† Motorola
	MC14531BC	Motorola
	HEF4531B	Signetics
	TC4531B	Toshiba
16-Bit Stereo A/D Converter		
CMOS	CS5336	◊ Crystal
	CS5537	◊ Crystal

(Continued)

Function	Device	Source
16-Bit Stereo A/D Converter		
CMOS		(Cont'd)
	CS5538	◊ Crystal
	CS5539	◊ Crystal
18-Bit Stereo D/A Converter		
CMOS	CS4328	◊ Crystal

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—Digital Signal Processing

Arithmetic Functions

Function	Device	Source	Line
Add/Subtract Logic, 16-Bit			
	L4C381C	◊ LogicDev	
	L4C381M	◊† LogicDev	
Adder, 6-Bit High Speed			
	F100180	◊ National	
	100180	Signetics	
Adder, 9-Bit Wallace Tree			
	F100182	◊ National	5
Address Generator			
	ADSP1410	**AD (3256)**	
ALU (single precision)			
	ADSP3202	AD	
Arithmetic Logic Unit, Cascade			
	MA7188	‡ Marconi	
Arithmetic Unit, Floating Point			
	ADSP3220	AD	
	TDC1022	TRWLSI	10
CMOS 32-Bit Floating Point Controller			
	MB86910	Fujitsu	
Correlator	L10C23	◊† LogicDev	
	L10C23M	◊† LogicDev	
	L1023C	◊† LogicDev	
	MA7170	† Marconi	15
	TMC2220	TRWLSI	
	TMC2220-1	† TRWLSI	
DSP, Multiplier/Accumulator, Serial			
	DSP135	STC	
DSP, Processing Register			
	DSP134	STC	
DSP, Programmable Multiplier			
	DSP135	STC	20
FFT Processor, Block Floating Point Chipset (2)			
	HDSP66110	† Signal Proc	
	HDSP66111	† Signal Proc	
	HDSP66210	† Signal Proc	
	HDSP66211	† Signal Proc	
Floating Point Accelerator (FPA)			
	LR3010	**◊ ° † LSI Logic (3534)**	25
Floating Point Multiplier/Divider			
	ADSP3212	AD	
Floating Point Multiplier (single precision)			
	ADSP3201	AD	
Logic Unit, 16 Bit Slice			
	L29C101	◊† LogicDev	
Microprogram Controller			
	WS5910A	**Waferscale (3717)**	
	WS5910B	**Waferscale (3717)**	30
Multiplier/Accumulator (12x12)			
	LMA2009	◊† LogicDev	
Multiplier/Accumulator, 16x16			
	HMA510	Harris	
	HMA510/883	† Harris	
	LMA2010	◊† LogicDev	
	MA7010	‡ Marconi	35
Multiplier (2x8) Recode			
	F100183	◊ National	
Multiplier (8-Bit Serial)			
	54HCT384	† Signetics	
Multiplier (8x8)			
	AM25S558	AMD	
	LMU08	◊† LogicDev	
	LMU557	◊† LogicDev	40
	LMU558	◊† LogicDev	
	LMU8U	◊† LogicDev	
Multiplier (12x12)			
	MPV12	IMI	
	MPY12	† IMI	
	LMU12	◊† LogicDev	45
Multiplier (12x12) 2's Complement and Unsigned Magnitude.	LMU112	◊† LogicDev	
Multiplier (16x16)			
	CY7C516C	◊ Cypress	
	CY7C516M	◊† Cypress	
	CY7C517C	◊ Cypress	
	CY7C517M	◊† Cypress	50
	HMU16	Harris	
	HMU17	Harris	
	LMU16	◊† LogicDev	
	LMU17	◊† LogicDev	
	LMU18	◊† LogicDev	55
	LMU216M	◊† LogicDev	
	LMU217	◊† LogicDev	
	WTL1016	Weitek	
	WTL2516	† Weitek	
	WTL2517	† Weitek	60
Multiplier, 16x16 (parallel)			
	HMU16/883	† Harris	
	HMU17/883	† Harris	
Multiplier, 16x16 (20 MHz)			
	PDSP16116	Plessey	
	PDSP16116A	Plessey	
Multiplier (24x24)			
	ADSP1024AS	**† AD (3255)**	65
	ADSP1024AT	**† AD (3255)**	
Multiplier (32-bit)			
	ADSP3210	AD	
Multiplier-Accumulator, Complex Numbers			
	STI2003	STEL	
Multiplier-Accumulator (8x8)			
	ADSP1008	**AD (3255)**	
Multiplier-Accumulator (12x12)			
	LMA1009	◊† LogicDev	70
	TDC1009	† TRWLSI	
	TMC2009	† TRWLSI	
Multiplier-Accumulator (16x16)			
	ADSP1110A	**AD (3255)**	
	ASDP1010	† AD	
	LMA1010	◊† LogicDev	75
	TMC2210	† TRWLSI	
	WTL2010	† Weitek	
	WTL2245	† Weitek	
Multiplier-Accumulator (16x16), single port			
	NCR45CM16A	† Harris	
	NCR45CM16	† NCR	80
Multiplier-Accumulator (16x16), 33 MHz			
	WS59510	**Waferscale (3717)**	
Programmable FIR Filter (16 multiplier - accumulators)			
	PDSP16256	Plessey	
Shift Matrix, 8-Bit Barrel Shifter			
	F100158	◊ National	
	100158	Signetics	
Shifter, Barrel Shifter			
	AM25S10	† AMD	85
	LSH32C	◊ LogicDev	
	LSH32M	◊† LogicDev	
	MC74F350	Motorola	
	54F350	† National	
	74F350	◊ National	90
	N25S10	Signetics	
	54S350	† Signetics	
	74F350	Signetics	
	SN74F350	TI	
	MC54F350	† Motorola	95

Converters, Analog to Digital

Function	Device	Source	Line
4-Bit, 200 MSPS			
	TDC1034	TRWLSI	
4-Bit, 30 MSPS			
	UAB1005	SGS-Thomson	
6-Bit, 100 MSPS			
	SDA5200	Siemens	
	TDC1029	† TRWLSI	
6-Bit, 15 MSPS			
	CA3306	Harris	100
6-Bit, 25 MSPS			
	TDC1014	† TRWLSI	
	TDC1046	† TRWLSI	
6-Bit, 50 MSPS			
	SDA6020	Siemens	
7-Bit, 15 MSPS			
	TDC1147	TRWLSI	
7-Bit, 20 MSPS			
	TDC1047	TRWLSI	105
7-Bit, 50 ns	MC10319	Motorola	
8-Bit, 100 MSPS			
	SDA8010	Siemens	
8-Bit, 170 MSPS			
	SCA5008	STC	
8-Bit, 20 MSPS			
	TDC1048	◊† TRWLSI	
	THC1068	TRWLSI	110
8-Bit, 50 MSPS			
	TDC1025	TRWLSI	
12-Bit, 1.5 μs	ADC803	Burr-Brown	
12-Bit, 100 ns	ADC600	Burr-Brown	
12-Bit, 20 MSPS			
	SCA3012	STC	
12-Bit, 3000 ns			
	MX578	† Maxim	115
13-Bit ADC	TC5092A	Toshiba	
14-Bit A/D D/A for TMS320 DSP			
	TLC32040	† TI	

Converters, Digital to Analog

Function	Device	Source	Line
4-Bit Triple Video DAC, 200 MSPS			
	TDC1334	TRWLSI	
4-Bit, 4 ns	HDG0405	AD	
	ZN434	Plessey	120
	TDC1034	TRWLSI	
6-Bit, Triple Video DAC, 35 MSPS			
	IMSG170-35	SGS-Thomson	
6-Bit, Triple Video DAC, 50 MSPS			
	IMSG170-50	SGS-Thomson	
	IMSG171-50	SGS-Thomson	
6-Bit, 6 ns	HDG0605	AD	125
8-Bit Video DAC (300 MHz)			
	VC108K	**VTC (3713)**	
8-Bit, Triple Video DAC			
	AH8308T	Analogic	
	SCD6038	STC	
8-Bit, Triple Video DAC, 200 MSPS			
	TDC1318	TRWLSI	
8-Bit, 100 MSPS			
	AD9768	**◊ AD (3219)**	130
8-Bit, 125 MSPS			
	AD9700	◊ AD	
8-Bit, 165 MSPS			
	HDAC10181B	Signal Proc	
8-Bit, 20 MSPS			
	TDC1016	TRWLSI	
8-Bit, 200 MSPS			
	HDAC97000	† Signal Proc	
	TDC1018	† TRWLSI	135
8-Bit, 275 MSPS			
	HDAC10180A	Signal Proc	
	HDAC10181A	Signal Proc	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—Digital Signal Processing (Cont'd)

Converters, Digital to Analog (Cont'd)

Function	Device	Source
8-Bit, 5 MSPS, 8 dB Dynamic Range	TLC7524	TI
8-Bit, 8 ns	HDG0805	AD
	DAC0805MR	Datel
	ADC0805	National
9-Bit, 20 MSPS	TDC1016	† TRWLSI
10-Bit, 15 ns	HDD1015	† AD
10-Bit, 20 MSPS	TDC1016	TRWLSI
10-Bit, 75 MSPS	SP9770	Plessey
12-Bit DAC (125 ns settling time)	**VC512J**	**VTC (3713)**
12-Bit, 20 MSPS	TDC1012	TRWLSI
12-Bit, 40 ns	DAC63	Burr-Brown
12-Bits (0.012 linearity error)	DAC65	Burr-Brown
16-Bits (serial latched)	PCM60	Burr-Brown

Processors

Function	Device	Source
Microprocessor, 12.5 MIPS Digital Signal Processor	**ADSP2100A**	**AD (3257)**
ALU, 4-Bit Binary/BCD	F100181	◊ National
	100181	Signetics
BCH Error Correcting Codec (30 MHz)	L64715-30	◊ LSI Logic
CMOS 32-Bit RISC Processor	MB86900	Fujitsu
Crossbar Switch (40 MHz)	**L64270-40**	**◊ LSI Logic (3536)**
Digital Signal Processor, Fixed Point	MSM77C20	OKI
Digital Signal Processor, 16-Bit Fixed-Point (33 Mhz)	TMS320C25-33	TI
Digital Signal Processor, 16-Bit Fixed-Point (40 MHz)	TMS320C51	TI
Digital Signal Processor, 32-Bit DSP Modem	TMS320A2400	TI
Digital Signal Processor, 32-Bit Floating-Point (26 MHz)	TMS320C30-26	TI
	TMS320C31	TI
	TMS320C31-26	TI
Digital Signal Processor (40 MHz)	**ADSP2105**	**AD (3288)**
Digital Signal Processor (52 MHz)	**ADSP21MSP50**	**AD (3290)**
	ADSP2111	**AD (3289)**
Digital Signal Processor (1K RAM-program, 512 RAM data)	ADSP-2105	† AD
Digital Signal Processor (2kx24-bit program memory)	ADSP2106	AD
Digital Signal Processor (8 kHz sampling freq.)	**ADSP28MSP02**	**AD (3295)**
Discrete Cosine Transform Processor (30 MHz)	L64730-30	LSI Logic
Discrete Cosine Transform Processor (40 MHz)	L64730-40	LSI Logic
Discrete Cosine Transform Quantization Processor (MHz)	L64740-30	LSI Logic
Discrete Cosine Transform Quantization Processor (40 MHz)	L64740-40	LSI Logic
FFT Processor Chipset (40 MHz)	**L64280-40**	**LSI Logic (3536)**
	L64281-40	**LSI Logic (3536)**
Filter, CAFIR (Cascadable Adaptive Finite Impulse Response)	DSP56200	Motorola
FIR Filter	TMC2243	TRWLSI
FIR Filter Processor (40 MHz)	**L64260-40**	**LSI Logic (3536)**
	L64261-40	**LSI Logic (3536)**
Floating Point DSP (24-bit)	MB86220	Fujitsu
	MB86232	Fujitsu
Floating Point Vector Processor, Single Precision (60—80 MFLOPS, 1K point complex FFT)	**UT69532**	**† UTMC (3693)**
Histogram/Hough Transform Processor (HHP)	**L64250**	**LSI Logic (3536)**
Multiplier and ALU, 22-Bits, Floating Point	TDC1042	TRWLSI
Multiplier Set, 32 and 64-Bit IEEE Floating Point Multiplier and ALU	IDT721264	IDT
	WTL1064	† Weitek
	WTL1065	† Weitek
	WTL1164	† Weitek
	WTL1165	† Weitek
	WTL1264	† Weitek
	WTL1265	† Weitek
Multiplier Set, 32-Bit IEEE Floating Point Multiplier and ALU	TMC3200	TRWLSI
	TMC3201	TRWLSI
	WTL1032	† Weitek
	WTL1033	† Weitek
Object Contour Tracer (20 MHz)	**L64290-20**	**LSI Logic (3536)**
Processor, Adaptive Differential Pulse Code Modulation (ADPCM)	DS2167	◊ Dallas
Processor, ADPCM	DS2168	◊ Dallas
	TEL721	STC
Processor, Advanced Signal Processor (ASP)	μPD77C20	NEC
Processor, Concurrent	Transputer	SGS-Thomson
Processor, Digital Signal Processor	**ADSP2100**	**AD (3257)**
	ADSP2100J	**AD (3257)**
	ADSP2100K	**AD (3257)**
	ADSP2100S	**† AD (3257)**
	WEDSP32	† AT&T
	WEDSP32C	AT&T
	MB87064	Fujitsu
	MB8764	Fujitsu
	DSC320C14	Microchip
	DSP320C10	Microchip
	DSP32010	Microchip
	DSP56000	† Motorola
	F9450	◊† National
	μPD77230	NEC
	MN1900	SGS-Thomson
	TS68930	SGS-Thomson
	SMJ32010	◊† TI
	TMS320	TI
Processor, Geometric Arithmetic Pattern Processor	NCR45CG72	NCR
Processor, High Performance External ROM Version of TS68930	TS68931	SGS-Thomson
Processor, Image Pipeline (Data Flow)	μPD7281	NEC
Processor, Programmable Signal Processor	AM29501	AMD
Processor, Signal Processing Interface	S77C20	Gould AMI
	S7720	Gould AMI
	μPD77P20	NEC
	μPD7720A	NEC
Processor, Signal Processor	LR37632	Sharp
Processor Unit, Floating Point	8232	Intel
Processor, 22-Bit Floating Point	MSM6992	OKI
Program Sequencer	ADSP1401	AD
	ADSP1402	**AD (3256)**
Reed-Solomon Error Correcting Codec	**L64710-40**	**LSI Logic (3536)**
Register File	**ADSP3128A**	**AD (3257)**
Signal Processor, Analog Real Time	2920	Intel
	2921	Intel
Video Motion Estimator Processor (30 MHz)	L64720-30	LSI Logic
Video Motion Estimator Processor (40 MHz)	L64720-40	LSI Logic
4-Bit Slice	AM2903	† AMD
	AM29203	† AMD
	CY2901	† Cypress
	CY7C901	◊† Cypress
	2901	° Harris
	2901	° LSI Logic
	2901-Cell	° LSI Logic
	IDM2901	† National
	NCR2910-Cell	° NCR
	SFC2901	SGS-Thomson
	SFC2903	SGS-Thomson
	2901	° SGS-Thomson
	2901-Cell	° SGS-Thomson
	2901	° Waferscale
4-Bit Slice (43 MHz)	**WS5901C**	**Waferscale (3717)**
	WS5901D	**Waferscale (3717)**
8-Bit Slice	5908	° Harris
16 bit, 32 Stage, Cascadable Transversal Filter.	IMSA100	SGS-Thomson
16-Bit CMOS	SMJ320C25	† TI
16-Bit CMOS DSP, Microcontroller/EPROM Version	TMS320E14	◊ TI
16-Bit CMOS DSP, EPROM Version of the TMS320C25	TMS320E25	◊ TI
16-Bit CMOS DSP with 4K EPROM	SMJ320E15	† TI
16-Bit CMOS DSP, 25 MHz EPROM Version of the TMS320C15	TMS320E15-25	◊ TI
16-Bit CMOS DSP, 25 MHz Version of the TMS320C15	TMS320C15-25	◊ TI
16-Bit DSP, 28.6 MIPS, Next Generation, Floating Point	TMS320C50	◊ TI
16-Bit DSP, 40 MHz, 1.5K RAM Version of TMS320C25	TMS320C26	◊ TI
16-Bit NMOS	SMJ32020	† TI
16-Bit Programmable, 2048-Word ROM, 512-Word RAM, MIL-883	WEDSP16	† AT&T
16-Bit Programmable, 4096-Word ROM, 2048-Word RAM	WEDSP16A	◊ AT&T
16-Bit Slice	5916	° Harris
	5916-Cell	° Harris

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—Digital Signal Processing (Cont'd)

Function	Device	Source	Line
Processors (Cont'd)			
16-Bit Slice (15 MHz)	**WS59016C**	◊ **Waferscale (3717)**	
16-Bit Slice (32 MHz)	**WS59016D**	◊ **Waferscale (3717)**	
16-Bit Versions of 2901	4x2901B	IMI	
	WS59016	**† Waferscale (3717)**	
32-Bit DSP, 33 MFLOPS Floating Point	TMS320C30	◊ TI	5
32-Bit Slice	59032-Cell	° Harris	
32-Bit Slice (1.35 MHz)	**WS59032D**	**Waferscale (3717)**	
32-Bit Slice (20 MHz)	**WS59032E**	**Waferscale (3717)**	
56-Bit General Purpose Digital Signal Processor	DSP56001	Motorola	
Registers			
Multilevel Pipeline Register	ISP9520	Harris	10
	ISP9521	Harris	
Pipeline Register, Multilevel	LPR520	◊† LogicDev	
	LPR521	◊† LogicDev	
	L29C520	◊† LogicDev	
	L29C521	◊† LogicDev	15
	WS59520	**Waferscale (3717)**	
	WS59521	**Waferscale (3717)**	
Processing Register	DSP134	STC	
Register File, 3-Port (8x8)	LRF07C	◊† LogicDev	
Register File, 5-Port (8x8)	LRF08	◊† LogicDev	20
Register File, 6-Port (32x32)	WTL1066	Weitek	
Shift Register, 8-Bitx3, 18 Bits Long, Programmable	TDC1011	† TRWLSI	
Miscellaneous			
Array, Custom	QuickChip 2	Tektronix	
	QuickChip 2S	Tektronix	
Cascadable Adaptive Finite Impulse Response (CAFIR) Filter Chip	DSP56200	Motorola	25
CMOS 16-Bit Digital Filter	MB86975	Fujitsu	
Coder/Decoder/Filter, Companding μ-LAW, 8-Bit, 12-Bit Dynamic Range, 8 MSPS	TCM29C18	TI	
	TCM29C19	TI	
Coder/Decoder/Filter, 14-Bit, 14 dB Dynamic Range, 19.2 MSPS (Programmable)	TLC32040	TI	
Comparator, String Proximity Computer and Ranker	PF474C	Proximity	30
Converter, Digital to Resolver	DRC10520	† ILC-DDC	
Converter, Digital to Synchro/Resolver	DSC11520	† ILC-DDC	
Converter, Resolver to Digital, 10/12/14/16 bits	2S80	AD	
Converter, Resolver to Digital, 12-Bit	2S81	AD	
Convolver 1-D/2-D	MA7180	‡ Marconi	35
Data Acquisition Peripheral (w/12-bit plus sign A/D converter)	ML2208	MicroLinear	
Delay Line (programmable length)	ISP9500	Harris	
Digital Filter, Video Speed (4 filter cells)	**HSP43481/883**	**Harris (3466)**	
Digital Filter, Video Speed (8 filter cells)	**HSP43891/883**	**Harris (3466)**	
Digital timing delay, 15 ps delay resolution, 125 MHz trigger rate	Bt604	Brooktree	40
Digitally Programmable Delay Generator (10 ps resolution)	AD9500	AD	
Direct Digital Synthesizer/NCO (FM,PM, or AM signal modulators)	PDSP16350	Plessey	
DSP PROM-Waveform Map 4 Bit Cosine	DRFS-3254	◊† Digital RF	
DSP PROM-Waveform Map 8 Bit Cosine	DRFS-3252	◊† Digital RF	
Ethernet/StarLAN Controller, IEEE 802.3	MB86950	Fujitsu	45
Filter, FIR Filter	NCR45CF8	NCR	
	TDC1028	† TRWLSI	
Filter, FIR (12-bit)	LMS12C	◊† LogicDev	
Filter, FIR, 30 MHz	**HSP43481**	**Harris (3466)**	
	HSP43881	**Harris (3466)**	50
	HSP43891	**Harris (3466)**	
Filter, Rank-Valve (15 MHz)	**L64220-15**	**LSI Logic (3536)**	
Filter, Rank-Valve (20 MHz)	**L64220-20**	**LSI Logic (3536)**	
FIR Filter Processor (computes inner products on 16-bit data, 30 MHz)	**L64260-30**	**LSI Logic (3536)**	
	L64261-30	**LSI Logic (3536)**	55
Histogram/Hough Transform Processor, 15 MHz	**L64250-15**	**LSI Logic (3536)**	
Histogram/Hough Transform Processor, 20 MHz	**L64250-20**	**LSI Logic (3536)**	
Image Sampling Sequencer (processes 4Kx4K multibit words at up to 18 MHz)	TMC2301	TRWLSI	
Multi-Bit Filter (15 MHz)	**L64240-15**	**LSI Logic (3536)**	
Multi-Bit Filter (20 MHz)	**L64240-20**	**LSI Logic (3536)**	60
Multi-Bit Filter (3x3), 20 MHz	**L64243-20**	**LSI Logic (3536)**	
Multi-Bit Filter (3x3), 30 MHz	**L64243-30**	**LSI Logic (3536)**	
Multi-Bit Filter (3x3), 40 MHz	**L64243-40**	**LSI Logic (3536)**	
Numerically Controlled Modulated Oscillator, Waveform Map	DRFS2252	Digital RF	
	DRFS2253	Digital RF	65
	DRFS2254	Digital RF	
Numerically Controlled Modulated Oscillator, 35 MHz	DRFS3250-35	◊ Digital RF	
Numerically Controlled Modulated Oscillator, 40 MHz	DRFS3250-40	◊ Digital RF	
Numerically Controlled Oscillator, 32-Bit Resolution, 25 MHz	ST1172A	STEL	
Programmable timing delay, 15 ps delay resolution, 125 MHz trigger rate, 4–40 ns delay	Bt605	Brooktree	70
Programmable timing delay, 20–200 ns delay, ± 1 LSB timing accuracy	Bt606	Brooktree	
Rank Order Filter	MA7190	‡ Marconi	
Video Line Buffer, Multi-Function	MA7186	‡ Marconi	
Video Shift Register	**L64211-15**	**LSI Logic (3536)**	
Video Shift Register (15 MHz)	**L64210-15**	**LSI Logic (3536)**	75
Video Shift Register (20 MHz)	**L64210-20**	**LSI Logic (3536)**	
	L64211-20	**LSI Logic (3536)**	
Binary Filter and Template Matcher (15 MHz)	**L64230-15**	**LSI Logic (3536)**	
Binary Filter and Template Matcher (20 MHz)	**L64230-20**	**LSI Logic (3536)**	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—BiCMOS

Arithmetic Functions

Function	Device	Source
Diagnostic/Pipeline Register		
BCT	SN54BCT818	† TI
	SN54BCT819	† TI
	SN74BCT818	TI
	SN74BCT819	TI
9-Bit Parity Checker		
AC	**TC74C280**	◊ **Toshiba (3674)**

Buffers

Function	Device	Source
Buffer/Line Driver, Octal, Open Collector		
BCT	SN54BCT756	† TI
	SN54BCT757	† TI
	SN54BCT760	† TI
	SN74BCT756	TI
	SN74BCT757	TI
	SN74BCT760	TI
Bus Buffer/Line Driver (with parity checker/generator)		
BCT	SN54BCT563	† TI
	SN54BCT564	† TI
	SN74BCT563	TI
	SN74BCT564	TI
Bus Buffers, Quad, Three-State		
BCT	SN54BCT125	† TI
	SN54BCT126	† TI
	SN74BCT125	TI
	SN74BCT126	TI
Hex Bus Buffer		
BC	TD74BC365	Toshiba
	TD74BC367	Toshiba
	TD74BC368	Toshiba
Octal Buffer/Line Driver		
BCT	SN54BCT541	◊† TI
Octal Buffer/Line Driver with Parity Checker/Generator		
BCT	SN54BCT455	† TI
	SN54BCT456	† TI
	SN74BCT455	TI
	SN74BCT456	TI
Octal Buffer/Line Driver, Three-State		
	74ABT244	**Signetics (3596)**
BCT	SN74BCT541	TI
Octal Bus Buffer		
BC	TD74BC241	Toshiba
	TD74BC244	Toshiba
	TD74BC540	◊ Toshiba
	TD74BC541	◊ Toshiba
Octal Bus Buffer, Inverting		
BC	TD74BC240	Toshiba
10-Bit Buffer/Line Driver, Non-Inverting, Three-State		
	74ABT827	Signetics
11-Bit		
BCT	SN74BCT2412	TI
	SN74BCT2413	TI
11-Bit with Series Resistor		
BCT	SN74BCT2410	TI
	SN74BCT2411	TI

Bus-Oriented Circuits

Function	Device	Source
MCP Address/Data Transceivers		
BCT	SN74BCT2425	TI
NuBus Address/Data Transceivers and Registers		
BCT	SN74BCT2420	TI
Quad Bus Transceiver		
BC	TD74BC242	Toshiba
	TD74BC243	Toshiba
Hex Bus Buffer, Three-State, Inverting		
BC	MC74BC366	Motorola
	MC74BC368	Motorola
Hex Bus Buffer, Three-State, Non-Inverting		
BC	MC74BC365	Motorola
	MC74BC367	Motorola
Octal Bidirectional Transceiver, Three-State		
FCT	54FCT245A	◊† National
	74FCT245A	◊ National
Octal Buffer/Line Driver, Three State, Inverting		
FCT	54FCT240A	◊† National
Octal Buffer/Line Driver, Three-State, Inverting		
FCT	74FCT240A	◊ National
Octal Buffer/Line Driver, Three-State, Non-Inverting		
FCT	54FCT241	◊† National
	54FCT241A	◊† National
	54FCT244	◊† National
	54FCT244A	◊† National
	74FCT241	◊ National
	74FCT241A	◊ National
	74FCT244	◊ National
	74FCT244A	◊ National
Octal Bus Buffer, Three-State, Inverting		
BC	MC74BC540	Motorola
Octal Bus Buffer, Three-State, Non-Inverting		
BC	MC74BC541	Motorola
Octal Bus Driver		
BCT	SN74BCT244	TI
	SN74BCT757	TI
	SN74BCT760	TI
Octal Bus Transceiver		
BCT	SN54BCT620A	◊† TI
Octal Bus Transceiver; 3-State (B Side); Open-Drain (A Side)		
FCT	FCT7623	Harris
Octal Bus Transceiver/Register; Open-Drain (A Side); 3-State (B Side)		
FCT	FCT654	Harris
Octal Bus Transceiver/Register, Three-State		
FCT	CD54FCT654	† Harris
	CD74FCT654	Harris
Octal Bus Transceiver, Three-State		
FCT	CD54FCT7623	† Harris
	CD74FCT7623	Harris
Octal Bus Transceiver, Three-State, Inverting		
BC	MC74BC242	Motorola
	MC74BC243	Motorola
Octal Register-Transceiver; 3-State		
FCT	FCT2952A	Harris
Octal Register-Transceiver; 3-State; Inverting		
FCT	FCT2953A	Harris
Octal Register-Transceiver, Three-State		
FCT	CD54FCT2952A	† Harris
	CD74FCT2952A	Harris
Octal Register-Transceiver, Three-State, Inverting		
FCT	CD54FCT2953A	† Harris
	CD74FCT2953A	Harris
Octal Registered Bus Transceiver		
BCT	SN74BCT646	TI
	SN74BCT652	TI
Octal Registered Transceiver		
FCT	54FCT543A	◊† National
	74FCT543A	◊ National
Octal Registered Transceiver, Three-State		
	74ABT2952	Signetics
Octal Transceiver with Direction Pin, Inverting, Three-State	74ABT640	Signetics
Octal Transceiver with Directional Pin, Three-State		
	74ABT245	**Signetics (3596)**
Octal Transceiver with Dual Enable, Inverting, Three-State	74ABT620	Signetics
Octal Transceiver with 8-Bit Parity Generator/Checker, Three-State	74ABT657	Signetics
9-Bit Bus Transceiver, Three-State		
FCT	CD54FCT863A	† Harris
	CD74FCT863A	Harris
9-Bit Bus Transceiver, Three-State, Inverting		
FCT	CD54FCT864A	† Harris
	CD74FCT864A	Harris
10-Bit Bus Interface Latch, Three-State		
	74ABT841	Signetics
10-Bit Bus Transceiver, Three-State		
FCT	CD54FCT861A	† Harris
	CD74FCT861A	Harris
10-Bit Bus Transceiver, Three-State, Inverting		
FCT	CD54FCT862A	† Harris
	CD74FCT862A	Harris
16-Bit Multiplexed Bus Transceiver with Latches		
BCT	SN74BCT2423	TI
	SN74BCT2424	TI
10-Bit Bus Transceiver; 3-State		
FCT	FCT861A	Harris
10-Bit Bus Transceiver; 3-State; Inverting		
FCT	FCT862A	Harris
9-Bit Bus Transceiver; 3-State		
FCT	FCT863A	Harris
9-Bit Bus Transceiver; 3-State; Inverting		
FCT	FCT864A	Harris

Decoders

Function	Device	Source
3-Line to 8-Line Memory Decoder with Battery Backup		
BCT	SN74BCT2414	TI

Drivers

Function	Device	Source
Octal Bus Driver		
BC	TD74BC230	Toshiba
	TD74BC231	Toshiba
Octal 25-Ohm Line Driver, Inverting, Three-State		
BCT	SN54BCT25240	† TI
	SN74BCT25240	TI
Octal 25-Ohm Line Driver, Non-Inverting, Three-State		
BCT	SN54BCT25241	† TI
	SN54BCT25244	† TI
	SN74BCT25241	TI
	SN74BCT25244	TI
Octal 25-Ohm Line Driver, Open Collector		
BCT	SN54BCT25756	† TI
	SN54BCT25757	† TI
	SN54BCT25760	† TI
	SN74BCT25756	TI
	SN74BCT25757	TI
	SN74BCT25760	TI
2-Bit Clock Driver		
BCT	SN74BCT306	TI

Flip-Flops, D-Type

Function	Device	Source
Octal		
BC	TD74BC564	◊ Toshiba
	TD74BC574	◊ Toshiba
	TD74BC575	◊ Toshiba
Octal D-Type, Edge-Triggered		
BCT	SN54BCT574	† TI
	SN74BCT574	TI
Octal D-Type, Three-State		
BC	TD74BC374	Toshiba
	TD74BC534	Toshiba
Octal D-Type, Three-State, Inverting		
BC	MC74BC534	Motorola
Octal D-Type, Three-State, Non-Inverting		
BC	MC74BC374	Motorola
Octal, Edge-Triggered		
	74ABT273	Signetics
FCT	54FCT273	◊† National
	54FCT377	◊† National
	74FCT273	◊ National
	74FCT377	◊† National

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL—BiCMOS (Cont'd)

Function	Device	Source
Flip-Flops, D-Type (Cont'd)		
Octal, Positive-Edge Trigger, Three-State		
	74ABT374	**Signetics (3597)**
Octal, Three State		
FCT	74FCT564A	◊ National
Octal, Three-State		
FCT	54FCT374	◊† National
	54FCT374A	◊† National
	54FCT564	◊† National
	54FCT564A	◊† National
	54FCT574	◊† National
	54FCT574A	◊† National
	74FCT374	◊ National
	74FCT374A	◊ National
	74FCT564	◊ National
	74FCT574	◊ National
	74FCT574A	◊ National
Octal, Three-State, Inverting		
BC	MC74BC564	Motorola
Octal, Three-State, Non-Inverting		
BC	MC74BC574	Motorola
10-Bit		
BCT	SN74BCT29821	TI
10-Bit, Positive-Edge Triggered, Three-State		
	74ABT821	Signetics
Gates, AND		
Quad 2-Input		
BC	MC74BC08	Motorola
	TD74BC08	Toshiba
Gates, NAND		
Quad 2-Input		
BC	MC74BC00	Motorola
	TD74BC00	Toshiba
Gates, OR		
Quad 2-Input		
BC	MC74BC32	Motorola
	TD74BC32	Toshiba
Gates, Miscellaneous		
8-Bit Bidirectional with Handshake		
BCT	SN74BCT2952	TI
	SN74BCT2953	TI
Latches		
Octal D-Type		
BC	MC74BC564	◊ Motorola
	TD74BC373	Toshiba
Octal D-Type, Transparent, Three-State		
BCT	SN54BCT573	† TI
	SN74BCT573	TI
Octal D-Type, Three-State, Inverting		
BC	MC74BC533	Motorola
	MC74BC563	Motorola
	TD74BC533	Toshiba
Octal D-Type, Three-State, Non-Inverting		
BC	MC74BC373	Motorola
	MC74BC573	Motorola
Octal Transparent		
BC	TD74BC563	◊ Toshiba
	TD74BC573	◊ Toshiba
Octal Transparent Latch; 3-State		
FCT	FCT373	Harris
	FCT573	Harris
Octal Transparent Latch; 3-State; Inverting		
FCT	FCT533	Harris
	FCT563	Harris
Octal Transparent, Three-State		
FCT	CD54FCT373	† Harris
	CD54FCT573	† Harris
	CD74FCT373	Harris
	CD74FCT573	Harris
	54FCT373	◊† National
	54FCT373A	◊† National
	54FCT533A	◊† National
	54FCT563	◊† National
	54FCT563A	◊† National
	54FCT573	◊† National
	54FCT573A	◊† National
	74FCT373	◊ National
	74FCT373A	◊ National
	74FCT533A	◊ National
	74FCT563	◊ National
	74FCT563A	◊ National
	74FCT573	◊ National
	74FCT573A	◊ National
Octal Transparent, Three-State, Inverting		
FCT	CD54FCT533	† Harris
	CD54FCT563	† Harris
	CD74FCT533	Harris
	CD74FCT563	Harris
8-Bit, Transparent D-Type, Three-State (bus interface)		
BCT	SN74BCT29846	TI
9-Bit, Transparent D-Type, Three-State (bus interface)		
BCT	SN74BCT29843	TI
9-Bit Transparent, Three-State		
FCT	CD54FCT843A	† Harris
	CD74FCT843A	Harris
9-Bit Transparent, Three-State, Inverting		
FCT	CD54FCT844A	† Harris
	CD74FCT844A	Harris
10-Bit, Transparent D-Type, Three-State (bus interface)		
BCT	SN74BCT29841	TI
10-Bit Transparent, Three-State		
FCT	CD54FCT841A	† Harris
	CD74FCT841A	Harris
10-Bit Transparent, Three-State, Inverting		
FCT	CD54FCT842A	† Harris
	CD74FCT842A	Harris
10-Bit Transparent Latch; 3-State		
FCT	FCT841A	Harris
10-Bit Transparent Latch; 3-State; Inverting		
FCT	FCT842A	Harris
9-Bit Transparent Latch; 3-State		
FCT	FCT843A	Harris
9-Bit Transparent Latch; 3-State; Inverting		
FCT	FCT844A	Harris
Shift Registers		
8-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)		
BCT	SN74BCT29825	TI
8-Bit Universal Shift/Storage, Three-State		
BCT	SN54BCT299	† TI
	SN54BCT323	† TI
	SN74BCT299	TI
	SN74BCT323	TI
9-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)		
BCT	SN74BCT29823	TI
10-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)		
BCT	SN74BCT29821	TI
	SN74BCT29822	TI
Transceivers, Bus		
Octal Bus Transceiver		
BC	TD74BC620	Toshiba
	TD74BC623	Toshiba
		(Continued)
Octal Bus Transceiver		
BC		(Cont'd)
	TD74BC640	Toshiba
	TD74BC643	Toshiba
	TD74BC645	Toshiba
9-Bit Latchable Transceiver with Parity		
BCT	SN74BCT899	TI
25 Ohm Registered Octal Bus Transceiver		
BCT	SN74BCT25646	TI
	SN74BCT25648	TI
	SN74BCT25651	TI
	SN74BCT25652	TI
Miscellaneous		
Bus Receivers, Octal, Three-State		
BCT	SN54BCT643	† TI
Logic Array with Phase-Lock Loop		
	Q24008	◊°† AMCC
	Q800B	AMCC
Octal Bus Transceiver, Non-Inverting, Three-State		
BCT	SN74BCT643	TI
PLL/Prescaler, Single-Chip		
	MB1501	**◊ Fujitsu (3409)**
	MB1502	◊ Fujitsu
	MB1504	◊ Fujitsu
	MB1505	◊ Fujitsu
	MB1507	**◊ Fujitsu (3410)**
	MB1508	◊ Fujitsu
	MB1509	◊ Fujitsu
	MB1511	◊ Fujitsu
Test Device with Octal Bus Driver		
BCT	SN74BCT8244	TI
Test Device with Octal Bus Transceiver		
BCT	SN74BCT8245	TI
Test Device with Octal D-Type Flip-Flop		
BCT	SN74BCT8374	TI
Test Device with Octal D-Type Latch		
BCT	SN74BCT8383	TI
Octal Buffer/Line Driver, Inverting, Three-State		
BCT	SN74BCT540	TI
Octal Buffer/Line Driver, Three-State		
BCT	SN54BCT2240	TI
	SN54BCT2244	† TI
	SN74BCT2240	† TI
	SN74BCT2241	TI
	SN74BCT2244	TI
Octal Bus Buffer, Three-State, Inverting		
BC	MC74BC231	Motorola
	MC74BC240	Motorola
Octal Bus Buffer, Three-State, Inverting and Non-Inverting		
BC	MC74BC230	Motorola
Octal Bus Buffer, Three-State, Non-Inverting		
BC	MC74BC241	Motorola
	MC74BC244	Motorola
Octal Bus Transceiver, Inverting, Three-State		
BCT	SN74BCT640	TI
	SN74BCT642	TI
Octal Bus Transceiver, Inverting, Three-State (A- and B-port has 25-ohm line driver output)		
BCT	SN54BCT25622	† TI
	SN54BCT25642	† TI
	SN74BCT25622	TI
	SN74BCT25642	TI
Octal Bus Transceiver, Inverting, Three-State (A-port has 25-ohm line driver output)		
BCT	SN54BCT25640	† TI
	SN74BCT25640	TI
Octal Bus Transceiver, Latched, Three-State		
BCT	SN54BCT956	† TI
	SN54BCT957	† TI
	SN54BCT958	† TI
		(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—BiCMOS (Cont'd)

Function	Device	Source	Line
Miscellaneous (Cont'd)			
Octal Bus Transceiver, Latched, Three-State			
BCT		(Cont'd)	
	SN54BCT959	† TI	
	SN74BCT956	TI	
	SN74BCT957	TI	
	SN74BCT958	TI	
	SN74BCT959	TI	5
Octal Bus Transceiver, Non-Inverting, Three-State (A- and B-port has 25-ohm line driver output)			
BCT	SN54BCT25621	† TI	
	SN54BCT25623	† TI	
	SN54BCT25641	† TI	
Octal Bus Transceiver, Non-Inverting, Three-State			
BCT	SN54BCT657	† TI	
Octal Bus Transceiver, Non-Inverting, Three-State (A- and B-port has 25-ohm line driver output)			
BCT	SN74BCT25621	TI	10
	SN74BCT25623	TI	
	SN74BCT25641	TI	
Octal Bus Transceiver (with 8-bit parity generator/checker)			
BCT	SN74BCT657	TI	
Octal Bus Transceiver, Three-State (A-port has 25-ohm line driver output)			
BCT	SN54BCT25245	† TI	
	SN54BCT25620	† TI	15
	SN74BCT25620	TI	
Octal Bus Transceiver, Three-State, Inverting			
BC	MC74BC620	Motorola	
	MC74BC640	Motorola	
Octal Bus Transceiver, Three-State, Inverting/Non-Inverting			
BC	MC74BC643	Motorola	
Octal Bus Transceiver, Three-State, Non-Inverting			
BC	MC74BC623	Motorola	20
	MC74BC645	Motorola	
Octal Bus Transceivers, Three-State (A-port has 25-ohm line driver output)			
BCT	SN74BCT25245	TI	

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DIGITAL–ECL

Function	Device	Source	Line
10K Series			
Arithmetic Functions			
Barrel Shifter, 16-Bit Parallel/Serial with 10K Compatible Outputs.	TIE10H897	TI	
Fixed Point Multiplier (16x16)	B3018A	Bipolar	
Floating Point ALU (SPARC processor family)	B5120	Bipolar	
Floating Point ALU (32/64-bit)	B3120A	Bipolar	
Floating Point Multiplier/Divider (32/64-bit)	B3110A	Bipolar	5
Floating Point Multiplier (SPARC processor family)	B5110	Bipolar	
Look-Ahead Carry Circuit	MC10H179	Motorola	
	MC10179	Motorola	
	MC10579	◊† Motorola	
	10179	Signetics	10
Microsequencer with TTL Compatible Outputs	TIET890A	TI	
Microsequencer with 10K Compatible Outputs	TIE10H890	TI	
Multiplier (12x12)	MC10L951	Motorola	
	MC10951	Motorola	
Dual High Speed Adder/Subtractor	MC10H180	Motorola	15
	MC10180	Motorola	
	MC10580	◊† Motorola	
	10180	Signetics	
2-Bit Logic Unit/Function Generator	MC10182	Motorola	
	MC10582	◊† Motorola	20
2-Bit Multiplier, High Speed	MC10287	Motorola	
	MC10687	Motorola	
4-Bit ALU Slice (microprocessor)	MC10800	Motorola	
4-Bit Logic Unit/Function Generator	MC10H181	Motorola	
	MC10181	Motorola	25
	MC10581	◊† Motorola	
	10181	Signetics	
5-Bit Comparator	MC10H166	Motorola	
	MC10166	Motorola	
8-Bit ALU with Parity	MC10900	Motorola	30
8-Bit Processor Slices with TTL Compatible Outputs	TIET888	TI	
8-Bit Processor Slices with 10K Compatible Outputs	TIE10H888	TI	
8-Bit BCD/Binary ALU	MC10902	Motorola	
8x8-Bit Expandable Multiplier	MC10901	Motorola	
9-Bit Magnitude Comparator	**SY10E166**	**Synergy (3668)**	35
12-Bit Parity Generator/Checker	**SY10E160**	**Synergy (3668)**	
Buffers			
Hex	MC10H188	Motorola	
	MC10188	Motorola	
	10188	Signetics	
9-Bit	**SY10E122**	**Synergy (3668)**	40
Inverters			
Hex	MC10H189	Motorola	
	MC10189	Motorola	
	10189	Signetics	
Hex Inverter/Buffer	MC10195	Motorola	
	MC10595	◊† Motorola	45
Bus-Oriented Circuits			
3-Bit Registered Bus Transceiver	**SY10E336**	**Synergy (3668)**	
3-Bit Scannable Registered Bus Transceiver	**SY10E337**	**Synergy (3668)**	
Counters, Binary			
4 Stage Ripple Counter with Reset	**MB1814**	**Fujitsu (3412)**	
4-Bit	MC10H016	Motorola	
	MC10154	Motorola	50
	MC10178	Motorola	
	MC10578	◊† Motorola	
4-Bit Universal	MC10H136	Motorola	
	MC10136	◊ Motorola	
	10136	Signetics	55
8-Bit Synchronous Count Up	**SY10E016**	**Synergy (3668)**	
Counters, Decade			
Bi-Quinary	MC10138	Motorola	
	MC10538	◊† Motorola	
Universal	MC10137	Motorola	
	10137	Signetics	60
Decoders			
Binary to 1–8 (high)	MC10H162	Motorola	
	MC10162	Motorola	
	MC10562	† Motorola	
	10162	Signetics	
Binary to 1–8 (low)	MC10H161	Motorola	65
	MC10161	Motorola	
	MC10561	† Motorola	
	10161	Signetics	
Dual Binary to 1–4 (high)	MC10H172	Motorola	
	MC10172	Motorola	70
	MC10572	◊† Motorola	
	10172	Signetics	
Dual Binary to 1–4 (low)	MC10H171	Motorola	
	MC10171	Motorola	
	MC10571	◊† Motorola	75
	10171	Signetics	
Drivers			
Clock Driver, 1-to–9 with Dual Enable	MB16A75	Fujitsu	
ECL-to-TTL Octal Bus Driver, Inverting (open collector)	SN10KHT5538	TI	
ECL-to-TTL Octal Bus Driver, Inverting (three-state)	SN10KHT5540	TI	
ECL-to-TTL Octal Bus Driver (open collector)	SN10KHT5539	TI	80
ECL-to-TTL Octal Bus Driver (three-state)	SN10KHT5541	TI	
TTL-to-ECL Octal Bus Driver, Inverting (output enable)	SN10KHT5542	TI	
TTL-to-TTL Octal Bus Driver (output enable)	SN10KHT5543	TI	
Dual TTL/MST Bus	MC10128	Motorola	
Triple 3-Input Bus	MC10H423	Motorola	85
Triple 4–3 Input Bus	MC10H123	Motorola	
	MC10123	Motorola	
	10123	Signetics	
Quad Bus	MC10192	Motorola	
	10192	Signetics	90
Quad Driver with Enable	**SY10E112**	**Synergy (3668)**	
1:9 Differential Clock Driver	**SY10E111**	**Synergy (3668)**	
Flip-Flops, D-Type			
D Flip-Flop wtih Set/Reset	**MB1810**	**Fujitsu (3412)**	
ECL-to-TTL Octal D-Type Flip-Flop, Inverting (three-state)	SN10KHT5576	TI	
ECL-to-TTL Octal D-Type Flip-Flop (three-state)	SN10KHT5574	TI	95
TTL-to-ECL Octal D-Type Flip-Flop, Inverting (output enable)	SN10KHT5580	TI	
TTL-to-ECL Octal D-Type Flip-Flop (output enable)b	SN10KHT5578	TI	
Dual D Flip-Flop with Set/Reset	**MB1811**	**Fujitsu (3412)**	
Dual Master-Slave	MC10H131	Motorola	
	MC10131	Motorola	100
	MC10231	Motorola	
	MC10531	◊† Motorola	
	MC10631	◊† Motorola	
	10131	Signetics	
	10231	Signetics	105
Dual Toggle Flip-Flop with Reset	**MB1813**	**Fujitsu (3412)**	
Quad D Flip-Flop with Common Set/Reset	**MB1812**	**Fujitsu (3412)**	
Hex Master-Slave	MC10H176	Motorola	
	MC10176	Motorola	
	MC10576	◊† Motorola	110
	10176	Signetics	
Hex Master-Slave (with common reset)	MC10H186	Motorola	
	MC10186	Motorola	
	MC10586	◊† Motorola	
4-Bit D Flip-Flop	**SY10E131**	**Synergy (3668)**	115
4-Bit with Set/Reset	MB16A90	Fujitsu	
Flip-Flops, J-K Type			
Dual J-K Master-Slave	MC10H135	Motorola	
	MC10535	◊† Motorola	
Dual J–K- Master-Slave	MC10135	Motorola	
	10135	Signetics	120
Gates, AND			
Qunit 2-Input AND/NAND	**SY10E104**	**Synergy (3668)**	
Dual 4-Input	10108	Signetics	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—ECL (Cont'd)

10K Series

Gates, AND (Cont'd)

Function	Device	Source
Quad 2-Input (3 AND, 1 AND/NAND)		
	MC10H104	Motorola
	MC10104	Motorola
	MC10504	◊† Motorola
	10104	Signetics
Hex	MC10197	Motorola
	MC10597	◊† Motorola

Gates, OR

Function	Device	Source
Dual 3-Input 3-Output (line driver)		
	MC10H210	Motorola
	MC10110	Motorola
	MC10210	Motorola
	MC10610	◊† Motorola
	10110	Signetics
Quad 2-Input (3 OR, 1 OR/NOR)		
	MC10H103	Motorola
	MC10103	Motorola
	MC10503	◊† Motorola
	10103	Signetics

Gates, NOR

Function	Device	Source
Dual 3-Input 3-Output (line driver)		
	MC10H211	Motorola
	MC10111	Motorola
	MC10211	Motorola
	MC10611	◊† Motorola
	10111	Signetics
	10210	Signetics
	10211	Signetics
Dual 3-Input 3-Output (1 OR, 2 NOR) (line driver)		
	MC10212	Motorola
	MC10612	◊† Motorola
Triple 4–3–3 Input		
	MC10H106	Motorola
	MC10106	Motorola
	MC10506	◊† Motorola
	10106	Signetics
Quad 2-Input (3 NOR, 1 OR/NOR)		
	MC10H102	Motorola
	MC10102	Motorola
	MC10502	◊† Motorola
	10102	Signetics
Quad 3-Input (one input common)		
	MC10H100	Motorola
	MC10100	Motorola
	MC10500	◊† Motorola
	10100	Signetics

Gates, OR/NOR

Function	Device	Source	Line
Dual 2-Input	**MB1801**	**Fujitsu**	**(3412)**
Dual 2-Input, 2-Output	**MB1803**	**Fujitsu**	**(3412)**
Dual 4–5 Input			
	MC10H109	Motorola	
	MC10109	Motorola	
	MC10509	◊† Motorola	
	10109	Signetics	
Triple 2–3–2 Input			
	MC10H105	Motorola	
	MC10105	Motorola	
	MC10505	◊† Motorola	
	10105	Signetics	
Quad 2-Input (one input common)			
	MC10H101	Motorola	
	MC10101	Motorola	
	MC10501	◊† Motorola	
	10101	Signetics	
Quad 4-Input	**SY10E101**	**Synergy**	**(3668)**

Gates, OR-AND

Function	Device	Source
Dual 2-Wide 3-Input		
	MC10H118	Motorola
	MC10118	Motorola
	MC10518	◊† Motorola
	10118	Signetics
4-Wide 4–3–3–3 Input		
	MC10H119	Motorola
	MC10119	Motorola
	MC10519	◊† Motorola
	10119	Signetics

Gates, OR-AND/OR-AND Invert

Function	Device	Source
Dual 2-Wide 2–3 Input		
	MC10H117	Motorola
	MC10117	Motorola
	MC10517	◊† Motorola
	10117	Signetics
4-Wide 3-Input		
	MC10H121	Motorola
	MC10121	Motorola
	MC10521	† Motorola
	10121	Signetics

Gates, Exclusive OR

Function	Device	Source
Quad	MC10H113	Motorola
	MC10113	Motorola
	MC10513	◊† Motorola
	10113	Signetics
1–8 or 2–4 Input		
	MC10H304	Motorola
2–4 or 1–6/1–4 Input		
	MC10H302	Motorola
2–4/1–2 Input		
	MC10H301	Motorola
2–5 Input	MC10H303	Motorola

Gates, Exclusive OR/NOR

Function	Device	Source	Line
Quint 2-Input	**SY10E107**	**Synergy**	**(3668)**
Dual 2-Input	**MB1802**	**Fujitsu**	**(3412)**
Triple 2-Input	MC10H107	Motorola	
	MC10107	Motorola	
	MC10507	◊† Motorola	
	10107	Signetics	

Latches

Function	Device	Source
ECL-to-TTL Octal D-Type Latch, Inverting (three-state)		
	SN10KHT5575	TI
ECL-to-TTL Octal D-Type Latch (three-state)		
	SN10KHT5573	TI
Quint	MC10H175	Motorola
	MC10175	Motorola
	MC10575	◊† Motorola
	10175	Signetics
TTL-to-ECL Octal D-Type Latch, Inverting (output enable)	SN10KHT5579	TI
TTL-to-ECL Octal D-Type Latch (output enable)		
	SN10KHT5577	TI
Dual D Clocked		
	MC10H130	Motorola
	MC10130	Motorola
	MC10530	◊† Motorola
	10130	Signetics
Dual 2 to 1 Multiplexer-Latch		
	MC10134	Motorola
	10134	Signetics
Dual 2 to 1 Multiplexer-Latch, Common Reset		
	MC10132	Motorola
	10132	Signetics
Quad, Common Clock, Separate Output Enable		
	MC10168	Motorola
	MC10568	◊† Motorola
Quad D, Gated Output		
	MC10133	Motorola
	MC10153	Motorola
	MC10533	◊† Motorola
	MC10553	† Motorola
	10133	Signetics
Quad 2-Input Multiplexer-Latch		
	MC10H173	Motorola
	MC10173	Motorola
	10173	Signetics
3-Bit 4:1 Multiplexer		
	SY10E156	**Synergy**	**(3668)**
6-Bit	**SY10E150**	**Synergy**	**(3668)**

Memories

Function	Device	Source
CAM (16-Bit content addressable)		
	MC10H155	Motorola
PROM (32x8)	MCM10139	Motorola
PROM (256x4)		
	MCM10149	Motorola
	10149	Signetics
RAM (8x2) Simultaneous Read-Write		
	MCM10143	Motorola
RAM (16x4)	MCM10145	Motorola
	MC10H145	Motorola
RAM (128x1)	MCM10147	Motorola
RAM (256x1)	MCM10144	Motorola
	MCM10152	Motorola
RAM (256x4)	MBM10422A-5	Fujitsu
	MBM10422A-7	Fujitsu
	MBM10423LL-6	Fujitsu
RAM (256x16)	MB7700H	Fujitsu
RAM (1024x1)	MCM10146	Motorola
	MCM10415	Motorola
	F10415	◊ National
RAM (1024x4)	MBM10470A-5	Fujitsu
RAM, 1024x4 (ECL bipolar, 15 ns)		
	AM10474-15	AMD
RAM, 1024x4 (ECL bipolar, 25 ns)		
	AM10474-25	AMD
RAM (1024x16)		
	MB7750-10	Fujitsu
RAM (4096x1)	MBM10470A-10	Fujitsu
	MBM10470A-15	Fujitsu
	MBM10470A-20	Fujitsu
	MBM10470A-7	Fujitsu
RAM (4096x4)	MBM10484-15	◊ Fujitsu
	MBM10484A-10	◊ Fujitsu
	MBM10484A-8	◊ Fujitsu
RAM, 16384x1 (ECL bipolar, 15 ns)		
	AM10480-15	AMD
RAM, 16384x1 (ECL bipolar, 25 ns)		
	AM10480-25	AMD
1024x4 RAM (5 nsF)		
	μPB10474A-5	NEC
1024x4 RAM (6 nsF)		
	μPB10474A-6	NEC

Multiplexers (Digital)

Function	Device	Source
Demultiplexer, 1:12 (up to 1.25 GHz)		
	VS8002	Vitesse
Demultiplexer, 1:4 (up to 2.5 GHz)		
	VS8005	Vitesse
Demultiplexer, 1:8 (with SONET frame recovery, up to 1.25 GHz)	VS8012	Vitesse

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—ECL (Cont'd)

10K Series Multiplexers (Digital) (Cont'd)

Function	Device	Source
Multiplexer/Demultiplexer, 8-Bit (with SONET frame recovery, up to 1.25 GHz)	VS8010	Vitesse
Multiplexer, 5-Bit 2-to-1 with Enable	MB16A80	Fujitsu
Multiplexer, 12:1 (up to 1.25 GHz)	VS8001	Vitesse
Multiplexer, 4:1 (up to 2.5 GHz)	VS8004	Vitesse
Multiplexer, 8:1 (up to 1.25 GHz)	VS8011	Vitesse
SONET Compatible, 8 bit Demultiplexer (2.5 GHz)	VS8022	◊‡ Vitesse
SONET Compatible, 8 bit Multiplexer (2.5 GHz)	VS8021	◊‡ Vitesse
Dual 4 to 1	MC10H174	Motorola
	MC10174	Motorola
	MC10574	◊† Motorola
	10174	Signetics
Dual 8-Input	**SY10E163**	**Synergy (3668)**
Quad 2 to 1 (inverting with enable)	MC10H159	Motorola
	MC10159	Motorola
	10159	Signetics
Quad 2 to 1 (non-inverting)	MC10H158	Motorola
	MC10158	Motorola
	MC10558	† Motorola
	10158	Signetics
1-to-4 Demultiplexer	**MB1822**	**Fujitsu (3412)**
3-Bit 4:1 Multiplexer	**SY10E171**	**Synergy (3668)**
3-Bit 4:1 Multiplexer/Latch	**SY10E256**	**Synergy (3668)**
4-to-1 Multiplexer	**MB1821**	**Fujitsu (3412)**
5-Bit 2:1 Multiplexer	**SY10E158**	**Synergy (3668)**
5-Bit 2:1 Multiplexer/Latch	**SY10E154**	**Synergy (3668)**
6-Bit 2:1 Multiplexer/Latch	**SY10E155**	**Synergy (3668)**
6-Bit 2:1 Multiplexer Register	**SY10E167**	**Synergy (3668)**
8 to 1	MC10H164	Motorola
	MC10164	Motorola
	MC10564	◊† Motorola
	10164	Signetics

Multivibrators

Function	Device	Source
Monostable	MC10198	Motorola

Shift Registers

Function	Device	Source
Register File, Five-Port (64x18)	B3210A	Bipolar
4-Bit Universal	MC10H141	Motorola
	MC10141	Motorola
	MC10541	◊† Motorola
	10141	Signetics
6-Bit D Register, Differential Data and Clock Inputs	**SY10E451**	**Synergy (3668)**
6-Bit D Register wtih Differential Data and Clock Inputs	MB16A92	Fujitsu
6-Bit with Reset	MB16A91	Fujitsu
8-Bit	**SY10E141**	**Synergy (3668)**
8-Bit Scannable Register	**SY10E241**	**Synergy (3668)**
8-Bit Universal with Reset	MB16A93	Fujitsu
9-Bit Hold Register	**SY10E143**	**Synergy (3668)**
9-Bit Parallel with Reset	MB16A96	Fujitsu
9-Bit Shift Register	**SY10E142**	**Synergy (3668)**
9-Bit with Reset	MB16A95	Fujitsu
16-Bit Video Shift Register	SLS6016	STC
	SLS6216	STC
	SLS6316	STC
	SLS6416	STC

Translators

Function	Device	Source
ECL-to-TTL Octal Bus Driver	SN10KHT5540	TI
	SN10KHT5541	TI
IBM Interface Line Driver/Receiver, Level Translator (ECL level to IBM level)	MB768	Fujitsu
Triple ECL to NMOS	MC10177	Motorola
Quad CMOS to MECL Translator	MC10H352	Motorola
Quad Differential Receiver/MST to ECL	MC10190	Motorola
	MC10590	◊† Motorola
Quad ECL to TTL	MC10H350	Motorola
Quad ECL to TTL (differential input)	MC10H125	Motorola
	MC10125	Motorola
	MC10525	◊† Motorola
	10125	Signetics
Quad ECL to TTL Translator	SLE5004	STC
Quad TTL/NMOS to MECL Translator	MC10H351	Motorola
Quad TTL to ECL	MC10H424	Motorola
Quad TTL to ECL OR/NOR	MC10H124	Motorola
	MC10124	Motorola
	MC10524	◊† Motorola
	10124	Signetics
Hex ECL to MST	MC10191	Motorola
	MC10591	◊† Motorola
Octal ECL to TTL	SLE5008	STC
Octal ECL-to-TTL Level Translator	MB766	Fujitsu
Octal TTL-to-ECL Level Translator with Stroke	MB767	Fujitsu
Octal 10KH ECL to TTL and TTL to 10KH ECL	BT501	Brooktree
9-Bit ECL to TTL	MC10H600	Motorola
	MC10H601	Motorola
9-Bit Latch/ECL to TTL	MC10H603	Motorola
9-Bit Latch/TTL to ECL	MC10H602	Motorola
10K ECL to TTL with Latch	DP8480	National
	DP8482	National

Miscellaneous

Function	Device	Source
Analog Mixer, Double Balanced	MC12002	Motorola
D-Type Flip-Flop (1 GHz)	SLG8001	STC
D-Type Flip-Flop (1.5GHz)	MB813A	Fujitsu
D-Type Flip-Flop (3GHz)	MB883	Fujitsu
Dealy Line Module, 5-Tap (70 to 350 ns)	ECLDL350	Technitrol
Decision Circuit	**MB1820**	**Fujitsu (3412)**
Delay Line Module, 5-Tap (10 to 50 ns)	ECLD050	Technitrol
Delay Line Module, 5-Tap (100 to 500 ns)	ECLDL500	Technitrol
Delay Line Module, 5-Tap (15 to 75 ns)	ECLD075	Technitrol
Delay Line Module, 5-Tap (20 to 100 ns)	ECLD100	Technitrol
Delay Line Module, 5-Tap (25 to 125 ns)	ECLD125	Technitrol
Delay Line Module, 5-Tap (30 to 150 ns)	ECLDL150	Technitrol
Delay Line Module, 5-Tap (40 to 200 ns)	ECLDL200	Technitrol
Delay Line Module, 5-Tap (50 to 250 ns)	ECLDL250	Technitrol
Delay Line Module, 5-Tap (60 to 300 ns)	ECLDL300	Technitrol
Delay Line Module, 5-Tap (80 to 400 ns)	ECLDL400	Technitrol
Delay Line Module, 5-Tap (90 to 450 ns)	ECLDL450	Technitrol
Delay Line Module,5-Tap (5 to 25 ns)	ECLD025	Technitrol
Demultiplexer, Two 4:1 (3 GHz)	MB886	Fujitsu
ECL Active Terminator- 6 pin SIP	S1011	AMCC
ECL Comparator, High Speed	NE5682	Signetics
ECL-to-Bus Level Transceiver/Receiver	MB565	Fujitsu
ECL-to-TTL Octal Bus Transceiver, Inverting (output enable)	SN10KHT5563	TI
ECL-to-TTL Octal Bus Transceiver (output enable)	SN10KHT5562	TI
ECL-to-TTL Octal Registered Bus Transceiver, Inverting (output enable)	SN10KHT5593	TI
	SN10KHT5648	TI
ECL-to-TTL Octal Registered Bus Transceiver, (output enable)	SN10KHT5592	TI
	SN10KHT5646	TI
ECL-to-TTL Octal Registered Transceiver, Inverting (output enable)	SN10KHT5591	TI
ECL-to-TTL Octal Registered Transceiver (output enable)	SN10KHT5590	TI
Error Detection/Correction Circuit	MC10163	Motorola
	MC10563	◊† Motorola
	MC10593	◊† Motorola
	MC10905	Motorola

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—ECL (Cont'd)

10K Series
Miscellaneous (Cont'd)

Function	Device	Source
Exclusive OR/NOR, Dual (1.5 GHz)	MB812A	Fujitsu
Exclusive OR/NOR, Dual (3GHz)	MB882	Fujitsu
Logic Array	Q20025	◊°† AMCC
	Q20045	◊°† AMCC
	Q20120	◊°† AMCC
Logic Array with Phase lock loop	Q208025	◊°† AMCC
Micro-Code Sequencer	MC10904	Motorola
Multiplexer, Four 2:1 (3 GHz)	MB885	Fujitsu
Programmable Delay Module (up to 10 ns)	ECLPG301	Technitrol
Programmable Delay Module (up to 17 ns)	ECLPG302	Technitrol
Programmable Delay Module (up to 24 ns)	ECLPG303	Technitrol
Programmable Delay Module (up to 31 ns)	ECLPG304	Technitrol
Programmable Delay Module (up to 38 ns)	ECLPG305	Technitrol
Programmable Delay Module (up to 45 ns)	ECLPG306	Technitrol
Programmable Delay Module (up to 52 ns)	ECLPG307	Technitrol
Programmable Delay Module (up to 59 ns)	ECLPG308	Technitrol
Programmable Delay Module (up to 66 ns)	ECLPG309	Technitrol
Programmable Delay Module (up to 73 ns)	ECLPG310	Technitrol
Programmable Delay Module (up to 108 ns)	ECLPG315	Technitrol
Programmable Delay Module (up to 143 ns)	ECLPG320	Technitrol
Programmable Delay Module (up to 178 ns)	ECLPG325	Technitrol
Programmable Delay Module (up to 213 ns)	ECLPG330	Technitrol
Programmable Delay Module (up to 248 ns)	ECLPG335	Technitrol
Programmable Delay Module (up to 283 ns)	ECLPG340	Technitrol
Programmable Delay Module (up to 318 ns)	ECLPG345	Technitrol
Programmable Delay Module (up to 353 ns)	ECLPG350	Technitrol
Pulse/Clock Generator	SLP7001	STC
Quint Differential Line Receiver	**SY10E116**	**Synergy (3668)**
T-Type Flip-Flop (1.5GHz)	MB814A	Fujitsu
T-Type Flip-Flop (3GHz)	MB884	Fujitsu
Single Chip Floating Point Processor	B2130	Bipolar
	B3130	Bipolar
	B4130	Bipolar
Dual Bus Driver/Receiver with 4-to-1 Output Multiplexers	MC10H332	Motorola
Dual Simultaneous Bus Transceiver	MC10594	◊† Motorola
Triple Differential Line Receiver	MC10H116	Motorola
	MC10114	Motorola
	MC10116	Motorola
	MC10216	Motorola
	MC10514	◊† Motorola
	MC10516	◊† Motorola
	MC10616	◊† Motorola
	10114	Signetics
	10116	Signetics
	10216	Signetics
Quad Bus Driver/Receiver with Transmit and Receiver Latches	MC10H334	Motorola
Quad Bus Driver/Receiver with 2-to-1 Output Multiplexers	MC10H330	Motorola
Quad Bus Receiver	MC10129	Motorola
	10129	Signetics
Quad Differential Line Receiver	MC10H115	Motorola
	MC10115	Motorola
	MC10515	◊† Motorola
	10115	Signetics
Octal 1–2 Bus Selector	SLM6008	STC
Two Modulus Prescaler, Divide by 20/21	MC12019	Motorola
2-Input OR/NOR, Dual (3GHz)	MB881	Fujitsu
2-Input, 4-Differential Output Clock Distributor	**MB1804**	**Fujitsu (3412)**
2–3–2 Input OR/NOR, Triple (1.5GHz)	MB811A	Fujitsu
4-Differential output Clock Distributor with Duty Control	**MB1806**	**Fujitsu (3412)**
4-Input OR/NOR, Dual (1.5 GHz)	MB810A	Fujitsu
6-Bit D-Register	**SY10E151**	**Synergy (3668)**
8-Bit Error Detection/Correction (EDAC)	**SY10E193**	**Synergy (3668)**
8-Input Priority Encoder	MC10H165	Motorola
	MC10165	Motorola
	MC10565	◊† Motorola
	10165	Signetics
9-Bit Parity Circuit (2 carry inputs)	MC10170	Motorola
12-Bit Parity Generator/Checker	MC10H160	Motorola
	MC10160	Motorola
	MC10560	† Motorola
	10160	Signetics

100K Series
Arithmetic Functions

Function	Device	Source
Barrel Shifter, 16-Bit Parallel/Serial with TTL Compatible Outputs.	TIET897	TI
Barrel Shifter, 16-Bit Parallel/Serial with 100K Compatible Outputs.	TIE100897	TI
Look Ahead Carry Circuit	F100179	National
	100179	Signetics
Multiplier (12x12)	MC100951	Motorola
Parity Checker/Generator, Dual	F100360	National
Parity Generator, Dual (with 8-bit comparator)	100160A	Signetics
Dual Parity Generator/Checker	**SY100S360**	**Synergy (3666)**
8-Bit Processor Slices with 100K Compatible Outputs	TIE100888	TI
9-Bit Comparator	F100166	◊ National
	100166	Signetics
	SY100S366	**Synergy (3666)**
9-Bit Magnitude Comparator	**SY100E166**	**Synergy (3668)**
12-Bit Parity Generator/Checker	**SY100E160**	**Synergy (3668)**

Buffers

Function	Device	Source
8-Bit, Low Power	F100352	National
9-Bit	F100122	◊ National
	100122	Signetics
	SY100E122	**Synergy (3668)**
	SY100S322	**Synergy (3666)**

Inverters

Function	Device	Source
9-Bit	F100121	National
9-Bit, Low Power	F100321	National

Bus-Oriented Circuits

Function	Device	Source
3-Bit Registered Bus Transceiver	**SY100E336**	**Synergy (3668)**
3-Bit Scannable Registered Bus Transceiver	**SY100E337**	**Synergy (3668)**

Counters

Function	Device	Source
Multipurpose Counting Register	F100136	◊ National
	100136	Signetics
4-Stage Counter/Shift Register	F100336	National
8-Bit Synchronous Count Up	**SY100E016**	**Synergy (3668)**

Decoders

Function	Device	Source
Priority Encoder, Universal	100165A	Signetics
Universal	F100170	National
	100170	Signetics
Universal Demultiplexer/Decoder	**SY100S370**	**Synergy (3666)**

Drivers

Function	Device	Source
Backplane	F100126	◊ National
	100126	Signetics
ECL-to-TTL Octal Bus Driver, Inverting (open-collector)	SN100KT5538	TI
ECL-to-TTL Octal Bus Driver, Inverting (three-state)	SN100KT5540	TI
ECL-to-TTL Octal Bus Driver (open-collector)	SN100KT5539	TI
ECL-to-TTL Octal Bus Driver (three-state)	SN100KT5541	TI
High Speed Line	F100113	◊ National
	100113	Signetics
TTL-to-ECL Octal Bus Driver, Inverting (output enable)	SN100KT5542	TI
TTL-to-ECL Octal Bus Driver (output enable)	SN100KT5543	TI

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—ECL (Cont'd)

100K Series Drivers (Cont'd)

Function	Device	Source
Quad	F100112	◊ National
	100112	Signetics
Quad Driver	**SY100S313**	**Synergy (3666)**
Quad Driver (low skew differential drivers)	F100115	National
Quad Driver with Enable	**SY100E112**	**Synergy (3668)**
Hex Bus	F100123	◊ National
	100123	Signetics
1:9 Differential Clock Driver	**SY100E111**	**Synergy (3668)**

Flip-Flops, D-Type

Function	Device	Source
ECL-to-TTL Octal D-Type Flip-Flop, Inverting (three-state)	SN100KT5576	TI
ECL-to-TTL Octal D-Type Flip-Flop (three-state)	SN100KT5574	TI
TTL-to-ECL Octal D-Type Flip-Flop, Inverting (output enable)	SN100KT5580	TI
TTL-to-ECL Octal D-Type Flip-Flop (output enable)	SN100KT5578	TI
Triple	F100131	◊ National
	100131	Signetics
Triple D Flip-Flop	**SY100S331**	**Synergy (3666)**
Triple D-Type Master/Slave	100231A	Signetics
Hex	F100151	◊ National
	100151	Signetics
Hex D Flip-Flop	**SY100S351**	**Synergy (3666)**
Hex, Low Power	F100351	National
4-Bit D Flip-Flop	**SY100E131**	**Synergy (3668)**

Flip-Flops, J-K Type

Function	Device	Source
Triple J-K Master-Slave	F100135	National

Gates, AND/NAND

Function	Device	Source
Quint 2-Input	F100304	National
	SY100E104	**Synergy (3668)**
	SY100S304	**Synergy (3666)**
Quintuple with Function Output	F100104	National

Gates, OR/NOR

Function	Device	Source
Quint 2-Input	F100102	◊ National
	F100302	National
	100102	Signetics
	SY100S302	**Synergy (3666)**
Triple 5-Input	F100101	◊ National
	F100301	National
	100101	Signetics
	SY100S301	**Synergy (3666)**
Quad 4-Input	**SY100E101**	**Synergy (3668)**

Gates, OR-AND/OR-AND Invert

Function	Device	Source
Triple	F100117	◊ National
	100117	Signetics
Triple 2-Wide OA/OAI	**SY100S317**	**Synergy (3666)**
5-Wide	F100118	◊ National
	100118	Signetics
5-Wide 5,4,4,4,2 OA/OAI	**SY100S318**	**Synergy (3666)**

Gates, Exclusive OR/NOR

Function	Device	Source
Quint	F100107	◊ National
	100107	Signetics
Quint 2-Input	F100307	National
	SY100E107	**Synergy (3668)**
	SY100S307	**Synergy (3666)**

Latches

Function	Device	Source
ECL-to-TTL Octal D-Type Latch, Inverting (three-state)	SN100KT5575	TI
ECL-to-TTL Octal D-Type Latch (three-state)	SN100KT5573	TI
Mask-Merge/Latch	**SY100S356**	**Synergy (3666)**
TTL-to-ECL Octal D-Type Latch, Inverting (output enable)	SN100KT5579	TI
TTL-to-ECL Octal D-Type Latch (output enable)	SN100KT5577	TI
Triple D	F100130	◊ National
Quad Multiplexer/Latch	**SY100S355**	**Synergy (3666)**
Hex D	F100150	◊ National
	100150	Signetics
Hex D-Type	**SY100S350**	**Synergy (3666)**
Hex D-Type Latch	F100350	National
6-Bit	**SY100E150**	**Synergy (3668)**
8-Bit, Low Power	F100343	National
8-Bit, Low Power with Cut-Off Drivers	F100344	National

Memories

Function	Device	Source
CAM (4x4)	F100142	◊ National
PROM (256x4)	100149	Signetics
RAM (16x4)	F100402	◊ National
RAM (16x4 register file)	F100145	◊ National
RAM (256x4)	MBM100422A-5	Fujitsu
	MBM100422A-7	Fujitsu
	F100422	◊ National
RAM (1024x4)	MBM100474A-10	Fujitsu
	MBM100474A-15	Fujitsu
	MBM100474A-5	Fujitsu
	MBM100474A-7	Fujitsu
RAM (4096x1)	MBM100470A-10	Fujitsu
	MBM100470A-15	Fujitsu
	MBM100470A-20	Fujitsu
	MBM100470A-7	Fujitsu
RAM (4096x4)	MBM100484-15	◊ Fujitsu
	MBM100484A-10	◊ Fujitsu
	MBM100484A-8	◊ Fujitsu
Register File (16x4)	10402	National
1024x4 RAM (5 nsF)	μPB100474A-5	NEC
1024x4 RAM (6 nsF)	μPB100474A-6	NEC

Multiplexers (Digital)

Function	Device	Source
Dual 8-Input	F100163	◊ National
	F100363	National
	100163	Signetics
	SY100E163	**Synergy (3668)**
Dual 8-Input Multiplexer	**SY100S363**	**Synergy (3666)**
Triple 4-Input	F100171	National
	100171	Signetics
Triple 4-Input Multiplexer with Enable	**SY100S371**	**Synergy (3666)**
Quad 2-Input with Latch	F100155	◊ National
	100155	Signetics
3-Bit 4:1	**SY100E171**	**Synergy (3668)**
3-Bit 4:1 Multiplexer/Latch	**SY100E156**	**Synergy (3668)**
	SY100E256	**Synergy (3668)**
5-Bit 2:1 Multiplexer	**SY100E158**	**Synergy (3668)**
5-Bit 2:1 Multiplexer/Latch	**SY100E154**	**Synergy (3668)**
6-Bit 2:1 Multiplexer/Latch	**SY100E155**	**Synergy (3668)**
6-Bit 2:1 Multiplexer Register	**SY100E167**	**Synergy (3668)**
16-Input	F100164	◊ National
	100164A	Signetics
16-Input Multiplexer	**SY100S364**	**Synergy (3666)**

Shift Registers

Function	Device	Source
Mask-Merge	F100156	◊ National
4-Stage Counter/Shift Register	**SY100S336**	**Synergy (3666)**
6-Bit D Register, Differential Data and Clock Inputs	**SY100E451**	**Synergy (3668)**
8-Bit	100141A	Signetics
	SY100E141	**Synergy (3668)**
	SY100S341	**Synergy (3666)**
8-Bit, Low Power	F100341	National
	F100353	National
8-Bit, Low Power with Cut-Off Drivers	F100354	National
8-Bit Scannable Register	**SY100E241**	**Synergy (3668)**
8-Bit Universal	F100141	◊ National
9-Bit Hold Register	**SY100E143**	**Synergy (3668)**
9-Bit Shift Register	**SY100E142**	**Synergy (3668)**

Translators

Function	Device	Source
ECL to TTL Bidirectional, 100K in/10K out	F100128	National
TTL–100K ECL	F100124	◊ National
Quad ECL/TTL Translating Transceiver with Registers	**100984**	**Signetics (3609)**
Hex ECL/TTL Translating Transceiver with Registers	**100982**	**Signetics (3609)**
Hex ECL-to-TTL Translator	F100325	National
	SY100S325	**Synergy (3666)**

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—ECL (Cont'd)

100K Series

Translators (Cont'd)

Function	Device	Source
Hex TTL-to-ECL Translator	F100324	National
	100124A	**Signetics (3608)**
	SY100S324	**Synergy (3666)**
Octal 100K ECL to TTL and TTL to 100K ECL	BT502	Brooktree
8-Bit Bidirectional ECL to TTL	F100128	National
9-Bit ECL to TTL	MC100H601	Motorola
9-Bit Latch/ECL to TTL	MC100H603	Motorola
9-Bit Latch/TTL to ECL	MC100H602	Motorola
9-Bit TTL to ECL	MC100H600	Motorola
100K ECL-TTL	F100125	◊ National
	100125	**Signetics (3608)**
100K ECL–10K ECL	F100175	National
100K-to–10K Translator w/Latches, 5-Bit	100175F	Signetics

Miscellaneous

Function	Device	Source
Delay Line Module, 8-Tap (1.2 to 5 ns)	EKLDL005	Technitrol
Delay Line Module, 8-Tap (1.2 to 8 ns)	EKLDL008	Technitrol
Delay Line Module, 8-Tap (10 to 80 ns)	EKLDL080	Technitrol
Delay Line Module, 8-Tap (12.5 to 100 ns)	EKLDL100	Technitrol
Delay Line Module, 8-Tap (15 to 120 ns)	EKLDL120	Technitrol
Delay Line Module, 8-Tap (2 to 16 ns)	EKLDL016	Technitrol
Delay Line Module, 8-Tap (20 to 160 ns)	EKLDL160	Technitrol
Delay Line Module, 8-Tap (25 to 200 ns)	EKLDL200	Technitrol
Delay Line Module, 8-Tap (4 to 25 ns)	EKLDL025	Technitrol
Delay Line Module, 8-Tap (4 to 32 ns)	EKLD032	Technitrol
Delay Line Module, 8-Tap (5 to 40 ns)	EKLDL040	Technitrol
Delay Line Module, 8-Tap (6 to 48 ns)	EKLDL048	Technitrol
Delay Line Module, 8-Tap (7 to 56 ns)	EKLDL056	Technitrol
Delay Line Module, 8-Tap (8 to 64 ns)	EKLDL064	Technitrol
Delay Line Module, 8-Tap (9 to 72 ns)	EKLDL072	Technitrol
ECL-to-TTL Octal Bus Transceiver, Inverting (output enable)	SN100KT5563	TI
ECL-to-TTL Octal Bus Transceiver (output enable)	SN100KT5562	TI
ECL-to-TTL Octal Registered Bus Transceiver, Inverting (output enable)	SN100KT5593	TI
	SN100KT5648	TI
ECL-to-TTL Octal Registered Bus Transceiver (output enable)	SN100KT5592	TI
	SN100KT5646	TI
ECL-to-TTL Octal Registered Transceiver, Inverting (output enable)	SN100KT5591	TI
ECL-to-TTL Octal Registered Transceiver (output enable)	SN100KT5590	TI
Line Receiver, Differential Inputs/Single-Ended Outputs	100114A	Signetics
Low Power Quad Driver	F100313	National
Microsequencer with 100K Compatible Outputs.	TIE100890	TI
Numerically Controlled Oscillator (300 MHz with 28-bit resolution)	**STEL2172**	**STEL (3663)**
Oscillator, 10 MHz	EKL0S010	Technitrol
Oscillator, 20 MHz	EKL0S020	Technitrol
Oscillator, 30 MHz	EKL0S030	Technitrol
Oscillator, 40 MHz	EKL0S040	Technitrol
Oscillator, 50 MHz	EKL0S050	Technitrol
Oscillator, 60 MHz	EKL0S060	Technitrol
Oscillator, 70 MHz	EKL0S070	Technitrol
Oscillator, 80 MHz	EKL0S080	Technitrol
Oscillator, 90 MHz	EKL0S090	Technitrol
Oscillator, 100 MHz	EKL0S100	Technitrol
Programmable Delay Line Module (0.1 to 3.5 ns)	EKLPGR10	Technitrol
Programmable Delay Line Module (0.25 to 5.75 ns)	EKLPGR25	Technitrol
Programmable Delay Line Module (0.5 to 9.5 ns)	EKLPGR50	Technitrol
Programmable Delay Line Module (1 to 17 ns)	EKLPG010	Technitrol
Programmable Delay Line Module (1.5 to 24.5 ns)	EKLPG015	Technitrol
Programmable Delay Line Module (2 to 32 ns)	EKLPG020	Technitrol
Programmable Delay Line Module (2.5 to 39.5 ns)	EKLPG025	Technitrol
Programmable Delay Line Module (3 to 47 ns)	EKLPG030	Technitrol
Programmable Delay Line Module (3.5 to 54.5 ns)	ELKPG035	Technitrol
Programmable Delay Line Module (4 to 62 ns)	EKLPG040	Technitrol
Programmable Delay Line Module (4.5 to 69.5 ns)	EKLPG045	Technitrol
Programmable Delay Line Module (5 to 77 ns)	EKLPG050	Technitrol
Programmable Delay Line Module (6 to 92 ns)	EKLPG060	Technitrol
Programmable Delay Line Module (7 to 107 ns)	EKLPG070	Technitrol
Programmable Delay Line Module (8 to 122 ns)	EKLPG080	Technitrol
Programmable Delay Line Module (9 to 137 ns)	EKLPG090	Technitrol
Programmable Delay Line Module (10 to 152 ns)	EKLPG100	Technitrol
Programmable Delay Line Module (40.75 to 13.25 ns)	EKLPGR75	Technitrol
Quint Differential Line Receiver	**SY100E116**	**Synergy (3668)**
	SY100S314	**Synergy (3666)**
Universal Priority Encoder	F100165	◊ National
	SY100S365	**Synergy (3666)**
Dual 9-Bit Parity Generator/Checker	F100160	◊ National
Quad Clock Driver, Low Skew	F100115	National
Quintuple Line Receiver	F100114	◊ National
Quintuple Line Transceiver	F100250	National
6-Bit D-Register	**SY100E151**	**Synergy (3668)**
8-Bit Error Detection/Correction (EDAC)	**SY100E193**	**Synergy (3668)**
9-Bit Transceiver, Three-State Bidirectional Lines	100790	Signetics
	100990	**Signetics (3610)**

101K Series

Arithmetic Functions

Function	Device	Source
Dual Parity Generator/Checker	**SY101S360**	**Synergy (3666)**
9-Bit Comparator	**SY101S366**	**Synergy (3666)**
9-Bit Magnitude Comparator	**SY101E166**	**Synergy (3668)**
12-Bit Parity Generator/Checker	**SY101E160**	**Synergy (3668)**

Buffers

Function	Device	Source
9-Bit	**SY101E122**	**Synergy (3668)**
	SY101S322	**Synergy (3666)**

Bus-Oriented Circuits

Function	Device	Source
3-Bit Registered Bus Transceiver	**SY101E336**	**Synergy (3668)**
3-Bit Scannable Registered Bus Transceiver	**SY101E337**	**Synergy (3668)**

Counters

Function	Device	Source
8-Bit Synchronous Count Up	**SY101E016**	**Synergy (3668)**

Decoders

Function	Device	Source
Universal Demultiplexer/Decoder	**SY101S370**	**Synergy (3666)**

Drivers

Function	Device	Source
Quad Driver	**SY101S313**	**Synergy (3666)**
Quad Driver with Enable	**SY101E112**	**Synergy (3668)**

Flip-Flops, D-Type

Function	Device	Source
Triple D Flip-Flop	**SY101S331**	**Synergy (3666)**
Hex D Flip-Flop	**SY101S351**	**Synergy (3666)**

Gates, AND/NAND

Function	Device	Source
Quint 2-Input	**SY101E104**	**Synergy (3668)**
	SY101S304	**Synergy (3666)**

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—ECL (Cont'd)

101K Series (Cont'd)

Gates, OR/NOR

Function	Device	Source	Line
Quint 2-Input	**SY101S302**	**Synergy**	**(3666)**
Triple 5-Input	**SY101S301**	**Synergy**	**(3666)**
Quad 4-Input	**SY101E101**	**Synergy**	**(3668)**

Gates, OR-AND/OR-AND Invert

Function	Device	Source	Line
Triple 2-Wide OA/OAI	**SY101S317**	**Synergy**	**(3666)**
5-Wide 5,4,4,4,2 OA/OAI	**SY101S318**	**Synergy**	**(3666)**

Gates, Exclusive OR/NOR

Function	Device	Source	Line
Quint 2-Input	**SY101E107**	**Synergy**	**(3668)**
	SY101S307	**Synergy**	**(3666)**

Latches

Function	Device	Source	Line
Mask-Merge/Latch	**SY101S356**	**Synergy**	**(3666)**
Quad Multiplexer/Latch	**SY101S355**	**Synergy**	**(3666)**
Hex D-Type	**SY101S350**	**Synergy**	**(3666)**
6-Bit	**SY101E150**	**Synergy**	**(3668)**

Multiplexers (Digital)

Function	Device	Source	Line
Dual 8-Input	**SY101E163**	**Synergy**	**(3668)**
Dual 8-Input Multiplexer	**SY101S363**	**Synergy**	**(3666)**
Triple 4-Input Multiplexer with Enable	**SY101S371**	**Synergy**	**(3666)**
3-Bit 4:1	**SY101E171**	**Synergy**	**(3668)**
3-Bit 4:1 Multiplexer/Latch	**SY101E156**	**Synergy**	**(3668)**
	SY101E256	**Synergy**	**(3668)**
16-Input Multiplexer	**SY101S364**	**Synergy**	**(3666)**

Shift Registers

Function	Device	Source	Line
4-Stage Counter/Shift Register	**SY101S336**	**Synergy**	**(3666)**
6-Bit D Register, Differential Data and Clock Inputs	**SY101E451**	**Synergy**	**(3668)**
8-Bit	**SY101E141**	**Synergy**	**(3668)**
	SY101S341	**Synergy**	**(3666)**
8-Bit Scannable	**SY101E241**	**Synergy**	**(3668)**

Translators

Function	Device	Source	Line
Hex ECL-to-TTL Translator	**SY101S325**	**Synergy**	**(3666)**
Hex TTL-to-ECL Translator	**SY101S324**	**Synergy**	**(3666)**

Miscellaneous

Function	Device	Source	Line
Quint Differential Line Receiver	**SY101S314**	**Synergy**	**(3666)**
Universal Priority Encoder	**SY101S365**	**Synergy**	**(3666)**
8-Bit Error Detection/Correction (EDAC)	**SY101E193**	**Synergy**	**(3668)**

III and Other Series

Counters

Function	Device	Source	Line
Bi-Quinary	MC1678	Motorola	
Divide by 4 Prescaler (1 GHz)	MC1697	Motorola	
	MC1699	Motorola	
Divide by 4 (1 GHz)	11C05C	National	
	11C05M	† National	
	SP8610	Plessey	
	SP8611A	Plessey	
	SP8611B	Plessey	
	SP8617B	Plessey	
Divide by 5/6 Prescaler, 650 MHz	11C91C	National	
	11C91M	† National	
Divide by 10/11 Prescaler, 650 MHz	11C90C	National	
	11C90M	† National	
	SP8680	Plessey	
Divide by 20 Prescaler	CA3232	Harris	
Binary	MC1654	Motorola	

Flip-Flops, D-Type

Function	Device	Source	Line
Master-Slave	MC1670	Motorola	
	11C70C	National	
	SP1670B	Plessey	
Master-Slave (UHF prescaler)	MC1690	Motorola	
	11C06C	National	

Flip-Flops, R-S Type

Function	Device	Source	Line
Dual, Clocked	MC1666	Motorola	

Gates, OR

Function	Device	Source	Line
Quad 2-Input	MC1664	Motorola	

Gates, NOR

Function	Device	Source	Line
Quad 2-Input	MC1662	Motorola	

Gates, OR/NOR

Function	Device	Source	Line
Dual 4-Input	MC1660	Motorola	
	SP16F60	Plessey	
	SP1660B	Plessey	
Dual 4–5 Input	MC10H209	Motorola	
	MC1688	Motorola	
	11C01C	National	

Gates, Exclusive OR

Function	Device	Source	Line
Triple 2-Input	MC1672	Motorola	

Gates, Exclusive NOR

Function	Device	Source	Line
Triple 2-Input	MC1674	Motorola	

Latches

Function	Device	Source	Line
Dual Clocked	MC1668	Motorola	

Multivibrators

Function	Device	Source	Line
Voltage Controlled	MC1658	Motorola	
	SP1658	Plessey	

Shift Registers

Function	Device	Source	Line
4-Bit	MC1694	Motorola	

Miscellaneous

Function	Device	Source	Line
Prescaler for Multiband Digital Tuning System	TD6109	Toshiba	
Voltage Controlled Oscillator	MC1648	◊ Motorola	
	MC1648M	◊† Motorola	
	SP1648	Plessey	
Dual Analog/Digital Comparator	MC1650	Motorola	
	MC1651	Motorola	
	SP1650B	Plessey	
Quad Line Receiver	MC1692	Motorola	
	SP1692B	Plessey	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—Gallium Arsenide

Function	Device	Source
Arithmetic Functions		
Carry Look-Ahead Generator (1.4 GHz)	10G101	GigaBit
Phase Accumulator, 32-Bit (1 GHz clock rate)	10G102	GigaBit
4-bit Adder (1.3 GHz)	10G100	GigaBit
Buffers		
Dual Fanout Buffer with 2:1 Multiplexer Inputs (1.6 GHz data rate)	10G010-2	GigaBit
	10G010-3	GigaBit
	10G010M-2	† GigaBit
	10G010M-3	† GigaBit
Dual, 1–4 Fanout Buffer (1.6 GHz)	10G011B	GigaBit
Counters, Binary		
Counter, Divider, 7-Stage, Divide by 2, 4—64 (3 GHz)	10G065	GigaBit
Divider, Divide by 5/6, 10/11, 20/21, 40/41 (2 GHz)	10G070	GigaBit
Divider, 2-Stage, Divide by 2, 4 (3 GHz)	10G060	GigaBit
Four-Stage Synchronous Programmable Counter (1.3 GHz clock rate)	10G061	GigaBit
Decoders		
Dual 2-Line to 4-Line Decoder/Demultiplexer and Single 3-Line to 8-Line Decoder/Demultiplexer (650 ps delay)	10G044	GigaBit
Drivers		
Dual Complementary Driver/Comparator (1.5 GHz data rate)	10G012B-3	GigaBit
Dual Complementary Driver/Comparator (1.75 GHz data rate)	10G012B	GigaBit
Flip-Flops, D-Type		
Dual Precision D-Type (1.8 GHz clock rate)	10G021A-3	GigaBit
Dual Precision D-Type (2.3 GHz clock rate)	10G021A	GigaBit
Dual Precision D-Type (2.7 GHz clock rate)	10G021A-2	GigaBit
Quad D-Type with Exclusive-OR Inputs (1.6 GHz data rate)	10G024-3	GigaBit
Quad D-Type with Exclusive-OR Inputs (1.9 GHz data rate)	10G024-2	GigaBit
Quad D-Type with 2:1 Mulptiplexer Inputs (1.6 GHz data rate)	10G023-3	GigaBit
Quad D-Type with 2:1 Multiplexer Inputs (1.9 GHz data rate)	10G023-2	GigaBit
Gates, AND/NAND		
AND-OR/AND-OR Invert Gate, Dual (1.4 GHz data rate)	10G003M	† GigaBit
AND-OR/AND-OR-Invert Gate, Dual (1.4 GHz data rate)	10G003	GigaBit
Gates, NOR		
Quad 2-Input (320 ps gate delay)	10G001	GigaBit
Quad 2-Input (390 ps gate delay)	10G001-4	GigaBit
Quad 3-Input (320 ps gate delay)	10G000A	GigaBit
Quad 3-Input (390 ps gate delay)	10G000A-4	GigaBit
Gates, Exclusive OR/NOR		
Quad 2-Input Exclusive-OR/Exclusive-NOR Gate (1.8 GHz data rate)	10G002M	† GigaBit
Multiplexers		
Time Division Demultiplexer (1.45 Gbps)	10G041A	GigaBit
Time Division Multiplexer (1.45 Gbps)	10G040A	GigaBit
Quad 2:1 Multiplexer (1.45 GHz data rate)	10G004-3	GigaBit
Quad 2:1 Multiplexer (1.8 GHz data rate)	10G004-2	GigaBit
Quad 4:1/Dual 8:1 Multiplexer (1.5 GHz data rate)	10G046	GigaBit
Shift Registers		
Octal Shift/Storage, PN Code Generator (1.5 GHz clock rate)	10G022	GigaBit
Miscellaneous		
Amplifier, Low Noise (1.2 to 1.6 GHz)	TQ9121	TriQuint
Amplifier, 1–8 GHz	TQ9111	TriQuint
Arrays, Diode, Schottky 14 Single, 1 full-wave rectifier	16G010	GigaBit
	16G011	GigaBit
Arrays, Transistor, Single-gate D-MESFETS, 9-Single, 1 dual	16G020	GigaBit
Arrays, Transistor, Dual-Gate D-MESFETS, 8 Single	16G021	GigaBit
Attenuator, 10dB variable	TQ9161	TriQuint
Laser Diode Driver (up to 3 Gb/s NRZ)	16G075	GigaBit
LED Driver (up to 1 Gb/s NRZ)	16G076	GigaBit
Line Receiver (3 GHz data rate)	TQ6331-M	TriQuint
MMIC Amplifier (0.5–3 GHz)	HMR10504	Harris
MMIC Amplifier (1–3 GHz)	HMR10505	Harris
MMIC Amplifier (6–18 GHz)	HMM11820	Harris
Monolithic Microwave Amplifier (2 to 6 GHz)	HMM10620	Harris
Pin Driver, Dual High-Speed (800 MHz)	16G061A	GigaBit
Pin/Line Driver (3 GHz data rate)	TQ6330-M	TriQuint
PLL Clock and Data Recovery Circuit (50 to 800 Mbit/s NRZ data rate)	16G041-H	GigaBit
Power Combiner, Active (1 to 10 GHz, provides in-phase signal combining and switching)	TQ9131	TriQuint
Power Divider (Active signal splitter)	TQ9141	TriQuint
Receiver, 1 Gb/s	GA9012	Gazelle
Switch, SPSD, Microwave	TQ9151	TriQuint
Transimpedance Amplifier (broad bandwidth, dc to 700 MHz)	16G071	GigaBit
Transimpedance Amplifier (1.9 GHz bw)	16G074	GigaBit
Transimpedance Amplifier (600 MHz bw)	16G072	GigaBit
Transmitter, 1 Gb/s	GA9011	Gazelle
Dual Complementary Driver/Comparator (1.75 GHz data rate)	10G012B	GigaBit
	10G013	GigaBit
Dual 9-bit Parity Generator and Checker, 8-bit Word Comparator (850 ps delay)	10G045	GigaBit
Quad 2-Input XOR/XNOR/Line Receiver (600 ps delay)	10G002	GigaBit
0.5–5 GHz MMIC Amplifier	HMR10502	Harris
1–5 GHz MMIC Amplifier	HMR10503	Harris
2–6 GHz Monolithic Microwave IC Amplifier	HMM10610	Harris
6–18 GHz MMIC Amplifier	HMM11810	Harris
64x64 Crosspoint Swich, ECL I/O Up to 200 M/s data rate, –2V supply	VS864FC	◊ Vitesse
512x8 Mask Programmable ROM (1.5 ns access time)	14GD048	GigaBit
	14GM048	GigaBit

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—HNIL/HTL

Function	Device	Source	Line
Arithmetic Functions			
4-Bit Comparator	343A/C	TeledyneS	
	343B/M	† TeledyneS	
Buffers/Inverters			
Hex	MC680	Motorola	
	MC690	Motorola	
	332A/C	TeledyneS	5
	332B/M	† TeledyneS	
Hex Open Collector	MC678	Motorola	
	MC681	Motorola	
	MC689	Motorola	
Hex Strobed	MC677	Motorola	10
	335A/C	TeledyneS	
Hex Strobed, Open Collector	334A/C	TeledyneS	
Counters, Binary			
Binary	MC685	Motorola	
	372A/C	TeledyneS	
	372B/M	† TeledyneS	15
Binary Up/Down	374A/C	TeledyneS	
Counters, Decade			
Decade	MC684	Motorola	
	371A/C	TeledyneS	
	371B/M	† TeledyneS	
Decade Up/Down	373A/C	† TeledyneS	20
	373B/M	† TeledyneS	
Decoders			
BCD to Decimal, Open Collector	381A/C	TeledyneS	
	381B/M	† TeledyneS	
Decoders/Drivers			
BCD to Decimal Decoder/Lamp Driver, Open Collector	380B/M	† TeledyneS	
BCD to Decimal (for gas discharge display tubes)	382A/C	TeledyneS	25
	382B/M	† TeledyneS	
BCD to Seven Segment	383A/C	TeledyneS	
	383B/M	† TeledyneS	
Quad 2-Input Power, Open Collector	302A/C	TeledyneS	
	302B/M	† TeledyneS	30
Drivers			
BCD to Decimal Decoder/Lamp Driver, Open Collector	380A/C	TeledyneS	
Dual 4-Input Line Driver, Expandable	MC662	Motorola	
Dual 5-Input Power NAND Driver	301A/C	TeledyneS	
	301B/M	† TeledyneS	
Flip-Flops, D-Type			
Quad	370A/C	TeledyneS	
	370B/M	† TeledyneS	35
Flip-Flops, J-K Type			
Master-Slave or Reset	311A/C	TeledyneS	
	311B/M	† TeledyneS	
Dual or Set-Reset	MC688	Motorola	
	312A/C	TeledyneS	40
	312B/M	† TeledyneS	
	313A/C	TeledyneS	
	313B/M	† TeledyneS	
Dual with Reset	MC663	Motorola	
Flip-Flops, R-S Type			
Master-Slave	MC664	Motorola	45
Gates, AND			
Dual 2-Input Interface Buffer	391	TeledyneS	
Dual 4-Input Interface Buffer	390	TeledyneS	
Gates, NAND			
Dual 2-Input Interface Buffer	392	TeledyneS	
Dual 4-Input	MC660	Motorola	
	MC661	Motorola	50
Dual 4-Input Interface Buffer	395	TeledyneS	
Dual 5-Input	322A/C	TeledyneS	
	322B/M	† TeledyneS	
Triple 3-Input	MC670	Motorola	
	MC671	Motorola	55
Quad 2-Input	MC668	Motorola	
	MC672	Motorola	
	303A/C	TeledyneS	
	303B/M	† TeledyneS	
	321A/C	TeledyneS	60
	321B/M	† TeledyneS	
	324A/C	TeledyneS	
	324B/M	† TeledyneS	
Quad 2-Input, Open Collector	323A/C	TeledyneS	
	323B/M	† TeledyneS	65
2,2,3,3-Input	325A/C	TeledyneS	
	325B/M	TeledyneS	
	326A/C	TeledyneS	
	326B/M	TeledyneS	
4, 3, 4-Input	304A/C	TeledyneS	70
	304B/M	† TeledyneS	
Gates, AND-OR-Invert			
Expandable	344A/C	TeledyneS	
Dual 2-Wide, 2-Input	MC673	Motorola	
	MC674	Motorola	
	341A/C	TeledyneS	75
	341B/M	† TeledyneS	
Gates, OR			
Dual 2-Input Interface Buffer	393	TeledyneS	
Gates, NOR			
Dual 2-Input Interface Buffer	394	TeledyneS	
Quad 2-Input	306A/C	TeledyneS	
Quad 2-Input, Open Collector	307A/C	TeledyneS	80
Gates, Exclusive OR			
Dual 2-Wide, 2-Input AND-OR-Invert, Expandable	MC683	Motorola	
Gates, Miscellaneous			
Dual 4-Input Expander (for 600 series)	MC669	Motorola	
Dual 5-Input Expander (for 300 series)	331A/C	TeledyneS	
	331B/M	† TeledyneS	
Hex Inverter/Gate (quad inverter, dual NAND)	333A/C	TeledyneS	85
	333B/M	† TeledyneS	
Latches			
Quad	MC682	Motorola	
Multiplexers (Digital)			
Dual 4-Bit	351A/C	TeledyneS	
8-Bit	350A/C	TeledyneS	
Multivibrators			
Dual Monostable	MC667	Motorola	90
	342A/C	TeledyneS	
	342B/M	† TeledyneS	
Dual Retriggerable Monostable	347A/C	TeledyneS	
	347B/M	† TeledyneS	
Shift Registers			
4-Bit Parallel-In Parallel-Out	MC686	Motorola	95
	375A/C	TeledyneS	
	375B/M	† TeledyneS	
Translators			
Dual High to Low Interface (HNL to DTL, TTL)	361A/C	TeledyneS	
	361B/M	† TeledyneS	
Dual Interface Element, (line driver, receiver, ECL to TTL, MOS to TTL, Schmitt trigger)	396AC	TeledyneS	100
Dual Low to High Interface (TTL to HNL)	362A/C	TeledyneS	
	362B/M	† TeledyneS	
Triple High to Low (HTL to TTL)	MC665	Motorola	
Triple Low to High (TTL to HTL)	MC666	Motorola	
Quad Low to High Interface (TTL to HNL)	363A/C	TeledyneS	105
	363B/M	† TeledyneS	
Miscellaneous			
Timer (see also linear-timers)	355A/C	TeledyneS	
Dual Pulse Stretcher	MC675	Motorola	
	349A/C	TeledyneS	
Quad Schmitt Trigger/Line Receiver	367A/C	TeledyneS	110
	367B/M	† TeledyneS	
Quad Schmitt Trigger/Line Receiver, Open Collector	368A/C	TeledyneS	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL

Arithmetic Functions

Function	Device	Source	Line
Adder/Subtractor Quad Serial			
TTL-F	54F385	† National	
	74F385	◊ National	
	74F385	Signetics	
TTL-LS	SN54LS385	† Motorola	
	SN74LS385	Motorola	5
	SN54LS385	◊† TI	
Adder, 4-Bit BCD			
TTL-S	N82S83	† Signetics	
AM, FM, PM Quadrature Output Direct Digital Signal Synthesizer, 16-bit, 20 MHz			
	TMC2340	TRWLSI	
	TMC2340-1	TRWLSI	
Arithmetic Logic/Multiplier, Floating Point Set/TTL(N)			
	WTL104A	Weitek	10
	WTL1064A	† Weitek	
	WTL1065A	† Weitek	
	WTL1164A	† Weitek	
	WTL1165A	† Weitek	
	WTL1264A	† Weitek	15
	WTL1265A	† Weitek	
Arithmetic Logic Unit, Fixed/Floating Point			
TTL(N)	WTL1033AC	Weitek	
	WTL1033AM	† Weitek	
Arithmetic Logic Unit, Floating Point			
TTL(N)	WTL1032A	† Weitek	
	WTL1032AC	Weitek	20
	WTL1032AM	† Weitek	
	WTL1033A	† Weitek	
Comparator, Address			
TTL-ALS	SN74ALS677A	TI	
	SN74ALS678	TI	
	SN74ALS679	TI	25
	SN74ALS680	TI	
Comparator, Registered			
TTL-F	54F524	† National	
	74F524	◊ National	
	74F524	Signetics	
Comparator, Dual 4-Bit Magnitude			
TTL	MC4021	Motorola	30
	MC4022	Motorola	
Comparator, 4-Bit Magnitude			
TTL	TD3502A	Toshiba	
Comparator, 4-Bit Magnitude, Separate A = B Output			
TTL	**GD74LS85**	**GoldStar (3439)**	
	HD74LS85	Hitachi	
	DM54LS85	† National	35
	DM7485	National	
	54LS85	† National	
	5485	† National	
	74LS85	◊ National	
	7485	National	40
	9324C	National	
	9324M	† National	
	DN74LS85	◊ Panasonic	
	N9324	Signetics	
	SN54LS85	◊† TI	45
TTL-S	**GD74S85**	**GoldStar (3439)**	
Comparator, 4-Bit Magnitude, Separate A = B Output			
TTL	SN54LS85	† Motorola	
	SN74LS85	Motorola	
	DM5485	† National	
	DM74LS85	National	50
	54LS85	† Signetics	
	5485	† Signetics	
	74LS85	Signetics	
	7485	Signetics	
	SN5485	† TI	55
	SN74LS85	TI	
	SN7485	TI	
TTL-F	74F85	Signetics	
TTL-S	54S85	† Signetics	
		(Continued)	

Function	Device	Source	Line
Comparator, 4-Bit Magnitude, Separate A = B Output (Cont'd)			
TTL-S	74S85	Signetics	60
	SN54S85	† TI	
	SN74S85	TI	
Comparator, 6-Bit Identity			
TTL	DM7160	† National	
	DM8160	National	
TTL-ALS	SN74ALS29806	TI	65
Comparator, 6-Bit, Unified Bus, Active Pull Up			
TTL	DM8131	National	
Comparator, 6-Bit, Unified Bus, Open Collector			
TTL	DM7136	† National	
	DM8136	National	
Comparator, 8-Bit			
TTL-ALS	DM74ALS520	National	
	DM74ALS521	National	70
	DM74ALS522	National	
	SN54ALS520	† TI	
	SN74ALS520	TI	
	SN74ALS521	TI	
	SN74ALS522	TI	75
TTL-F	MC54F521	Motorola	
	MC74F521	Motorola	
	54F521	† National	
	74F521	◊ National	
	54F521	† Signetics	80
	74F521	Signetics	
	SN54F520	◊† TI	
	SN54F521	◊† TI	
	SN74F520	◊ TI	
	SN74F521	◊ TI	85
TTL-LS	AM25LS2521C	AMD	
	AM25LS2521M	† AMD	
Comparator, 8-Bit Identity, Fuse Programmable plus 4-Bit Comparator			
TTL-ALS	SN74ALS527	TI	
Comparator, 8-Bit Magnitude Open Collector			
TTL-ALS	DM74ALS518	National	
	DM74ALS519	National	90
	DM74ALS689	National	
	SN74ALS518	TI	
	SN74ALS519	TI	
	SN74ALS689	TI	
TTL-F	SN54F519	◊† TI	95
	SN74F518	◊ TI	
	SN74F519	◊ TI	
TTL-LS	SN74LS683	Motorola	
	SN74LS685	Motorola	
	SN74LS687	Motorola	100
	SN74LS689	Motorola	
	SN54LS685	◊† TI	
Comparator, 8-Bit Magnitude Totem Pole			
TTL-LS	**GD74LS688**	**GoldStar (3439)**	
Comparator, 8-Bit Magnitude Totem-Pole			
TTL-ALS	SN54ALS688	† TI	
	SN74ALS688	TI	105
TTL-AS	SN54AS885	† TI	
	SN74AS885	TI	
TTL-LS	SN74LS682	Motorola	
	SN74LS684	Motorola	
	SN74LS686	Motorola	110
	SN74LS688	Motorola	
	SN54LS682	◊† TI	
	SN54LS684	◊† TI	
	SN54LS688	◊† TI	
	SN74LS682	TI	115
	SN74LS684	TI	
	SN74LS688	TI	
Comparator, 9-Bit Identity			
TTL-ALS	SN74ALS29809	TI	

Function	Device	Source	Line
Comparator, 10-Bit Identity			
TTL	DM7130	† National	
	DM8130	National	120
Comparator, 12 Bit			
	SE5105A	Signetics	
Comparator, 12-Bit			
	SA5105A	Signetics	
Comparator, 8-Bit Magnitude Open Collector			
TTL-F	SN54F518	◊† TI	
Cycle Redundancy Check (CRC) Generator/Checker			
TTL-F	54F401	† National	
	74F401	◊ National	125
Digital Anti-aliasins (half-band or low pass) Filter, 55 Pre-loaded Coefficients, 12x12-bits, 40 MHz			
	TMC2242-1	TRWLSI	
Digital Anti-aliasins (half-band or low-pass) Filter, 55 Pre-loaded Coefficients, 12x12-bits, 30 MHz			
	TMC2242	TRWLSI	
Error Detection and Correction Circuit, 32-Bit			
TTL-ALS	SN54ALS632A	◊† TI	
Fixed Point Multiplier/Accumulator (16x16)			
	B2011A	Bipolar	
Floating Point ALU (32/64-bit)			
	B2120A	Bipolar	130
Floating Point Multiplier/Divider (32/64-bit)			
	B2110A	Bipolar	
Floating Point, Registered ALU, 22-bit, 8.3 MHz			
	TDC1033	‡ TRWLSI	
Full Adder			
TTL	**ML5480**	**† Lansdale (3514)**	
	ML7480	**Lansdale (3514)**	
Full Adder, BCD with Fast Carry			
	54F583	† National	135
	74F583	◊ National	
	74F583	Signetics	
Full Adder, Dual			
TTL-LS	SN74LS183	Motorola	
	SN54LS183	◊† TI	
Logic Sequencer			
TTL-S	TIB82S105B	TI	140
Logic Unit/Function Generator			
TTL	DM54181	† National	
	54181	† Signetics	
TTL-AS	DM54AS881B	† National	
	DM74AS181B	National	
	DM74AS881B	National	145
	SN54AS181B	† TI	
	SN74AS1181	TI	
	SN74AS181B	TI	
	SN74AS881A	TI	
TTL-F	MC54F181	† Motorola	150
	MC54F381	† Motorola	
	MC54F382	† Motorola	
	MC74F181	Motorola	
	MC74F381	Motorola	
	MC74F382	Motorola	155
	54F181	◊† National	
	54F381	† National	
	54F382	† National	
	74F181	◊ National	
	74F381	◊ National	160
	74F382	◊ National	
	54F181	† Signetics	
	74F181	Signetics	
	74F381	Signetics	
	74F382	Signetics	165
	74F881	Signetics	
	SN54F381	† TI	
	SN54F382	† TI	
	SN74F381	TI	
	SN74F382	TI	170
TTL-LS	HD74LS181	Hitachi	
	SN54LS181	† Motorola	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Arithmetic Functions (Cont'd)

Function	Device	Source
Logic Unit/Function Generator		
TTL-LS		(Cont'd)
	SN74LS181	Motorola
	54LS181	† National
	74LS181	◊ National
	74LS181	SGS-Thomson
	54LS181	† Signetics
	SN54LS181	◊† TI
	SN54LS381A	◊† TI
	SN54LS382A	◊† TI
	SN74LS181	TI
	SN74LS381A	TI
	SN74LS382A	TI
TTL-S	54S181	† Signetics
	74S181	Signetics
	SN54S181	† TI
	SN54S381	† TI
	SN74S181	TI
	SN74S381	TI
Look-Ahead Carry Generator		
TTL	AM2902AC	AMD
	AM2902AM	† AMD
	MC74182	Motorola
TTL-AS	DM74AS182	National
	DM74AS264	National
	DM74AS282	National
	SN74AS182	TI
	SN74AS264	TI
	SN74AS282	TI
	SN74AS882A	TI
TTL-F	MC54F182	† Motorola
	MC74F182	Motorola
	54F182	◊† National
	74F182	◊ National
	74F182	Signetics
	74F882	Signetics
TTL-LS	SN54LS182	† Motorola
	SN74LS182	Motorola
TTL-S	DM74S182	National
	54S182	† Signetics
	SN54S182	† TI
	SN74S182	TI
Look-Ahead Carry Generator for ALU		
TTL	**ML54182**	**† Lansdale (3514)**
	ML74182	**Lansdale (3514)**
Look-Ahead Carry Generator, 32-Bit		
TTL-AS	SN54AS882A	◊† TI
Maginitude Comparator, 4-bit		
TTL-F	MC54F85	◊† Motorola
Magnitud Comparator, 4-bit		
TTL-F	MC74F85	◊ Motorola
Multiplier/Accumulator, 12x12-bit, 135NS		
	TMC2209	† TRWLSI
Multiplier/Accumulator, 8x8-bit, 40NS		
	TMC2208	◊† TRWLSI
Multiplier (2x4, Binary Parallel, Serial Output		
TTL-LS	54LS261	† Signetics
	SN54LS261	◊† TI
Multiplier, 4-Bit Three-State (two ICs to a set, 7875A and 7875B)		
TTL	DM8875	National
Multiplier (4x2), 2's Complement		
TTL-S	AM25S05C	AMD
	AM25S05M	† AMD
Multiplier (4x4), Binary Parallel (used with 54/74284)		
TTL	DM54284	† National
Multiplier (12x12), 2's Complement & Unsigned Magnitude, 16-Bit Product		
TTL	MPY112K	† TRWLSI
Multiplier (12x12), 2's Complement, Unsigned Magnitude		
TTL	MPY012H	TRWLSI
Multiplier (16x16), High Speed		
TTL-S	CY7C516	◊† Cypress
	CY7C517	◊† Cypress
Multiplier (16x16), Integer		
	B2018	Bipolar
Multiplier (16x16), 2's Complement and Unsigned Magnitude		
TTL	MPY016H	† TRWLSI
	MPY016K	† TRWLSI
	MPY016K-1	† TRWLSI
Multiplier, 8x8-bits, 45NS		
	TMC208K-1	TRWLSI
	TMC28KU-1	TRWLSI
Multiplier, 8x8-bits, 65NS		
	TMC208K	TRWLSI
	TMC28KU	TRWLSI
Rectangular/Polar Bi-directional Coordinate Transformer, 25MHz		
	TMC2330-1	TRWLSI
Register/Arithmetic Logic Unit		
TTL-LS	SN54LS681	◊† TI
	SN74LS681	TI
TTL-S	SN74S281	TI
Register File, Dual 16x4		
TTL-ALS	SN54ALS870	◊† TI
Register File (4x4)		
TTL-F	74F670	Signetics
Shifter, Barrel Shifter		
TTL-F	SN54F350	† TI
Binary Multiplier, 4x4		
TTL-LS	SN54LS275	◊† TI
Octal Comparator		
TTL-F	M74F521	Mitsubishi
Two's Complement Multiplier, 8-Bit Serial/Parallel		
TTL-F	54F384	◊† National
	74F384	◊ National
2-Bit Binary Full Adder		
TTL	**ML5482**	**† Lansdale (3514)**
	ML7482	**Lansdale (3514)**
4-Bit Microprocessor Slice (ALU)		
TTL-S	AM2901BC	◊ AMD
	AM2901BM	◊† AMD
	AM2901C	◊ AMD
	AM2901M	◊† AMD
	AM2903C	AMD
	AM2903M	† AMD
	3002	Intel
	SFC2901B	SGS-Thomson
	N3002	Signetics
	S3002	† Signetics
4-Bit ALU		
TTL-LS	T74LS181	SGS-Thomson
4-Bit ALU and Function Generator		
TTL	**ML54181**	**Lansdale (3514)**
	ML74181	**Lansdale (3514)**
4-Bit Magnitude Comparator		
TTL	**ML5485**	**† Lansdale (3514)**
	ML7485	**Lansdale (3514)**
4-Bit Slice, Expandable Control		
TTL-S	SN74S482	TI
4-Bit Binary Full Adder		
TTL	**ML5483**	**† Lansdale (3514)**
	ML7483	**Lansdale (3514)**
TTL-LS	T74LS283	SGS-Thomson
	T74LS83A	SGS-Thomson
4-Bit Binary Full Adder, Look-Ahead Carry		
TTL	DM5483	† National
	54283	† National
	5483	† National
		(Continued)
4-Bit Binary Full Adder, Look-Ahead Carry		
TTL		(Cont'd)
	74283	National
	5483	† Signetics
	SN54283	† TI
	SN5483A	† TI
	SN74283	TI
	SN7483A	TI
TTL-F	MC54F283	† Motorola
	MC74F283	Motorola
	54F283	◊† National
	74F283	◊ National
	74F283	Signetics
	SN54F283	† TI
	SN74F283	TI
TTL-LS	**GD74LS283**	**GoldStar (3439)**
	HD74LS283A	Hitachi
	HD74LS83A	Hitachi
	SN54LS283	† Motorola
	SN54LS83A	† Motorola
	SN74LS283	Motorola
	SN74LS83A	Motorola
	DM54LS283	† National
	DM54LS83A	† National
	DM74LS283	National
	DM74LS83A	National
	54LS283	† National
	54LS83A	† National
	74LS283	◊ National
	74LS83	National
	DN74LS283	◊ Panasonic
	DN74LS83A	◊ Panasonic
	54LS283	† SGS-Thomson
	54LS83A	† SGS-Thomson
	74LS283	SGS-Thomson
	74LS83A	SGS-Thomson
	54LS283	† Signetics
	54LS83A	† Signetics
	74LS283	Signetics
	74LS83A	Signetics
	SN54LS283	◊† TI
	SN54LS83A	† TI
	SN74LS283	TI
	SN74LS83A	TI
TTL-S	SN54S283	† TI
	SN74S283	TI
4-Bit Binary Full Adder with Full Carry		
TTL-F	M74F283	Mitsubishi
4-Bit BCD (add, subtract, compare)		
TTL-S	N82S82	Signetics
4-Bit BCD ALU		
TTL-F	N74F582	Signetics
4-Bit BCD Arithmetic Logic Unit		
FAST	54F582	† National
	74F582	National
8-Bit Magnitude		
TTL-AS	SN74AS866	TI
8-Bit Odd/Even Parity Generator/Checker		
TTL	**ML54180**	**† Lansdale (3514)**
	ML74180	**Lansdale (3514)**
8-Bit Serial/Parallel Register (for use with 25LS14/74LS384)		
TTL-LS	**GD74LS322**	**GoldStar (3439)**
	SN74LS322A	Motorola
	54LS322	† National
	SN54LS322A	◊† TI
	SN74LS322A	TI
9-Bit Latchable Transceiver w/Parity Generator/Checker		
TTL-F	54F899	◊† National
	74F899	◊ National
9-Bit Odd/Even Parity Generator		
TTL-LS	T74LS280	SGS-Thomson
	54LS280	† SGS-Thomson
	74LS280	SGS-Thomson

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Arithmetic Functions (Cont'd)

Function	Device	Source
9-Bit Odd/Even Parity Generator/Checker		
TTL-F	M74F280	Mitsubishi
9-Bit Parity Generator/Checker		
TTL-AS	SN54AS286	◊† TI
9-Bit Parity Generator/Checker with Parity I/O Port		
TTL-F	SN54F286	† TI
1024 POWT, 16-bit FFT Processor, 20 MHz		
	TMC2310	TRWLSI
	TMC2310-1	TRWLSI

Buffers

Function	Device	Source
Buffer, Parallel-In/Serial-Out Scan Line Buffer		
	M66307	Mitsubishi
Buffer, Toggle Line Buffer		
	M66305	Mitsubishi
Dual 4-Input NAND		
TTL-H	**ML3024**	**Lansdale (3514)**
	ML3124	**† Lansdale (3514)**
Dual 4-Input NAND Buffer		
TTL-LS	T54LS40	† SGS-Thomson
Dual 4-Input NAND (positive)		
TTL-ALS	M74ALS40A	Mitsubishi
Quad Buffer/Line Driver, Three-State		
TTL-F	M74F125	Mitsubishi
Quad Buffer, Three-State		
TTL-F	MC74F125	◊ Motorola
Quad Buffer, Three-State.		
TTL-F	MC74F126	◊ Motorola
Quad Gated, Three-State		
TTL	DM54125	† National
	DM74125	National
	DM8093	National
	54125	† National
	74125	National
	54125	† Signetics
	74125	Signetics
	SN54125	† TI
	SN74125	TI
TTL-F	54F125	† National
	74F125	National
	74F125	Signetics
	SN74F125	TI
TTL-LS	**GD74LS125A**	**GoldStar (3439)**
	HD74LS125A	Hitachi
	SN54LS125A	† Motorola
	SN74LS125A	Motorola
	DM54LS125A	† National
	DM74LS125A	National
	54LS125A	† National
	74LS125	◊ National
	DN74LS125A	Panasonic
	54LS125A	† SGS-Thomson
	74LS125A	SGS-Thomson
	54LS125A	† Signetics
	74LS125A	Signetics
	SN54LS125A	◊† TI
	SN74LS125A	TI
Quad Gated, Three-State (inverted control)		
TTL	54126	† Signetics
	74126	Signetics
	SN54126	† TI
	SN74126	TI
TTL-F	74F126	Signetics
	SN74F126	TI
TTL-LS	HD74LS126A	Hitachi
	SN54LS126A	† Motorola
	SN74LS126A	Motorola
	DM74LS126	National
	54LS126	† National
	74LS126	◊ National
	54LS126	† SGS-Thomson

(Continued)

Function	Device	Source
Quad Gated, Three-State (inverted control)		
TTL-LS		(Cont'd)
	74LS126	SGS-Thomson
	54LS126A	† Signetics
	74LS126A	Signetics
	SN54LS126A	◊† TI
	SN74LS126A	TI
Quad, Three State		
TTL-LS	T74LS126A	SGS-Thomson
Quad, Three-State		
TTL-LS	T74LS125A	SGS-Thomson
Quad 2-Input NAND		
TTL-ALS	M74ALS37A	Mitsubishi
Quad 2-Input NAND Buffer		
TTL-LS	T54LS37	† SGS-Thomson
	T54LS38	† SGS-Thomson
Quad 2-Input NAND (positive, open collector)		
TTL-ALS	M74ALS38A	Mitsubishi
Quad 2-Input NOR Buffer		
TTL-LS	74LS28	SGS-Thomson
	74LS33	SGS-Thomson
Quad 2-Input NOR (positive)		
TTL-ALS	M74ALS28A	Mitsubishi
Quad 2-Input NOR (positive, open collector)		
TTL-ALS	M74ALS33A	Mitsubishi
Hex		
TTL-LS	T54LS365A	† SGS-Thomson
	T54LS367A	† SGS-Thomson
Hex, Buffer/Driver		
TTL	**ML5417**	**† Lansdale (3514)**
	ML7417	**Lansdale (3514)**
Hex Buffer Driver, Gated Enable		
TTL-F	MC54F365	◊† Motorola
Hex Buffer Driver, Gated Enable, Inv.		
TTL-F	MC54F366	◊† Motorola
	MC74F366	◊ Motorola
Hex Buffer Driver, Gated Enable, Non-Inv.		
TTL-F	MC74F365	◊ Motorola
Hex Buffer/Driver, Non-Inverting, Open Collector		
TTL-F	74F07	Signetics
Hex Buffer Driver, 4/2-bit, Inv.		
TTL-F	MC54F368	◊† Motorola
	MC74F368	◊ Motorola
Hex Buffer Driver, 4/2-bit, Non-Inv		
TTL-F	MC54F367	◊† Motorola
Hex Buffer Driver, 4/2-bit, Non-Inv.		
TTL-F	MC74F367	◊ Motorola
Hex Driver, Non-inverting		
TTL-AS	DM74AS1034	National
	SN74AS1034A	TI
Hex, Inverting		
TTL-ALS	SN54ALS1005	◊† TI
Hex, Non-Inverting		
TTL-ALS	SN74ALS34	TI
TTL-AS	DM74AS34	National
	SN54AS34	† TI
	SN74AS34	TI
Hex, Open Collector		
TTL	**ML5407**	**† Lansdale (3514)**
	ML7407	**Lansdale (3514)**
TTL-ALS	M74ALS1035	Mitsubishi
	DM74ALS1035	National
	SN54ALS1035	† TI
	SN74ALS1035	TI
TTL-LS	**GD74LS07**	**GoldStar (3439)**
	GD74LS17	**GoldStar (3439)**
Hex, Open Collector, Non-Inverting		
TTL-ALS	SN74ALS35A	TI
Hex, Three-State		
TTL	DM54365	† National
	DM54367	† National

(Continued)

Function	Device	Source
Hex, Three-State		
TTL		(Cont'd)
	DM74367	National
	DM8095	National
	DM8097	National
	54365A	◊† Signetics
	54367A	◊† Signetics
	74365	Signetics
	74367	Signetics
	SN54365A	† TI
	SN54367A	† TI
	SN74365A	TI
	SN74367A	TI
TTL-ALS	M74ALS1034	Mitsubishi
	DM74ALS1034	National
	SN54ALS1034	† TI
	SN74ALS1034	TI
TTL-AS	DM74AS1034	National
	SN54AS1034A	◊† TI
	SN74AS1034A	TI
TTL-F	54F365	† National
	74F365	National
	54F365	† Signetics
	54F367	† Signetics
	74F365	Signetics
	74F367	Signetics
TTL-LS	**GD74LS365A**	**GoldStar (3439)**
	GD74LS367A	**GoldStar (3439)**
	HD74LS365A	Hitachi
	HD74LS367A	Hitachi
	SN54LS365A	† Motorola
	SN54LS367A	† Motorola
	SN74LS365A	Motorola
	SN74LS367A	Motorola
	DM54LS365A	† National
	DM54LS367A	† National
	DM74LS365A	National
	DM74LS367A	National
	54LS365	† National
	54LS367	† National
	74LS365	National
	74LS367	National
	DN74LS365A	◊ Panasonic
	DN74LS367A	◊ Panasonic
	T74LS365A	SGS-Thomson
	T74LS367A	SGS-Thomson
	54LS365	† SGS-Thomson
	54LS367	† SGS-Thomson
	74LS365A	SGS-Thomson
	74LS367A	SGS-Thomson
	54LS365A	† Signetics
	54LS367A	† Signetics
	74LS365A	Signetics
	74LS367A	Signetics
	SN54LS365A	◊† TI
	SN54LS367A	◊† TI
	SN74LS365A	TI
	SN74LS367A	TI
TTL-S	MC8T95	Motorola
	MC8T97	Motorola
	N8T95	Signetics
	N8T97	Signetics
	S8T97	† Signetics
Octal		
TTL-LS	T74LS240	SGS-Thomson
	T74LS241	SGS-Thomson
	T74LS244	SGS-Thomson
	54LS240	† SGS-Thomson
	74LS240	SGS-Thomson
	74LS241	SGS-Thomson
	74LS244	SGS-Thomson
Octal Buffer		
TTL-LS	T54LS240	† SGS-Thomson
Octal Buffer/Driver, Inverting		
TTL-ALS	SN74ALS763	TI

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Function	Device	Source	Line
Buffers (Cont'd)			
Octal Buffer/Line Driver, Three-State, Non-Inverting			
TTL-ALS	M74ALS1244A	Mitsubishi	
Octal Bus Driver, Inverting with Pull-Up Resistors			
TTL-ALS	SN74ALS746	TI	
	SN74ALS746-1	TI	
Octal Bus Driver, Non-Inverting with Pull-Up Resistors			
TTL-ALS	SN74ALS747	TI	
	SN74ALS747-1	TI	5
Octal, with Parity Generator-Checker			
TTL-F	54F656	† Signetics	
	74F656A	Signetics	
	SN74F455	TI	
	SN74F456	TI	
Octal, Three-State			
TTL-ALS	M74ALS465A	Mitsubishi	10
	M74ALS467A	Mitsubishi	
	DM74ALS465	National	
	DM74ALS467	National	
	SN74ALS465A	TI	
	SN74ALS467A	TI	15
TTL-LS	AM81LS95	AMD	
	SN54LS795	† Motorola	
	SN54LS796	† Motorola	
	SN54LS797	† Motorola	
	SN54LS798	† Motorola	20
	SN74LS795	Motorola	
	SN74LS796	Motorola	
	SN74LS797	Motorola	
	SN74LS798	Motorola	
	DM81LS95	National	25
	DM81LS97	National	
	SN74LS465	TI	
10-bit Buffer/Line Driver, Inv.			
TTL-F	MC54F828	◊† Motorola	
	MC74F828	◊ Motorola	
10-bit Buffer/Line Driver, Non-Inv.			
TTL-F	MC54F827	◊† Motorola	30
	MC74F827	◊ Motorola	
10-Bit (bus interface)			
TTL-F	54F827	† National	
	74F827	National	
	74F827	Signetics	
TTL-S	AM29827	AMD	35
	AM29827A	AMD	
	AM29828	AMD	
	AM29828A	AMD	
Inverters			
Dual Schmitt Trigger			
TTL	**ML5413**	**† Lansdale (3514)**	
	ML7413	**Lansdale (3514)**	40
Dual 4-Input Schmitt Trigger			
TTL-F	MC54F13	† Motorola	
	MC74F13	Motorola	
TTL-LS	74LS13	SGS-Thomson	
Quad 2-Input Schmitt Trigger			
TTL-LS	T54LS132	† SGS-Thomson	
	T74LS132	SGS-Thomson	45
Hex			
TTL	**ML5404**	**† Lansdale (3514)**	
	ML7404	**Lansdale (3514)**	
	DM5404	† National	
	DM7404	National	
	5404	† National	50
	7404	National	
	N8890	Signetics	
	N8891	Signetics	
	S8891	† Signetics	
	5404	† Signetics	55
	7404	Signetics	
	SN5404	† TI	
		(Continued)	

Function	Device	Source	Line
Hex			
TTL		(Cont'd)	
	SN7404	TI	
	TC7404B	**Toshiba (3674)**	
TTL-ALS	M74ALS04B	Mitsubishi	60
	M74ALS05A	Mitsubishi	
	M74ALS1004	Mitsubishi	
	DM74ALS04	National	
	DM74ALS1004	National	
	74ALS04B	Signetics	65
	SN54ALS04B	† TI	
	SN54AS04	† TI	
	SN74ALS04B	TI	
	SN74ALS1004	TI	
TTL-AS	DM74AS04	National	70
	DM74AS1004	National	
	SN54AS1004A	† TI	
	SN74AS04	TI	
	SN74AS1004A	TI	
TTL-F	M74F04	Mitsubishi	75
	M74F14	Mitsubishi	
	MC54F04	Motorola	
	MC54F14	† Motorola	
	MC74F04	Motorola	
	MC74F14	Motorola	80
	54F04	◊ National	
	74F04	◊ National	
	54F04	Signetics	
	74F04	Signetics	
	SN54F04	† TI	85
	SN74F04	TI	
TTL-H	**ML3008**	**Lansdale (3514)**	
	ML3009	**Lansdale (3514)**	
	ML3108	**† Lansdale (3514)**	
	ML3109	**† Lansdale (3514)**	90
TTL-LS	**GD74LS04**	**GoldStar (3439)**	
	HD74LS04	Hitachi	
	SN54LS04	† Motorola	
	SN74LS04	Motorola	
	DM54LS04	† National	95
	DM74LS04	National	
	54LS04	† National	
	74LS04	◊ National	
	DN74LS04	◊ Panasonic	
	T54LS04	† SGS-Thomson	100
	T54LS05A	† SGS-Thomson	
	T54LS366A	† SGS-Thomson	
	T54LS368A	† SGS-Thomson	
	T74LS04	SGS-Thomson	
	T74LS05A	SGS-Thomson	105
	54LS04	† SGS-Thomson	
	74LS04	SGS-Thomson	
	54LS04	† Signetics	
	74LS04	Signetics	
	SN54LS04	† TI	110
	SN74LS04	TI	
TTL-S	**GD74S04**	**GoldStar (3439)**	
	DM54S04	† National	
	DM74S04	National	
	74S04	National	115
	54S04	† Signetics	
	74S04	Signetics	
	SN54S04	† TI	
	SN74S04	TI	
Hex, Buffer/Driver			
TTL	**ML5416**	**† Lansdale (3514)**	120
	ML7416	**Lansdale (3514)**	
Hex Inverter/Driver, Open Collector			
TTL-F	74F06	Signetics	
Hex, Open Collector			
TTL	**ML5405**	**† Lansdale (3514)**	
	ML5406	**† Lansdale (3514)**	
	ML7405	**Lansdale (3514)**	125
	ML7406	**Lansdale (3514)**	
	DM5405	† National	
	DM7405	National	
		(Continued)	

Function	Device	Source	Line
Hex, Open Collector			
TTL		(Cont'd)	
	7405	National	
	S8T90	† Signetics	130
	5405	† Signetics	
	7405	Signetics	
	SN5405	† TI	
	SN7405	TI	
TTL-ALS	DM74ALS05	National	135
	DM74ALS1005	National	
	SN54ALS05A	† TI	
	SN74ALS05A	TI	
	SN74ALS1005	TI	
TTL-LS	**GD74LS05**	**GoldStar (3439)**	140
	GD74LS06	**GoldStar (3439)**	
	GD74LS16	**GoldStar (3439)**	
	HD74LS05	Hitachi	
	SN54LS05	† Motorola	
	SN74LS05	Motorola	145
	DM54LS05	† National	
	DM74LS05	National	
	54LS05	† National	
	74LS05	◊ National	
	DN74LS05	◊ Panasonic	150
	54LS05	† SGS-Thomson	
	74LS05	SGS-Thomson	
	54LS05	† Signetics	
	74LS05	Signetics	
	SN54LS05	◊† TI	155
	SN74LS05	TI	
TTL-S	**GD74S05**	**GoldStar (3439)**	
	DM74S05	National	
	74S05	National	
	54S05	† Signetics	160
	74S05	Signetics	
	SN54S05	† TI	
	SN74S05	TI	
Hex, Open-Collector			
TTL-ALS	M74ALS1005	Mitsubishi	
Hex Schmitt Trigger			
TTL	**ML5414**	**† Lansdale (3514)**	165
	ML7414	**Lansdale (3514)**	
TTL-LS	T54LS14	† SGS-Thomson	
Hex Schmitt Trigger Inverter			
TTL-LS	T74LS14	SGS-Thomson	
Hex, Unbuffered			
TTL-S	HCU04	GoldStar	
Hex, Three-State			
TTL	DM54368	† National	170
	DM74365	National	
	DM74368	National	
	DM8098	National	
	54366A	◊† Signetics	
	54368A	† Signetics	175
	74366	Signetics	
	74368	Signetics	
	SN54366A	† TI	
	SN54368A	† TI	
	SN74366A	TI	180
	SN74368A	TI	
TTL-F	54F366	† National	
	54F368	† National	
	74F366	National	
	74F368	National	185
	54F366	† Signetics	
	54F368	† Signetics	
	74F366	Signetics	
	74F368	Signetics	
TTL-LS	**GD74LS366**	**GoldStar (3439)**	190
	GD74LS368	**GoldStar (3439)**	
	HD74LS368A	Hitachi	
	SN54LS366A	† Motorola	
	SN54LS368A	† Motorola	
	SN74LS366A	Motorola	195
	SN74LS368A	Motorola	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Inverters (Cont'd)

Function	Device	Source	Line
Hex, Three-State			
TTL-LS		(Cont'd)	
	DM54LS366A	† National	
	DM54LS368A	† National	
	DM74LS366A	National	
	DM74LS368A	National	
	54LS366	† National	5
	54LS368	† National	
	74LS366	National	
	74LS368	National	
	DN74LS366A	◊ Panasonic	
	DN74LS368A	◊ Panasonic	10
	T74LS366A	SGS-Thomson	
	T74LS368A	SGS-Thomson	
	54LS366	† SGS-Thomson	
	54LS368	† SGS-Thomson	
	74LS366A	SGS-Thomson	15
	74LS368A	SGS-Thomson	
	54LS366A	◊† Signetics	
	54LS368A	† Signetics	
	74LS366A	Signetics	
	74LS368A	Signetics	20
	SN54LS366A	† TI	
	SN54LS368A	◊† TI	
	SN74LS366A	TI	
	SN74LS368A	TI	
TTL-S	MC8T96	Motorola	25
	MC8T98	Motorola	
	N8T96	Signetics	
	N8T98	Signetics	
	S8T98	† Signetics	
Octal, with Parity Generator-Checker			
TTL-F	54F655	† Signetics	30
	74F655A	Signetics	
Octal, Three-State			
TTL-ALS	M74ALS466A	Mitsubishi	
	M74ALS468A	Mitsubishi	
	DM74ALS466	National	
	DM74ALS468	National	35
	SN74ALS466A	TI	
	SN74ALS468A	† TI	
TTL-LS	DM81LS96	National	
	DM81LS98	National	
	SN74LS466	TI	40
10-Bit (bus interface)			
	54F828	† National	
	74F828	National	
	74F828	Signetics	

Bus-Oriented Circuits

Function	Device	Source	Line
Bus Driver	IL8216	Lansdale	
	IL8226	Lansdale	45
	IL8228	Lansdale	
Bus Transceiver			
	IL8286	Lansdale	
	IL8287	Lansdale	
TTL-ALS	SN55ALS056	◊† TI	
Future Bus Transceiver, 9-Bit Latched, Bidirectional			
TTL-F	N74F8962	Signetics	50
	N74F8963	Signetics	
NuBus Block Slave Address Generator			
ALS	SN74ALS2442	TI	
PI Bus Transceiver			
TTL-F	SN74F776	TI	
Test Mode Bus Transceiver, Three-State/Open Collector			
TTL-F	N74F777	Signetics	
Transceiver/Register			
	74F646A	**Signetics (3606)**	55
	74F648A	**Signetics (3606)**	
	74F651A	**Signetics (3607)**	
	74F652A	**Signetics (3607)**	
Dual Latch Transceiver with 8-Bit Parity Generator/Checker, Three-State			
TTL-F	74F899	Signetics	
Quad Bidirectional Bus Transceiver, Three-State			
TTL-LS	SN54LS442	† TI	60
	SN74LS442	TI	
Quad Bus Transceiver, Open Collector			
TTL-AS	SN74AS758	TI	
	SN74AS759	TI	
Quad Bus Transceiver, Three-State			
TTL-ALS	SN74ALS758	TI	
Quad FutureBus Transceiver			
TTL-F	**74F3893**	**Signetics (3599)**	65
Hex 2-Input AND Driver			
TTL-AS	SN74AS808	TI	
TTL-F	74F1808	Signetics	
	74F808	Signetics	
Hex 2-Input NAND Driver			
TTL-F	74F1804	Signetics	
	74F804	Signetics	70
Hex 2-Input NOR Driver			
TTL-F	74F1805	Signetics	
	74F805	Signetics	
Hex 2-Input OR Driver			
TTL-F	74F1832	Signetics	
	74F832	Signetics	
Octal Buffer/Driver w/Parity			
TTL-F	N74F455	Signetics	75
Octal Buffer/Line Driver			
TTL-AS	SN54AS760	◊† TI	
Octal Buffer/Line Driver, Open Collector, Non-Inverting			
TTL-ALS	SN74ALS760	TI	
TTL-AS	SN74AS760	TI	
TTL-F	74F760	Signetics	
Octal Buffer/Line Driver, Open-Collector, Inverting			
TTL-ALS	SN74ALS756	TI	80
	SN74ALS756-1	TI	
TTL-AS	SN74AS756	TI	
TTL-F	74F756	Signetics	
Octal Buffer/Line Driver, Open-Collector, Non-Inverting			
TTL-ALS	SN74ALS757	TI	
TTL-AS	SN74AS757	TI	85
TTL-F	74F757	Signetics	
Octal Buffer/Line Driver, Three-State, Complementary Inputs			
TTL-ALS	SN74ALS231	TI	
TTL-AS	DM74AS231	National	
	SN74AS231	TI	
Octal Buffer/Line Driver, Three-State, Inverting			
TTL-ALS	M74ALS1240A	Mitsubishi	90
	M74ALS240A	Mitsubishi	
	M74ALS240A-1	Mitsubishi	
	DM74ALS240	National	
	74ALS240A	Signetics	
	74ALS240A-1	Signetics	95
	SN74ALS1240	TI	
	SN74ALS1240-1	TI	
	SN74ALS2240	TI	
TTL-AS	DM54AS240	† National	
	DM74ALS1240	National	100
	DM74AS240	National	
	SN54ALS240A	† TI	
	SN54AS240	◊† TI	
	SN74ALS240A	TI	
	SN74ALS240A-1	TI	105
	SN74AS240	TI	
TTL-F	M74F240	Mitsubishi	
	MC74F240	Motorola	
	54F240	◊† National	
	74F240	◊ National	110
	54F240	† Signetics	
	74F1240	Signetics	
	74F240	Signetics	
		(Continued)	
Octal Buffer/Line Driver, Three-State, Inverting			
TTL-F		(Cont'd)	
	74F30240	Signetics	
	SN54F240	† TI	115
	SN74F240	TI	
TTL-LS	**GD74LS240**	**GoldStar (3439)**	
	HD74LS240	Hitachi	
	SN54LS240	† Motorola	
	SN74LS240	Motorola	120
	DM54LS240	† National	
	DM74LS240	National	
	54LS240	† National	
	74LS240	◊ National	
	DN74LS240	◊ Panasonic	125
	74LS240	Signetics	
	SN54LS240	◊† TI	
	SN74LS240	TI	
TTL-S	**GD74S240**	**GoldStar (3439)**	
	54LS240	† Signetics	130
	54S240	† Signetics	
	74S240	Signetics	
	SN54S240	† TI	
	SN74S240	TI	
Octal Buffer/Line Driver, Three-State, Inverting (dual)			
TTL-ALS	DPLALS240Y	Dense-Pac	135
	SN74ALS2540	TI	
	SN74ALS540	TI	
	SN74ALS540-1	TI	
TTL-AS	DPLAS240Y	Dense-Pac	
TTL-F	DPLF240Y	Dense-Pac	140
	DPLF540Y	Dense-Pac	
	54F540	† National	
	74F540	National	
	54F540	† Signetics	
	74F540	Signetics	145
	SN74F540	TI	
TTL-LS	DPLLS240Y	Dense-Pac	
	DPLLS540Y	Dense-Pac	
	SN54LS540	† Motorola	
	SN74LS540	Motorola	150
	74LS540	◊ National	
	T74LS540	SGS-Thomson	
	74LS540	Signetics	
	SN54LS540	† TI	
	SN74LS540	TI	155
Octal Buffer/Line Driver, Three-State, Non-Inverting (dual)			
TTL-ALS	DPLALS244Y	Dense-Pac	
	M74ALS1241A	Mitsubishi	
	M74ALS241A	Mitsubishi	
	M74ALS241A-1	Mitsubishi	
	M74ALS244A	Mitsubishi	160
	M74ALS244A-1	Mitsubishi	
	DM74ALS1241	National	
	DM74ALS1244	National	
	DM74ALS241	National	
	DM74ALS244	National	165
	74ALS241A	Signetics	
	74ALS241A-1	Signetics	
	74ALS244A	Signetics	
	74ALS244A-1	Signetics	
	SN54ALS1244A	† TI	170
	SN54ALS241A	† TI	
	SN54ALS244A	† TI	
	SN54ALS541	† TI	
	SN74ALS1244A	TI	
	SN74ALS1244A-1	TI	175
	SN74ALS241A	TI	
	SN74ALS241A-1	TI	
	SN74ALS244A	TI	
	SN74ALS244A-1	TI	
	SN74ALS2541	TI	180
	SN74ALS541	TI	
	SN74ALS541-1	TI	
TTL-AS	DPLAS244Y	Dense-Pac	
	DM74AS230	National	
	DM74AS241	National	185
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source
Octal Buffer/Line Driver, Three-State, Non-Inverting		
TTL-AS		(Cont'd)
	DM74AS244	National
	SN54AS241	◊† TI
	SN54AS244	◊† TI
	SN74AS230	TI
	SN74AS241	TI
	SN74AS244	TI
TTL-F	DPLF244Y	Dense-Pac
	M74F241	Mitsubishi
	M74F244	Mitsubishi
	MC54F241	† Motorola
	MC54F244	† Motorola
	MC74F241	Motorola
	MC74F244	Motorola
	54F241	◊† National
	54F244	◊† National
	54F541	† National
	74F241	◊ National
	74F244	◊ National
	74F541	National
	54F241	† Signetics
	54F244	† Signetics
	74F1241	Signetics
	74F1244	Signetics
	74F241	Signetics
	74F244	Signetics
	74F30241	Signetics
	74F30244	Signetics
	74F541	Signetics
	SN54F241	† TI
	SN54F244	† TI
	SN74F241	TI
	SN74F244	TI
	SN74F541	TI
TTL-LS	DPLLS244Y	Dense-Pac
	GD74LS241	**GoldStar (3439)**
	GD74LS244	**GoldStar (3439)**
	HD74LS241	Hitachi
	HD74LS244	Hitachi
	SN54LS241	† Motorola
	SN54LS244	† Motorola
	SN54LS541	† Motorola
	SN74LS241	Motorola
	SN74LS244	Motorola
	SN74LS541	Motorola
	DM54LS241	† National
	DM74LS241	National
	54LS241	† National
	54LS244	† National
	74LS241	◊ National
	74LS244	◊ National
	DN74LS241	◊ Panasonic
	DN74LS244	◊ Panasonic
	T74LS541B1	SGS-Thomson
	54LS241	† Signetics
	54LS244	† Signetics
	54LS541	† Signetics
	74LS241	Signetics
	74LS541	Signetics
	SN54LS241	◊† TI
	SN54LS244	◊† TI
	SN54LS541	◊† TI
	SN74LS241	TI
	SN74LS244	TI
	SN74LS541	TI
TTL-S	54S241	† Signetics
	54S244	† Signetics
	74S241	Signetics
	74S244	Signetics
	SN54S241	† TI
	SN54S244	† TI
	SN74S241	TI
Octal Bus Driver, Inverting, Three-State		
TTL-F	MC54F20	† Motorola
Octal Bus Driver, Non-Inverting, Three-State		
TTL-F	MC54F21	† Motorola
Octal Bus Driver, Open Collector, Complementary Controls		
TTL-AS	SN74AS763	TI
Octal Bus Driver, Open Collector, Symmetrical Controls		
TTL-AS	SN74AS762	TI
Octal Bus Driver with Series Resistor		
ALS	SN74ALS2244	TI
Octal Bus Transceiver		
TTL-ALS	SN54ALS646	◊† TI
	SN55ALS160	◊† TI
TTL-AS	SN54AS756	◊† TI
TTL-F	SN74F657	TI
Octal Bus Transceiver, Bidirectional Latched		
TTL-F	74F776	Signetics
Octal Bus Transceiver, GPIB Compatible		
TTL-F	74F588	Signetics
Octal Bus Transceiver, IEEE-488		
TTL-ALS	SN55ALS161	TI
Octal Bus Transceiver, Inverting, Three-State		
TTL-LS	N8T125	Signetics
	S8T125	† Signetics
Octal Bus Transceiver, Open-Collector, Non-Inverting/Inverting		
TTL-ALS	M74ALS1644A	Mitsubishi
	M74ALS644A	Mitsubishi
	SN74ALS644A	TI
	SN74ALS644A-1	TI
TTL-AS	SN74AS644	TI
TTL-LS	SN54LS644	† Motorola
	SN74LS644	Motorola
	SN54LS644	◊† TI
	SN74LS644	TI
	SN74LS644-1	TI
Octal Bus Transceiver, Open-Collector/Three-State, Inverting		
TTL-ALS	SN74ALS638A	TI
	SN74ALS638A-1	TI
	SN74ALS639A	TI
	SN74ALS639A-1	TI
TTL-AS	SN74AS638	TI
	SN74AS639	TI
Octal Bus Transceiver/Register		
TTL-ALS	SN54ALS648	◊† TI
	SN54ALS653	◊† TI
Octal Bus Transceiver/Register with Direction Pin, Three-State, Non-Inverting		
TTL-ALS	M74ALS646	Mitsubishi
	M74ALS647	Mitsubishi
	M74ALS648	Mitsubishi
	M74ALS649	Mitsubishi
	74ALS646	Signetics
	74ALS646-1	Signetics
	74ALS648	Signetics
	74ALS648-1	Signetics
	SN74ALS646	TI
	SN74ALS646-1	TI
	SN74ALS647	TI
	SN74ALS647-1	TI
	SN74ALS648	TI
	SN74ALS648-1	TI
	SN74ALS649	TI
	SN74ALS649-1	TI
TTL-AS	DM74AS646	National
	SN54AS646	† TI
	SN74AS646	TI
	SN74AS648	TI
TTL-F	M74F646	Mitsubishi
	M74F648	Mitsubishi
	54F646	† National
	54F648	† National
	74F646	National
	74F648	National
		(Continued)
Octal Bus Transceiver/Register with Direction Pin, Three-State, Non-Inverting		
TTL-F		(Cont'd)
	54F646	† Signetics
	54F647	† Signetics
	54F648	† Signetics
	54F649	† Signetics
	74F646	**Signetics (3606)**
	74F647	Signetics
	74F648	**Signetics (3606)**
	74F649	Signetics
	SN74F646	TI
TTL-LS	**GD74LS646**	**GoldStar (3439)**
	SN74LS646	TI
	SN74LS648	TI
Octal Bus Transceiver/Register with Dual Enable, Three-State, Inverting		
TTL-ALS	M74ALS651	Mitsubishi
	M74ALS652	Mitsubishi
	74ALS651	Signetics
	74ALS651-1	Signetics
	74ALS652	Signetics
	74ALS652-1	Signetics
	SN54ALS652	† TI
	SN74ALS651	TI
	SN74ALS651-1	TI
	SN74ALS652	TI
	SN74ALS652	TI
	SN74ALS652-1	TI
TTL-AS	DM74AS651	National
	DM74AS652	National
	SN54AS651	† TI
	SN54AS652	† TI
	SN74AS651	TI
	SN74AS652	TI
TTL-F	**74F651**	**Signetics (3607)**
	74F652	**Signetics (3607)**
TTL-LS	SN74LS651	TI
	SN74LS651	TI
	SN74LS652	TI
	SN74LS652	TI
Octal Bus Transceiver/Register, Three-State		
TTL-ALS	DM54ALS651	† National
	DM74ALS651	National
Octal Bus Transceiver/Register, Three-State/Open-Collector, Inverting		
TTL-ALS	SN74ALS653	TI
	SN74ALS653-1	TI
	SN74ALS654	TI
	SN74ALS654-1	TI
TTL-F	74F653	Signetics
	74F654	Signetics
Octal Bus Transceiver with Common Output Enable, Open-Collector, Non-Inverting		
TTL-ALS	M74ALS1641A	Mitsubishi
	M74ALS1642A	Mitsubishi
	M74ALS641A	Mitsubishi
	M74ALS642A	Mitsubishi
	SN74ALS641A	TI
	SN74ALS641A-1	TI
	SN74ALS642A	TI
	SN74ALS642A-1	TI
TTL-AS	SN74AS641	TI
	SN74AS642	TI
TTL-F	74F641	Signetics
	74F642	Signetics
TTL-LS	HD74LS641	Hitachi
	HD74LS642	Hitachi
	SN54LS641	† Motorola
	SN54LS642	† Motorola
	SN74LS641	Motorola
	SN74LS642	Motorola
	54LS641	† Signetics
	74LS641	Signetics
	74LS641-1	Signetics
		(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value ^Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL—TTL (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source	Line
Octal Bus Transceiver with Common Output Enable, Open-Collector, Inverting			
TTL-LS		(Cont'd)	
	74LS642	Signetics	
	74LS642-1	Signetics	
	SN54LS641	◊† TI	
	SN54LS642	◊† TI	
	SN74LS641	TI	5
	SN74LS641-1	TI	
	SN74LS642	TI	
	SN74LS642-1	TI	
Octal Bus Transceiver with Direction Pin, Three-State, Inverting			
TTL-ALS	M74ALS1640A	Mitsubishi	
	M74ALS640A	Mitsubishi	10
	M74ALS640A-1	Mitsubishi	
	DM74ALS640	National	
	SN54ALS640A	† TI	
	SN74ALS1640A	TI	
	SN74ALS1640A-1	TI	15
	SN74ALS640A	TI	
	SN74ALS640A-1	TI	
TTL-AS	DPLAS640Y	Dense-Pac	
	DM74AS640	National	
	SN54AS640	† TI	20
	SN74AS2640	TI	
	SN74AS640	TI	
TTL-F	MC74F640	Motorola	
	74F640	Signetics	
TTL-LS	DPLLS640Y	Dense-Pac	25
	GD74LS640	**GoldStar (3439)**	
	SN54LS640	† Motorola	
	SN74LS640	Motorola	
	54LS640	Signetics	
	74LS640	Signetics	30
	SN54LS640	◊† TI	
	SN74LS640	TI	
	SN74LS640-1	TI	
Octal Bus Transceiver with Register, Open Collector			
TTL-ALS	SN74ALS614-1	TI	
Octal Bus Transceiver with Dual Enable, Open-Collector, Non-Inverting			
TTL-ALS	M74ALS1621A	Mitsubishi	35
	M74ALS1622A	Mitsubishi	
	M74ALS621A	Mitsubishi	
	M74ALS622A	Mitsubishi	
	SN74ALS621A	TI	
	SN74ALS621A-1	TI	40
	SN74ALS622A	TI	
	SN74ALS622A-1	TI	
TTL-AS	SN74AS621	TI	
	SN74AS622	TI	
TTL-F	74F621	Signetics	45
	74F622	Signetics	
	SN54F621	◊† TI	
	SN74F621	◊ TI	
	SN74F622	TI	
TTL-LS	SN74LS621	Motorola	50
	SN74LS622	Motorola	
	54LS621	Signetics	
	54LS622	Signetics	
	74LS621	Signetics	
	74LS622	Signetics	55
Octal Bus Transceiver with Dual Enable, Three-State, Inverting			
TTL-ALS	M74ALS1620A	Mitsubishi	
	M74ALS1623A	Mitsubishi	
	M74ALS620A	Mitsubishi	
	M74ALS620A-1	Mitsubishi	
	M74ALS623A	Mitsubishi	60
	M74ALS623A-1	Mitsubishi	
	74ALS620A	Signetics	
	74ALS620A-1	Signetics	
	74ALS623A	Signetics	
		(Continued)	

Function	Device	Source	Line
Octal Bus Transceiver with Dual Enable, Three-State, Non-Inverting			
TTL-ALS		(Cont'd)	
	74ALS623A-1	Signetics	65
	SN74ALS620A	TI	
	SN74ALS620A-1	TI	
	SN74ALS623A	TI	
	SN74ALS623A-1	TI	
TTL-AS	DM74AS2620	National	70
	DM74AS620	National	
	SN74AS2620	TI	
	SN74AS2623	TI	
	SN74AS620	TI	
	SN74AS623	TI	75
TTL-F	MC74F620	Motorola	
	MC74F623	Motorola	
	54F620	† National	
	54F623	† National	
	74F620	National	80
	74F623	National	
	54F620	† Signetics	
	74F620	Signetics	
	74F623	Signetics	
	SN54F620	† TI	85
	SN54F623	† TI	
	SN74F620	TI	
	SN74F623	TI	
TTL-LS	SN54LS623	† Motorola	
	SN74LS623	Motorola	90
	54LS620	Signetics	
	54LS623	† Signetics	
	74LS620	Signetics	
	74LS623	Signetics	
	SN74LS623	TI	95
Octal Bus Transceiver with 8-Bit Parity Generator/Checker, Three-State, Non-Inverting			
TTL-F	54F657	† National	
	74F657	National	
	54F657	† Signetics	
	74F657	Signetics	
Octal Bus Transceiver, Three-State Inputs/Outputs			
TTL-F	54F545	◊† National	100
	74F545	◊ National	
	54F545	† Signetics	
	74F545	Signetics	
Octal Bus Transceiver, Three-State, Inverting			
TTL-ALS	M74ALS1242A	Mitsubishi	
	M74ALS242A	Mitsubishi	105
	DM74ALS1242	National	
	DM74ALS242	National	
	SN54ALS242B	† TI	
	SN74ALS1242	TI	
	SN74ALS1242-1	TI	110
	SN74ALS2242	TI	
	SN74ALS242B	TI	
	SN74ALS242B-1	TI	
TTL-AS	DM74AS242	National	
	SN54AS242	◊† TI	115
	SN74AS242	TI	
TTL-F	MC54F242	† Motorola	
	MC74F242	Motorola	
	54F242	† National	
	54F2620	◊† National	120
	74F242	◊ National	
	74F2620	◊ National	
	54F242	† Signetics	
	74F1242	Signetics	
	74F242	Signetics	125
	SN54F242	† TI	
	SN74F242	TI	
TTL-LS	**GD74LS242**	**GoldStar (3439)**	
	HD74LS242	Hitachi	
	SN54LS242	† Motorola	130
	SN74LS242	Motorola	
	DM54LS242	† National	
	54LS242	Signetics	
		(Continued)	

Function	Device	Source	Line
Octal Bus Transceiver, Three-State, Inverting			
TTL-LS		(Cont'd)	
	54S242	Signetics	
	74LS242	Signetics	135
	SN54LS242	◊† TI	
	SN74LS242	TI	
Octal Bus Transceiver, Three-State, Non-Inverting (dual)			
TTL-ALS	DPLALS245Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-ALS	M74ALS1243A	Mitsubishi	
	M74ALS1245A	Mitsubishi	140
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
TTL-ALS	M74ALS1643A	Mitsubishi	
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-ALS	M74ALS1645A	Mitsubishi	
	M74ALS243A	Mitsubishi	
	M74ALS245A	Mitsubishi	
	M74ALS245A-1	Mitsubishi	145
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
TTL-ALS	M74ALS643A	Mitsubishi	
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-ALS	M74ALS645A	Mitsubishi	
	M74ALS645A-1	Mitsubishi	
	DM74ALS1243	National	
	DM74ALS243	National	150
	DM74ALS245	National	
	DM74ALS645	National	
	74ALS245A	Signetics	
	74ALS245A-1	Signetics	
	74ALS645A	Signetics	155
	74ALS645A-1	Signetics	
	SN54ALS1245A	† TI	
	SN54ALS243A	† TI	
	SN54ALS245A	† TI	
	SN54ALS645A	† TI	160
	SN74ALS1245A	TI	
	SN74ALS1245A-1	TI	
	SN74ALS1645A	TI	
	SN74ALS1645A-1	TI	
	SN74ALS243A	TI	165
	SN74ALS243A-1	TI	
	SN74ALS245A	TI	
	SN74ALS245A-1	TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
TTL-ALS	SN74ALS643A	TI	
	SN74ALS643A-1	TI	170
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-ALS	SN74ALS645A	TI	
	SN74ALS645A-1	TI	
Octal Bus Transceiver, Three-State, Non-Inverting (dual)			
TTL-AS	DPLAS245Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-AS	DM74AS243	National	
	DM74AS245	National	175
	DM74AS645	National	
	SN54AS245	† TI	
	SN54AS645	† TI	
	SN74AS243	TI	
	SN74AS245	TI	180
	SN74AS2645	TI	
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting			
TTL-AS	SN74AS643	TI	
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-AS	SN74AS645	TI	
Octal Bus Transceiver, Three-State, Non-Inverting (dual)			
TTL-F	DPLF245Y	Dense-Pac	
Octal Bus Transceiver, Three-State, Non-Inverting			
TTL-F	M74F245	Mitsubishi	185
	MC54F243	† Motorola	
	MC54F245	† Motorola	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL–TTL (Cont'd)

Bus-Oriented Circuits (Cont'd)

Function	Device	Source
Octal Bus Transceiver, Three-State, Non-Inverting (Cont'd)		
TTL-F	MC74F243	Motorola
	MC74F245	Motorola
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting		
TTL-F	MC74F643	Motorola
Octal Bus Transceiver, Three-State, Non-Inverting		
TTL-F	54F243	† National
	54F245	◊† National
	54F2623	◊† National
	74F243	◊ National
	74F245	◊ National
	74F2623	◊ National
	54F243	† Signetics
	54F245	† Signetics
	74F1243	Signetics
	74F1245	Signetics
	74F243	Signetics
	74F245	Signetics
	74F30245	Signetics
	SN54F243	† TI
	SN54F245	† TI
	SN74F243	TI
	SN74F245	TI
Octal Bus Transceiver, Three-State, Non-Inverting (dual)		
TTL-LS	DPLLS245Y	Dense-Pac
Octal Bus Transceiver, Three-State, Non-Inverting		
TTL-LS	**GD74LS243**	**GoldStar (3439)**
	GD74LS245	**GoldStar (3439)**
	HD74LS243	Hitachi
	HD74LS245	Hitachi
	HD74LS645	Hitachi
	SN54LS243	† Motorola
	SN54LS245	† Motorola
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting		
TTL-LS	SN54LS643	† Motorola
Octal Bus Transceiver, Three-State, Non-Inverting		
TTL-LS	SN54LS645	† Motorola
	SN74LS243	Motorola
	SN74LS245	Motorola
Octal Bus Transceiver, Three-State, Non-Inverting/Inverting		
TTL-LS	SN74LS643	Motorola
Octal Bus Transceiver, Three-State, Non-Inverting		
TTL-LS	SN74LS645	Motorola
	DM54LS243	† National
	DM54LS245	† National
	DM74LS243	National
	DM74LS245	National
	54LS245	† National
	74LS245	◊ National
	DN74LS245	◊ Panasonic
	T74LS245	SGS-Thomson
	T74LS645B1	SGS-Thomson
	74LS245	SGS-Thomson
	N8T245	Signetics
	S8T245	† Signetics
	54LS243	Signetics
	54LS245	† Signetics
	54LS645	† Signetics
	54S243	Signetics
	74LS243	Signetics
	74LS245	Signetics
	74LS645	Signetics
	74LS645-1	Signetics
	SN54LS243	◊† TI
	SN54LS245	◊† TI
	SN54LS645	◊† TI
	SN74LS243	TI
	SN74LS245	TI
	SN74LS645	TI
	SN74LS645-1	TI
Octal Bus Transceiver with Parity		
TTL-F	MC54F657A	◊† Motorola
	MC54F657B	◊† Motorola
Octal Bus Transciever with Parity.		
TTL-F	MC74F657A	◊ Motorola
	MC74F657B	◊ Motorola
Octal Register Transciever, Non-Inv.		
TTL-F	MC74F543	◊ Motorola
	MC74F543A	◊ Motorola
Octal Registered Transceiver with Dual Enable, Three-State,Non-Inverting		
TTL-F	54F543	† National
	54F544	† National
	74F543	◊ National
	74F544	◊ National
	74F543	Signetics
	74F544	Signetics
	SN54F543	† TI
	SN54F544	† TI
	SN74F543	TI
	SN74F544	TI
Octal Registered Transceiver, Three-State, Inverting		
TTL-F	74F2953	Signetics
Octal Registered Transceiver, Three-State, Non-Inverting		
TTL-F	74F2952	Signetics
Octal Transceiver/Register		
TTL-F	N74F646A	Signetics
	N74F648A	Signetics
Octal Transceiver/Register, Inverting, Three-State		
TTL-F	N74F651A	Signetics
Octal Transceiver/Register, Non-Inverting, Three-State		
TTL-F	N74F652A	Signetics
Octal Transceiver, Three-State		
TTL-F	N74F807	Signetics
8-Bit Bus Interface Flip-Flop		
TTL-ALS	SN54ALS29825	◊† TI
8-Bit Bus Interface Register, Three-State, Non-Inverting		
TTL-ALS	SN74ALS29825	TI
9-Bit Bus Interface D-Type Latch		
TTL-ALS	SN54ALS29843	◊† TI
9-Bit Bus Interface Flip-Flop		
TTL-ALS	SN54ALS29823	◊† TI
	SN54ALS29824	◊† TI
9-Bit Bus Interface Register, Three-State, Inverting		
TTL-ALS	SN74ALS29824	TI
9-Bit Bus Transceiver, Three-State, Inverting		
TTL-ALS	SN74ALS29864	TI
TTL-F	74F864	Signetics
9-Bit Bus Transceiver, Three-State, Non-Inverting		
TTL-ALS	SN74ALS29863	TI
TTL-F	74F863	Signetics
TTL-LS	AM29863	AMD
10-Bit Buffer/Line Driver, Three-State, Inverting		
BCT	SN54BCT29828	† TI
10-Bit Bus Interface D-Type Latch		
TTL-ALS	SN54ALS29842	◊† TI
10-Bit Bus Interface Flip-Flop		
TTL-ALS	SN54ALS29821	◊† TI
	SN54ALS29822	◊† TI
10-Bit Bus Interface Register, Three-State, Inverting		
TTL-ALS	SN74ALS29822	TI
10-Bit Bus Transceiver, Three-State, Inverting		
TTL-ALS	SN74ALS29862	TI
TTL-F	74F862	Signetics
10-Bit Bus Transceiver, Three-State, Non-Inverting		
TTL	AM29861	AMD
	AM29861A	AMD
TTL-ALS	SN74ALS29861	TI
TTL-F	74F861	Signetics
9-Bit Bus Transceiver with Registered 8-Bit Parity Error, Open-Collector		
TTL-F	**74F8960**	**Signetics (3600)**
	74F8961	**Signetics (3600)**

Counters, Binary

Function	Device	Source
8-bit Bidirectional		
TTL-F	MC54F269	◊† Motorola
	MC74F269	◊ Motorola

Counters, Binary Count Up

Function	Device	Source
Counter/Latch (divide-by-2, 4, 8, 16), Preset Input		
TTL	74197	National
	SN54177	† TI
	SN54197	† TI
	SN74177	TI
	SN74197	TI
TTL-LS	SN54LS197	† Motorola
	SN74LS197	Motorola
	74LS197	National
	DN74LS197	Panasonic
	74LS197	SGS-Thomson
	54LS197	† Signetics
	74LS197	Signetics
	SN54LS197	◊† TI
	SN74LS197	TI
TTL-S	SN54S197	† TI
	SN74S197	TI
Counter/Register with Multiplexed Output, Three-State		
TTL-LS	SN54LS691	◊† TI
	SN54LS693	◊† TI
Divide by 12		
TTL	**ML5492A**	**† Lansdale (3514)**
	ML7492A	**Lansdale (3514)**
Modulo-16		
TTL-LS	T54LS293	† SGS-Thomson
Modulo-16 Binary Counter		
TTL-LS	74LS169	SGS-Thomson
Synchronous (both conventional and three-state outputs) Preset Input		
TTL	DM7556	National
	DM8556	National
Synchronous, Preset Input (asynchronous clear)		
TTL	DM54161A	† National
	DM74161A	National
	DM8316	† National
	DM9316	National
	54161	† National
	74161	National
	9316C	National
	9316M	† National
	N9316	Signetics
	54161	† Signetics
	SN54161	† TI
	SN74161	TI
TTL-ALS	DM74ALS161	National
	SN54ALS161B	† TI
	SN74ALS161B	TI
TTL-AS	DM74AS161	National
	DM74AS162	National
	SN54AS161	† TI
	SN74AS161	TI
TTL-F	MC74F161A	Motorola
	54F161A	◊† National
	74F161A	◊ National
	74F161A	Signetics
	SN54F161A	† TI
	SN74F161A	TI
TTL-LS	**GD74LS161A**	**GoldStar (3439)**
	HD74LS161A	Hitachi
	SN54LS161A	† Motorola
	SN74LS161A	Motorola
	DM54LS161A	† National

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Counters, Binary Count Up (Cont'd)

Function	Device	Source	Line
Synchronous, Preset Input (asynchronous clear)			
TTL-LS		(Cont'd)	
	DM74LS161A	National	
	54LS161	† National	
	74LS161	National	
	DN74LS161A	Panasonic	
	54LS161A	† Signetics	5
	74LS161A	Signetics	
	SN54LS161A	◊† TI	
	SN74LS161A	TI	
TTL-S	AM93S16C	AMD	
	AM93S16M	† AMD	10
Synchronous, Preset Input (synchronous clear)			
TTL	DM54163	† National	
	DM74163	National	
	74163	National	
	54163	Signetics	
	SN54163	† TI	15
	SN74163	TI	
TTL-ALS	M74ALS163B	Mitsubishi	
	DM74ALS163	National	
	SN54ALS163B	† TI	
	SN74ALS163B	TI	20
TTL-AS	DM74AS163	National	
	SN54AS163	† TI	
	SN74AS163	TI	
TTL-F	MC74F163A	Motorola	
	54F163A	◊† National	25
	74F163A	◊ National	
	74F163A	Signetics	
	SN54F163A	† TI	
	SN74F163A	TI	
TTL-LS	**GD74LS163A**	**GoldStar (3439)**	30
	HD74LS163A	Hitachi	
	SN54LS163A	† Motorola	
	SN74LS163A	Motorola	
	DM54LS163A	† National	
	DM74LS163A	National	35
	54LS163A	† National	
	74LS163	National	
	DN74LS163A	◊ Panasonic	
	54LS163A	† Signetics	
	74LS163A	Signetics	40
	SN54LS163A	◊† TI	
	SN74LS163A	TI	
TTL-S	**GD74S163**	**GoldStar (3439)**	
	SN54S163	† TI	
	SN74S163	TI	45
Synchronous Up/Down 4-Bit Binary Counter			
TTL	**ML54191**	**† Lansdale (3514)**	
	ML54193	**† Lansdale (3514)**	
	ML74191	**Lansdale (3514)**	
	ML74193	**Lansdale (3514)**	
Synchronous 4-Bit			
TTL	**ML54163**	**† Lansdale (3514)**	50
	ML74163	**Lansdale (3514)**	
TTL-ALS	SN54ALS561	◊† TI	
Synchronous 4-Bit Counter			
TTL	**ML74161**	**Lansdale (3514)**	
Synchronous 4-Bit Binary Counter			
TTL	**ML54161**	**† Lansdale (3514)**	
Synchronous 6-Bit Binary Rate Multiplier			
TTL	**ML5497**	**† Lansdale (3514)**	55
	ML7497	**Lansdale (3514)**	
Dual 4-Bit Ripple Counter			
TTL-F	N74F393	Signetics	
Dual 4-Bit, Ripple (dual 54/7493A)			
TTL	SN54393	† TI	
	SN74393	TI	
		(Continued)	

Function	Device	Source	Line
Dual 4-Bit, Ripple (dual 54/7493A)		(Cont'd)	
TTL-LS	**GD74LS393**	**GoldStar (3439)**	60
	HD74LS393	Hitachi	
	SN54LS393	† Motorola	
	SN74LS393	Motorola	
	DM74LS393	National	
	74LS393	◊ National	65
	DN74LS393	◊ Panasonic	
	T54LS393	† SGS-Thomson	
	T74LS393	SGS-Thomson	
	54LS393	† Signetics	
	74LS393	Signetics	70
	SN54LS393	◊† TI	
	SN74LS393	TI	
Dual 4-Stage			
TTL-LS	74LS393	SGS-Thomson	
4-Bit, Ripple			
TTL	DM5493A	† National	
	DM7493A	National	75
	7493	National	
	5493	† Signetics	
	7493	Signetics	
	SN54293	† TI	
	SN5493A	† TI	80
	SN74293	TI	
	SN7493A	TI	
	TD3505A	Toshiba	
TTL-LS	**GD74LS93**	**GoldStar (3439)**	
	HD74LS293	Hitachi	85
	HD74LS93	Hitachi	
	SN54LS293	† Motorola	
	SN54LS93	† Motorola	
	SN74LS293	Motorola	
	SN74LS93	Motorola	90
	DM74LS293	National	
	DM74LS93	National	
	74LS293	◊ National	
	DN74LS293	◊ Panasonic	
	DN74LS93	◊ Panasonic	95
	T74LS93B1	SGS-Thomson	
	54LS293	† SGS-Thomson	
	54LS93	† SGS-Thomson	
	74LS293	SGS-Thomson	
	74LS93	SGS-Thomson	100
	54LS293	† Signetics	
	54LS93	† Signetics	
	74LS293	Signetics	
	74LS93	Signetics	
	SN54LS293	◊† TI	105
	SN54LS93	† TI	
	SN74LS293	TI	
	SN74LS93	TI	
4-Bit Binary			
TTL	**ML5493A**	**† Lansdale (3514)**	
	ML7493A	**Lansdale (3514)**	110
TTL-ALS	SN74ALS561A	TI	
4-Bit Binary Counter			
TTL	**ML54293**	**† Lansdale (3514)**	
	ML74293	**Lansdale (3514)**	
4-Bit Binary Counter, Asynchronous Reset			
TTL-ALS	74ALS161B	Signetics	
4-Bit Binary Counter/Latch			
TTL	**ML54197**	**† Lansdale (3514)**	115
	ML74197	**Lansdale (3514)**	
4-Bit Binary Counter/Latch, Presettable			
TTL	**ML54177**	**† Lansdale (3514)**	
	ML74177	**Lansdale (3514)**	
4-Bit Binary Counter, Synchronous Reset			
TTL-ALS	74ALS163B	Signetics	
4-Bit Binary with Asynchronous Reset			
TTL-F	M74F161A	Mitsubishi	120
4-Bit Binary with Synchronous Reset			
TTL-F	M74F163A	Mitsubishi	

Function	Device	Source	Line
4-Stage Ripple Counter			
TTL-LS	T74LS196	SGS-Thomson	
	T74LS197	SGS-Thomson	
8-Bit Synchronous			
TTL-ALS	SN74ALS8161	TI	
TTL-LS	SN54LS461	† AMD	125
	SN74LS461	AMD	
	DM74LS461	National	
8-Bit with Input Registers			
TTL-LS	SN54LS592	◊† TI	
	SN54LS593	† TI	
	SN74LS592	TI	130
8-Bit with Output Registers			
TTL-LS	**GD74LS590**	**GoldStar (3439)**	
	SN54LS590	† TI	
	SN74LS590	TI	
	SN74LS591	TI	

Counters, Binary Count Up/Down

Function	Device	Source	Line
Counter/Register with Multiplexed Three-State Output			
TTL-LS	SN54LS697	◊† TI	135
	SN54LS699	◊† TI	
	SN74LS697	TI	
	SN74LS699	TI	
Divide by 16 Counter			
TTL-LS	T54LS93	† SGS-Thomson	
Presettable BCD/Decade Up/Down Counter			
TTL-LS	T54LS192	† SGS-Thomson	140
Synchronous			
TTL-ALS	SN54AS867	† TI	
	SN54AS869	◊† TI	
	SN74AS867	TI	
	SN74AS869	TI	
TTL-F	54F569	† National	145
	54F579	† National	
	54F779	† National	
	74F569	◊ National	
	74F579	National	
	74F779	National	150
	74F779	Signetics	
	SN74F569	TI	
Synchronous, Parallel load			
	SN54LS469	† AMD	
	SN74LS469	AMD	
Synchronous, Preset Input, Mode Control, Look-Ahead Carry			
TTL-ALS	M74ALS169B	Mitsubishi	155
	DM74ALS169	National	
	SN54ALS169B	TI	
	SN74ALS169B	TI	
TTL-AS	DM74AS169	National	
	SN54AS169A	† TI	160
	SN74AS169	TI	
TTL-F	MC54F169	† Motorola	
	MC74F169	Motorola	
	54F169	† National	
	54F269	† National	165
	74F169	◊ National	
	74F269	National	
	54F269	† Signetics	
	74F169	Signetics	
	74F269	Signetics	170
	SN54F169	† TI	
	SN74F169	TI	
TTL-LS	SN54LS169	† Motorola	
	SN74LS169	Motorola	
	DM54LS169A	† National	175
	DM74LS169A	National	
	54LS169	† National	
	74LS169	National	
	T54LS169	† SGS-Thomson	
	T74LS169	SGS-Thomson	180
	54LS169A	† Signetics	
	74LS169A	Signetics	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Counters, Binary Count Up/Down (Cont'd)

Function	Device	Source	Line
Synchronous, Preset Input, Mode Control, Look-Ahead Carry			
TTL-LS		(Cont'd)	
	SN54LS169B	◊† TI	
	SN54LS669	◊† TI	
	SN74LS169B	TI	
	SN74LS669	TI	
TTL-S	**GD74S169**	**GoldStar (3439)**	5
	54S169A	Signetics	
	SN54S169	† TI	
	SN74S169	TI	
Synchronous, Preset Input with Mode Control			
TTL	DM54191	† National	
	DM74191	National	10
	54191	† National	
	74191	National	
	54191	† Signetics	
	SN54191	† TI	
	SN74191	TI	15
TTL-ALS	M74ALS191	Mitsubishi	
	SN54ALS191	† TI	
	SN74ALS191	TI	
TTL-F	54F191	† National	
	74F191	◊ National	20
	74F191	Signetics	
	SN74F191	TI	
TTL-LS	**GD74LS191**	**GoldStar (3439)**	
	HD74LS191	Hitachi	
	SN54LS191	† Motorola	25
	SN74LS191	Motorola	
	DM54LS191	† National	
	DM74LS191	National	
	74LS191	National	
	DN74LS191	◊ Panasonic	30
	74LS191	SGS-Thomson	
	54LS191	† Signetics	
	74LS191	Signetics	
	SN54LS191	◊† TI	
	SN74LS191	TI	35
Synchronous, Preset Input, Three-State			
TTL-ALS	SN54ALS569A	† TI	
	SN74ALS569A	TI	
TTL-LS	AM25LS2569C	AMD	
	AM25LS2569M	† AMD	
	SN54LS569	† Motorola	40
	SN74LS569	Motorola	
	74LS569A	Signetics	
Synchronous, Preset Input (2 clocks)			
TTL	DM54193	† National	
	DM74193	National	
	DM7563	† National	45
	DM8563	National	
	54193	† Signetics	
	74193	Signetics	
	SN54193	† TI	
	SN74193	TI	50
TTL-ALS	M74ALS193	Mitsubishi	
	SN54ALS193	† TI	
	SN74ALS193	TI	
TTL-F	54F193	◊† National	
	74F193	◊ National	55
	74F193	Signetics	
	SN74F193	TI	
TTL-LS	**GD74LS193**	**GoldStar (3439)**	
	HD74LS193	Hitachi	
	SN54LS193	† Motorola	60
	SN74LS193	Motorola	
	DM54LS193	† National	
	DM74LS193	National	
	54LS193	† National	
	74LS193	National	65
	DN74LS193	◊ Panasonic	
		(Continued)	

Function	Device	Source	Line
Synchronous, Preset Input (2 clocks)			
TTL-LS		(Cont'd)	
	54LS193	† SGS-Thomson	
	74LS193	SGS-Thomson	
	54LS193	Signetics	
	74LS193	Signetics	70
	SN54LS193	◊† TI	
	SN74LS193	TI	
Synchronous with Mode Control			
TTL	S8284	† Signetics	
Synchronous 4-Bit, Look-Ahead Carry			
TTL-LS	HD74LS669	Hitachi	
	SN74LS669	Motorola	75
Up/Down Binary Counter			
TTL-F	M74F169	◊ Mitsubishi	
TTL-LS	T54LS193	† SGS-Thomson	
Dual, Synchronous, Preset Input			
TTL	MC4355	† Motorola	
4-Bit Asynchronous Presettable			
TTL-ALS	74ALS191	Signetics	
4-Bit Synchronous Presettable			
TTL-ALS	74ALS193	Signetics	80
4-Bit Up/Down Counter (synchronous)			
TTL-ALS	M74ALS569A	Mitsubishi	
4-Bit Up/Down BCD Decade (synchronous)			
TTL-ALS	M74ALS568A	Mitsubishi	
4-Bit Binary Counter with Asynchronous Reset			
TTL-ALS	M74ALS161B	Mitsubishi	
4-Bit Binary Up/Down Counter			
TTL-LS	T74LS191	SGS-Thomson	
	T74LS193	SGS-Thomson	85
8-Bit Synchronous			
TTL-ALS	SN74ALS8163	TI	
	SN74ALS8169	TI	
	SN74ALS869	TI	

Counters, Decade

Function	Device	Source	Line
Synchronous, Presettable, Three-State			
TTL-ALS	M74ALS560A	Mitsubishi	
Synchronous Up/Down Decade Counter			
TTL	**ML54190**	**† Lansdale (3514)**	90
	ML54192	**† Lansdale (3514)**	
	ML74190	**Lansdale (3514)**	
	ML74192	**Lansdale (3514)**	
Synchronous Decade Counter			
TTL	**ML54152**	**Lansdale (3514)**	
	ML54160	**† Lansdale (3514)**	95
	ML54162	**† Lansdale (3514)**	
	ML74160	**Lansdale (3514)**	
	ML74162	**Lansdale (3514)**	
Synchronous Decade Decimal Rate Multiplier			
TTL	**ML54167**	**† Lansdale (3514)**	
	ML74167	**Lansdale (3514)**	100
BCD Decade Counter			
TTL-LS	74LS168	SGS-Thomson	
BCD Decade Counter with Asynchronous Reset			
TTL-ALS	M74ALS160B	Mitsubishi	
BCD Decade Counter with Synchronous Reset			
TTL-ALS	M74ALS162B	Mitsubishi	
Dual			
TTL-LS	54LS390	† SGS-Thomson	
Dual Decade Counter			
TTL-LS	74LS390	SGS-Thomson	105
	74LS490	SGS-Thomson	
Decade Counter			
TTL	**ML54290**	**† Lansdale (3514)**	
	ML74290	**Lansdale (3514)**	
TTL-LS	T54LS280	† SGS-Thomson	
Decade Counter/Latch, Presettable			
TTL	**ML54176**	**† Lansdale (3514)**	110
	ML54196	**† Lansdale (3514)**	
		(Continued)	

Function	Device	Source	Line
Decade Counter/Latch, Presettable			
TTL		(Cont'd)	
	ML74176	**Lansdale (3514)**	
	ML74196	**Lansdale (3514)**	

Counters, Decade Count Up

Function	Device	Source	Line
Divide-by-2 and by-5			
TTL	DM5490	† National	
	DM7490	National	115
	5490	† National	
	7490	National	
	7490	Signetics	
	SN54290	† TI	
	SN5490A	† TI	120
	TD3501A	Toshiba	
TTL-LS	**GD74LS90**	**GoldStar (3439)**	
	HD74LS290	Hitachi	
	HD74LS90	Hitachi	
	SN54LS290	† Motorola	125
	SN54LS90	† Motorola	
	SN74LS290	Motorola	
	SN74LS90	Motorola	
	DM74LS290	National	
	DM74LS90	National	130
	74LS290	◊ National	
	DN74LS290	◊ Panasonic	
	DN74LS90	◊ Panasonic	
	T74LS90B1	SGS-Thomson	
	54LS290	† SGS-Thomson	135
	74LS90	SGS-Thomson	
	54LS290	† Signetics	
	54LS90	† Signetics	
	74LS290	Signetics	
	74LS90	Signetics	140
	SN54LS290	◊† TI	
	SN54LS90	† TI	
	SN74LS290	TI	
	SN74LS90	TI	
(Divide-by-2 and divide-by-5) Counter/Latch, Ripple, Preset Input			
TTL	SN54176	† TI	145
	SN54196	† TI	
	SN74176	TI	
	SN74196	TI	
TTL-LS	SN54LS196	† Motorola	
	SN74LS196	Motorola	150
	74LS196	National	
	DN74LS196	◊ Panasonic	
	74LS196	SGS-Thomson	
	SN54LS196	◊† TI	
	SN74LS196	TI	155
TTL-S	SN54S196	† TI	
	SN74S196	TI	
Synchronous, Preset Input (asynchronous clear)			
TTL	N9310	Signetics	
	54160	† Signetics	
	SN54160	† TI	160
	SN74160	TI	
TTL-ALS	DM74ALS160	National	
	SN74ALS160B	TI	
TTL-AS	DM74AS160	National	
	SN74AS160	TI	165
TTL-F	MC74F160A	Motorola	
	54F160A	◊† National	
	74F160A	◊ National	
	74F160A	Signetics	
	SN54F160A	† TI	170
	SN74F160A	TI	
TTL-LS	HD74LS160A	Hitachi	
	SN54LS160A	† Motorola	
	SN74LS160A	Motorola	
	54LS160A	† National	175
	74LS160	National	
	DN74LS160A	◊ Panasonic	
	54LS160A	† Signetics	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Counters, Decade Count Up (Cont'd)

Function	Device	Source	Line
Synchronous, Preset Input (asynchronous clear)			
TTL-LS		(Cont'd)	
	74LS160A	Signetics	
	SN54LS160A	◊† TI	
	SN74LS160A	TI	
Synchronous, Preset Input (synchronous clear)			
TTL	SN54162	† TI	
TTL-ALS	DM74ALS162	National	5
	SN54ALS162B	† TI	
	SN74ALS162B	TI	
TTL-AS	SN74AS162	TI	
TTL-F	MC74F162A	Motorola	
	54F162A	◊† National	10
	74F162A	◊ National	
	74F162A	Signetics	
	SN54F162A	† TI	
	SN74F162A	TI	
TTL-LS	HD74LS162A	Hitachi	15
	SN54LS162A	† Motorola	
	SN74LS162A	Motorola	
	54LS162A	† National	
	74LS162	National	
	DN74LS162	Panasonic	20
	54LS162A	† Signetics	
	74LS162A	Signetics	
	SN54LS162A	† TI	
	SN74LS162A	TI	
TTL-S	SN54S162	† TI	25
	SN74S162	◊ TI	
Dual, Ripple (dual 54/7490A)			
TTL	SN54390	† TI	
	SN74390	TI	
TTL-LS	**GD74LS390**	**GoldStar (3439)**	
	HD74LS390	Hitachi	30
	HD74LS490	Hitachi	
	SN54LS390	† Motorola	
	SN54LS490	† Motorola	
	SN74LS390	Motorola	
	SN74LS490	Motorola	35
	DM74LS390	National	
	54LS490	† National	
	74LS490	◊ National	
	DN74LS390	◊ Panasonic	
	DN74LS490	◊ Panasonic	40
	T54LS390	† SGS-Thomson	
	T54LS490	† SGS-Thomson	
	T74LS390	SGS-Thomson	
	T74LS490	SGS-Thomson	
	54LS390	† Signetics	45
	54LS490	† Signetics	
	74LS390	Signetics	
	74LS490	Signetics	
	SN54LS390	◊† TI	
	SN54LS490	◊† TI	50
	SN74LS390	TI	
Decade Ripple Counter			
TTL	5490	† Signetics	
4-Bit, Three-State			
TTL-ALS	SN74ALS560A	TI	

Counters, Decade Count Up/Down

Function	Device	Source	Line
Counter/Register with Multiplexed Three-State Output			
TTL-LS	SN54LS696	◊† TI	
Synchronous			
TTL-ALS	SN74ALS568A	TI	55
TTL-F	54F568	† National	
	74F568	◊ National	
	54F579	† Signetics	
	74F568	Signetics	
	74F569	Signetics	60
		(Continued)	
Synchronous			
TTL-F		(Cont'd)	
	74F579	Signetics	
	SN74F568	TI	
Synchronous, Preset Input, Mode Control, Look-Ahead Carry			
TTL-ALS	M74ALS168B	Mitsubishi	
	DM74ALS168	National	
	SN74ALS168B	TI	65
TTL-AS	DM74AS168	National	
	SN74AS168	TI	
TTL-F	MC54F168	† Motorola	
	MC74F168	Motorola	
	54F168	National	70
	74F168	National	
	74F168	Signetics	
	SN54F168	† TI	
	SN74F168	TI	
TTL-LS	SN54LS168	† Motorola	75
	SN74LS168	Motorola	
	SN74LS668	Motorola	
	DM54LS168A	National	
	54LS168	† National	
	T54LS168	† SGS-Thomson	80
	T74LS168	SGS-Thomson	
	54LS168A	† Signetics	
	54S168A	Signetics	
	SN54LS668	◊† TI	
Synchronous, Preset Input, Three-State			
TTL-LS	SN54LS568	† Motorola	85
	SN74LS568	Motorola	
Synchronous, Preset Input (2 clocks)			
TTL	54192	† Signetics	
	74192	Signetics	
	SN54192	† TI	
	SN74192	TI	90
TTL-ALS	M74ALS192	Mitsubishi	
	SN74ALS192	TI	
TTL-F	54F192	◊† National	
	74F192	◊ National	
	74F192	Signetics	95
	SN74F192	TI	
TTL-LS	HD74LS192	Hitachi	
	SN54LS192	† Motorola	
	SN74LS192	Motorola	
	54LS192	† National	100
	74LS192	National	
	DN74LS192	◊ Panasonic	
	54LS192	† SGS-Thomson	
	74LS192	SGS-Thomson	
	54LS192	† Signetics	105
	74LS192	Signetics	
	SN54LS192	◊† TI	
	SN74LS192	TI	
Synchronous, Preset, with Mode Control			
TTL	54190	† Signetics	
	SN54190	† TI	110
	SN74190	TI	
TTL-ALS	M74ALS190	Mitsubishi	
	SN74ALS190	TI	
TTL-F	54F190	† National	
	74F190	◊ National	115
	74F190	Signetics	
	SN74F190	TI	
TTL-LS	HD74LS190	Hitachi	
	SN54LS190	† Motorola	
	SN74LS190	Motorola	120
	DM54LS190	† National	
	DM74LS190	National	
	74LS190	National	
	DN74LS190	◊ Panasonic	
	74LS190	SGS-Thomson	125
	54LS190	† Signetics	
		(Continued)	
Synchronous, Preset, with Mode Control			
TTL-LS		(Cont'd)	
	SN54LS190	◊† TI	
	SN74LS190	TI	
BCD/Decade Up/Down Counter			
TTL-LS	T74LS190	SGS-Thomson	
	T74LS192	SGS-Thomson	130
Four Counter/Latch/Display Driver (synchronous, BCD and segment drives)			
TTL	ZN1040E-RED	Plessey	

Counters, Miscellaneous

Function	Device	Source	Line
Divide-by-4			
TTL	TD6100	Toshiba	
Divide-by-12 (divide by 2 and 6), Ripple			
TTL	DM5492A	† National	
	5492	† Signetics	
	7492	Signetics	135
	SN5492A	† TI	
	SN7492A	TI	
TTL-LS	**GD74LS92**	**GoldStar (3439)**	
	HD74LS92	Hitachi	
	SN54LS92	† Motorola	140
	SN74LS92	Motorola	
	DN74LS92	◊ Panasonic	
	54LS92	† Signetics	
	74LS92	Signetics	
	SN54LS92	† TI	145
	SN74LS92	TI	
Programmable Counter (16-Bit Countdown)			
	74F525	◊ National	
TTL-F	54F525	† National	
Programmable Modulo-N Binary			
TTL	MC4318	† Motorola	
	MC4319	† Motorola	150
TTL-LS	SN74LS718	Motorola	
Programmable Modulo-N Decade			
TTL	MC4016	Motorola	
	MC4316	† Motorola	
	MC4317	† Motorola	
TTL-LS	SN74LS716	Motorola	155
Decade Counter/Latch, LED/Lamp Driver (constant current output)			
TTL	SN74143	TI	
4-Bit			
TTL-LS	T74LS293	SGS-Thomson	
4-Bit Universal			
TTL	MC4023	Motorola	
8-Bit Binary Counter/Latch			
TTL-LS	SN74LS593	TI	
10-Bit Up/Down (provides CRT vertical and horizontal timing generation)			
TTL-LS	SN54LS491	† AMD	160
	SN74LS491	AMD	
16-Bit Programmable Modulo			
TTL-LS	SN74LS294	TI	
32-Bit Programmable Modulo			
TTL-LS	SN74LS292	TI	

Decoders

Function	Device	Source	Line
Excess-3 Gray to Decimal			
TTL	**ML5444**	**† Lansdale (3514)**	
	ML7444	**Lansdale (3514)**	165
Excess-3 to Decimal			
TTL	**ML5443**	**† Lansdale (3514)**	
	ML7443	**Lansdale (3514)**	
Binary to Octal (1 of 8)			
TTL-S	N82S50	Signetics	
BCD-to-Decimal Decoder			
TTL	**ML5442**	**† Lansdale (3514)**	
	ML7442	**Lansdale (3514)**	170

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Decoders (Cont'd)

Function	Device	Source	Line
BCD-to-Decimal Decoder/Driver, Open Collector			
TTL-LS	54LS445	† Signetics	
BCD-to-Decimal Decoder/Driver, Open Collector to 30 V Output			
TTL	DM5445	† National	
	DM7445	National	
	7445	National	
	5445	† Signetics	5
	7445	Signetics	
	SN5445	† TI	
	SN7445	TI	
BCD-to-Decimal Decoder/Driver, Open Collector, 15 V			
TTL	DM54145	† National	
	DM74145	National	10
	74145	National	
	54145	† Signetics	
	74145	Signetics	
	SN74145	TI	
TTL-LS	**GD74LS145**	**GoldStar (3439)**	15
	HD74LS145	Hitachi	
	SN74LS145	Motorola	
	DN74LS145	◊ Panasonic	
	SN54LS145	◊† TI	
	SN74LS145	TI	20
BCD-to-Decimal (1 of 10)			
TTL	DM5442	† National	
	DM7442	National	
	5442	† National	
	7442	National	
	9301C	National	25
	9301M	† National	
	5442	† Signetics	
	SN5442A	† TI	
	SN7442A	TI	
TTL-LS	**GD74LS42**	**GoldStar (3439)**	30
	HD74LS42	Hitachi	
	SN54LS42	† Motorola	
	SN74LS42	Motorola	
	DM54LS42	† National	
	DM74LS42	National	35
	54LS42	† National	
	74LS42	◊ National	
	DN74LS42	◊ Panasonic	
	54LS42	† SGS-Thomson	
	74LS42	SGS-Thomson	40
	54LS42	† Signetics	
	74LS42	Signetics	
	SN54LS42	◊† TI	
	SN74LS42	TI	
TTL-S	N82S52	Signetics	45
BCD-to-Decimal (1 of 10), Three-State			
TTL-F	54F537	† National	
	74F537	◊ National	
	74F537	Signetics	
BCD-to–7 Segment Decoder			
TTL-LS	SN54LS249	◊† TI	
Dual Binary to One-of-Four Line Gated			
TTL	MC4307	† Motorola	50
Dual 1 of 4 Decoder/Demultiplexer			
TTL-F	M74F139	Mitsubishi	
Dual 1-of–4 Decoder			
TTL-LS	T54LS139	† SGS-Thomson	
	T74LS139	SGS-Thomson	
Dual 1-of–4 Decoder/Demultiplexer			
TTL-ALS	74ALS139	Signetics	
TTL-LS	T54LS155	† SGS-Thomson	55
	T54LS156	† SGS-Thomson	
	T74LS155	SGS-Thomson	
	T74LS156	SGS-Thomson	
Dual 1-of–4 Decoder/Demultiplexer (independent address)			
TTL	9321C	National	
	9321M	† National	60
Dual 1-of–4 Decoder, Three-State			
TTL-F	MC54F539	† Motorola	
	MC74F539	Motorola	
Dual 2-Line to 4-Line Decoder/Demultiplexer			
TTL	**ML54155**	**† Lansdale (3514)**	
	ML74155	**Lansdale (3514)**	
	DM54155	† National	65
	DM74155	National	
	74155	National	
	54155	Signetics	
	54156	† Signetics	
	SN54155	† TI	70
	SN54156	† TI	
	SN74155	TI	
	SN74156	TI	
TTL-ALS	SN74ALS155	TI	
TTL-AS	SN74ALS139	TI	75
TTL-F	MC54F139	† Motorola	
	MC74F139	Motorola	
	54F139	◊† National	
	54F539	† National	
	74F139	◊ National	80
	74F539	◊ National	
	54F139	† Signetics	
	74F139	Signetics	
	74F539	Signetics	
TTL-LS	**GD74LS139**	**GoldStar (3439)**	85
	GD74LS155	**GoldStar (3439)**	
	HD74LS139	Hitachi	
	HD74LS155	Hitachi	
	HD74LS156	Hitachi	
	SN54LS139	† Motorola	90
	SN54LS155	† Motorola	
	SN54LS156	† Motorola	
	SN74LS139	Motorola	
	SN74LS155	Motorola	
	SN74LS156	Motorola	95
	DM54LS139	† National	
	DM54LS155	† National	
	DM54LS156	† National	
	DM74LS139	National	
	DM74LS155	National	100
	DM74LS156	National	
	54LS139	† National	
	54LS155	† National	
	54LS156	† National	
	74LS139	◊ National	105
	74LS155	◊ National	
	74LS156	◊ National	
	DN74LS139	◊ Panasonic	
	DN74LS155	◊ Panasonic	
	DN74LS156	◊ Panasonic	110
	54LS139	† SGS-Thomson	
	54LS155	† SGS-Thomson	
	54LS156	† SGS-Thomson	
	74LS139	SGS-Thomson	
	74LS155	SGS-Thomson	115
	74LS156	SGS-Thomson	
	54LS139	† Signetics	
	54LS155	† Signetics	
	54LS156	† Signetics	
	74LS139	Signetics	120
	74LS155	Signetics	
	74LS156	Signetics	
	SN54LS139A	◊† TI	
	SN54LS155A	◊† TI	
	SN54LS156	◊† TI	125
	SN74LS139A	TI	
	SN74LS155A	TI	
	SN74LS156	TI	
TTL-S	**GD74S139**	**GoldStar (3439)**	
	DM54S139	† National	130
	DM74S139	National	
	74S139	National	
	54S139	† Signetics	
	74S139	Signetics	
	SN54S139	† TI	135
	SN74S139	TI	
Dual 2-Line to 4-Line Decoder/Multiplexer			
TTL-ALS	SN54ALS139	† TI	
Dual 2-Line to4-Line Decoder/Demultiplexer with Open-Collector Outputs			
TTL-ALS	SN74ALS156	TI	
One-of-Ten Decoder/Demultiplexer, Three-State			
	MC74F537	Motorola	
TTL-F	MC54F537	† Motorola	140
1 of 10 Decoder			
TTL-LS	T74LS42	SGS-Thomson	
1 of 8 Decoder/Demultiplexer			
TTL-ALS	M74ALS138	Mitsubishi	
TTL-F	M74F138	Mitsubishi	
1 of 8 Decoder/Demultiplexer with Address Latch			
TTL-ALS	M74ALS137	Mitsubishi	
1-Line to 8-Line Decoder/Demultiplexer			
	54F547	† National	145
	54F548	◊† National	
	74F547	◊ National	
	74F548	◊ National	
	74F547	Signetics	
	74F548	Signetics	150
1-of–8 Decoder/Demultiplexer			
TTL-ALS	74ALS138	Signetics	
1-of–10 Decoder			
TTL-LS	T54LS42	† SGS-Thomson	
3-Line to 8-Line Decoder/Demultiplexer			
TTL-ALS	M74ALS131	Mitsubishi	
	DM74ALS138	National	
	SN54ALS138	† TI	155
	SN74ALS138	TI	
TTL-AS	SN54AS138	† TI	
	SN74AS138	TI	
TTL-F	MC54F138	† Motorola	
	MC74F138	Motorola	160
	54F138	◊† National	
	74F138	◊ National	
	74F138	Signetics	
	SN54F138	◊† TI	
	SN74F138	◊ TI	165
TTL-LS	**GD74LS138**	**GoldStar (3439)**	
	HD74LS138	Hitachi	
	SN54LS138	† Motorola	
	SN74LS138	Motorola	
	DM54LS138	† National	170
	DM74LS138	National	
	54LS138	† National	
	74LS138	◊ National	
	DN74LS138	◊ Panasonic	
	T54LS138	† SGS-Thomson	175
	T74LS138	SGS-Thomson	
	54LS138	† SGS-Thomson	
	74LS138	SGS-Thomson	
	54LS138	† Signetics	
	74LS138	Signetics	180
	SN54LS138	◊† TI	
	SN74LS138	TI	
TTL-S	**GD74S138**	**GoldStar (3439)**	
	DM54S138	† National	
	DM74S138	National	185
	74S138	National	
	54S138	† Signetics	
	74S138	Signetics	
	SN54S138	† TI	
	SN74S138	TI	190
3-Line to 8-Line Decoder/Demultiplexer, Inverting/Non-Inverting, Three-State			
TTL-F	MC54F538	† Motorola	
	MC74F538	Motorola	
	54F538	◊† National	
	74F538	◊ National	
	74F538	Signetics	195
TTL-LS	AM25LS2536C	AMD	
	AM25LS2536M	† AMD	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Decoders (Cont'd)

Function	Device	Source
3-Line to 8-Line Decoder/Demultiplexer, Inverting/Non-Inverting, Three-State		
TTL-LS		(Cont'd)
	AM25LS2538C	AMD
	AM25LS2538M	† AMD
3-Line to 8-Line Decoder/Demultiplexer with Input Latches		
TTL-ALS	DM74ALS137	National
	SN74ALS137	TI
TTL-AS	SN74AS137	TI
TTL-LS	SN74LS137	Motorola
	SN54LS137	◊† TI
	SN74LS137	TI
3-Line to 8-Line Decoders/Demultiplexer with Address Registers		
TTL-ALS	DM74ALS131	National
	SN74ALS131	TI
TTL-AS	SN74AS131A	TI
4-Line to 16-Line Decoder/Demultiplexer		
TTL	**ML54154**	**† Lansdale (3514)**
	ML74154	**Lansdale (3514)**
	DM54154	† National
	DM74154	National
	DM8311	National
	54154	† National
	9311C	National
	9311M	† National
	54154	† Signetics
	74154	Signetics
	SN54154	† TI
	SN74154	TI
TTL-ALS	SN74ALS154	TI
TTL-LS	**GD74LS154**	**GoldStar (3439)**
	HD74LS154	Hitachi
	DM54LS154	† National
	DM74LS154	National
	54LS154	† Signetics
	74LS154	Signetics
4-Line to 16-Line Decoder/Demultiplexer, Open Collector Output		
TTL	SN74159	TI
8-Line to 3-Line Priority Encoder		
TTL-LS	**GD74LS148**	**GoldStar (3439)**

Drivers

Function	Device	Source
Differential Line Driver, RS-422A		
TTL-ALS	SN55ALS192	† TI
	SN55ALS193	† TI
	SN55ALS194	† TI
	SN55ALS195	† TI
Fiber Optic LED Driver		
TTL-F	N74F5300	Signetics
Fiber Optic LED Driver (dual)		
TTL-F	N74F5302	Signetics
Line Driver, Quad		
TTL-ALS	SN55ALS126	† TI
	SN55ALS130	† TI
Dual 3-Input, 3-Output AND		
TTL-H	**ML3028**	**Lansdale (3514)**
	ML3128	**† Lansdale (3514)**
Dual 3-Input, 3-Output NAND		
TTL-H	**ML3029**	**Lansdale (3514)**
	ML3129	**† Lansdale (3514)**
Dual 4-Input Positive NAND 50 Ohm Line Driver		
TTL-S	DM54S140	† National
	DM74S140	National
	54S140	† Signetics
	74S140	Signetics
	SN54S140	† TI
	SN74S140	TI
Quad Bus Driver, Three-State		
TTL	N8T09	Signetics
	S8T09	† Signetics
Quad NAND Driver		
TTL	**SG508**	**† SiliconG (3643)**
Quad NAND Power Driver (to 60 V, sinks 1.5 A)		
	UDN2540B	**Allegro Micro (3206)**
Quad Predriver, Open Collector		
TTL	MC4042	Motorola
Quad 2-Input AND Power Driver, Open Collector (to 100 V, sinks 500 mA)		
TTL	UHD-400	† Allegro Micro
	UHD-406	† Allegro Micro
	UHD-500	† Allegro Micro
	UHD-506	† Allegro Micro
	UHP400	**Allegro Micro (3206)**
	UHP406	**Allegro Micro (3206)**
Quad 2-Input AND Power Driver (to 80 V, sinks 600ma)		
TTL	UDN5706A	Allegro Micro
	UDS5706H	**† Allegro Micro (3206)**
Quad 2-Input NAND Buffer, Open Collector, to 15 V Output		
TTL	DM7426	National
	S8T80	† Signetics
	5426	† Signetics
	7426	Signetics
	SN5426	† TI
	SN7426	TI
Quad 2-Input NAND Bus Driver, Open Collector, 80ma		
TTL	96101	National
Quad 2-Input NAND Power Driver, Open Collector (to 100 V, sinks 500 mA)		
TTL	UHD-407	† Allegro Micro
	UHD-408	† Allegro Micro
	UHD-507	† Allegro Micro
	UHD-508	† Allegro Micro
	UHP407	**Allegro Micro (3206)**
	UHP408	**Allegro Micro (3206)**
Quad 2-Input NOR Driver		
TTL-AS	DM74AS1036	National
	SN74AS1036A	TI
Quad 2-Input NOR Power Driver, Open Collector (to 100 V, sinks 500 mA)		
TTL	UHD-432	† Allegro Micro
	UHD-433	† Allegro Micro
	UHD-532	† Allegro Micro
	UHD-533	† Allegro Micro
Quad 2-Input NOR 74-Ohm/50-Ohm Line Driver		
TTL	SN54128	† TI
	SN74128	TI
Quad 2-Input OR Power Driver, Open Collector (to 100 V, sinks 500 mA)		
TTL	UHD-402	† Allegro Micro
	UHD-403	† Allegro Micro
	UHD-502	† Allegro Micro
	UHD-503	† Allegro Micro
	UHP402	**Allegro Micro (3206)**
	UHP403	**Allegro Micro (3206)**
Hex Buffer/Driver, Open Collector High Voltage Output, to 30 V		
TTL	DM5407	† National
	DM5417	† National
	DM7407	National
	DM7417	National
	7407	National
	7417	National
	5407	† Signetics
	5417	† Signetics
		(Continued)
Hex Buffer/Driver, Open Collector High Voltage Output, to 30 V		
TTL		(Cont'd)
	7407	Signetics
	7417	Signetics
	SN5407	† TI
	SN5417	† TI
	SN7407	TI
	SN7417	TI
Hex Inverter Buffer/Driver Open Collector High Voltage Output, to 30 V		
TTL	DM5406	† National
	DM5416	† National
	DM7406	National
	DM7416	National
	7406	National
	7416	National
	5406	† Signetics
	5416	† Signetics
	7406	Signetics
	7416	Signetics
	SN5406	† TI
	SN5416	† TI
	SN7406	TI
	SN7416	TI
Hex Inverter/MOS Memory Driver		
TTL	DS16149	† National
	DS16179	† National
	DS36149	National
	DS36179	National
Hex, Three-State		
TTL	74366	Signetics
	74367	Signetics
TTL-F	54F366	† National
	74F366	National
	54F366	† Signetics
	74F366	Signetics
TTL-LS	HD74LS366A	Hitachi
	HD74LS367A	Hitachi
Hex, Three-State Driver		
TTL	DM54367	† National
	DM74367	National
	54366A	◊† Signetics
	54367A	◊† Signetics
	SN54366A	† TI
	SN54367A	† TI
	SN74367A	TI
Hex 2-Input AND Driver		
TTL-ALS	DM74ALS808	National
	SN54ALS808A	† TI
	SN74ALS1808A	TI
TTL-AS	DM74AS808A	National
	SN54AS808B	† TI
	SN74AS1808	TI
	SN74AS808B	TI
Hex 2-Input NAND Driver		
TTL-ALS	DM74ALS804	National
	SN54ALS804A	† TI
	SN74ALS1804A	TI
	SN74ALS804A	TI
TTL-AS	DM74AS804A	National
	SN54AS804B	† TI
	SN74AS1804	TI
	SN74AS804B	TI
Hex 2-Input NOR Driver		
TTL-ALS	DM74ALS805	National
	SN54ALS805A	† TI
	SN74ALS1805A	TI
TTL-AS	DM74AS805A	National
	SN54AS805B	◊† TI
	SN74AS1805	TI
	SN74AS805B	TI

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Function	Device	Source	Line
Drivers (Cont'd)			
Hex 2-Input OR Driver			
TTL-ALS	DM74ALS832	National	
	SN54ALS832A	† TI	
	SN74ALS1832A	TI	
TTL-AS	DM74AS832A	National	
	SN54AS832B	† TI	5
	SN74AS1832	TI	
	SN74AS832B	TI	
Octal Trapezoidal Driver			
TTL	DS3890	National	
10-Bit Buffer/Driver, Three-State, Inverting			
TTL-ALS	SN74ALS29828	TI	
10-Bit Buffer/Driver, Three-State, Non-Inverting			
TTL-ALS	SN74ALS29827	TI	10
Flip-Flops, D-Type			
Flip-Flop, Clock Driver			
	74F50729	**Signetics (3605)**	
Monostable Multivibrator			
TTL	**ML54121**	**† Lansdale (3514)**	
	ML74121	**Lansdale (3514)**	
Monostable Multivibrator, Retriggerable with Clear			
TTL	**ML54122**	**† Lansdale (3514)**	
	ML74122	**Lansdale (3514)**	15
Monostable Multivibrator, Retriggerable, Dual			
TTL	**ML54123**	**† Lansdale (3514)**	
	ML74123	**Lansdale (3514)**	
Nonvolatile Octal D-Type with Recall (ferroelectric memory cells for nonvolatile store)			
TTL-LS	K74C372	National	
Octol, Non-Inv.			
TTL-F	MC74F377	◊ Motorola	
Dual			
TTL-F	M74F74	Mitsubishi	20
TTL-H	**ML3060**	**Lansdale (3514)**	
	ML3160	**† Lansdale (3514)**	
Dual			
TTL-LS	T54LS74A	† SGS-Thomson	
Dual			
TTL-LS	T74LS74A	SGS-Thomson	
Dual D-Type			
TTL-ALS	74ALS74A	Signetics	25
Dual D-Type, Edge Triggered			
TTL	**ML5479**	**† Lansdale (3514)**	
	ML7479	**Lansdale (3514)**	
Dual D-Type Edge-Triggered			
TTL	**ML5474**	**† Lansdale (3514)**	
	ML7474	**Lansdale (3514)**	
Dual D-Type, Synchronizing Cascaded			
TTL-F	**74F50728**	**Signetics (3605)**	30
Dual Edge-Triggered			
TTL-ALS	DM74ALS874	National	
	DM74ALS876	National	
	SN54ALS874B	† TI	
	SN74ALS874B	TI	
	SN74ALS876A	TI	35
	SN74ALS878A	TI	
	SN74ALS879A	TI	
TTL-AS	DM74AS874	National	
	DM74AS876	National	
	DM74AS878	National	40
	DM74AS879	National	
	SN54AS874	◊† TI	
	SN74AS874	TI	
	SN74AS876	TI	
	SN74AS878	TI	45
	SN74AS879	TI	
Dual Edge-Triggered, Inverting, Three-State			
TTL-ALS	M74ALS876A	Mitsubishi	
Dual Edge-Triggered, Non-Inverting, Three-State			
TTL-ALS	M74ALS874B	Mitsubishi	
Dual Edge-Triggered, Three-State and Synchronous Reset, Non-Inverting			
TTL-ALS	M74ALS878A	Mitsubishi	
	M74ALS879A	Mitsubishi	50
Dual, Metastable Resistant			
TTL-AS	SN74AS3074	TI	
Dual Positive Edge-Triggered (w/set and reset)			
TTL-ALS	M74ALS74A	Mitsubishi	
Dual Positive Edge-Triggered with Preset			
TTL-F	MC54F74	Motorola	
Dual Positive Edge-Triggered with Preset and Clear			
TTL	DM5474	† National	
	DM7474	National	55
	5474	† National	
	7474	National	
	5474	† Signetics	
	7474	Signetics	
	SN5474	† TI	60
	SN7474	TI	
TTL-ALS	DM74ALS74	National	
	SN54ALS74A	† TI	
	SN74ALS74A	TI	
TTL-AS	DM74AS74	National	65
	SN54AS74	◊† TI	
	SN74AS74	TI	
TTL-F	MC74F74	Motorola	
	54F74	◊† National	
	74F74	◊ National	70
	74F74	Signetics	
	SN54F74	† TI	
	SN74F74	◊ TI	
TTL-H	MC3060	Motorola	
TTL-LS	**GD74LS74A**	**GoldStar (3439)**	75
	HD74LS74A	Hitachi	
	SN54LS74A	† Motorola	
	SN74LS74A	Motorola	
	DM54LS74	† National	
	DM74LS74	National	80
	54LS74	† National	
	74LS74	National	
	DN74LS74A	◊ Panasonic	
	54LS74	† SGS-Thomson	
	74LS74	SGS-Thomson	85
	54LS74A	† Signetics	
	74LS74A	Signetics	
	SN54LS74A	◊† TI	
	SN74LS74A	TI	
TTL-S	**GD74S74**	**GoldStar (3439)**	90
	DM74S74	National	
	74S74	National	
	54S74	◊† Signetics	
	74S74	Signetics	
	SN54S74	† TI	95
	SN74S74	TI	
Dual-D-Type, Metastable Transparent			
TTL-F	**74F5074**	**Signetics (3605)**	
Quad			
TTL-AS	SN54AS175A	◊† TI	
TTL-F	M74F175	Mitsubishi	
TTL-LS	T54LS175	† SGS-Thomson	100
	T74LS175	SGS-Thomson	
Quad D-Type			
TTL-ALS	74ALS175	Signetics	
Quad D-Type (clock driver)			
TTL-F	MC74F803	Motorola	
Quad D-Type with Clear			
TTL	**ML54175**	**† Lansdale (3514)**	
	ML74175	**Lansdale (3514)**	105
Quad D-Type, Three-State			
TTL-F	74F173	Signetics	
Quad Edge-Triggered with Clear, Complementary Output			
TTL	DM54175	† National	
	DM74175	National	
	54175	† National	
	74175	National	110
	54175	† Signetics	
	74175	Signetics	
	SN54175	† TI	
	SN74175	TI	
TTL-ALS	M74ALS175	Mitsubishi	115
	DM74ALS175	National	
	SN54ALS175	† TI	
	SN74ALS175	TI	
TTL-AS	DM74AS175	National	
	SN74AS175A	TI	120
TTL-F	MC54F175	† Motorola	
	MC74F175	Motorola	
	54F175	◊† National	
	74F175	◊ National	
	74F175	Signetics	125
	SN54F175	† TI	
	SN74F175	TI	
TTL-LS	**GD74LS175**	**GoldStar (3439)**	
	HD74LS175	Hitachi	
	SN54LS175	† Motorola	130
	SN74LS175	Motorola	
	DM54LS175	† National	
	DM74LS175	National	
	54LS175	† National	
	74LS175	◊ National	135
	DN74LS175	Panasonic	
	54LS175	† SGS-Thomson	
	74LS175	SGS-Thomson	
	54LS175	† Signetics	
	74LS175	Signetics	140
	SN54LS175	◊† TI	
	SN74LS175	TI	
TTL-S	**GD74S175**	**GoldStar (3439)**	
	DM54S175	† National	
	DM74S175	National	145
	74S175	National	
	54S175	† Signetics	
	74S175	Signetics	
	SN54S175	† TI	
	SN74S175	TI	150
Quad Register with Dual Three-Stete Outputs			
TTL	AM2919C	AMD	
	AM2919M	† AMD	
Quad, Standard TTL and Three-State Outputs			
TTL	AM2918C	AMD	
	AM2918M	† AMD	
	SFC2918	SGS-Thomson	155
TTL-LS	AM25LS2518C	AMD	
	AM25LS2518M	† AMD	
TTL-S	AM25S18C	AMD	
	AM25S18M	† AMD	
Quad with Common Clock Enable			
TTL-F	MC54F379	† Motorola	160
	MC74F379	Motorola	
	54F379	† National	
	74F379	◊ National	
	74F379	Signetics	
	SN74F379	TI	165
TTL-LS	SN54LS379	† Motorola	
	SN74LS379	Motorola	
	54LS379	† National	
	74LS379	◊ National	
	T54LS379	† SGS-Thomson	170
	T74LS379	SGS-Thomson	
	SN54LS379	◊† TI	
	SN74LS379	TI	
Quad, Dual Three-State Outputs			
TTL-LS	AM25LS2519C	AMD	
	AM25LS2519M	† AMD	175

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Flip-Flops, D-Type (Cont'd)

Function	Device	Source	Line
Quad Three-State			
TTL	DM54173	† National	
	DM74173	National	
	DM8551	National	
	54173	† National	
	74173	National	5
	N8T10	Signetics	
	S8T10	† Signetics	
	54173	† Signetics	
	SN54173	† TI	
	SN74173	TI	10
TTL-LS	SN54LS173A	† Motorola	
	SN74LS173A	Motorola	
	54LS173A	† National	
	74LS173A	◊ National	
	DN74LS173	Panasonic	15
	54LS173	† Signetics	
	74LS173	Signetics	
	SN54LS173A	◊† TI	
	SN74LS173A	TI	
Hex			
TTL-F	M74F174	Mitsubishi	20
TTL-LS	T54LS174	† SGS-Thomson	
	T74LS174	SGS-Thomson	
Hex, D-Type			
TTL-ALS	74ALS174	Signetics	
Hex D-Type with Clear			
TTL	**ML54174**	**† Lansdale (3514)**	
	ML74174	**Lansdale (3514)**	25
Hex Edge-Triggered with Clear			
TTL	DM54174	† National	
	DM74174	National	
	54174	† National	
	74174	National	
	54174	† Signetics	30
	74174	Signetics	
	SN54174	† TI	
	SN74174	TI	
TTL-ALS	M74ALS174	Mitsubishi	
	DM54ALS174	† National	35
	DM74ALS174	National	
	SN54ALS174	† TI	
	SN74ALS174	TI	
TTL-AS	DM74AS174	National	
	SN54AS174	† TI	40
	SN74AS174	TI	
TTL-F	MC54F174	† Motorola	
	MC74F174	Motorola	
	54F174	◊† National	
	74F174	◊ National	45
	74F174	Signetics	
	SN54F174	† TI	
	SN74F174	TI	
TTL-LS	**GD74LS174**	**GoldStar (3439)**	
	HD74LS174	Hitachi	50
	SN54LS174	† Motorola	
	SN74LS174	Motorola	
	DM54LS174	† National	
	DM74LS174	National	
	54LS174	† National	55
	74LS174	◊ National	
	DN74LS174	Panasonic	
	54LS174	† SGS-Thomson	
	74LS174	SGS-Thomson	
	54LS174	† Signetics	60
	74LS174	Signetics	
	SN54LS174	◊† TI	
	SN74LS174	TI	
TTL-S	**GD74S174**	**GoldStar (3439)**	
	DM54S174	† National	65
	DM74S174	National	
	74S174	National	
	54S174	† Signetics	

(Continued)

Function	Device	Source	Line
Hex Edge-Triggered with Clear			
TTL-S		(Cont'd)	
	74S174	Signetics	
	SN54S174	† TI	70
	SN74S174	TI	
Hex, Metastable-Resistant			
AS	SN74AS4174	TI	
Hex with Common Enable			
TTL-F	MC54F378	† Motorola	
	MC74F378	Motorola	
	54F378	† National	75
	74F378	◊ National	
	74F378	Signetics	
	SN74F378	TI	
TTL-LS	SN54LS378	† Motorola	
	SN74LS378	Motorola	80
	54LS378	† National	
	74LS378	◊ National	
	T54LS378	† SGS-Thomson	
	T74LS378	SGS-Thomson	
	54LS378	† Signetics	85
	74LS378	Signetics	
	SN54LS378	◊† TI	
	SN74LS378	TI	
Octal			
TTL-ALS	SN74ALS374A	TI	
	SN74ALS534A	TI	90
	SN74ALS573	TI	
	SN74ALS574	TI	
	SN74ALS576	TI	
TTL-F	M74F374	Mitsubishi	
	MC74F273	◊ Motorola	95
TTL-LS	T54LS374	† SGS-Thomson	
	T54LS377	† SGS-Thomson	
	54LS374	† SGS-Thomson	
	54LS377	† SGS-Thomson	
	74LS374	SGS-Thomson	100
	74LS377	SGS-Thomson	
Octal D-Type			
TTL-ALS	M74ALS564A	Mitsubishi	
	74ALS273	Signetics	
TTL-F	N74F574	Signetics	
Octal D-Type Flip-Flop			
TTL-F	SN54F574	† TI	105
Octal D-Type with Enable			
TTL-ALS	74ALS377	Signetics	
Octal D-Type, Three-State			
TTL-ALS	74ALS374	Signetics	
	74ALS564A	Signetics	
	74ALS574A	Signetics	
Octal, Edge-Triggered			
TTL-ALS	SN74ALS564	TI	110
Octal Edge-Triggered, Common Clock and Enable, Three-State	54LS364	† Signetics	
Octal Edge-Triggered, Inverting, Three-State			
TTL-ALS	M74ALS534	Mitsubishi	
	DM74ALS534	National	
	DM74ALS564	National	
	DM74AS534	National	115
	SN54ALS534	† TI	
	SN54ALS564A	† TI	
	SN54ALS576A	† TI	
	SN74ALS534	TI	
	SN74ALS564A	TI	120
	SN74ALS576A	TI	
	SN74AS534	TI	
TTL-AS	DM74AS576	National	
	SN54AS576	◊† TI	
	SN74AS576	TI	125
TTL-F	MC54F534	† Motorola	
	MC74F534	Motorola	
	54F534	◊† National	
	54F564	† National	
	74F534	◊ National	130

(Continued)

Function	Device	Source	Line
Octal Edge-Triggered, Inverting, Three-State			
TTL-F		(Cont'd)	
	74F564	National	
	54F534	† Signetics	
	74F534	Signetics	
	74F564	Signetics	
	SN54F534	† TI	135
	SN74F534	TI	
	SN74F564	TI	
TTL-LS	74LS534	◊ National	
	T74LS534	◊ SGS-Thomson	
TTL-S	54S534	† Signetics	140
	74S534	Signetics	
Octal Edge-Triggered, with Clear			
TTL	SN74273	TI	
TTL-ALS	M74ALS273	Mitsubishi	
	DM74ALS273	National	
	SN54ALS273	† TI	145
	SN74ALS273	TI	
TTL-F	54F273	National	
	74F273	National	
	54F273	† Signetics	
	74F273	Signetics	150
	SN54F273	† TI	
	SN74F273	TI	
TTL-LS	**GD74LS273**	**GoldStar (3439)**	
	HD74LS273	Hitachi	
	SN54LS273	† Motorola	155
	SN74LS273	Motorola	
	54LS273	† National	
	74LS273	◊ National	
	T74LS273	SGS-Thomson	
	54LS273	† Signetics	160
	74LS273	Signetics	
	SN54LS273	◊† TI	
	SN74LS273	TI	
TTL-S	54S273	† Signetics	
	74S273	Signetics	165
Octal Edge-Triggered with Clear (dual)			
TTL-ALS	DPLALS273X	Dense-Pac	
TTL-F	DPLF273X	Dense-Pac	
TTL-LS	DPLLS273X	Dense-Pac	
Octal Edge-Triggered, Three-State			
TTL-ALS	M74ALS374	Mitsubishi	
	M74ALS575A	Mitsubishi	170
	M74ALS577A	Mitsubishi	
	DM74ALS374	National	
	DM74ALS574	National	
	SN54ALS374	† TI	
	SN54ALS574A	† TI	175
	SN74ALS374	TI	
	SN74ALS574A	TI	
	SN74ALS575A	TI	
	SN74ALS577A	TI	
TTL-AS	DM74AS374	National	180
	DM74AS574	National	
	DM74AS575	National	
	DM74AS577	National	
	SN54AS374	◊† TI	
	SN54AS574	† TI	185
	SN54AS575	◊† TI	
	SN74AS374	TI	
	SN74AS574	TI	
	SN74AS575	TI	
	SN74AS577	TI	190
TTL-F	MC54F374	† Motorola	
	MC74F374	Motorola	
	54F374	◊† National	
	54F574	National	
	74F374	◊ National	195
	74F574	National	
	54F374	† Signetics	
	74F374	Signetics	
	SN54F374	† TI	
	SN54F379	† TI	200

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Flip-Flops, D-Type (Cont'd)

Function	Device	Source
Octal Edge-Triggered, Three-State		
TTL-F		(Cont'd)
	SN74F374	TI
	SN74F574	TI
TTL-LS	**GD74LS374**	**GoldStar (3439)**
	HD74LS374	Hitachi
	SN54LS374	† Motorola
	SN74LS374	Motorola
	DM54LS374	† National
	DM74LS374	National
	54LS374	† National
	74LS374	◊ National
	74LS574	◊ National
	T74LS374	SGS-Thomson
	54LS374	† Signetics
	74LS374	Signetics
	SN54LS374	◊† TI
	SN74LS374	TI
TTL-S	**GD74S374**	**GoldStar (3439)**
	DM74S374	National
	54S374	† Signetics
	74S374	Signetics
	SN54S374	† TI
	SN74S374	TI
Octal Edge-Triggered, Three-State (dual)		
TTL-ALS	DPLALS574X	Dense-Pac
TTL-AS	DPLAS574X	Dense-Pac
TTL-F	DPLF574X	Dense-Pac
TTL-LS	DPLLS574X	Dense-Pac
Octal Edge-Triggered, Three-State, Inverting		
TTL-ALS	M74ALS576A	Mitsubishi
Octal, Edge-Triggered, Three-State, Non-Inverting		
TTL-ALS	M74ALS574A	Mitsubishi
TTL-F	M74F574	Mitsubishi
Octal, Metastable Resistant		
TTL-AS	SN74AS3374	TI
Octal, Metastable-Resistant		
AS	SN74AS4374	TI
Octal Register, Non-Inverting, Three-State		
TTL-S	AM2954C	AMD
	AM2954M	† AMD
Octal with Enable		
TTL-F	54F377	National
	74F377	National
	54F377	† Signetics
	74F377	Signetics
	SN74F377	TI
TTL-LS	**GD74LS377**	**GoldStar (3439)**
	SN54LS377	† Motorola
	SN74LS377	Motorola
	54LS377	† National
	74LS377	◊ National
	T74LS377	SGS-Thomson
	54LS377	† Signetics
	74LS377	Signetics
	SN54LS377	◊† TI
	SN74LS377	TI
8-Bit D-Type, Edge-Triggered, Three-State, Non-Inverting		
TTL-F	M74F825	◊ Mitsubishi
8-Bit Parallel, Inverting		
TTL-AS	SN54AS826	† TI
	SN74AS826	TI
TTL-F	74F826	Signetics
8-Bit Parallel, Non-inverting		
TTL-AS	SN54AS825	† TI
	SN74AS825	TI
TTL-F	54F825	† National
	74F825	National
	74F825	Signetics
9-Bit D-Type, Edge-Triggered, Three-State, Non-Inverting		
TTL-F	M74F823	◊ Mitsubishi
9-Bit Parallel, Inverting		
TTL-AS	SN54AS824	TI
TTL-F	74F824	Signetics
9-Bit Parallel, Non-Inverting		
TTL-AS	SN54AS823	† TI
	SN74AS823	TI
TTL-F	54F823	† National
	74F823	National
	74F823	Signetics
10-Bit D-Type Edge-Triggered, Three-State, Non-Inverting		
TTL-F	M74F821	◊ Mitsubishi
10-Bit Parallel, Inverting		
F	74F822	Signetics
TTL-AS	SN54AS822	† TI
	SN74AS822	TI
10-Bit Parallel, Non-inverting		
TTL-AS	SN54AS821	† TI
	SN74AS821	TI
TTL-F	54F821	† National
	74F821	National
	74F821	Signetics

Flip-Flops, J-K Type

Function	Device	Source
AND Gated, Edge-Triggered with Preset and Clear		
TTL	SN5470	† TI
	SN7470	TI
AND Gated Master-Slave with Preset and Clear		
TTL	SN5472	† TI
AND Input, Single		
TTL-H	**ML3051**	**Lansdale (3514)**
	ML3052	**Lansdale (3514)**
	ML3151	**† Lansdale (3514)**
	ML3152	**† Lansdale (3514)**
J-K Flip-Flop, Positive Edge-Triggered		
TTL	**ML5470**	**† Lansdale (3514)**
	ML7470	**Lansdale (3514)**
J-K Master-Slave Flip-Flop		
TTL	**ML5472**	**† Lansdale (3514)**
	ML7472	**Lansdale (3514)**
Dual		
TTL-H	**ML3061**	**Lansdale (3514)**
	ML3062	**Lansdale (3514)**
	ML3161	**† Lansdale (3514)**
	ML3162	**† Lansdale (3514)**
TTL-LS	SN54LS114A	◊† TI
Dual J-K Master-Slave		
TTL	**ML54107**	**† Lansdale (3514)**
	ML74107	**Lansdale (3514)**
Dual J-K Master-Slave Flip-Flop		
TTL	**ML5473**	**† Lansdale (3514)**
	ML7473	**Lansdale (3514)**
Dual J-K Master-Slave with Preset and Clear		
TTL	**ML5476**	**† Lansdale (3514)**
	ML7476	**Lansdale (3514)**
Dual J-K, Metastable Transparent		
TTL-F	**74F50109**	**Signetics (3605)**
Dual J-K Positive Edge-Triggered		
TTL-ALS	74ALS109A	Signetics
	74ALS112A	Signetics
Dual J-K Positive Edge-Triggered, Preset and Clear		
TTL	DM74109	National
	54109	† Signetics
TTL-AS	SN54AS109	◊† TI
TTL-F	54F109	◊† National
	74F109	◊ National
	SN54F109	◊† TI

(Continued)

Function	Device	Source
Dual J-K Positive Edge-Triggered, Preset and Clear		(Cont'd)
TTL-LS	**GD74LS109**	**GoldStar (3439)**
	HD74LS109A	Hitachi
	SN54LS109A	† Motorola
	SN74LS109A	Motorola
	54LS109	† National
	74LS109	National
	DN74LS109	◊ Panasonic
	T74LS109A	◊ SGS-Thomson
TTL-S	74S109	National
Dual J-K, Positive Trigger		
TTL-F	M74F109	◊ Mitsubishi
Dual J-K with Preset, Common Clock and Common Clear		
TTL-LS	HD74LS78A	Hitachi
	DN74LS78	◊ Panasonic
Dual J–K- Positive Edge-Triggered, Preset and Clear		
TTL	DM54109	† National
	SN54109	† TI
	SN74109	TI
TTL-ALS	DM74ALS109	National
	SN54ALS109A	† TI
	SN74ALS109	TI
TTL-AS	DM74AS109	National
	SN74AS109	TI
TTL-F	MC54F109	† Motorola
	MC74F109	Motorola
	74F109	Signetics
	SN74F109	TI
TTL-LS	DM54LS109	† National
	DM74LS109	National
	54LS109	† Signetics
	74LS109	Signetics
	SN54LS109A	◊† TI
	SN74LS109A	TI
Dual J–K- with Preset, Common Clock and Common Clear		
TTL-LS	SN54LS78A	† Motorola
	SN74LS78A	Motorola
	SN54LS78A	† TI
	SN74LS78A	TI
Dual Master/Slave with Preset and Clear		
TTL	**TC7476B**	**Toshiba (3674)**
Dual Master-Slave with Clear		
TTL	DM54107	† National
	DM5473	† National
	DM74107	National
	DM7473	National
	5473	† National
	7473	National
	54107	† Signetics
	5473	† Signetics
	SN54107	† TI
	SN5473	† TI
	SN74107	TI
	SN7473	TI
TTL-H	MC3061	Motorola
	MC3062	Motorola
TTL-LS	**GD74LS107**	**GoldStar (3439)**
	GD74LS73	**GoldStar (3439)**
	HD74LS107A	Hitachi
	HD74LS73A	Hitachi
	SN54LS107A	† Motorola
	SN74LS107A	Motorola
	SN74LS73A	Motorola
	DM54LS107A	† National
	DM54LS73A	† National
	DM74LS107A	National
	DM74LS73A	National
	DN74LS107	◊ Panasonic
	DN74LS73	◊ Panasonic
	54LS107	† Signetics
	54LS73	† Signetics
	74LS107	Signetics
	74LS73	Signetics

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL—TTL (Cont'd)

Flip-Flops, J-K Type (Cont'd)

Function	Device	Source	Line
Dual Master-Slave with Clear			
TTL-LS		(Cont'd)	
	SN54LS107A	◊† TI	
	SN54LS73A	† TI	
	SN74LS107A	TI	
	SN74LS73A	TI	
Dual Master-Slave with Data Lockout			
TTL	SN54111	† TI	5
Dual Master-Slave with Preset and Clear			
TTL	DM5476	† National	
	DM7476	National	
	5476	† National	
	7476	National	
	5476	† Signetics	10
	SN5476	† TI	
	SN7476	TI	
TTL-LS	HD74LS76A	Hitachi	
	SN54LS76A	† Motorola	
	SN74LS76A	Motorola	15
	DN74LS76	◊ Panasonic	
	54LS76	† Signetics	
	74LS76	Signetics	
	SN54LS76A	† TI	
	SN74LS76A	TI	20
Dual, Negative Edge-Triggered			
TTL-ALS	M74ALS112A	Mitsubishi	
	M74ALS113A	Mitsubishi	
	M74ALS114A	Mitsubishi	
TTL-F	M74F112	Mitsubishi	
Dual Negative Edge-Triggered, Separate Preset and Clock, (no clear)			
TTL-ALS	SN54ALS113A	† TI	25
	SN74ALS113A	TI	
TTL-F	54F113	† National	
	74F113	◊ National	
	74F113	Signetics	
	SN54F113	† TI	30
	SN74F113	TI	
TTL-LS	HD74LS113	Hitachi	
	SN54LS113A	† Motorola	
	SN74LS113A	Motorola	
	54LS113	† National	35
	DN74LS113	◊ Panasonic	
	T74LS113A	SGS-Thomson	
	54LS113	† Signetics	
	74LS113	Signetics	
	SN74LS113A	TI	40
TTL-S	DM54S113	† National	
	DM74S113	National	
	54S113	† Signetics	
	SN54S113	† TI	
	SN74S113	TI	45
Dual Negative Edge-Triggered with Preset and Clear			
TTL-ALS	SN54ALS112A	† TI	
	SN74ALS112A	TI	
TTL-F	MC54F112	† Motorola	
	MC74F112	Motorola	
	54F112	† National	50
	74F112	◊ National	
	74F112	Signetics	
	SN54F112	† TI	
	SN74F112	TI	
TTL-LS	**GD74LS112**	**GoldStar (3439)**	55
	HD74LS112	Hitachi	
	SN54LS112A	† Motorola	
	SN74LS112A	Motorola	
	DM74LS112	National	
	54LS112	† National	60
	74LS112	◊ National	
	DN74LS112	◊ Panasonic	
	T74LS112A	SGS-Thomson	
	54LS112	Signetics	
	74LS112	Signetics	65
		(Continued)	

Function	Device	Source	Line
Dual Negative Edge-Triggered with Preset and Clear			
TTL-LS		(Cont'd)	
	SN54LS112A	TI	
	SN74LS112A	TI	
TTL-S	**GD74S112**	**GoldStar (3439)**	
	DM54S112	† National	
	DM74S112	National	70
	74S112	National	
	54S112	† Signetics	
	74S112	Signetics	
	SN54S112	† TI	
	SN74S112	TI	75
Dual Negative Edge-Triggered with Preset, Common Clock and Common Clear			
TTL-ALS	SN54ALS114A	† TI	
	SN74ALS114A	TI	
TTL-F	54F114	† National	
	74F114	◊ National	
	74F114	Signetics	80
	SN54F114	† TI	
	SN74F114	TI	
TTL-LS	HD74LS114	Hitachi	
	SN54LS114A	† Motorola	
	SN74LS114A	Motorola	85
	54LS114	† National	
	DN74LS114	◊ Panasonic	
	T54LS114	† SGS-Thomson	
	T74LS114A	SGS-Thomson	
	SN74LS114A	TI	90
TTL-S	SN54S114	† TI	
	SN74S114	TI	
Dual, Positive Edge-Triggered			
TTL-ALS	M74ALS109A	Mitsubishi	
Quad J-K Edge-Triggered with Preset and Clear			
TTL	SN74276	TI	
Quad J–K- Edge-Triggered with Clear			
TTL	SN54376	† TI	95
	SN74376	TI	

Gates, AND

Function	Device	Source	Line
Dual 4-Input			
TTL	5421	† Signetics	
TTL-ALS	DM74ALS21	National	
	DM74ALS22	National	
	SN54ALS21A	† TI	100
	SN74ALS21A	TI	
TTL-AS	DM74AS21	National	
	SN54AS21	◊† TI	
	SN74AS21	TI	
TTL-F	MC54F21	† Motorola	105
	MC74F21	Motorola	
	MV74F21	Motorola	
TTL-H	**ML3011**	**Lansdale (3514)**	
	ML3026	**Lansdale (3514)**	
	ML3111	**† Lansdale (3514)**	110
	ML3126	**† Lansdale (3514)**	
TTL-LS	**GD74LS21**	**GoldStar (3439)**	
	HD74LS21	Hitachi	
	SN54LS21	† Motorola	
	SN74LS21	Motorola	115
	DM54LS21	† National	
	DM74LS21	National	
	54LS21	† National	
	74LS21	◊ National	
	DN74LS21	◊ Panasonic	120
	T74LS21	SGS-Thomson	
	74LS21	SGS-Thomson	
	54LS21	† Signetics	
	74LS21	Signetics	
	SN54LS21	◊† TI	125
	SN74LS21	TI	
Dual 4-Input (positive)			
TTL-ALS	M74ALS21A	Mitsubishi	

Function	Device	Source	Line
Dual 4-Input Power			
TTL-H	MC3026	Motorola	
Triple 3-Input			
TTL	HD74LS11	Hitachi	
	7411	National	130
TTL-ALS	M74ALS1011A	Mitsubishi	
	DM54ALS11	† National	
	DM74ALS1011	National	
	DM74ALS11	National	
	74ALS11A	Signetics	135
	SN54ALS11A	† TI	
	SN74ALS1011A	TI	
	SN74ALS11A	TI	
TTL-AS	DM74AS11	National	
	SN54AS11	◊† TI	140
	SN74AS11	TI	
TTL-F	M74F11	Mitsubishi	
	MC54F11	† Motorola	
	MC74F11	Motorola	
	54F11	◊† National	145
	74F11	◊ National	
	74F11	Signetics	
	SN54F11	† TI	
	SN74F11	TI	
TTL-H	**ML3006**	**Lansdale (3514)**	150
	ML3106	**† Lansdale (3514)**	
TTL-LS	**GD74LS11**	**GoldStar (3439)**	
	SN54LS11	† Motorola	
	SN74LS11	Motorola	
	DM54LS11	† National	155
	DM74LS11	National	
	54LS11	† National	
	74LS11	◊ National	
	DN74LS11	◊ Panasonic	
	T54LS11	† SGS-Thomson	160
	T74LS11	SGS-Thomson	
	T74LS15	SGS-Thomson	
	54LS11	† SGS-Thomson	
	74LS11	SGS-Thomson	
	54LS11	† Signetics	165
	74LS11	Signetics	
	SN54LS11	◊† TI	
	SN74LS11	TI	
TTL-S	DM54S11	† National	
	DM74S11	National	170
	74S11	National	
	54S11	† Signetics	
	74S11	Signetics	
	SN54S11	† TI	
	SN74S11	TI	175
Triple 3-Input, Open Collector			
TTL-ALS	DM74ALS15	National	
	SN54ALS15A	† TI	
	SN74ALS15A	TI	
TTL-LS	HD74LS15	Hitachi	
	SN54LS15	† Motorola	180
	SN74LS15	Motorola	
	54LS15	† National	
	74LS15	◊ National	
	DN74LS15	◊ Panasonic	
	54LS15	† SGS-Thomson	185
	74LS15	SGS-Thomson	
	SN54LS15	◊† TI	
	SN74LS15	TI	
TTL-S	SN54S15	† TI	
	SN74S15	TI	190
Triple 3-Input (positive)			
TTL-ALS	M74ALS11A	Mitsubishi	
Triple 3-Input (positive, open collector)			
TTL-ALS	M74ALS15A	Mitsubishi	
Quad 2-Input			
TTL	**ML5408**	**† Lansdale (3514)**	
	ML7408	**Lansdale (3514)**	
	DM5408	† National	195
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Function	Device	Source	Line
Gates, AND (Cont'd)			
Quad 2-Input			
TTL		(Cont'd)	
	DM7408	National	
	5408	† National	
	7408	National	
	5408	Signetics	
	7408	Signetics	5
	SN5408	† TI	
	SN7408	TI	
TTL-ALS	M74ALS08	Mitsubishi	
	M74ALS09	Mitsubishi	
	M74ALS1008A	Mitsubishi	10
	DM74ALS08	National	
	DM74ALS1008	National	
	DM74ALS576	National	
	74ALS08	Signetics	
	SN54ALS08	† TI	15
	SN74ALS08	TI	
	SN74ALS1008A	TI	
TTL-AS	DM74AS08	National	
	DM74AS1008	National	
	SN54AS08	◊† TI	20
	SN74AS08	TI	
	SN74AS1008A	TI	
TTL-F	M74F08	Mitsubishi	
	MC54F08	† Motorola	
	MC74F08	Motorola	25
	54F08	◊† National	
	74F08	◊ National	
	74F08	Signetics	
	SN54F09	† TI	
	SN74F09	TI	30
TTL-H	**ML3001**	**Lansdale (3514)**	
	ML3101	**† Lansdale (3514)**	
	MC3001	Motorola	
TTL-LS	**GD74LS08**	**GoldStar (3439)**	
	HD74LS08	Hitachi	35
	SN54LS08	† Motorola	
	SN74LS08	Motorola	
	DM54LS08	† National	
	DM74LS08	National	
	54LS08	† National	40
	74LS08	◊ National	
	DN74LS08	◊ Panasonic	
	T54LS09	† SGS-Thomson	
	T74LS08	SGS-Thomson	
	T74LS09	SGS-Thomson	45
	74LS08	SGS-Thomson	
	54LS08	† Signetics	
	74LS08	Signetics	
	SN54LS08	◊† TI	
	SN74LS08	TI	50
TTL-S	**GD74S08**	**GoldStar (3439)**	
	DM54S08	† National	
	DM74S08	National	
	74S08	National	
	54S08	† Signetics	55
	74S08	Signetics	
	SN54S08	† TI	
	SN74S08	TI	
Quad 2-Input, Open Collector			
TTL	**ML5409**	**† Lansdale (3514)**	
	ML7409	**Lansdale (3514)**	60
	DM5409	† National	
	DM7409	National	
	5409	† National	
	7409	National	
	SN5409	† TI	65
	SN7409	TI	
TTL-ALS	DM74ALS09	National	
	SN54ALS09	† TI	
	SN74ALS09A	TI	
TTL-LS	**GD74LS09**	**GoldStar (3439)**	70
	HD74LS09	Hitachi	
		(Continued)	

Function	Device	Source	Line
Quad 2-Input, Open Collector			
TTL-LS		(Cont'd)	
	SN54LS09	† Motorola	
	SN74LS09	Motorola	
	DM54LS09	† National	
	DM74LS09	National	75
	DM74S09	National	
	54LS09	† National	
	74LS09	◊ National	
	DN74LS09	◊ Panasonic	
	54LS09	† SGS-Thomson	80
	74LS09	SGS-Thomson	
	54LS09	† Signetics	
	74LS09	Signetics	
	SN54LS09	◊† TI	
	SN74LS09	TI	85
TTL-S	SN54S09	† TI	
	SN74S09	TI	
Quad 2-Input			
TTL-F	SN74F08	TI	
Hex 2-Input			
TTL-AS	DM74AS1808	National	
Hex 2-Input AND Driver			
TTL-ALS	SN74ALS808A	TI	90
Gates, NAND			
Single 8-Input			
TTL-F	M74F30	Mitsubishi	
Dual 2-Input			
TTL-ALS	SN74ALS8003A	TI	
Dual 4-Input			
TTL	**ML5420**	**† Lansdale (3514)**	
	ML7420	**Lansdale (3514)**	
	DM5420	† National	95
	DM7420	National	
	5420	† National	
	7420	National	
	5420	† Signetics	
	7420	Signetics	100
	SN5420	† TI	
	SN7420	TI	
TTL-ALS	M74ALS1020A	Mitsubishi	
	M74ALS20A	Mitsubishi	
	DM74ALS1020	National	105
	DM74ALS20	National	
	74ALS20A	Signetics	
	SN54ALS20A	† TI	
	SN54ALS22A	◊† TI	
	SN74ALS1020A	TI	110
	SN74ALS20A	TI	
TTL-AS	DM74AS20	National	
	SN54AS20	◊† TI	
	SN74AS20	TI	
TTL-F	M74F20	Mitsubishi	115
	MC54F20	† Motorola	
	MC74F20	Motorola	
	MC74F40	Motorola	
	54F20	◊† National	
	74F20	◊ National	120
	54F20	† Signetics	
	74F20	Signetics	
	SN54F20	† TI	
	SN54F21	† TI	
	SN74F20	TI	125
	SN74F21	TI	
TTL-H	**ML3010**	**Lansdale (3514)**	
	ML3025	**Lansdale (3514)**	
	ML3110	**† Lansdale (3514)**	
	ML3125	**† Lansdale (3514)**	130
TTL-LS	**GD74LS20**	**GoldStar (3439)**	
	HD74LS20	Hitachi	
	SN54LS20	† Motorola	
	SN74LS20	Motorola	
	DM54LS20	† National	135
		(Continued)	

Function	Device	Source	Line
Dual 4-Input			
TTL-LS		(Cont'd)	
	DM74LS20	National	
	54LS20	† National	
	74LS20	◊ National	
	DN74LS20	◊ Panasonic	
	T54LS20	† SGS-Thomson	140
	T54LS22	† SGS-Thomson	
	T74LS20	SGS-Thomson	
	T74LS22	SGS-Thomson	
	T74LS40	SGS-Thomson	
	54LS20	† SGS-Thomson	145
	74LS20	SGS-Thomson	
	54LS20	† Signetics	
	74LS20	Signetics	
	SN54LS20	◊† TI	
	SN74LS20	TI	150
TTL-S	**GD74S20**	**GoldStar (3439)**	
	DM54S20	† National	
	DM74S20	National	
	74S20	National	
	54S20	† Signetics	155
	74S20	Signetics	
	SN54S20	† TI	
	SN74S20	TI	
Dual 4-Input Buffer			
TTL	**ML5440**	**† Lansdale (3514)**	
	ML7440	**Lansdale (3514)**	160
	5440	† National	
	7440	National	
	5440	† Signetics	
	7440	Signetics	
	SN5440	† TI	165
	SN7440	TI	
TTL-ALS	DM74ALS40	National	
	SN74ALS40A	TI	
TTL-F	54F40	National	
	74F40	National	170
	74F40	Signetics	
	SN74F40	TI	
TTL-LS	HD74LS40	Hitachi	
	SN54LS40	† Motorola	
	SN74LS40	Motorola	175
	54LS40	† National	
	74LS40	◊ National	
	DN74LS40	◊ Panasonic	
	54LS40	† SGS-Thomson	
	74LS40	SGS-Thomson	180
	54LS40	† Signetics	
	SN54LS40	◊† TI	
	SN74LS40	TI	
TTL-S	DM54S40	† National	
	DM74S40	National	185
	74S40	National	
	54S40	† Signetics	
	74S40	Signetics	
	SN54S40	† TI	
	SN74S40	TI	190
Dual 4-Input NAND Buffer			
TTL-F	SN54F40	† TI	
Dual 4-Input, Open Collector			
TTL	SN5422	† TI	
	SN7422	TI	
TTL-ALS	SN74ALS22B	TI	
TTL-H	**ML3012**	**Lansdale (3514)**	195
	ML3112	**† Lansdale (3514)**	
TTL-LS	HD74LS22	Hitachi	
	SN54LS22	† Motorola	
	SN74LS22	Motorola	
	54LS22	† National	200
	DN74LS22	◊ Panasonic	
	54LS22	† SGS-Thomson	
	74LS22	SGS-Thomson	
	SN54LS22	◊† TI	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Gates, NAND (Cont'd)

Function	Device	Source	Line
Dual 4-Input, Open Collector (Cont'd)			
TTL-S	SN54S22	† TI	
	SN74S22	TI	
Dual 4-Input (positive, open collector)			
TTL-ALS	M74ALS22B	Mitsubishi	
Triple 3-Input			
TTL	**ML5410**	**† Lansdale (3514)**	
	ML7410	**Lansdale (3514)**	5
	MC54F10	† Motorola	
	MC5410	† Motorola	
	DM5410	† National	
	DM7410	National	
	5410	† National	10
	7410	National	
	5410	† Signetics	
	7410	Signetics	
	SN5410	† TI	
	SN7410	TI	15
TTL-ALS	M74ALS1010A	Mitsubishi	
	DM74ALS10	National	
	DM74ALS1010	National	
	74ALS10A	Signetics	
	SN54ALS10A	† TI	20
	SN54ALS1010A	† TI	
	SN74ALS10A	TI	
	SN74ALS1010A	TI	
TTL-AS	DM74AS10	National	
	SN54AS10	◊† TI	25
	SN74AS10	TI	
TTL-F	M74F10	Mitsubishi	
	MC74F10	Motorola	
	54F10	◊† National	
	74F10	◊ National	30
	74F10	Signetics	
	SN74F10	TI	
TTL-H	**ML3005**	**Lansdale (3514)**	
	ML3105	**† Lansdale (3514)**	
TTL-LS	**GD74LS10**	**GoldStar (3439)**	35
	HD74LS10	Hitachi	
	SN54LS10	† Motorola	
	SN74LS10	Motorola	
	DM54LS10	† National	
	DM74LS10	National	40
	54LS10	† National	
	74LS10	◊ National	
	DN74LS10	◊ Panasonic	
	T54LS10	† SGS-Thomson	
	T74LS10	SGS-Thomson	45
	T74LS12	SGS-Thomson	
	54LS10	† SGS-Thomson	
	74LS10	SGS-Thomson	
	74LS12	SGS-Thomson	
	54LS10	† Signetics	50
	74LS10	Signetics	
	SN54LS10	◊† TI	
	SN74LS10	TI	
TTL-S	**GD74S10**	**GoldStar (3439)**	
	DM54S10	† National	55
	DM74S10	National	
	74S10	National	
	54S10	† Signetics	
	74S10	Signetics	
	SN54S10	† TI	60
	SN74S10	TI	
Triple 3-Input, Open Collector			
TTL	SN5412	† TI	
	SN7412	TI	
TTL-ALS	DM74ALS12	National	
	SN54ALS12A	† TI	65
	SN74ALS12A	TI	
TTL-H	**ML3007**	**Lansdale (3514)**	
	ML3107	**† Lansdale (3514)**	

(Continued)

Function	Device	Source	Line
Triple 3-Input, Open Collector (Cont'd)			
TTL-LS	HD74LS12	Hitachi	
	SN54LS12	† Motorola	70
	SN74LS12	Motorola	
	DM54LS12	† National	
	DM74LS12	National	
	74LS12	National	
	DN74LS12	◊ Panasonic	75
	SN54LS12	◊† TI	
	SN74LS12	TI	
Triple 3-Input (positive)			
TTL-ALS	M74ALS10A	Mitsubishi	
Triple 3-Input (positive, open collector)			
TTL-ALS	M74ALS12A	Mitsubishi	
Triple 3-Input			
TTL-F	SN54F10	† TI	80
Quad 2-Input			
TTL	**ML5400**	**† Lansdale (3514)**	
	ML5426	**† Lansdale (3514)**	
	ML7400	**Lansdale (3514)**	
	ML7426	**Lansdale (3514)**	
	DM5400	† National	85
	DM7400	National	
	5400	† National	
	7400	National	
	5400	† Signetics	
	7400	Signetics	90
	SN5400	† TI	
	SN7400	TI	
	TC7400B	**Toshiba (3674)**	
TTL-ALS	M74ALS1000A	Mitsubishi	
	DM74ALS00	National	95
	DM74ALS1000	National	
	74ALS00A	Signetics	
	SN54ALS00A	† TI	
	SN74ALS00A	TI	
	SN74ALS1000A	TI	100
TTL-AS	DM74AS00	National	
	DM74AS1000	National	
	SN54AS00	† TI	
	SN54AS1000A	◊† TI	
	SN74AS00	TI	105
	SN74AS1000A	TI	
TTL-F	M74F00	Mitsubishi	
	MC54F00	† Motorola	
	MC74F00	Motorola	
	MC74F37	Motorola	110
	MC74F38	Motorola	
	54F00	◊† National	
	74F00	◊ National	
	54F00	Signetics	
	74F00	Signetics	115
	SN54F37	† TI	
	SN54F38	† TI	
	SN74F00	TI	
TTL-H	**ML3000**	**Lansdale (3514)**	
	ML3100	**† Lansdale (3514)**	120
TTL-LS	**GD74LS00**	**GoldStar (3439)**	
	HD74LS00	Hitachi	
	SN54LS00	† Motorola	
	SN74LS00	Motorola	
	DM54LS00	† National	125
	DM74LS00	National	
	54LS00	† National	
	74LS00	◊ National	
	DN74LS00	◊ Panasonic	
	T54LS00	† SGS-Thomson	130
	T74LS00	SGS-Thomson	
	T74LS01	SGS-Thomson	
	T74LS03A	SGS-Thomson	
	T74LS37	SGS-Thomson	
	T74LS38	SGS-Thomson	135
	54LS00	† SGS-Thomson	
	74LS00	SGS-Thomson	
	74LS01	† SGS-Thomson	
	74LS26	SGS-Thomson	

(Continued)

Function	Device	Source	Line
Quad 2-Input			
TTL-LS		(Cont'd)	
	54LS00	† Signetics	140
	74LS00	Signetics	
	SN54LS00	† TI	
	SN74LS00	TI	
TTL-S	**GD74S00**	**GoldStar (3439)**	
	DM54S00	† National	145
	DM74S00	National	
	74S00	National	
	54S00	† Signetics	
	74S00	Signetics	
	SN54S00	† TI	150
	SN74S00	TI	
Quad 2-Input Buffer			
TTL	**ML5437**	**† Lansdale (3514)**	
	ML5438	**† Lansdale (3514)**	
	ML7437	**Lansdale (3514)**	
	ML7438	**Lansdale (3514)**	155
	DM5437	† National	
	DM7437	National	
	5437	† National	
	7437	National	
	5437	† Signetics	160
	7437	Signetics	
	SN5437	† TI	
	SN7437	TI	
TTL-ALS	DM74ALS37	National	
	74ALS38A	Signetics	165
	SN54ALS37A	† TI	
	SN74ALS37A	TI	
TTL-F	54F37	National	
	74F37	National	
	74F37	Signetics	170
	SN74F37	TI	
TTL-LS	HD74LS37	Hitachi	
	SN54LS37	† Motorola	
	SN74LS37	Motorola	
	DM54LS37	† National	175
	DM74LS37	National	
	54LS37	† National	
	74LS37	◊ National	
	DN74LS37	◊ Panasonic	
	54LS37	† SGS-Thomson	180
	74LS37	SGS-Thomson	
	54LS37	† Signetics	
	74LS37	Signetics	
	SN54LS37	◊† TI	
	SN74LS37	TI	185
TTL-S	54S37	† Signetics	
	74S37	Signetics	
	SN54S37	† TI	
	SN74S37	TI	
Quad 2-Input Buffer, Open Collector			
TTL	DM5438	† National	190
	DM7438	National	
	7438	National	
	7439	National	
	5438	† Signetics	
	5439	† Signetics	195
	7438	Signetics	
	7439	Signetics	
	SN5438	† TI	
	SN7438	TI	
	SN7439	TI	200
TTL-ALS	DM74ALS38	National	
	SN54ALS38A	† TI	
	SN74ALS38A	TI	
TTL-F	54F38	National	
	74F38	National	205
	74F38	Signetics	
	SN74F38	TI	
TTL-LS	**GD74LS38**	**GoldStar (3439)**	
	HD74LS38	Hitachi	
	SN54LS38	† Motorola	210

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Function	Device	Source	Line
Gates, NAND (Cont'd)			
Quad 2-Input Buffer, Open Collector			
TTL-LS		(Cont'd)	
	SN74LS38	Motorola	
	DM54LS38	† National	
	DM74LS38	National	
	54LS38	† National	
	74LS38	◊ National	5
	DN74LS38	◊ Panasonic	
	54LS38	† Signetics	
	74LS38	Signetics	
	SN54LS38	◊† TI	
	SN74LS38	TI	10
TTL-S	54S38	† Signetics	
	74S38	Signetics	
	SN54S38	† TI	
	SN74S38	TI	
Quad 2-Input Buffer, Open Collector, to 15 V			
TTL-LS	HD74LS26	Hitachi	15
	SN54LS26	† Motorola	
	SN74LS26	Motorola	
	DM54LS26	† National	
	DM74LS26	National	
	54LS26	† National	20
	74LS26	◊ National	
	DN74LS26	◊ Panasonic	
	T74LS26A	SGS-Thomson	
	54LS26	† Signetics	
	74LS26	Signetics	25
	SN54LS26	◊† TI	
	SN74LS26	TI	
Quad 2-Input, Open Collector			
TTL	**ML5401**	**† Lansdale (3514)**	
	ML5403	**† Lansdale (3514)**	
	ML7401	**Lansdale (3514)**	30
	ML7403	**Lansdale (3514)**	
	DM5401	† National	
	DM5403	† National	
	DM7401	National	
	DM7403	National	35
	7401	National	
	7403	National	
	N8881	Signetics	
	5403	† Signetics	
	7403	Signetics	40
	SN5401	† TI	
	SN5403	† TI	
	SN7401	TI	
	SN7403	TI	
TTL-ALS	M74ALS03B	Mitsubishi	45
	M74ALS1003A	Mitsubishi	
	DM74ALS01	National	
	DM74ALS03	National	
	DM74ALS1003	National	
	SN54ALS01	† TI	50
	SN54ALS03B	† TI	
	SN74ALS01	TI	
	SN74ALS03B	TI	
	SN74ALS1003A	TI	
TTL-H	**ML3004**	**Lansdale (3514)**	55
	ML3104	**† Lansdale (3514)**	
TTL-LS	HD74LS01	Hitachi	
	HD74LS03	Hitachi	
	SN54LS01	† Motorola	
	SN54LS03	† Motorola	60
	SN74LS01	Motorola	
	SN74LS03	Motorola	
	DM54LS03	† National	
	DM74LS03	National	
	54LS03	† National	65
	74LS03	◊ National	
	DN74LS01	◊ Panasonic	
	DN74LS03	◊ Panasonic	
	54LS03	† SGS-Thomson	
	74LS03	SGS-Thomson	70
	54LS01	† Signetics	
		(Continued)	

Function	Device	Source	Line
Quad 2-Input, Open Collector			
TTL-LS		(Cont'd)	
	54LS03	† Signetics	
	74LS01	Signetics	
	SN54LS01	† TI	
	SN54LS03	† TI	75
	SN74LS01	TI	
	SN74LS03	TI	
TTL-S	DM54S03	† National	
	DM74S03	National	
	74S03	National	80
	54LS38	† SGS-Thomson	
	74LS38	SGS-Thomson	
	54S03	Signetics	
	74S03	Signetics	
	SN54S03	† TI	85
	SN74S03	TI	
Quad 2-Input (Schmitt)			
TTL	**ML54132**	**† Lansdale (3514)**	
	ML74132	**Lansdale (3514)**	
Quad 2-Input			
TTL-F	SN54F00	† TI	
Quad 2-Input Buffer, Open Collector, to 15 V			
TTL-LS	**GD74LS26**	**GoldStar (3439)**	90
Hex 2-Input			
TTL-AS	DM74AS1804	National	
8-Input			
TTL	**ML5430**	**† Lansdale (3514)**	
	ML7430	**Lansdale (3514)**	
	DM5430	† National	
	5430	† National	95
	7430	National	
	5430	† Signetics	
	SN5430	† TI	
	SN7430	TI	
TTL-ALS	DM74ALS30	National	100
	74ALS30A	Signetics	
	SN54ALS30A	† TI	
	SN74ALS30A	TI	
TTL-AS	DM74AS30	National	
	SN54AS30	† TI	105
	SN74AS30	TI	
TTL-F	54F30	† National	
	74F30	Signetics	
	SN54F30	† TI	
	SN74F30	TI	110
TTL-H	**ML3015**	**Lansdale (3514)**	
	ML3016	**Lansdale (3514)**	
	ML3115	**† Lansdale (3514)**	
	ML3116	**† Lansdale (3514)**	
TTL-LS	**GD74LS30**	**GoldStar (3439)**	115
	HD74LS30	Hitachi	
	SN54LS30	† Motorola	
	SN74LS30	Motorola	
	DM54LS30	† National	
	DM74LS30	National	120
	54LS30	† National	
	74LS30	◊ National	
	DN74LS30	◊ Panasonic	
	T54LS30	† SGS-Thomson	
	T74LS30	SGS-Thomson	125
	54LS30	† SGS-Thomson	
	74LS30	◊ SGS-Thomson	
	54LS30	† Signetics	
	74LS30	Signetics	
	SN54LS30	◊† TI	130
	SN74LS30	TI	
TTL-S	**GD74S30**	**GoldStar (3439)**	
	DM54S30	† National	
	DM74S30	National	
	74S30	National	135
	SN54S30	† TI	
	SN74S30	TI	

Function	Device	Source	Line
8-Input (positive)			
TTL-ALS	M74ALS30A	Mitsubishi	
12-Input, Three-State			
TTL-S	54S134	† Signetics	
	74S134	Signetics	140
	SN54S134	† TI	
	SN74S134	TI	
13-Input			
TTL-ALS	M74ALS133	Mitsubishi	
	DM74ALS133	National	
	SN54ALS133	† TI	145
	SN74ALS133	TI	
TTL-LS	SN54LS133	† Motorola	
	SN74LS133	Motorola	
	54LS133	† National	
	74LS133	◊ National	150
	T74LS133	SGS-Thomson	
	74LS133	SGS-Thomson	
TTL-S	**GD74S133**	**GoldStar (3439)**	
	DM54S133	† National	
	DM74S133	National	155
	74S133	National	
	54S133	† Signetics	
	74S133	Signetics	
	SN54S133	† TI	
	SN74S133	TI	160
8-Input			
TTL-F	74F30	National	
Gates, AND-OR			
Expandable 4-Wide 2–2–2–3 Input			
TTL-H	**ML3031**	**Lansdale (3514)**	
	ML3131	**† Lansdale (3514)**	
Triple 3-Input AND/Or			
TTL-LS	T54LS15	† SGS-Thomson	
Gates, AND-OR-Invert			
AND-OR-Invert Gate			
TTL-F	SN54F51	† TI	165
Expandable 4-Wide 2–2–2–3 Input			
TTL-H	**ML3032**	**Lansdale (3514)**	
	ML3132	**† Lansdale (3514)**	
Dual 2-Wide 2-Input			
TTL	**ML5450**	**† Lansdale (3514)**	
	ML5451	**† Lansdale (3514)**	
	ML7450	**Lansdale (3514)**	170
	ML7451	**Lansdale (3514)**	
	7451	National	
	5451	† Signetics	
	7451	Signetics	
	SN5451	† TI	175
	SN7451	TI	
TTL-F	74F51	Signetics	
	SN74F51	TI	
TTL-H	**ML3020**	**Lansdale (3514)**	
	ML3023	**Lansdale (3514)**	180
	ML3120	**† Lansdale (3514)**	
	ML3123	**† Lansdale (3514)**	
TTL-LS	**GD74LS51**	**GoldStar (3439)**	
	HD74LS51	Hitachi	
	SN54LS51	† Motorola	185
	SN74LS51	Motorola	
	DM74LS51	National	
	54LS51	† National	
	74LS51	◊ National	
	DN74LS51	◊ Panasonic	190
	LS5451	† SGS-Thomson	
	LS7451	SGS-Thomson	
	T74LS51	SGS-Thomson	
	54LS51	† Signetics	
	74LS51	Signetics	195
	SN54LS51	◊† TI	
	SN74LS51	TI	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Gates, AND-OR-Invert (Cont'd)

Function	Device	Source	Line
Dual 2-Wide 2-Input (Cont'd)			
TTL-S	**GD74S51**	**GoldStar (3439)**	
	DM74S51	National	
	74S51	National	
	54S51	† Signetics	
	74S51	Signetics	5
	SN54S51	† TI	
	SN74S51	TI	
Dual 2-Wide 2-Input (one gate is expandable)			
TTL	7450	National	
	5450	† Signetics	
	SN5450	† TI	10
	SN7450	TI	
Dual 2-Wide, 2-Input/3-Input			
TTL-LS	74LS51	SGS-Thomson	
Dual 4-Input Expander (for 54/7423, 54/7450, 54/7453)			
TTL	5460	† Signetics	
2-Wide 2-Input, 2-Wide 3-Input, Dual			
TTL-F	MC54F51	† Motorola	
	MC74F51	Motorola	15
2-Wide, 4-Input			
TTL-LS	HD74LS55	Hitachi	
	SN54LS55	† Motorola	
	SN74LS55	Motorola	
	54LS55	† National	
	74LS55	◊ National	20
	DN74LS55	◊ Panasonic	
	T54LS55	† SGS-Thomson	
	T74LS55	SGS-Thomson	
	54LS55	† SGS-Thomson	
	74LS55	SGS-Thomson	25
	SN74LS55	TI	
2-2-2-3 Input			
FAST	54F51	† National	
	74F51	National	
2-3-3-2 Input			
TTL-LS	T54LS54	† SGS-Thomson	
3-2-2-3 Input			
TTL-LS	T74LS54	SGS-Thomson	30
4-Wide 2-Input			
TTL	**ML5453**	**† Lansdale (3514)**	
	ML5454	**† Lansdale (3514)**	
	ML7453	**Lansdale (3514)**	
	ML7454	**Lansdale (3514)**	
	SN5454	† TI	35
	SN7454	TI	
4-Wide 2-Input, Expandable			
TTL	SN5453	† TI	
4-Wide 2-2-3-3-Input			
TTL-LS	HD74LS54	Hitachi	
	SN54LS54	† Motorola	
	SN74LS54	Motorola	40
	54LS54	† National	
	74LS54	◊ National	
	DN74LS54	◊ Panasonic	
	54LS54	† SGS-Thomson	
	74LS54	SGS-Thomson	45
	54LS54	† Signetics	
	74LS54	Signetics	
	SN54LS54	◊† TI	
	SN74LS54	TI	
4-2-3-2 Input			
TTL-F	MC54F64	Motorola	50
4-2-3-2 Input AND-OR-Invert Gate			
TTL-F	SN54F64	† TI	
4-2-3-2-Input			
TTL-F	MC74F64	Motorola	
	54F64	◊† National	
	74F64	◊ National	
	54F64	† Signetics	55
		(Continued)	

Function	Device	Source	Line
4-2-3-2-Input			
TTL-F		(Cont'd)	
	74F64	Signetics	
	SN74F64	TI	
TTL-S	**GD74S64**	**GoldStar (3439)**	
	DM54S64	† National	
	DM74S64	National	60
	74S64	National	
	54S64	† Signetics	
	74S64	Signetics	
	SN54S64	TI	
	SN74S64	TI	65
4-2-3-2-Input, Open Collector			
TTL-S	54S65	† Signetics	
	SN54S65	† TI	
	SN74S65	TI	
2-Wide, 4-Input			
TTL-LS	**GD74LS55**	**GoldStar (3439)**	

Gates, OR

Function	Device	Source	Line
Quad 2-Input			
TTL	DM5432	† National	70
	DM7432	National	
	5432	† National	
	7432	National	
	5432	† Signetics	
	7432	Signetics	75
	SN5432	† TI	
	SN7432	TI	
TTL-ALS	M74ALS1032A	Mitsubishi	
	DM74ALS1032	National	
	DM74ALS32	National	80
	74ALS32	Signetics	
	SN54ALS32	† TI	
	SN74ALS1032A	TI	
	SN74ALS32	TI	
TTL-AS	DM74AS1032	National	85
	DM74AS32	National	
	SN54AS1032A	◊† TI	
	SN54AS32	† TI	
	SN74AS1032A	TI	
	SN74AS32	TI	90
TTL-F	M74F32	Mitsubishi	
	MC54F32	† Motorola	
	MC74F32	Motorola	
	54F32	◊† National	
	74F32	◊ National	95
	74F32	Signetics	
	SN54F32	† TI	
	SN74F32	TI	
TTL-H	**ML3003**	**Lansdale (3514)**	
	ML3103	**† Lansdale (3514)**	100
	MC3003	Motorola	
TTL-LS	**GD74LS32**	**GoldStar (3439)**	
	HD74LS32	Hitachi	
	SN54LS32	† Motorola	
	SN74LS32	Motorola	105
	DM54LS32	† National	
	DM74LS32	National	
	54LS32	† National	
	74LS32	◊ National	
	DN74LS32	◊ Panasonic	110
	T54LS32	† SGS-Thomson	
	T74LS32	SGS-Thomson	
	54LS32	† SGS-Thomson	
	74LS32	SGS-Thomson	
	54LS32	† Signetics	115
	74LS32	Signetics	
	SN54LS32	◊† TI	
	SN74LS32	TI	
TTL-S	**GD74S32**	**GoldStar (3439)**	
	DM54S32	† National	120
	DM74S32	National	
	74S32	National	
	54S32	† Signetics	
		(Continued)	

Function	Device	Source	Line
Quad 2-Input			
TTL-S		(Cont'd)	
	74S32	Signetics	
	SN54S32	† TI	125
	SN74S32	TI	
Hex 2-Input			
TTL-AS	DM74AS1832	National	
Hex 2-Input Line Driver/Buffer			
TTL-ALS	DM74ALS832	National	
	SN54ALS832A	† TI	
Hex 2-Input OR Driver			
TTL-ALS	SN74ALS832A	TI	130

Gates, NOR

Function	Device	Source	Line
Dual 4-Input			
TTL	**ML5423**	**† Lansdale (3514)**	
	ML5425	**† Lansdale (3514)**	
	ML7423	**Lansdale (3514)**	
	ML7425	**Lansdale (3514)**	
Dual 4-Input, with Strobe			
TTL	5425	† National	135
	7425	National	
	5425	† Signetics	
	7425	Signetics	
	SN5425	† TI	
	SN7425	TI	140
Dual 4-Input, with Strobe, Expandable (see 54/7460 expander)			
TTL	SN5423	† TI	
	SN7423	TI	
Dual 5-Input			
TTL-F	74F260	Signetics	
	SN74F260	TI	
TTL-LS	SN54LS260	† Motorola	145
	SN74LS260	Motorola	
	54LS260	† National	
	74LS260	◊ National	
	DN74LS260	◊ Panasonic	
	T54LS260	† SGS-Thomson	150
	T74LS260	SGS-Thomson	
	74LS260	SGS-Thomson	
	54LS260A	† Signetics	
	74LS260	Signetics	
TTL-S	54S260	† Signetics	155
	74S260	Signetics	
	SN54S260	† TI	
	SN74S260	TI	
Triple 3-Input			
TTL	**ML5427**	**† Lansdale (3514)**	
	ML7427	**Lansdale (3514)**	160
	DM7427	National	
	7427	National	
	5427	† Signetics	
	SN5427	† TI	
	SN7427	TI	165
TTL-ALS	DM74ALS27	National	
	74ALS27	Signetics	
	SN54ALS27	† TI	
	SN74ALS27	TI	
TTL-AS	DM74AS27	National	170
	SN54AS27	† TI	
	SN74AS27	TI	
TTL-F	SN54F27	† TI	
	SN74F27	TI	
TTL-LS	**GD74LS27**	**GoldStar (3439)**	175
	HD74LS27	Hitachi	
	SN54LS27	† Motorola	
	SN74LS27	Motorola	
	DM54LS27	† National	
	DM74LS27	National	180
	54LS27	† National	
	74LS27	◊ National	
	DN74LS27	◊ Panasonic	
	T54LS27	† SGS-Thomson	
		(Continued)	

DIGITAL

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Gates, NOR (Cont'd)

Function	Device	Source	Line
Triple 3-Input TTL-LS (Cont'd)	T74LS27	SGS-Thomson	
	54LS27	† SGS-Thomson	
	74LS27	SGS-Thomson	
	54LS27	† Signetics	
	74LS27	Signetics	5
	SN54LS27	◊† TI	
	SN74LS27	TI	
Triple 3-Input TTL-F	54F27	† National	
	74F27	National	
Quad 2-Input TTL	**ML5402**	**† Lansdale (3514)**	10
	ML7402	**Lansdale (3514)**	
TTL-ALS	M74ALS02	Mitsubishi	
	74ALS02	Signetics	
TTL-AS	SN54AS02	◊† TI	
TTL-F	M74F02	Mitsubishi	15
	SN54F36	† TI	
	SN74F36	TI	
TTL-H	**ML3002**	**Lansdale (3514)**	
	ML3102	**† Lansdale (3514)**	
	MC3002	Motorola	20
TTL-LS	T54LS02	† SGS-Thomson	
	T74LS02	SGS-Thomson	
Quad 2-Input Buffer, Open Collector TTL	5433	† Signetics	
	7433	Signetics	
	SN5433	† TI	25
	SN7433	TI	
TTL-ALS	DM74ALS33	National	
	SN54ALS33A	† TI	
	SN74ALS33A	TI	
TTL-LS	SN54LS33	† Motorola	30
	SN74LS33	Motorola	
	54LS33	† National	
	74LS33	◊ National	
	DN74LS33	◊ Panasonic	
	T54LS33	† SGS-Thomson	35
	T74LS33	SGS-Thomson	
	54LS33	† Signetics	
	74LS33	Signetics	
	SN54LS33	◊† TI	
	SN74LS33	TI	40
Quad 2-Input, Open Collector TTL-LS	74LS266	Signetics	
Quad 2-Input (54/7428 devices are also buffers)	M74ALS1002A	Mitsubishi	
TTL	DM5402	† National	
	DM7402	National	
	5402	† National	45
	7402	National	
	5402	† Signetics	
	5428	† Signetics	
	7402	Signetics	
	SN5402	† TI	50
	SN5428	† TI	
	SN7402	TI	
	SN7428	TI	
TTL-ALS	DM74ALS02	National	
	DM74ALS1002	National	55
	DM74ALS28	National	
	SN54ALS02	† TI	
	SN54ALS28A	† TI	
	SN74ALS02	TI	
	SN74ALS1002A	TI	60
	SN74ALS28A	TI	
TTL-AS	DM74AS02	National	
	DM74AS1036	National	
	SN54AS1036A	† TI	
		(Continued)	

Function	Device	Source	Line
Quad 2-Input (54/7428 devices are also buffers) TTL-AS (Cont'd)	SN74AS02	TI	65
	SN74AS1036A	TI	
TTL-F	MC54F02	† Motorola	
	MC74F02	Motorola	
	54F02	◊† National	
	74F02	◊ National	70
	74F02	Signetics	
	SN74F02	TI	
TTL-LS	**GD74LS02**	**GoldStar (3439)**	
	HD74LS02	Hitachi	
	SN54LS02	† Motorola	75
	SN54LS28	† Motorola	
	SN74LS02	Motorola	
	SN74LS28	Motorola	
	DM54LS02	† National	
	DM74LS02	National	80
	54LS02	† National	
	54LS28	† National	
	74LS02	◊ National	
	74LS28	◊ National	
	DN74LS02	◊ Panasonic	85
	DN74LS28	◊ Panasonic	
	T54LS28	† SGS-Thomson	
	T74LS28	SGS-Thomson	
	54LS02	† SGS-Thomson	
	74LS02	SGS-Thomson	90
	54LS02	† Signetics	
	54LS28	† Signetics	
	74LS02	Signetics	
	SN54LS02	† TI	
	SN54LS28	◊† TI	95
	SN74LS02	TI	
	SN74LS28	TI	
TTL-S	**GD74S02**	**GoldStar (3439)**	
	DM54S02	† National	
	DM74S02	National	100
	74S02	National	
	54S02	† Signetics	
	74S02	Signetics	
	SN54S02	† TI	
	SN74S02	TI	105
Quad 2-Input (547/428 devices are also buffers) TTL-F	SN54F02	† TI	
Hex 2-Input TTL-AS	DM74AS1805	National	
Hex 2-Input NOR Driver TTL-ALS	SN74ALS805A	TI	

Gates, OR/NOR

Function	Device	Source	Line
Quad 2-Input Exclusive OR/NOR TTL-S	74S135	National	
	54S135	† Signetics	110
	SN54S135	† TI	
	SN74S135	TI	

Gates, Exclusive OR

Function	Device	Source	Line
Quad 2-Input TTL	**ML5486**	**† Lansdale (3514)**	
	ML7486	**Lansdale (3514)**	
TTL-ALS	74ALS86	Signetics	115
TTL-AS	SN54AS86A	◊† TI	
TTL-F	M74F86	Mitsubishi	
TTL-H	**ML3021**	**Lansdale (3514)**	
	ML3121	**† Lansdale (3514)**	
	MC3021	Motorola	120
TTL-LS	T54LS136	† SGS-Thomson	
	T74LS136	SGS-Thomson	
	T74LS86	SGS-Thomson	
Quad 2-Input, Open Collector TTL	**ML54136**	**† Lansdale (3514)**	
	ML74136	**Lansdale (3514)**	125
		(Continued)	

Function	Device	Source	Line
Quad 2-Input, Open Collector TTL (Cont'd)	SN54136	† TI	
	SN74136	TI	
TTL-ALS	DM74ALS136	National	
	SN74ALS136	TI	
TTL-AS	SN74AS136	TI	130
TTL-LS	HD74LS136	Hitachi	
	SN54LS136	† Motorola	
	SN74LS136	Motorola	
	DM54LS136	† National	
	54LS136	National	135
	74LS136	◊ National	
	DN74LS136	◊ Panasonic	
	54LS136	† SGS-Thomson	
	74LS136	SGS-Thomson	
	54LS136	† Signetics	140
	74LS136	Signetics	
	SN54LS136	◊† TI	
	SN74LS136	TI	
TTL-S	N82S41	Signetics	
Quad 2-Input, Totem Pole Outputs TTL	DM5486	National	145
	DM7486	National	
	5486	† National	
	7486	National	
	5486	† Signetics	
	7486	Signetics	150
	SN5486	† TI	
	SN7486	TI	
TTL-ALS	DM74ALS86	National	
	SN54ALS86	† TI	
	SN74ALS86	TI	155
TTL-AS	DM74AS86	National	
	SN74AS86	TI	
TTL-F	MC54F86	Motorola	
	MC74F86	Motorola	
	54F86	◊† National	160
	74F86	◊ National	
	54F86	† Signetics	
	74F86	Signetics	
	SN74F86	TI	
TTL-LS	**GD74LS86**	**GoldStar (3439)**	165
	HD74LS386	Hitachi	
	HD74LS86	Hitachi	
	SN54LS386	† Motorola	
	SN54LS86	† Motorola	
	SN74LS386	Motorola	170
	SN74LS86	Motorola	
	DM54LS86	† National	
	DM74LS86	National	
	74LS386	◊ National	
	74LS86	◊ National	175
	DN74LS386	◊ Panasonic	
	DN74LS86	◊ Panasonic	
	74LS86	SGS-Thomson	
	54LS86	† Signetics	
	74LS86	Signetics	180
	SN54LS386A	◊† TI	
	SN54LS86A	◊† TI	
	SN74LS86A	TI	
TTL-S	**GD74S86**	**GoldStar (3439)**	
	DM74S86	National	185
	74S86	National	
	54S86	† Signetics	
	74S86	Signetics	
	SN54S86	† TI	
	SN74S86	TI	190

Gates, Exclusive NOR

Function	Device	Source	Line
Quad TTL-LS	T54LS266	† SGS-Thomson	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Gates, Exclusive NOR (Cont'd)

Function	Device	Source
Quad 2-Input		
TTL-ALS	DM74ALS810	National
	DM74AS810	National
	SN74ALS810	TI
TTL-H	**ML3022**	**Lansdale (3514)**
	ML3122	**† Lansdale (3514)**
	MC3022	Motorola
TTL-LS	T74LS266	SGS-Thomson
Quad 2-Input, Open Collector		
TTL	9386C	National
	9386M	† National
	N8242	Signetics
	N9386	Signetics
	S9386	† Signetics
TTL-ALS	DM74ALS811	National
	DM74AS811	National
	SN74ALS811	TI
TTL-LS	HD74LS266	Hitachi
	SN54LS266	† Motorola
	SN74LS266	Motorola
	54LS266	† National
	74LS266	◊ National
	DN74LS266	◊ Panasonic
	54LS266	† SGS-Thomson
	74LS266	SGS-Thomson
	S8242	† Signetics
	54LS266	† Signetics
	SN54LS266	◊† TI
	SN74LS266	TI

Latches

Function	Device	Source
Data Latch, 10-Line, Inverting		
	M66211	Mitsubishi
Data Latch, 10-Line, Non-Inverting		
	M66210	Mitsubishi
Dual Octal Latch		
TTL-F	74F1604	Signetics
Dual 4-Bit		
TTL-ALS	DM74ALS873	National
	SN54ALS873B	† TI
	SN74ALS873B	TI
TTL-AS	DM74AS873	National
	SN54AS873	◊† TI
	SN74AS873	TI
Dual 4-Bit Addressable		
TTL-F	MC74F256	Motorola
	54F256	National
	74F256	National
	74F256	Signetics
TTL-LS	SN54LS256	† Motorola
	SN74LS256	Motorola
	54LS256	† National
	74LS256	◊ National
	T54LS256	† SGS-Thomson
	T74LS256	SGS-Thomson
	74LS256	Signetics
Dual 4-Bit Addressable Latch		
TTL-LS	74LS256	SGS-Thomson
Dual 4-Bit D-Type Transparent Latch, Three-State, Inverting		
TTL-ALS	M74ALS880A	Mitsubishi
Dual 4-Bit D-Type Transparent, Three-State, Non-Inverting		
TTL-ALS	M74ALS873B	Mitsubishi
Dual 4-Bit with Clear		
TTL	9308C	National
	9308M	† National
	54116	† Signetics
	SN54116	† TI
	SN74116	TI
Quad Bistable, Complementary Outputs		
TTL	DM5475	† National
	DM7475	National
	5475	† National
	7475	National
	5475	† Signetics
	SN5475	† TI
	SN7475	TI
TTL-LS	**GD74LS75**	**GoldStar (3439)**
	HD74LS375	Hitachi
	HD74LS75	Hitachi
	SN54LS375	† Motorola
	SN54LS75	† Motorola
	SN74LS375	Motorola
	SN74LS75	Motorola
	DM54LS75	† National
	DM74LS75	National
	54LS375	† National
	74LS375	◊ National
	DN74LS75	◊ Panasonic
	T74LS75B1	SGS-Thomson
	54LS375	† Signetics
	54LS75	† Signetics
	74LS375	Signetics
	74LS75	Signetics
	SN54LS375	◊† TI
	SN54LS75	† TI
	SN74LS375	TI
	SN74LS75	TI
Quad Bistable Latch		
TTL	**ML5475**	**† Lansdale (3514)**
	ML5477	**† Lansdale (3514)**
	ML7475	**Lansdale (3514)**
	ML7477	**Lansdale (3514)**
Quad Bistable, Single Output		
TTL-LS	HD74LS77	Hitachi
	SN54LS77	† Motorola
	SN74LS77	Motorola
Quad Multifunction		
TTL	9314C	National
	9314M	† National
	S9314	† Signetics
Quad R-S Type		
TTL-LS	T74LS279	SGS-Thomson
Quad Set-Reset		
TTL	54279	† National
	74279	National
	54279	† Signetics
	SN54279	† TI
	SN74279	TI
TTL-LS	HD74LS279	Hitachi
	SN54LS279	† Motorola
	SN74LS279	Motorola
	DM54LS279	† National
	DM74LS279	National
	54LS279	† National
	74LS279	◊ National
	DN74LS279	◊ Panasonic
	54LS279	† SGS-Thomson
	74LS279	SGS-Thomson
	54LS279	† Signetics
	SN54LS279A	◊† TI
	SN74LS279A	TI
Octal	IL8282	Lansdale
	IL8283	Lansdale
Octal D-Type		
TTL-ALS	SN74ALS580	TI
TTL-AS	SN74AS573A	TI
TTL-F	M74F373	Mitsubishi
Octal D-Type, Transparent		
TTL-ALS	SN74ALS563	TI
TTL-AS	SN54AS573A	◊† TI
Octal D-Type Transparent Latch		
TTL-F	SN54F563	† TI
Octal D-Type Transparent Latch, Three-State		
TTL-ALS	74ALS573B	Signetics
Octal D-Type Transparent, Three-State, Inverting		
TTL-ALS	M74ALS563A	Mitsubishi
	M74ALS580A	Mitsubishi
Octal D-Type Transparent, Three-State, Non-Inverting		
TTL-ALS	M74ALS573B	Mitsubishi
TTL-F	M74F573	Mitsubishi
Octal D-Type with Readback, Inverting		
TTL-ALS	SN74ALS867A	TI
Octal, Transparent		
TTL-LS	74LS373	SGS-Thomson
Octal Transparent Bidirectional		
TTL-F	M74F543	◊ Mitsubishi
Octal Transparent Bidirectional Latch, Inverting, Three-State		
TTL-ALS	74ALS543	Signetics
	74ALS543-1	Signetics
Octal Transparent Bidirectional Latch, Non-Inverting, Three-State		
TTL-ALS	74ALS544	Signetics
	74ALS544-1	Signetics
Octal Transparent, Inverting		
TTL-ALS	DM74ALS880	National
	SN74ALS880A	TI
TTL-AS	DM74AS880	National
	SN74AS880	TI
Octal Transparent Latch		
TTL-LS	54LS373	† SGS-Thomson
Octal Transparent Latch, Three-State		
TTL-ALS	74ALS563A	Signetics
Octal Transparent, Three-State		
TTL-ALS	74ALS373	Signetics
Octal 2-Input Multiplexed, Three-State Outputs		
TTL-F	54F604	† Signetics
	54F605	† Signetics
	74F604	Signetics
	74F605	Signetics
TTL-LS	SN74LS604	Motorola
	SN74LS605	Motorola
	SN74LS606	Motorola
	SN74LS607	Motorola
	SN74LS607	TI
6-Bit (independent 2 and 4-Bit)		
TTL-S	N8T3404	Signetics
8-Bit Addressable Latch		
TTL-LS	T74LS259	SGS-Thomson
8-Bit, Addressable, with Clear		
TTL	DM8334	National
	DM9334	† National
	9334C	National
	9334M	† National
	N9334	Signetics
	S9334	† Signetics
	SN54259	† TI
	SN74259	TI
TTL-ALS	SN54ALS259	† TI
	SN74ALS259	TI
TTL-F	MC74F259	Motorola
	54F259	National
	74F259	National
	74F259	Signetics
TTL-LS	**GD74LS259**	**GoldStar (3439)**
	HD74LS259	Hitachi
	SN54LS259	† Motorola
	SN74LS259	Motorola
	DM54LS259	† National
	DM74LS259	National
	54LS259	† National
	74LS259	◊ National
	54LS259	† SGS-Thomson
	74LS259	SGS-Thomson
	54LS259	† Signetics

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DIGITAL

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Latches (Cont'd)

Function	Device	Source
8-Bit, Addressable, with Clear		
TTL-LS		(Cont'd)
	74LS259	Signetics
	SN54LS259B	◊† TI
	SN74LS259B	TI
8-Bit Bistable		
TTL	**ML54100**	**† Lansdale (3514)**
	ML74100	**Lansdale (3514)**
8-Bit D-Type Read-Back Latch		
TTL-ALS	SN54ALS996	◊† TI
8-Bit D-Type Transparent, Three-State, Non-Inverting		
TTL-F	M74F845	◊ Mitsubishi
8-Bit, Edge-Triggered D-Type, Read-Back		
	SN74ALS996	TI
	SN74ALS996-1	TI
8-Bit, Inverting, Three-State		
TTL-ALS	SN74ALS29846	TI
8-Bit Latch		
TTL-LS	T54LS259	† SGS-Thomson
8-Bit, Non-Inverting		
TTL-ALS	SN74ALS29845	TI
8-Bit, Transparent, D Type, Three-State		
TTL-ALS	DM74ALS373	National
	DM74ALS573	National
	SN54ALS373	† TI
	SN54ALS573B	† TI
	SN74ALS373	TI
TTL-AS	DM74AS373	National
	DM74AS573	National
	SN54AS373	◊† TI
	SN54AS573	† TI
	SN74AS373	TI
	SN74AS573	TI
TTL-F	MC54F373	† Motorola
	MC74F373	Motorola
	54F373	◊† National
	54F412	† National
	54F432	† National
	54F573	† National
	74F373	◊ National
	74F412	◊ National
	74F432	National
	74F573	◊ National
	54F373	† Signetics
	74F373	Signetics
	74F412	Signetics
	74F432	Signetics
	74F573	Signetics
	SN54F373	† TI
	SN54F573	† TI
	SN74F373	TI
	SN74F573	TI
TTL-LS	**GD74LS373**	**GoldStar (3439)**
	HD74LS373	Hitachi
	SN54LS373	† Motorola
	SN74LS373	Motorola
	DM54LS373	† National
	DM74LS373	National
	74LS373	◊ National
	74LS573	◊ National
	DN74LS373	◊ Panasonic
	T74LS373	SGS-Thomson
	S8TS805	† Signetics
	S8TS806	† Signetics
	54LS363	† Signetics
	54LS373	† Signetics
	74LS373	Signetics
	SN54LS373	◊† TI
	SN74LS373	TI
TTL-S	DM54S373	† National
	DM74S373	National
	54S373	Signetics
	74S373	Signetics

(Continued)

Function	Device	Source
8-Bit, Transparent, D Type, Three-State		
TTL-S		(Cont'd)
	SN54S373	† TI
	SN74S373	TI
8-Bit, Transparent, D-Type, Inverting		
TTL-AS	SN74AS846	TI
TTL-F	74F846	Signetics
8-Bit, Transparent, D-Type, Inverting Three State		
TTL-ALS	SN74ALS563A	TI
	SN74ALS580A	TI
8-Bit, Transparent, D-Type, Inverting Three-State		
TTL-ALS	M74ALS533	Mitsubishi
	DM74ALS533	National
	DM74ALS563	National
	DM74ALS580	National
	SN54ALS563A	† TI
	SN54ALS580A	† TI
	SN74ALS533	TI
TTL-AS	DM74AS533	National
	DM74AS580	National
	SN74AS533	TI
	SN74AS580	TI
TTL-F	MC54F533	† Motorola
	MC74F533	Motorola
	54F533	◊† National
	54F563	† National
	74F533	◊ National
	74F563	National
	54F533	† Signetics
	74F533	Signetics
	74F563	Signetics
	SN54F533	† TI
	SN74F533	TI
	SN74F563	TI
TTL-LS	74LS533	◊ National
	74LS563	◊ National
	74LS564	◊ National
	T74LS533	◊ SGS-Thomson
8-Bit, Transparent, D-Type, Non-inverting		
TTL-AS	SN74AS845	TI
TTL-F	54F845	† National
	74F845	National
	74F845	Signetics
8-Bit, Transparent, D-Type, Three State		
TTL-ALS	SN74ALS573B	TI
8-Bit, Transparent, D-Type, Three-State		
TTL-ALS	M74ALS373	Mitsubishi
TTL-LS	T54LS373	† SGS-Thomson
8-Bit, Transparent D-Type, Three-State (bus interface)		
TTL	AM29845	AMD
TTL-ALS	SN74ALS845	TI
	SN74ALS845-1	TI
	SN74ALS846	TI
	SN74ALS846-1	TI
9-Bit D-Type Transparent, Three-State, Non-Inverting		
TTL-F	M74F843	◊ Mitsubishi
9-Bit, Inverting, Three-State		
TTL-ALS	SN74ALS29844	TI
9-Bit, Non-Inverting, Three-State		
TTL-ALS	SN74ALS29843	TI
9-Bit to 8-Bit with Ready		
TTL-F	74F755	Signetics
9-Bit, Transparent, D-Type, Inverting		
TTL-AS	SN74AS844	TI
TTL-F	74F844	Signetics
9-Bit, Transparent, D-Type, Inverting (bus interface)		
TTL-ALS	SN74ALS844	TI
	SN74ALS844-1	TI
9-Bit, Transparent, D-Type, Non-inverting		
TTL-ALS	SN74ALS843	TI
	SN74ALS843-1	TI

(Continued)

Function	Device	Source
9-Bit, Transparent, D-Type, Non-inverting		
		(Cont'd)
TTL-AS	SN74AS843	TI
TTL-F	74F843	National
	74F843	Signetics
9-Bit, Transparent D-Type Read-Back, Inverting		
TTL-ALS	SN74ALS991	TI
9-Bit, Transparent D-Type Read-Back, Non-Inverting		
TTL-ALS	SN74ALS990	TI
9-Bit, Transparent D-Type Read-Back, Three-State, Non-Inverting		
TTL-ALS	SN74ALS992	TI
	SN74ALS993	TI
9-Bit, Transparent D-Type, Three-State (bus interface)		
TTL	AM29843	AMD
10-Bit D-Type Transparent, Three-State, Non-Inverting		
TTL-F	M74F841	◊ Mitsubishi
10-Bit, Inverting, Three-State		
TTL-ALS	SN74ALS29842	TI
10-Bit, Non-Inverting		
TTL-ALS	SN74ALS29841	TI
10-Bit Readback Latch, Inverting		
TTL-ALS	SN74ALS995	TI
10-Bit Readback Latch, Non-Inverting		
TTL-ALS	SN74ALS994	TI
10-Bit, Transparent, D-Type, Inverting		
TTL-ALS	SN74ALS842	TI
	SN74ALS842-1	TI
TTL-AS	SN74AS842	TI
TTL-F	74F842	Signetics
10-Bit, Transparent, D-Type, Non-inverting		
TTL-AS	SN74AS841	TI
TTL-F	54F841	† National
	74F841	National
	74F841	Signetics
10-Bit, Transparent, D-Type, Non-Inverting (bus interface)		
TTL-ALS	SN74ALS841	TI
10-Bit, Transparent D-Type, Three-State (bus interface)		
TTL	AM29841	AMD
	AM29841A	AMD

Memories

Function	Device	Source
Asynchronous FIFO, 16x4		
TTL-ALS	SN74ALS232	TI
Asynchronous First-In, First-Out Memory (16x5)		
TTL-ALS	SN74ALS229A	TI
Cache Tag RAM (2048x9)		
	SSL2152	Saratoga
	SSL2154	Saratoga
Cache Tag RAM (4096x4)		
	SSL4180	Saratoga
	SSL4181	Saratoga
Data Access Register		
TTL-F	54F407	† National
	74F407	◊ National
Dynamic RAM Controller		
FAST	29F68	National
FIFO, 16x5		
TTL-ALS	SN54ALS229A	◊† TI
FIFO, 64x4		
TTL-ALS	SN54ALS234	◊† TI
	SN74ALS236	TI
FIFO (64x4 BiCMOS)		
	SSL7401	Saratoga
FIFO (64x4 BiCMOS with output enable)		
	SSL7403	Saratoga
FIFO (64x5 BiCMOS)		
	SSL7402	Saratoga

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Memories (Cont'd)

Function	Device	Source
FIFO (64x5 BiCMOS with output enable)	SSL7404	Saratoga
FIFO (64x5 with flags)	SSL7413	Saratoga
FIFO, 64x8 Asynchronous TTL-ALS	SN74ALS2232	TI
FIFO, 64x9 Asynchronous TTL-ALS	SN74ALS2233	TI
FIFO (64x9 BiCMOS)	SSL7409	Saratoga
FIFO (512x9 BiCMOS)	SSL7201	Saratoga
FIFO (1024x9 BiCMOS)	SSL7202	Saratoga
FIFO (2048x9 BiCMOS)	SSL7203	Saratoga
Memory Address Multiplexer TTL-F	**74F1762**	**Signetics (3603)**
Memory Mappers TTL-LS	SN74LS612	TI
RAM, 64-Bit Inverting Output TTL-S	AM27S02	AMD
	AM27S03	AMD
RAM, 64-Bit Inverting Output (low power) TTL-LS	AM27LS02	AMD
RAM, 64-Bit Inverting Output, Three-State (low power) TTL-LS	AM27LS03	AMD
RAM, 64-Bit Non-Inverting Output TTL-LS	AM27LS07	AMD
TTL-S	AM27S07	AMD
RAM, 1024x4 (three-state) TTL	AM93425	AMD
Register File, Dual 16x4 TTL-ALS	SN74ALS870	TI
	SN74ALS871	TI
Register File, 10-Bit, Non-Inveritng, Three-State TTL-ALS	SN74ALS29821	TI
Register Stack, 16x4 RAM, Three-State TTL-F	N74F410	Signetics
SIPO Shift Register TTL-LS	T74LS164	SGS-Thomson
Static-Column and Page-Mode Detector TTL-ALS	SN74ALS6310	TI
	SN74ALS6311	TI
Dual Rank 8-Bit Shift Register (8-Bit I/O buffer, "D" register, and serial "B" register) TTL-LS	DM86LS52	National
	DM86LS62	National
Dual 16-Word x 4-Bit Register File TTL-AS	SN74AS870	TI
	SN74AS871	TI
Octal Storage Register (two stage, 4-Bit wide shift register) TTL-LS	SN54LS396	◊† TI
4x4 Register File TTL-LS	T74LS170	SGS-Thomson
	T74LS670	SGS-Thomson
8-Bit Feedback Register, Inverting TTL-ALS	SN74ALS667	TI
8-Bit Feedback Register, Non-Inverting TTL-ALS	SN74ALS666	TI
8-Bit Multiport Register (RAM with simultaneous read/write) TTL	9338C	National
	9338M	† National
16-Bit Active Element Memory TTL	MC4304	† Motorola
16-Bit (4x4) Register File, Simultaneous Read/Write, Open Collector TTL	54170	† National
	74170	National
	54170	† Signetics
	SN54170	† TI
	SN74170	TI
TTL-LS	**GD74LS670**	**GoldStar (3439)**
	HD74LS170	Hitachi
	SN54LS170	† Motorola
	SN54LS670	† Motorola
	SN74LS170	Motorola
	SN74LS670	Motorola
	DM54LS670	† National
	DM74LS670	National
	54LS170	† National
	54LS670	† National
	74LS170	◊ National
	74LS670	◊ National
	DN74LS170	◊ Panasonic
	54LS170	† SGS-Thomson
	54LS670	† SGS-Thomson
	74LS170	SGS-Thomson
	74LS670	SGS-Thomson
	54LS670	† Signetics
	74LS670	Signetics
	SN54LS170	◊† TI
	SN54LS670	◊† TI
	SN74LS170	TI
	SN74LS670	TI
16-Bit (8x2) Multiport Register File, Simultaneous Read/Write, Three-State TTL	SN74172	TI
TTL-S	54S172	† Signetics
16x5 Asynchronous FIFO, Three-State TTL-F	74F225	Signetics
64-Bit TTL Bipolar RAM TTL-F	74F189A	Signetics
64-Bit (16x4) First-In/First-Out Memory TTL-ALS	SN74ALS232A	TI
64-Bit (16x4) RAM, Open Collector TTL	DM7489B	National
	DM7589	National
	DM8589	National
TTL-S	DM74S289	National
64-Bit (16x4) RAM, Two Port, Three-State TTL	AM29705C	◊ AMD
	AM29705M	◊† AMD
TTL-S	IDM29705AC	National
	IDM29705C	National
	IDM29705M	† National
64-Bit (16x4) RAM, Three-State TTL-F	54F189	◊† National
	54F219	† National
	74F189	◊ National
	74F219	◊ National
TTL-S	DM74S189	National
64-Bit (16x4) Register File with Latch, Three-State TTL-S	DM85S68	National
64-Bit (16x4) Simultaneous Read/Write RAM with Output Register TTL	54F410	† National
	74F410	◊ National
80-Bit (16x5) First-In/First-Out Memory TTL-ALS	SN74ALS233A	TI
80-Bit (16x5) First-In/First-Out Memory, Asynchronous, Three-State TTL-S	74S225	Signetics
	SN74S225	TI
256-Bit (64x5) First-In/First-Out Memory TTL-ALS	SN74ALS234	TI
320-Bit (64x5) First-In/First-Out Memory TTL-ALS	SN74ALS235	TI

Multiplexers (Digital)

Function	Device	Source
Data Selector, 5-Channel (2-to-1)	M66212	Mitsubishi
	M66213	Mitsubishi
Quint 2-Input TTL-F	**74F711**	**Signetics (3601)**
Quint 2-Input (with 30 ohm term.) TTL-F	**74F711-1**	**Signetics (3601)**
Quint 3-Input TTL-F	**74F712**	**Signetics (3601)**
Quint 3-Input (with 30 ohm term.) TTL-F	**74F712-1**	**Signetics (3601)**
Synchronous Address TTL-LS	SN74LS783	Motorola
Dual 1-of-4 Data Selector/Multiplexer TTL-ALS	74ALS153	Signetics
Dual 4:1 Data Selector/Multiplexer TTL	**ML54153**	**† Lansdale (3514)**
	ML74153	**Lansdale (3514)**
Dual 4-Input LS	T74LS153	SGS-Thomson
TTL	MC4300	† Motorola
	DM54153	† National
	DM74153	National
	54153	† National
	74153	National
	54153	† Signetics
	SN54153	† TI
	SN74153	TI
TTL-ALS	M74ALS153	Mitsubishi
	DM74ALS153	National
	SN54ALS153	† TI
	SN74ALS153	TI
TTL-AS	SN74AS153	TI
TTL-F	MC54F153	† Motorola
	MC74F153	Motorola
	54F153	◊† National
	74F153	◊ National
	74F153	Signetics
	SN54F153	† TI
	SN74F153	TI
TTL-LS	**GD74LS153**	**GoldStar (3439)**
	HD74LS153	Hitachi
	SN54LS153	† Motorola
	SN74LS153	Motorola
	DM54LS153	◊† National
	DM74LS153	National
	54LS153	† National
	74LS153	◊ National
	DN74LS153	◊ Panasonic
	T74LS253	SGS-Thomson
	74LS153	SGS-Thomson
	74LS352	SGS-Thomson
	74LS353	SGS-Thomson
	54LS153	† Signetics
	74LS153	Signetics
	SN54LS153	◊† TI
	SN74LS153	TI
TTL-S	DM54S153	† National
	DM74S153	National
	74S153	National
	54S153	† Signetics
	74S153	Signetics
	SN54S153	† TI
	SN74S153	TI
Dual 4-Input, Complementary Output TTL	9309C	National
	9309M	† National
	N9309	Signetics
	S9309	† Signetics
Dual 4-Input, Inverting TTL-ALS	M74ALS352	Mitsubishi
	DM74ALS352	National

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† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Multiplexers (Digital) (Cont'd)

Function	Device	Source
Dual 4-Input, Inverting		
TTL-ALS		(Cont'd)
	SN54ALS352	† TI
	SN74ALS352	TI
TTL-AS	SN74AS352	TI
TTL-F	MC54F352	† Motorola
	MC74F352	Motorola
	54F352	◊† National
	74F352	◊ National
	74F352	Signetics
	SN54F352	† TI
	SN74F352	TI
TTL-LS	SN74LS352	Motorola
	DM54LS352	† National
	DM74LS352	National
	54LS352	† National
	74LS352	◊ National
	T54LS352	† SGS-Thomson
	T74LS352	SGS-Thomson
	54LS352	† Signetics
	74LS352	Signetics
	SN54LS352	† TI
	SN74LS352	TI
Dual 4-Input, Inverting, Three-State		
TTL-ALS	M74ALS353	Mitsubishi
	DM74ALS353	National
	SN54ALS353	† TI
	SN74ALS353	TI
	SN74AS353	TI
TTL-F	MC54F353	† Motorola
	MC74F353	Motorola
	54F353	◊† National
	74F353	◊ National
	74F353	Signetics
	SN54F353	† TI
	SN74F353	TI
TTL-LS	SN74LS353	Motorola
	54LS353	† National
	74LS353	◊ National
	T54LS353	† SGS-Thomson
	T74LS353	SGS-Thomson
	54LS353	† Signetics
	74LS353	Signetics
	SN54LS353	◊† TI
	SN74LS353	TI
Dual 4-Input (three-state 54/75153)		
TTL	DM8214	National
Dual 4-Input, Three-State		
TTL-ALS	M74ALS253	Mitsubishi
	DM74ALS253	National
	74ALS253	Signetics
	SN54ALS253	† TI
	SN74ALS253	TI
TTL-F	MC54F253	† Motorola
	MC74F253	Motorola
	54F253	◊† National
	74F253	◊ National
	74F253	Signetics
	SN54F253	† TI
	SN74F253	TI
TTL-LS	HD74LS253	Hitachi
	SN54LS253	† Motorola
	SN74LS253	Motorola
	DM54LS253	† National
	DM74LS253	National
	54LS253	† National
	74LS253	◊ National
	DN74LS253	◊ Panasonic
	74LS253	SGS-Thomson
	54LS253	† Signetics
	74LS253	Signetics
	SN54LS253	◊† TI
	SN74LS253	TI

(Continued)

Function	Device	Source
Dual 4-Input, Three-State		(Cont'd)
TTL-S	DM54S253	† National
	DM74S253	National
	74S253	National
	54S253	† Signetics
	74S253	Signetics
	SN74S253	TI
Dual 4-Line to 1-Line Data Selector/Multiplexer with Strobe		
TTL-F	M74F153	Mitsubishi
	M74F253	Mitsubishi
	M74F352	Mitsubishi
	M74F353	Mitsubishi
Dual 4-to-1 Multiplexer		
TTL-S	**GD74S153**	**GoldStar (3439)**
Dual 8-Input (two 8-to-1 sections)		
TTL	DM74LS451	National
Quad Data Multiplexer, Non-Inverting		
TTL-F	74F732	Signetics
	74F733	Signetics
Quad 1-of-2 Data Selector/Multiplexer, Inverting, Three-State		
TTL-ALS	74ALS258	Signetics
Quad 1-of-2 Data Selector/Multiplexer, Non-Inverting, Three-State		
TTL-ALS	74ALS257	Signetics
Quad 2-Input		
TTL-F	M74F157A	Mitsubishi
	M74F158A	Mitsubishi
	M74F257A	Mitsubishi
	M74F258A	Mitsubishi
	MC74F157A	Motorola
	MC74F158A	Motorola
	74F723	**Signetics (3602)**
TTL-LS	T54LS157	† SGS-Thomson
	T54LS158	† SGS-Thomson
	T54LS258A	† SGS-Thomson
	T74LS157	SGS-Thomson
	T74LS158	SGS-Thomson
	T74LS257A	SGS-Thomson
	T74LS258A	SGS-Thomson
Quad 2-Input Data Selector/Multiplexer, Inverting		
TTL-ALS	74ALS158	Signetics
Quad 2-Input Data Selector/Multiplexer, Non-Inverting		
TTL-ALS	74ALS157	Signetics
Quad 2-Input Data Selector/Multiplexer (with LSTTL compatible inputs)		
HCT	MC54HCT157A	† Motorola
	MC74HCT157A	Motorola
Quad 2-Input Digital (suitable for driving adders, registers)		
TTL	N8266	Signetics
	S8266	† Signetics
Quad 2-Input, Inverting		
TTL	54158	† Signetics
	74158	Signetics
TTL-ALS	M74ALS158	Mitsubishi
	SN54ALS158	† TI
	SN74ALS158	TI
TTL-AS	DM74AS158	National
	SN74AS158	TI
TTL-F	MC54F158	† Motorola
	MC74F158	Motorola
	54F158	† National
	74F158	◊ National
	54F158	† Signetics
	74F158	Signetics
	SN54F158A	† TI
	SN74F158A	TI
TTL-LS	**GD74LS158**	**GoldStar (3439)**
	HD74LS158	Hitachi
	SN54LS158	† Motorola
	SN74LS158	Motorola
	DM54LS158	† National

(Continued)

Function	Device	Source
Quad 2-Input, Inverting		
TTL-LS		(Cont'd)
	DM74LS158	National
	54LS158	† National
	74LS158	◊ National
	DN74LS158	◊ Panasonic
	54LS158	† SGS-Thomson
	74LS158	SGS-Thomson
	54LS158	† Signetics
	74LS158	Signetics
	SN54LS158	◊† TI
	SN74LS158	TI
TTL-S	DM54S158	† National
	DM74S158	National
	74S158	National
	54S158	† Signetics
	74S158	Signetics
	SN54S158	† TI
	SN74S158	TI
Quad 2-Input, Inverting, Open Collector		
TTL	N8234	Signetics
	S8234	† Signetics
Quad 2-Input, Inverting Three-State		
TTL-ALS	M74ALS258	Mitsubishi
	DM74ALS258	National
	SN54ALS258	† TI
	SN74ALS258	TI
TTL-AS	DM74AS258	National
	SN74AS258	TI
TTL-F	MC54F258	† Motorola
	MC74F258	Motorola
	54F258	† National
	74F258	◊ National
	54F258	† Signetics
	74F258	Signetics
	SN54F258	† TI
	SN74F258	TI
TTL-LS	**GD74LS258**	**GoldStar (3439)**
	HD74LS258	Hitachi
	SN54LS258A	† Motorola
	SN74LS258A	Motorola
	DM54LS258B	† National
	DM74LS258B	National
	54LS258A	† National
	74LS258	National
	DN74LS258A	◊ Panasonic
	54LS258	† SGS-Thomson
	74LS258	SGS-Thomson
	54LS256	† Signetics
	54LS258A	† Signetics
	74LS258A	Signetics
	SN54LS258B	◊† TI
	SN74LS258B	TI
TTL-S	DM54S258	† National
	DM74S258	National
	74S258	National
	54S258	† Signetics
	74S258	Signetics
	SN54S258	† TI
	SN74S258	TI
Quad 2-Input Multiplexer		
TTL-F	N74F158A	Signetics
TTL-LS	**GD74LS298**	**GoldStar (3439)**
Quad 2-Input, Non-Inverting		
TTL	DM54157	† National
	DM74157	National
	DM8322	National
	DM9322	† National
	54157	◊† National
	74157	National
	9322C	National
	9322M	† National
	N9322	Signetics
	S8233	† Signetics
	54157	† Signetics
	74157	Signetics

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† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL—TTL (Cont'd)

Multiplexers (Digital) (Cont'd)

Function	Device	Source	Line
Quad 2-Input, Non-Inverting			
TTL (Cont'd)			
	SN54157	† TI	
	SN74157	TI	
TTL-ALS	M74ALS157	Mitsubishi	
	SN54ALS157	† TI	
	SN74ALS157	TI	5
TTL-AS	SN74AS157	TI	
TTL-F	MC54F157	† Motorola	
	MC74F157	Motorola	
	54F157	† National	
	74F157	◊ National	10
	54F157	† Signetics	
	74F157	Signetics	
	SN54F157A	† TI	
	SN74F157A	TI	
TTL-LS	**GD74LS157**	**GoldStar (3439)**	15
	HD74LS157	Hitachi	
	SN54LS157	† Motorola	
	SN74LS157	Motorola	
	DM54LS157	† National	
	DM74LS157	National	20
	54LS157	† National	
	74LS157	◊ National	
	DN74LS157	◊ Panasonic	
	54LS157	† SGS-Thomson	
	74LS157	SGS-Thomson	25
	54LS157	Signetics	
	74LS157	Signetics	
	SN54LS157	◊† TI	
	SN74LS157	TI	
TTL-S	**GD74S157**	**GoldStar (3439)**	30
	DM54S157	† National	
	DM74S157	National	
	74S157	National	
	54S157	† Signetics	
	74S157	Signetics	35
	SN54S157	† TI	
	SN74S157	TI	
Quad 2-Input, Non-Inverting, Three-State			
TTL-ALS	M74ALS257	Mitsubishi	
	DM74ALS257	National	
	DM74AS257	National	40
	SN54ALS257	† TI	
	SN74ALS257	TI	
TTL-AS	SN74AS257	TI	
TTL-F	MC54F257	† Motorola	
	MC74F257	Motorola	45
	54F257	† National	
	74F257	◊ National	
	54F257	† Signetics	
	74F257	Signetics	
	SN54F257	† TI	50
	SN74F257	TI	
TTL-LS	**GD74LS257A**	**GoldStar (3439)**	
	HD74LS257	Hitachi	
	SN54LS257A	† Motorola	
	SN74LS257A	Motorola	55
	DM54LS257B	† National	
	DM74LS257B	National	
	54LS257A	† National	
	74LS257	National	
	DN74LS257A	Panasonic	60
	74LS257	SGS-Thomson	
	54LS257A	† Signetics	
	74LS257A	Signetics	
	SN54LS257B	◊† TI	
	SN74LS257B	TI	65
TTL-S	**GD74S257**	**GoldStar (3439)**	
	DM54S257	† National	
	DM74S257	National	
	74S257	National	
	54S257	† Signetics	70
	74S257	Signetics	
		(Continued)	

Function	Device	Source	Line
Quad 2-Input, Non-Inverting, Three-State			
TTL-S (Cont'd)			
	SN54S257	† TI	
	SN74S257	TI	
Quad 2-Input, (three-state 54/74157)			
TTL	DM7123	National	
	DM8123	† National	75
Quad 2-Input with Output Register			
TTL	54298	† National	
	54298	† Signetics	
	SN54298	† TI	
	SN74298	TI	
TTL-AS	SN74AS298	TI	80
TTL-F	54F298	† National	
	54F398	† National	
	54F399	† National	
	74F298	National	
	74F398	◊ National	85
	74F399	◊ National	
	74F298	Signetics	
	74F398	Signetics	
	74F399	Signetics	
TTL-LS	HD74LS298	Hitachi	90
	SN54LS298	† Motorola	
	SN54LS398	† Motorola	
	SN54LS399	† Motorola	
	SN74LS298	Motorola	
	SN74LS398	Motorola	95
	SN74LS399	Motorola	
	54LS298	† National	
	74LS298	◊ National	
	54LS298	† SGS-Thomson	
	74LS298	SGS-Thomson	100
	54LS298	† Signetics	
	74LS298	Signetics	
	SN54LS298	◊† TI	
	SN54LS399	◊† TI	
	SN74LS298	TI	105
	SN74LS399	TI	
TTL-S	AM25S09C	AMD	
	AM25S09M	† AMD	
Quad 2-Input (with 30 ohm term.)			
TTL-F	**74F723-1**	**Signetics (3602)**	
Quad 2-Input, Three-State			
TTL-F	MC74F257A	Motorola	110
	MC74F258A	Motorola	
Quad 2-Port			
TTL-F	MC54F398	† Motorola	
	MC54F399	† Motorola	
	MC74F398	Motorola	
	MC74F399	Motorola	115
Quad 2-to-1 Multiplexer, Inverting			
TTL-F	N74F258A	Signetics	
Quad 2-to-1 Multiplexer, Non-Inverting			
TTL-F	N74F257A	Signetics	
Quad 3-Input			
TTL-F	**74F725**	**Signetics (3602)**	
Quad 3-Input (with 30 ohm term.)			
TTL-F	**74F725-1**	**Signetics (3602)**	
Quad 4-Input			
TTL-LS	DM74LS453	National	120
Hex 2-Input, Three-State			
TTL-ALS	SN54ALS857	† TI	
	SN74ALS857	TI	
TTL-AS	SN74AS857	TI	
4-to-1 Data Selector/Multiplexer			
TTL-AS	SN74AS253	TI	
8-Bit Data Selector/Multiplexer			
TTL	**ML54151**	**† Lansdale (3514)**	125
	ML54152	**† Lansdale (3514)**	
	ML74151	**Lansdale (3514)**	
	ML74152	**Lansdale (3514)**	

Function	Device	Source	Line
8-Input			
TTL-ALS	74ALS151	Signetics	
TTL-F	M74F151A	Mitsubishi	130
	M74F251A	Mitsubishi	
TTL-LS	T74LS151	SGS-Thomson	
	T74LS251	SGS-Thomson	
8-Input, Complementary Output			
TTL	9312C	National	
	9312M	† National	135
TTL-S	S82S30	† Signetics	
	S82S31	† Signetics	
	S82S32	† Signetics	
8-Input, Complementary Output, Strobe			
TTL	DM54151A	† National	
	DM74151A	National	140
	54151	† National	
	74151	National	
	54151	† Signetics	
	74151	Signetics	
	SN54151A	† TI	145
	SN74151A	TI	
TTL-ALS	M74ALS151	Mitsubishi	
	DM74ALS151	National	
	SN54ALS151	† TI	
	SN74ALS151	TI	150
TTL-AS	SN74AS151	TI	
TTL-F	MC54F151	† Motorola	
	MC74F151	Motorola	
	54F151	† National	
	74F151	National	155
	74F151	Signetics	
	SN54F151	TI	
	SN74F151	TI	
TTL-LS	**GD74LS151**	**GoldStar (3439)**	
	HD74LS151A	Hitachi	160
	SN54LS151	† Motorola	
	SN74LS151	Motorola	
	DM54LS151	† National	
	DM74LS151	National	
	54LS151	† National	165
	74LS151	◊ National	
	DN74LS151	◊ Panasonic	
	54LS151	† SGS-Thomson	
	74LS151	SGS-Thomson	
	54LS151	† Signetics	170
	74LS151	Signetics	
	SN54LS151	◊† TI	
	SN74LS151	TI	
TTL-S	DM54S151	† National	
	DM74S151	National	175
	74S151	National	
	54S151	† Signetics	
	74S151	Signetics	
	SN54S151	† TI	
	SN74S151	TI	180
8-Input, Inverted Output			
TTL-LS	HD74LS152	Hitachi	
	54LS152	† National	
	T74LS152	SGS-Thomson	
8-Input Multiplexer			
TTL-F	N74F151	Signetics	
	N74F151A	Signetics	185
	N74F251A	Signetics	
TTL-LS	T54LS151	† SGS-Thomson	
	74LS152	SGS-Thomson	
8-Input Multiplexer/Data Selector/Register, Complementary Output, Three-State			
TTL-LS	SN54LS356	◊† TI	
	SN74LS354	TI	190
	SN74LS356	TI	
8-Input, Stobe, Complementary Output, Three-State			
TTL-F	SN54F251	† TI	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL–TTL (Cont'd)

Multiplexers (Digital) (Cont'd)

Function	Device	Source
8-Input, Strobe, Complementary Output, Three-State		
TTL	SN54251	† TI
	SN74251	TI
TTL-ALS	M74ALS251	Mitsubishi
	DM74ALS251	National
	SN54ALS251	† TI
	SN74ALS251	TI
TTL-AS	SN74AS251	TI
TTL-F	MC54F251	† Motorola
	MC74F251	Motorola
	54F251A	◊† National
	74F251	National
	74F251	Signetics
	SN74F251	TI
TTL-LS	**GD74LS251**	**GoldStar (3439)**
	HD74LS251	Hitachi
	SN54LS251	† Motorola
	SN74LS251	Motorola
	DM54LS251	† National
	DM74LS251	National
	74LS251	◊ National
	DN74LS251	◊ Panasonic
	74LS251	SGS-Thomson
	74LS251	Signetics
	SN54LS251	◊† TI
	SN74LS251	TI
TTL-S	**GD74S251**	**GoldStar (3439)**
	DM54S251	† National
	DM74S251	National
	54LS251	† Signetics
	54S251	† Signetics
	74S251	Signetics
	SN54S251	† TI
	SN74S251	TI
8-Input, Three-State		
TTL-ALS	74ALS251	Signetics
8-to-1 Multiplexer		
TTL-F	SN74F151A	TI
	SN74F251A	TI
16-Bit Data Selector/Multiplexer		
TTL	**ML54150**	**† Lansdale (3514)**
	ML74150	**Lansdale (3514)**
16-Input, Complementary Output, Three-State		
TTL-AS	SN74AS850	TI
	SN74AS851	TI
16-Input, Inverted Output, Strobe		
TTL	DM54150	† National
	DM74150	National
	54150	† National
	74150	National
	54150	† Signetics
	74150	Signetics
	SN54150	† TI
	SN74150	TI
TTL-LS	DM74LS450	National
16-Input, Inverting Output, Three-State		
TTL-AS	SN74AS250	TI
16-to-1 Multiplexer		
TTL-AS	SN54AS250A	◊† TI

Multivibrators

Function	Device	Source
Bidirectional Monostable (low level input)		
TTL	N8T20	Signetics
Monostable, Schmitt Trigger Input		
TTL	DM54121	† National
	54121	† National
	74121	National
	54121	† Signetics
	74121	Signetics
	SN54121	† TI
	SN74121	TI
Retriggerable Monostable		
TTL	DM8601	National
	DM9601	† National
	9601C	National
	9601M	† National
Retriggerable Monostable with Clear		
TTL	54122	† National
	74122	National
	SN54122	† TI
	SN74122	TI
TTL-LS	HD74LS122	Hitachi
	SN54LS122	† Motorola
	SN74LS122	Motorola
	DM74LS122	National
	SN54LS122	◊† TI
	SN74LS122	TI
Dual Monostable, Schmitt-Trigger Input (dual 54/74121)		
TTL	54221	† Signetics
	SN54221	† TI
	SN74221	TI
TTL-LS	**GD74LS221**	**GoldStar (3439)**
	HD74LS221	Hitachi
	SN54LS221	† Motorola
	SN74LS221	Motorola
	DM54LS221	† National
	DM74LS221	National
	54LS221	† Signetics
	SN54LS221	TI
	SN74LS221	TI
Dual Retriggerable Monostable with Clear (AND triggered)		
TTL	DM74123	National
	54123	† National
	74123	National
	54123	† Signetics
	74123	Signetics
	SN54123	† TI
	SN74123	TI
TTL-LS	**GD74LS123**	**GoldStar (3439)**
	HD74LS123	Hitachi
	SN54LS123	† Motorola
	SN74LS123	Motorola
	DM74LS123	National
	DN74LS123	◊ Panasonic
	SN54LS123	◊† TI
	SN74LS123	TI
Dual Retriggerable Monostable with Reset (OR triggered)		
TTL	DM8602	National
	DM9602	† National
	96L02C	National
	96L02M	† National
	9602C	National
	9602M	† National
	N9602	Signetics
	S9602	† Signetics
TTL-LS	96LS02C	◊ National
	96LS02M	◊† National
TTL-S	AM26S02C	AMD
	AM26S02M	† AMD
	96S02C	National
	96S02M	† National
Dual Voltage-Controlled		
TTL	MC4024	Motorola
	MC4324	† Motorola

Shift Registers

Function	Device	Source
Latched Octal with 2:1 Multiplexer		
TTL-F	74F835	Signetics
Parallel 4-Bit D-Type with Enable		
TTL-F	MC54F379	Motorola
Parallel 6-Bit D-Type with Enable		
TTL-F	MC54F378	Motorola
Pipeline Register with On-Board 8-Bit Shadow Register		
TTL-S	AM29818C	AMD
	AM29818M	† AMD
Register File, Five Port (64x18-bit)		
	B2210A	Bipolar
Serial Data Polynomial Generator/Checker		
TTL-F	54F402	† National
	74F402	◊ National
Shift Register, Programmable 1–16 stages x 8, 40 MHz		
	TMC2111-1	TRWLSI
Shift Register, Programmable 3–18 stages x 8, 30 MHz		
	TMC2011	† TRWLSI
Shift Register, Programmable 3–18 stages x 8, 40 MHz		
	TMC2011-1	TRWLSI
TTL-ECL (400 MHz)		
FAST	54F710	† National
	74F710	National
Dual Pipeline Register (7 deep)		
FAST	29F524	National
Dual Pipeline Register (8 deep)		
FAST	29F525	National
Quad Parallel Register		
TTL-F	SN74F379	TI
TTL-LS	74LS379	SGS-Thomson
Quad 2-Input Multiplexer with Storage		
TTL	**ML54298**	**† Lansdale (3514)**
	ML74298	**Lansdale (3514)**
Quad 2-Port Register		
TTL-LS	T74LS298	SGS-Thomson
	T74LS399	SGS-Thomson
	74LS399	SGS-Thomson
Hex Parallel D Register		
TTL-LS	74LS378	SGS-Thomson
Decade Counter		
TTL	**ML5490A**	**† Lansdale (3514)**
	ML7490A	**Lansdale (3514)**
4-Bit		
TTL	**ML7494**	**Lansdale (3514)**
TTL-LS	T74LS295A	SGS-Thomson
	T74LS95B	SGS-Thomson
	54LS195A	† SGS-Thomson
	74LS195	SGS-Thomson
	74LS395	SGS-Thomson
4-Bit Bidirectional		
TTL-LS	74LS194	SGS-Thomson
4-Bit Parallel		
TTL	**ML5495A**	**† Lansdale (3514)**
	ML7495A	**Lansdale (3514)**
4-Bit Parallel In, Parallel Out, Right/Left, Three-State		
TTL-LS	SN54LS295A	† Motorola
	SN74LS295A	Motorola
	74LS295A	SGS-Thomson
	54LS295B	† Signetics
	74LS295B	Signetics
	SN54LS295B	◊† TI
	SN74LS295B	TI
4-Bit Parallel Input, Parallel Output		
TTL	9300C	National
	9300M	† National
	54195	† Signetics
	SN54195	† TI
	SN74195	TI
TTL-AS	SN74AS195	TI
TTL-F	MC74F195	Motorola
	74F195	Signetics
TTL-LS	**GD74LS195**	**GoldStar (3439)**
	HD74LS195A	Hitachi
	SN54LS195A	† Motorola
	SN74LS195A	Motorola
	DM74LS195A	National
	54LS195	† National
	DN74LS195A	◊ Panasonic
	T74LS195A	SGS-Thomson

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Shift Registers (Cont'd)

Function	Device	Source	Line
4-Bit Parallel Input, Parallel Output			
TTL-LS		(Cont'd)	
	74LS195A	Signetics	
	SN54LS195A	◊† TI	
	SN74LS195A	TI	
TTL-S	DM54S195	† National	
	DM74S195	National	5
	54S195	† Signetics	
	74S195	Signetics	
	SN54S195	† TI	
	SN74S195	TI	
4-Bit Parallel-in/out			
TTL	**ML54195**	**† Lansdale (3514)**	10
	ML74195	**Lansdale (3514)**	
4-Bit Parallel-in/out, Bidirectional			
TTL	**ML54194**	**† Lansdale (3514)**	
	ML74194	**Lansdale (3514)**	
4-Bit Parallel-In, Parallel Out, Right/Left			
TTL	MC4312	† Motorola	
	DM5495	† National	15
	DM7495	National	
	5495	† National	
	7495	National	
	5495A	† Signetics	
	SN5495A	† TI	20
	SN7495A	TI	
TTL-AS	SN74AS95	TI	
TTL-LS	**GD74LS95**	**GoldStar (3439)**	
	HD74LS95B	Hitachi	
	SN54LS95B	† Motorola	25
	SN74LS95B	Motorola	
	54LS95B	† National	
	74LS95B	◊ National	
	DN74LS95B	Panasonic	
	74LS95B	SGS-Thomson	30
	54LS95B	† Signetics	
	74LS95B	Signetics	
	SN54LS95B	◊† TI	
	SN74LS95B	TI	
4-Bit Parallel-In, Parallel Out, (with load, shift, hold control)			
TTL	SN54178	† TI	35
4-Bit Parallel-In, Parallel Out, with Reset, Complementary Output for Last Bit			
TTL	N8271	Signetics	
	S8271	† Signetics	
4-Bit Parallel-In, Parallel-Out, Cascadable, Three-State			
TTL-F	54F395	† National	
	74F395	National	
	74F395	Signetics	40
TTL-LS	**GD74LS395A**	**GoldStar (3439)**	
	74LS395	◊ National	
	DN74LS395A	◊ Panasonic	
	T54LS395	† SGS-Thomson	
	T74LS395A	SGS-Thomson	45
	54LS395A	† Signetics	
	74LS395A	Signetics	
	SN54LS395A	◊† TI	
	SN74LS395A	TI	
4-Bit (Parallel-In, Serial-Out)			
TTL	**ML5494**	**† Lansdale (3514)**	50
	SN5494	† TI	
4-Bit Shift Register			
TTL-LS	T54LS194A	† SGS-Thomson	
	T54LS195A	† SGS-Thomson	
4-Bit Universal Bidirectional			
TTL	DM54194	† National	
	DM74194	National	55
	54194	† Signetics	
	74194	Signetics	
	SN74194	TI	
TTL-AS	SN54AS194	† TI	
	SN74AS194	TI	60
		(Continued)	

Function	Device	Source	Line
4-Bit Universal Bidirectional		(Cont'd)	
TTL-F	MC74F194	Motorola	
	54F194	◊† National	
	74F194	◊ National	
	74F194	Signetics	
TTL-LS	**GD74LS194A**	**GoldStar (3439)**	65
	HD74LS194A	Hitachi	
	SN54LS194A	† Motorola	
	SN74LS194A	Motorola	
	DM74LS194A	National	
	54LS194A	† National	70
	DN74LS194A	◊ Panasonic	
	T74LS194A	SGS-Thomson	
	54LS194A	† Signetics	
	74LS194A	Signetics	
	SN54LS194A	◊† TI	75
	SN74LS194A	TI	
TTL-S	DM54S194	† National	
	DM74S194	National	
	74S194	National	
	SN54S194	† TI	80
	SN74S194	TI	
5-Bit (Parallel-in, Parallel-out)			
TTL	**ML5496**	**† Lansdale (3514)**	
	ML7496	**Lansdale (3514)**	
	5496	† Signetics	
	SN5496	† TI	85
	SN7496	TI	
TTL-LS	54LS96	† Signetics	
	74LS96	Signetics	
	SN54LS96	† TI	
	SN74LS96	TI	90
8-Bit			
TTL	**ML5491A**	**† Lansdale (3514)**	
	ML7491A	**Lansdale (3514)**	
TTL-F	M74F164	◊ Mitsubishi	
TTL-LS	T54LS170	† SGS-Thomson	
	T54LS273	† SGS-Thomson	95
	T74LS166	SGS-Thomson	
	54LS273	† SGS-Thomson	
	74LS166	SGS-Thomson	
8-Bit Diagnostic/Pipeline			
TTL-ALS	SN74ALS29818	TI	
8-Bit Gated Serial-In, Parallel-Out			
TTL	DM74164	National	100
	DM8570	National	
	54164	◊† National	
	74164	National	
	54164	† Signetics	
	74164	Signetics	105
	SN54164	† TI	
	SN74164	TI	
TTL-F	MC54F164	† Motorola	
	MC74F164	Motorola	
	54F164	◊† National	110
	74F164	National	
	74F164	Signetics	
TTL-LS	**GD74LS164**	**GoldStar (3439)**	
	HD74LS164	Hitachi	
	SN54LS164	† Motorola	115
	SN74LS164	Motorola	
	DM54LS164	† National	
	DM74LS164	National	
	54LS164	† National	
	74LS164	◊ National	120
	DN74LS164	◊ Panasonic	
	74LS164	SGS-Thomson	
	54LS164	† Signetics	
	54LS164B	† Signetics	
	74LS164	Signetics	125
	SN54LS164	◊† TI	
	SN74LS164	TI	
8-Bit, Inverting, Three-State			
TTL-ALS	SN74ALS29826	TI	

Function	Device	Source	Line
8-Bit, Parallel Load			
TTL	**ML54165**	**† Lansdale (3514)**	
	ML74165	**Lansdale (3514)**	130
TTL-ALS	DM54ALS166	† National	
	DM74ALS166	National	
8-Bit Parallel-In, Parallel-Out, Right/Left			
TTL	SN54198	† TI	
	SN74198	TI	
TTL-F	74F198	Signetics	135
8-Bit Parallel-In, Parallel-Out, Unidirectional			
TTL	54199	† Signetics	
	74199	Signetics	
	SN54199	† TI	
	SN74199	TI	
TTL-F	74F199	Signetics	140
8-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip Flops (bus interface)			
TTL	AM29825	AMD	
8-Bit Parallel-In/Serial-Out			
TTL-ALS	DM54ALS165	† National	
	DM74ALS165	National	
8-Bit Parallel-In, Serial-Out, Complementary Output			
TTL	54165	† National	
	74165	National	145
	54165	† Signetics	
	SN54165	† TI	
	SN74165	TI	
TTL-ALS	SN54ALS165	◊† TI	
	SN74ALS165	TI	150
TTL-LS	**GD74LS165**	**GoldStar (3439)**	
	HD74LS165A	Hitachi	
	SN54LS165	† Motorola	
	SN74LS165	Motorola	
	54LS165	† National	155
	74LS165	◊ National	
	SN54LS165A	◊† TI	
	SN74LS165A	TI	
8-Bit Parallel-In, Serial-Out with Clear			
TTL	DM74166	National	
	54166	† Signetics	160
	74166	Signetics	
	SN54166	† TI	
	SN74166	TI	
TTL-ALS	SN74ALS166	TI	
TTL-F	74F166	Signetics	165
	SN74F166	TI	
TTL-LS	**GD74LS166**	**GoldStar (3439)**	
	SN54LS166	† Motorola	
	SN74LS166	Motorola	
	DM74LS166	National	170
	SN54LS166A	◊† TI	
	SN74LS166A	TI	
8-Bit Parallel-In, Serial-Out with Input Latches			
TTL-F	54F597	† National	
	54F598	† National	
	74F597	National	175
	74F597	Signetics	
	74F598	Signetics	
TTL-LS	SN54LS597	† TI	
	SN54LS598	† TI	
	SN74LS597	TI	180
	SN74LS598	TI	
8-Bit Register			
TTL-LS	74LS273	SGS-Thomson	
8-Bit Serial/Parallel-In Register with Sign Extend (for use with 25LS14/74LS384 multiplier)			
TTL-F	54F322	† National	
	74F322	◊ National	
	74F322	Signetics	185
TTL-LS	74LS322	National	
8-Bit Serial-In, Parallel-Out			
TTL-ALS	74ALS164	Signetics	
	SN74ALS164	TI	
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Shift Registers (Cont'd)

Function	Device	Source
8-Bit Serial-In, Parallel-Out (Cont'd)		
TTL-F	54F164A	◊† National
	74F164A	◊ National
8-Bit Serial-In, Parallel-Out Register with Output Latches		
TTL-F	54F595	† National
	74F595	National
	74F595	Signetics
TTL-LS	SN54LS595	† TI
	SN74LS594	TI
	SN74LS595	TI
	SN74LS599	TI
8-Bit Serial-In, Serial-Out		
TTL	SN5491A	† TI
TTL-LS	HD74LS91	Hitachi
	SN74LS91	Motorola
	SN54LS91	† TI
	SN74LS91	TI
8-Bit Synchronous with Parallel Load, Load Complement, Preset, Clear and Hold		
TTL-LS	DM74LS380	National
8-Bit Universal Shift/Storage, Three-State		
TTL-ALS	SN54ALS299	† TI
	SN54ALS323	† TI
	SN74ALS2299	TI
	SN74ALS2323	TI
	SN74ALS299	TI
	SN74ALS323	TI
TTL-AS	SN74AS299	TI
TTL-F	MC74F299	◊ Motorola
	MC74F323	Motorola
	54F323	† National
	74F299	National
	74F323	◊ National
	74F299	◊ Signetics
	74F323	Signetics
	SN54F299	† TI
	SN74F299	TI
	SN74F323	TI
TTL-LS	**GD74LS299**	**GoldStar (3439)**
	HD74LS299	Hitachi
	SN54LS299	† Motorola
	SN54LS323	† Motorola
	SN74LS299	Motorola
	SN74LS323	Motorola
	54LS299	† National
	54LS323	† National
	74LS299	◊ National
	74LS323	National
	SN54LS299	◊† TI
	SN54LS323	◊† TI
	SN74LS299	TI
	SN74LS323	TI
TTL-S	**GD74S299**	**GoldStar (3439)**
	DM74S299	National
	SN54S299	† TI
	SN74S299	TI
8-Bit Dual Serial-In, Serial-Out		
TTL	9328C	National
	9328M	† National
9-Bit Bidirectional Register with Parity		
TTL	SL6007	Universal
	SL6008	Universal
	SL6009	Universal
	SL6010	Universal
9-Bit, Non-Inverting, Three-State		
TTL-ALS	SN74ALS29823	TI
9-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)		
TTL	AM29823	AMD
	AM29824	AMD
10/9-Bit Serial/Parallel-In, Serial-Out		
TTL-F	74F847	Signetics
10-Bit Parallel-In, Parallel-Out, Three-State, with Positive Edge-Triggered D-Type Flip-Flops (bus interface)		
TTL	AM29821	AMD
	AM29821A	AMD
10-Bit Parallel-In, Serial Out		
TTL	N8274	Signetics
10-Bit Serial-In, Parallel-Out		
TTL	N8273	Signetics
	S8273	† Signetics
16-Bit Parallel Out, Serial In (ECL)		
	SLS6316	STC
	SLS6416	STC
16-Bit Parallel-In, Serial Out (ECL)		
	SLS6016	STC
	SLS6216	STC
16-Bit Parallel-In, Serial-Out		
TTL-F	54F674	† National
	74F674	National
	74F674	Signetics
TTL-LS	SN74LS674	Motorola
	SN54LS674	◊† TI
	SN74LS674	TI
16-Bit Serial/Parallel-In, Serial Out		
	54F676	† National
	74F676	◊ National
TTL-F	74F676	Signetics
16-Bit Serial-In, Serial/Parallel Out		
	54F675	† National
	74F675	◊ National
16-Bit Serial-In, Serial-Out Register plus Stored Parallel Output		
TTL-F	54F673	† National
	74F673	◊ National
TTL-LS	SN74LS673	Motorola
	SN54LS673	◊† TI
8-Bit Gated Serial-In, Parallel-Out		
TTL-S	**GD74S164**	**GoldStar (3439)**

Translators

Function	Device	Source
TTL to 10K ECL with latch		
	DP8481	National
TTL to 100K ECL with latch		
	DP8483	National
Dual MOS to TTL Level, Three-State		
TTL	MC54468	† Motorola
Dual TTL to MOS Voltage		
TTL	D139A	† Siliconix
Dual 2-Input NAND TTL to MOS Voltage		
TTL	μA962AM	† National
	DH0034	† National
	DH0034C	National
	DS7800	† National
	DS8800	National
Hex TTL to MOS Voltage		
TTL	DS78L12	‡ National
	DS88L12	National
	D125A	† Siliconix
	D125B	Siliconix
Hex TTL-to-ECL Translator		
	100124	**Signetics (3608)**
Octal 10KH ECL to TTL and TTL to 10KH ECL		
	BT501	Brooktree
Octal 100K ECL to TTL and TTL to 100K ECL		
	BT502	Brooktree
7-Unit MOS to TTL Level Converter		
TTL	SN75270	TI

Miscellaneous

Function	Device	Source
A/D Converter, 10-bit, 1.8μS		
	TMC1061	◊ TRWLSI
A/D Converter, 10-bit, 25 MSPS		
	THC1070	‡ TRWLSI
A/D Converter, 12-bit, 13.8μS		
	TMC1241	TRWLSI
	TMC12441	TRWLSI
A/D Converter, 12-bit, 7.7μS		
	TMC1251	TRWLSI
	TMC12551	TRWLSI
A/D Converter, 8-bit, 25 MSPS		
	THC1068	‡ TRWLSI
Bidirectional Bus Extender and Repeater, Asynchronous		
TTL	N8X41	Signetics
Bus Arbiter, 4-Input Asynchronous		
TTL-F	74F786	Signetics
Crossbar Switch		
TTL-S	SN74S8840	TI
Cyclic Redundancy Checker		
TTL	9401C	National
	9401M	† National
	N8X01A	Signetics
	N9401	Signetics
D/A Converter; 10-bit, 20 MHz		
	TDC1041	◊‡ TRWLSI
D/A Converter and RAM, Triple 6-bit, 40 MHz		
	TMC0171-4	TRWLSI
	TMC0176-4	TRWLSI
D/A Converter and RAM, Triple 6-bit, 50 MHz		
	TMC0176-5	TRWLSI
D/A Converter and RAM, Triple 6-bit, 66 MHz		
	TMC0176-6	TRWLSI
D/A Converter and RAM, Triple 6-bit, 80 MHz		
	TMC0176-8	TRWLSI
DACRAM, Triple 8-bit, Multiplexed Inputs, 110 MHz		
	TMC0458-110	TRWLSI
DACRAM, Triple 8-bit, Multiplexed Inputs, 125 MHz		
	TMC0458-125	TRWLSI
DACRAM, Triple 8-bit, Multiplexed Inputs, 135 MHz		
	TMC0458-135	TRWLSI
DACRAM, Triple 8-bit, Multiplexed Inputs, 165 MHz		
	TMC0458-165	TRWLSI
DACRAM, Triple 8-bit, Multiplexed Inputs, 80 MHz		
	TMC0458-80	TRWLSI
Dealy Line Module, 5-Tap (30,60,90,120,150 ns)		
	BTTLDL150	Technitrol
Delay Element		
TTL-LS	SN74LS31	TI
Delay Line Module, Two Separate Delays (10 ns each)		
	TTL2S010	Technitrol
Delay Line Module, Two Separate Delays (100 ns each)		
	TTL2S100	Technitrol
Delay Line Module, Two Separate Delays (110 ns each)		
	TTL2S110	Technitrol
Delay Line Module, Two Separate Delays (15 ns each)		
	TTL2S015	Technitrol
Delay Line Module, Two Separate Delays (20 ns each)		
	TTL2S020	Technitrol
Delay Line Module, Two Separate Delays (50 ns each)		
	TTL2S050	Technitrol
Delay Line Module, Three Separate Delays (10 ns each)		
	TTL3S010	Technitrol
Delay Line Module, Three Separate Delays (100 ns each)		
	TTL3S100	Technitrol
Delay Line Module, Three Separate Delays (110 ns each)		
	TTL3S110	Technitrol
Delay Line Module, Three Separate Delays (15 ns each)		
	TTL3S015	Technitrol
Delay Line Module, Three Separate Delays (20 ns each)		
	TTL3S020	Technitrol

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
Delay Line Module, 10-Tap (12.5 to 125 ns)	TTLDD125	Technitrol
Delay Line Module, 10-Tap (10 to 100 ns)	LTTLDD100	Technitrol
	TTLDD100	Technitrol
Delay Line Module, 10-Tap (12.5 to 125 ns)	LTTLDD125	Technitrol
Delay Line Module, 10-Tap (15 to 150 ns)	LTTLDD150	Technitrol
	TTLDD150	Technitrol
Delay Line Module, 10-Tap (20 to 200 ns)	LTTLDD200	Technitrol
	TTLDD200	Technitrol
Delay Line Module, 10-Tap (25 to 250 ns)	TTLDD250	Technitrol
Delay Line Module, 10-Tap (5 to 50 ns)	LTTLDLDD050	Technitrol
	TTLDD050	Technitrol
Delay Line Module, 10-Tap (50 to 500 ns)	LTTLDD500	Technitrol
Delay Line Module, 10-tap (7.5 to 75 ns)	LTTLDD075	Technitrol
	TTLDD075	Technitrol
Delay Line Module, 3-Tap (120,160,200 ns)	STTLDL200	Technitrol
Delay Line Module, 3-Tap (150,200,250 ns)	STTLDL250	Technitrol
Delay Line Module, 3-Tap (15,20,25 ns)	STTLDL025	Technitrol
Delay Line Module, 3-Tap (300,400,500 ns)	STTLDL500	Technitrol
Delay Line Module, 3-Tap (30,40,50 ns)	STTLDL050	Technitrol
Delay Line Module, 3-Tap (45,60,75 ns)	STTLDL075	Technitrol
Delay Line Module, 3-Tap (60,80,100 ns)	STTLDL100	Technitrol
Delay Line Module, 3-Tap (75,100,125 ns)	STTLDL125	Technitrol
Delay Line Module, 3-Tap (90,120,150,ns)	STTLDL150	Technitrol
Delay Line Module, 5-Tap (10 to 50 ns)	HTTLDL050	Technitrol
	LTTLDL050	Technitrol
Delay Line Module, 5-Tap (100 to 500 ns)	HTTLDL500	Technitrol
	TEC	Technitrol
Delay Line Module, 5-Tap (100,200,300,400,500 ns)	TTLDL500	Technitrol
Delay Line Module, 5-Tap (10,12.5,15,17.5,20 ns)	BTTLDL020	Technitrol
	TTLDL020	Technitrol
Delay Line Module, 5-Tap (10,20,30,40,50 ns)	BTTLDL050	Technitrol
	TTLDL050	Technitrol
Delay Line Module, 5-Tap (15 to 75 ns)	HTTLDL075	Technitrol
	LTTLDL075	Technitrol
Delay Line Module, 5-Tap (15,30,45,60,75 ns)	BTTLDL075	Technitrol
	TTLDL075	Technitrol
Delay Line Module, 5-Tap (20 to 100 ns)	HTTLDL100	Technitrol
	LTTLDL100	Technitrol
Delay Line Module, 5-Tap (20,40,60,80,100 ns)	BTTLDL100	Technitrol
	TTLDL100	Technitrol
Delay Line Module, 5-Tap (25 to 125 ns)	HTTLDL125	Technitrol
	LTTLDL125	Technitrol
Delay Line Module, 5-Tap (25,50,75,100,125 ns)	BTTLDL125	Technitrol
	TTLDL125	Technitrol
Delay Line Module, 5-tap (30 to 150 ns)	HTTLDL150	Technitrol
	LTTLDL150	Technitrol
Delay LIne Module, 5-Tap (30,60,90,120,150 ns)	TTLDL150	Technitrol
Delay Line Module, 5-Tap (40 to 200 ns)	HTTLDL200	Technitrol
	LTTLDL200	Technitrol
Delay Line Module, 5-Tap (40,80,120,160,200 ns)	BTTLDL200	Technitrol
	TTLDL200	Technitrol
Delay Line Module, 5-Tap (5 to 25 ns)	HTTLDL025	Technitrol
	LTTLDL025	Technitrol
Delay Line Module, 5-Tap (50 to 250 ns)	HTTLDL250	Technitrol
	LTTLDL250	Technitrol
Delay Line Module, 5-Tap (50 to 500 ns)	TTLDD500	Technitrol
Delay Line Module, 5-Tap (50,100,150,200,250 ns)	TTLDL250	Technitrol
Delay Line Module, 5-Tap (5,10,15,20,25, ns)	BTTLDL025	Technitrol
	TTLDL025	Technitrol
Delay Line Module,10-Tap (25 to 250 ns)	LTTLDD250	Technitrol
Display Driver	SN55563A	◊† TI
	SN55564A	◊† TI
DRAM Controller, Intelligent (IDC) TTL-F	**74F1763**	**Signetics (3603)**
DRAM Dual-Ported Controller TTL-F	74F764-1	Signetics
	74F765	Signetics
	74F765-1	Signetics
DRAM Dual-Ported Controller (1 Mbit) TTL-F	**74F1764**	**Signetics (3604)**
	74F1764-1	**Signetics (3604)**
	74F1765	**Signetics (3604)**
	74F1765-1	**Signetics (3604)**
Driver, Dual (TTL level to MOSFETs)	CS2706	Cherry Semi
	CS3706	Cherry Semi
Dynamic Memory Controller TTL-ALS	SN74ALS6301	TI
	SN74ALS6302	TI
Dynamic RAM Refresh Controller	MB1422A	Fujitsu
Error Correction and Detection Unit, 64-Bit TTL-AS	SN74AS6364	TI
Error Correction Chip (ECC) TTL-LS	MB1412A	Fujitsu
	MB1426	Fujitsu
Error Detection and Correction Circuit, 16-Bit Parallel TTL-LS	SN54LS630	◊† TI
FIFO RAM Emulator (12-Bit address) TTL-LS	N8X60	Signetics
Floating Point ALU, 32-Bit IEEE TTL(N)	WTL1033C	Weitek
	WTL1033M	† Weitek
Floating Point Multiplier, 32-Bit IEEE TTL(N)	WTL1032C	Weitek
	WTL1032M	† Weitek
GPIB Data Transceiver See also Microprocessor Peripherals TTL-F	54F588	† National
	74F588	◊ National
I/O Register Array (16x8 or 8x16) TTL-LS	N8X320	Signetics
Identity Comparator/Decoder, Fuse Programmable TTL-ALS	SN74ALS812	TI
Image Filter, 65K x 65K Pixels, 11-bit x 10-bit, 30 MHz	TMC2246	TRWLSI
Image Filter, 65K x 65K Pixels, 11-bit x 10-bit, 40 MHz	TMC2246-1	TRWLSI
Line Receiver	MC3550	† TI
	MC3552	† TI
	MC3553	† TI
Memory Mapper, Expands 4 Address Lines to 12 Address Lines TTL-LS	**GD74LS612**	**GoldStar (3439)**
	SN54LS610	† TI
	SN74LS610	TI
	SN74LS611	TI
	SN74LS612	TI
	SN74LS613	TI
Microprogram Sequencer TTL-LS	AM2909A	AMD
	AM2909M	† AMD
	AM2911A	AMD
	AM2911C	AMD
	AM2911M	† AMD
	M3001	Intel
	IDM2909AC	National
	IDM2911AC	National
	SFC2909	SGS-Thomson
	SFC2911A	SGS-Thomson
	N3001	Signetics
	N8X02A	Signetics
	S3001	† Signetics
Microsequencer TTL-AS	SN54AS890	† TI
	SN74AS890	TI
Multimode Associative Stack TTL-S	DP8402	National
Oscillator Clock/Driver TTL-LS	SN54LS320	† TI
	SN54LS321	† TI
	SN74LS321	TI
Phase Locked Loop TTL-LS	SN74LS297	TI
Phase-Frequency Detector TTL	MC4044	Motorola
	MC4344	† Motorola
Pipeline Register, 8-Bit, Diagnostic TTL-ALS	SN74ALS819	TI
Port Controller, Universal, 8-Bit AS	SN74AS852	TI
	SN74AS856	TI
	SN74AS877	TI
Processor, 8-Bit Microcodeable TTL-AS	SN74AS887	TI
Programmable Delay Module (up to 13 ns)	TTLPG301	Technitrol
Programmable Delay Module (up to 20 ns)	TTLPG302	Technitrol
Programmable Delay Module (up to 27 ns)	TTLPG303	Technitrol
Programmable Delay Module (up to 34 ns)	TTLPG304	Technitrol
Programmable Delay Module (up to 41 ns)	TTLPG305	Technitrol
Programmable Delay Module (up to 48 ns)	TTLPG306	Technitrol

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—TTL (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
Programmable Delay Module (up to 55 ns)	TTLPG307	Technitrol
Programmable Delay Module (up to 62 ns)	TTLPG308	Technitrol
Programmable Delay Module (up to 69 ns)	TTLPG309	Technitrol
Programmable Delay Module (up to 76 ns)	TTLPG310	Technitrol
Programmable Delay Module (up to 111 ns)	TTLPG315	Technitrol
Programmable Delay Module (up to 146 ns)	TTLPG320	Technitrol
Programmable Delay Module (up to 181 ns)	TTLPG325	Technitrol
Programmable Delay Module (up to 216 ns)	TTLPG330	Technitrol
Programmable Delay Module (up to 286 ns)	TTLPG340	Technitrol
Programmable Delay Module (up to 321 ns)	TTLPG345	Technitrol
Programmable Delay Module (up to 356 ns)	TTLPG350	Technitrol
Programmable Delay Module (up to 454 ns)	TTLPG364	Technitrol
Programmble Delay Module (up to 251 ns)	TTLP335	Technitrol
Pulse Differentiator (Rejects pulses < 4 ns)	TTLPD005	Technitrol
Pulse Differentiator (Rejects pulses <13.5 ns)	TTLPD015	Technitrol
Pulse Differentiator (Rejects pulses <142.5 ns)	TTLPD150	Technitrol
Pulse Differentiator (Rejects pulses <18.5 ns)	TTLPD020	Technitrol
Pulse Differentiator (Rejects pulses <190 ns)	TTLPD200	Technitrol
Pulse Differentiator (Rejects pulses <23.5 ns)	TTLPD025	Technitrol
Pulse Differentiator (Rejects pulses <237.5 ns)	TTLPD250	Technitrol
Pulse Differentiator (Rejects pulses <28.5 ns)	TTLPD030	Technitrol
Pulse Differentiator (Rejects pulses <285 ns)	TTLPD300	Technitrol
Pulse Differentiator (Rejects pulses <33 ns)	TTLPD035	Technitrol
Pulse Differentiator (Rejects pulses <38 ns)	TTLPD040	Technitrol
Pulse Differentiator (Rejects pulses <380 ns)	TTLPD400	Technitrol
Pulse Differentiator (Rejects pulses <42.5 ns)	TTLPD045	Technitrol
Pulse Differentiator (Rejects pulses <47.5 ns)	TTLPD050	Technitrol
Pulse Differentiator (Rejects pulses <475 ns)	TTLPD500	Technitrol
Pulse Differentiator (Rejects pulses <57 ns)	TTLPD060	Technitrol
Pulse Differentiator (Rejects pulses <66 ns)	TTLPD070	Technitrol
Pulse Differentiator (Rejects pulses <71 ns)	TTLPD075	Technitrol
Pulse Differentiator (Rejects pulses <8.5 ns)	TTLPD010	Technitrol
Pulse Differentiator (Rejects pulses <95 ns)	TTLPD100	Technitrol
Pulse-Width Regulator (5 ns output)	TTLPW005	Technitrol
Pulse-Width Regulator (10 ns output)	TTLPW010	Technitrol
Pulse-Width Regulator (15 ns output)	TTLPW015	Technitrol
Pulse-Width Regulator (20 ns output)	TTLPW020	Technitrol
Pulse-Width Regulator (25 ns output)	TTLPW025	Technitrol
Pulse-Width Regulator (30 ns output)	TTLPW030	Technitrol
Pulse-Width Regulator (35 ns output)	TTLPW035	Technitrol
Pulse-Width Regulator (40 ns output)	TTLPW040	Technitrol
Pulse-Width Regulator (45 ns output)	TTLPW045	Technitrol
Pulse-Width Regulator (50 ns output)	TTLPW050	Technitrol
Pulse-Width Regulator (60 ns output)	TTLPW060	Technitrol
Pulse-Width Regulator (70 ns output)	TTLPW070	Technitrol
Pulse-Width Regulator (75 ns output)	TTLPW075	Technitrol
Pulse-Width Regulator (100 ns output)	TTLPW100	Technitrol
Pulse-Width Regulator (150 ns output)	TTLPW150	Technitrol
Pulse-Width Regulator (200 ns output)	TTLPW200	Technitrol
Pulse-Width Regulator (250 ns output)	TTLPW250	Technitrol
Pulse-Width Regulator (300 ns output)	TTLPW300	Technitrol
Pulse-Width Regulator (400 ns output)	TTLPW400	Technitrol
Pulse-Width Regulator (500 ns output)	TTLPW500	Technitrol
RAMDAC, Triple 6-bit, 35 MHz, 256x18 LUT	TMC0171	◊ TRWLSI
Read-Back Transceiver		
FAST	54F702	† National
	74F702	National
Register/Counter/Comparator		
FAST	54F701	† National
	74F701	National
Synchronous Decade Rate Multiplier		
TTL	SN54167	† TI
	SN74167	TI
Trajectory Generator (for Winchester disk drives)	ML414	MicroLinear
TTL Square Wave Oscillator, 1 MHz	TTLS001	Technitrol
TTL Square Wave Oscillator, 5 MHz	TTLOS005	Technitrol
TTL Square Wave Oscillator, 10 MHz	TTLOS010	Technitrol
TTL Square Wave Oscillator, 20 MHz	TTLOS020	Technitrol
TTL Square Wave Oscillator, 30 MHz	TTLOS030	Technitrol
TTL Square Wave Oscillator, 40 MHz	TTLOS040	Technitrol
TTL Square Wave Oscillator, 50 MHz	TTLOS050	Technitrol
TTL-ECL Register, 8-Bit (400 MHz)		
FAST	54F707	† National
	75F707	National
Voltage Comparator (analog input-digital output)		
TTL-S	AM686C	◊ AMD
	AM686M	◊† AMD
Voltage Controlled Oscillator (or crystal controlled)		
TTL-LS	SN54LS624	◊† TI
	SN54LS628	◊† TI
	SN74LS624	TI
	SN74LS628	TI
Voltage-Controlled Oscillator, Low Power		
TTL-LS	SN74LS724	Motorola
Binary-To-BCD Converter		
TTL	DM74185A	National
BCD-To-Binary Converter		
TTL	DM74184	National
Dual Pulse Synchronizer/Driver		
TTL	**ML54120**	**† Lansdale (3514)**
	ML74120	**Lansdale (3514)**
	SN54120	† TI
	SN74120	TI
Dual Voltage Controlled Oscillator (or crystal controlled)		
TTL-S	SN54LS626	◊† TI
	SN54LS629	◊† TI
	SN74LS625	TI
	SN74LS629	TI
Dual 4-Input NAND Schmitt-Trigger		
TTL	5413	† Signetics
	SN5413	† TI
	SN7413	TI
TTL-ALS	DM74ALS13	National
TTL-F	54F13	† National
	74F13	National
	74F13	Signetics
TTL-LS	HD74LS13	Hitachi
	SN54LS13	† Motorola
	SN74LS13	Motorola
	54LS13	† National
	74LS13	◊ National
	DN74LS13	◊ Panasonic
	T54LS13	† SGS-Thomson
	T74LS13	SGS-Thomson
	54LS132	† SGS-Thomson
	74LS132	SGS-Thomson
	54LS13	† Signetics
	74LS13	Signetics
	SN54LS13	◊† TI
	SN74LS13	TI
TTL-S	54S13	† Signetics
Dual 4-Input 30-Ohm Transmission Line Driver		
TTL-F	54F3040	† Signetics
	74F3040	Signetics
Quad Complementary-Output Elements (for symmetrical generation of complementary outputs)		
TTL	SN54265	† TI
	SN74265	TI
Quad S-R Latch		
TTL-LS	T54LS279	† SGS-Thomson
Quad 2-Input NAND Schmitt-Trigger		
TTL	DM54132	† National
	DM74132	National
	74132	National
	54132	† Signetics
	SN54132	† TI
	SN74132	TI
TTL-ALS	DM74ALS132	National
TTL-F	54F132	National
	74F132	National
	74F132	Signetics
TTL-LS	**GD74LS132**	**GoldStar (3439)**
	HD74LS132	Hitachi
	SN54LS132	† Motorola

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† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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DIGITAL

DIGITAL—TTL (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
Quad 2-Input NAND Schmitt-Trigger		
TTL-LS		(Cont'd)
	SN74LS132	Motorola
	DM54LS132	† National
	DM74LS132	National
	74LS132	◊ National
	DN74LS132	◊ Panasonic
	54LS132	† Signetics
	54LS132A	† Signetics
	74LS132	Signetics
	SN54LS132	◊† TI
	SN74LS132	TI
TTL-S	74S132	National
	SN54S132	† TI
	SN74S132	TI
Quad 2-Input 30-Ohm Transmission Line Driver		
TTL-F	54F3037	† Signetics
	74F3037	Signetics
	74F3038	Signetics
Hex Schmitt Trigger, Inverting		
TTL	DM5414	† National
	DM7414	National
	7414	National
	5414	† Signetics
	7414	Signetics
	SN5414	† TI
	SN7414	TI
TTL-ALS	DM74ALS14	National
TTL-F	54F14	† National
	74F14	National
	74F14	Signetics
TTL-LS	**GD74LS14**	**GoldStar (3439)**
	HD74LS14	Hitachi
	SN54LS14	† Motorola
	SN74LS14	Motorola
	DM74LS14	National
	54LS14	† National
	74LS14	◊ National
	DN74LS14	◊ Panasonic
	54LS14	† SGS-Thomson
	74LS14	SGS-Thomson
	54LS14	† Signetics
	74LS14	Signetics
	SN54LS14	◊† TI
	SN74LS14	TI
	SN74LS19	TI
Octal Flip-Flop with Serial Scanner		
FAST	54F978	† National
	74F978	National
Octal Trapezoidal Repeater		
TTL-S	DS3898	National
4-Bit Priority Register, Cascadable		
TTL	SN54278	† TI
	SN74278	TI
4-Bit Shifter, Three-State (shifts 0, 1, 2, or 3-bits under 2-line select control)		
TTL-S	AM25S10C	AMD
	AM25S10M	† AMD
4-Bit Universal Presettable Polynomial Generator		
TTL	MC8504	Motorola
6-Bit Synchronous Binary Rate Multiplier		
TTL	5497	† National
	7497	National
	SN5497	† TI
	SN7497	TI
8-Bit Bidirectional I/O Port, Latched, Addressable		
TTL-S	N8T31	Signetics
	N8T32	Signetics
	N8T33	Signetics
	N8T36	Signetics
	S8T33	† Signetics
	S8T35	† Signetics
		(Continued)

Function	Device	Source
8-Bit Bidirectional I/O Port, Latched, Addressable		
TTL-S		(Cont'd)
	S8T36	† Signetics
	S8T39	† Signetics
8-Bit Successive Approximation Register		
TTL	DM2502C	National
	DM2502M	† National
	DM2503C	National
	DM2503M	† National
TTL-LS	54LS502	† National
	54LS503	† National
	74LS502	◊ National
	74LS503	◊ National
8-Input Priority Encoder		
	MC54F148	† Motorola
	MC74F148	Motorola
TTL	DM54148	† National
	DM74148	National
	DM8318	National
	DM9318	† National
	9318C	National
	9318M	† National
	54148	† Signetics
	SN54148	† TI
	SN74148	TI
TTL-F	54F148	◊† National
	74F148	◊ National
	74F148	Signetics
	SN74F148	TI
TTL-LS	AM25LS2513M	† AMD
	HD74LS148	Hitachi
	SN54LS148	† Motorola
	SN74LS148	Motorola
	SN74LS748	Motorola
	T74LS148	SGS-Thomson
	SN54LS148	◊† TI
	SN74LS148	TI
8-Input Priority Encoder, Three State		
TTL-LS	SN54LS848	† Motorola
	SN74LS348	Motorola
	SN74LS848	Motorola
	SN54LS348	† TI
	SN74LS348	TI
9-Bit Odd/Even Parity Generator/Checker		
	T54L5280	† SGS-Thomson
TTL	DM54180	† National
	DM74180	National
	74180	National
	N8262	Signetics
	S8262	† Signetics
	54180	† Signetics
	SN54180	† TI
	SN74180	TI
TTL-ALS	SN74ALS280	TI
TTL-AS	DM74AS280	National
	SN74AS280	TI
TTL-F	MC54F280	† Motorola
	MC74F280	Motorola
	54F280	◊† National
	74F280	◊ National
	54F280	† Signetics
	74F280A	Signetics
	74F280B	Signetics
	SN54F280B	† TI
	SN74F280A	TI
TTL-LS	**GD74LS280**	**GoldStar (3439)**
	HD74LS280	Hitachi
	SN54LS280	† Motorola
	SN74LS280	Motorola
	SN54LS280	◊† TI
	SN74LS280	TI
TTL-S	AM82S62C	AMD
	AM82S62M	† AMD
	GD74S280	**GoldStar (3439)**
	DM54S280	† National
		(Continued)

Function	Device	Source
9-Bit Odd/Even Parity Generator/Checker		
TTL-S		(Cont'd)
	DM74S280	National
	N82S62	Signetics
	54S280	† Signetics
	74S280	Signetics
	SN54S280	† TI
	SN74S280	TI
9-Bit Parity Generator/Checker with Parity I/O Port		
TTL-AS	DM74AS286	National
	SN74AS286	TI
10-Bit Priority Encoder		
TTL	54147	† Signetics
	SN74147	TI
TTL-LS	SN74LS147	Motorola
	SN54LS147	◊† TI
	SN74LS147	TI
12-Bit Schottky Barrier Diode		
TTL-S	SN74S1050	TI
	SN74S1051	TI
12-Bit Successive Approximation Register		
TTL	AM2504C	AMD
	AM2504M	† AMD
	DM2504C	National
	DM2504M	† National
12-Input Odd/Even Parity Checker/Generator		
TTL	9348C	National
	9348M	† National
TTL-S	AM93S48C	AMD
	AM93S48M	† AMD
16-Bit Schottky Barrier Diode		
TTL-S	SN74S1052	TI
	SN74S1053	TI
16-Bit Shift Register, Video, Parallel In Serial Out (ECL)		
	SLS6216	STC
ECL	SLS6016	STC
16-Bit Shift Register, Video, Parallel Out, Serial In (ECL)		
	SLS6316	STC
	SLS6416	STC
16-Bit Shift Register, Video, Parallel-In, Parallel Out		
	DP8515	National
	DP8515-350	National
	DP8516	National
	DP8516-350	National
16-Stage Programmable Counter/Divider		
	54F525	† National
	74F525	◊ National
32-Bit Parallel Error Correction and Detection Circuit		
TTL-AS	SN74AS632	TI
32-Bit Parallel Error Detection and Correction Circuit		
FAST	54F632	† National
	74F632	National
TTL-ALS	SN74ALS632A	TI
	SN74ALS632B	TI

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—Special

Function	Device	Source	Line
Arithmetic Processor (supply 5–12 V)	AM9511A	AMD	
Baud Rate Generator/Programmable Divider (ROM controlled divider)	COM8046	SMC	
	COM8046T	SMC	
	COM8126	SMC	
	COM8126T	SMC	5
	COM8146	SMC	
	COM8146T	SMC	
Baud Rate Generator/Programmable Divider, Dual (ROM controlled divider)	COM5016T	SMC	
	COM8116	SMC	
	COM8116T	SMC	10
	COM8136	SMC	
	COM8136T	SMC	
	WD1943	Western	
Comparator for Servomechanisms (NC, robot, and drawing machine applications)	KM3702D	Toko	
Counter/Display Decoder, 4 Decade (7 segment and BCD outputs, 0.25 MHz; supply 5 V)	**MIC5002**	**Micrel (3540)**	15
	MIC5005	**Micrel (3540)**	
	MIC5007	**Micrel (3540)**	
Counter/Display Driver, 6 Decade Up/Down (7 segment and BCD output, 1MHz, presettable compare register, latched output, LED driver maximum count 999999, 995959, or 595999 versions, supply 10–15V)	**MIC50395**	**Micrel (3540)**	
	MIC50396	**Micrel (3540)**	
	MIC50397	**Micrel (3540)**	20
	MIC50398	**Micrel (3540)**	
	MIC50399	**Micrel (3540)**	
Counter Logic Control (use with MC12013 and MC4016)	MC12014	Motorola	
Counter Time-Base (oscillator, programmable divider, 10^1 to 10^8, $2x10^7$, $6x10^8$, and $36x10^8$, supply –12,5 V)	**MIC5009**	**Micrel (3540)**	
Counter/Timer, 4 Digit Up/Down Presettable Counter/Timer, Settable Register with Comparison to Counter, Multiplexed 7-Segment and BCD Output (maximum count 5959)	ICM7217B	Harris	25
	ICM7217C	Harris	
	ICM7217B	◊ Maxim	
	ICM7217C	◊ Maxim	
Counter, Universal (8 decade)/Latch/Display Driver (direct 7 segment and digit drivers for common anode LEDs: 'A' types	ICM7216A	Harris	
	ICM7216B	Harris	30
	ICM7226A	Harris	
	ICM7226B	Harris	
Counter, Dual (two 3-decade up/down counters with latch, BCD output, 0.5 MHz, supply 5–15 V)	LS7040	LSI Comp	
Counter, Dual 16-Bit Binary Up Counter with 32-Bit Latch, Multiplexer and Three-State Drivers	**LS7062**	**LSI Comp (3527)**	
Counter, Dual 16-Bit, Prescalable, Multiplexed and Latched Outputs (5 V supply)	**LS7063**	**LSI Comp (3527)**	35
Counter, 6 Decade Up/Down (predetermining, 3 pre-set storage registers, latched output)	**LS7055**	**LSI Comp (3527)**	
	LS7056	**LSI Comp (3527)**	
Counter, 6 Decade, BCD Output, 5 MHz, 8 Latches (supply 5–15 V)	**LS7031**	**LSI Comp (3527)**	
Counter, 8 Decade Frequency Counter/Latch/Display Driver (Direct 7 segment and digit drivers for common anode LEDs: 7216C. common cathode LEDs: 7216D. DC to 10 MHz, 5 V supply)	ICM7216D	Harris	
Counter, 8 Decade, BCD and 7 Segment Outputs, 5 MHz, Latches (supply 5–15 V)	**LS7030**	**LSI Comp (3527)**	40
Counter, 24-Bit, Universal	**LS7066**	**LSI Comp (3527)**	
Counter, 32-Bit, Multiplexed and Latched Outputs (5 V supply)	**LS7060**	**LSI Comp (3527)**	
Counter, 32-Bit, 8-Bit Prescalable, Multiplexed and Latched Outputs (5 V supply)	**LS7061**	**LSI Comp (3527)**	
Counter, 3 Timers, 0.01 to 99 sec Counter	RP5C06	Ricoh	
Data Acquisition System (250 kHz throughput)	**DPHDAM16**	**Dense-Pac (3370)**	45
	DPHDAM8	**Dense-Pac (3370)**	
Data Encryption Device (high speed)	WD20C03A	Western	
Data Encryption Device (NBS standard)	WD2001	◊ Western	
	WD2002	◊ Western	
Data Security Device (data encryption standard)	MC6859	Motorola	50
Delay Generator (digitally programmable, TTL and ECL compatible)	AD9500B	AD	
	AD9500T	† AD	
Delay Line, 3-in-1	**DS1013**	**◊ Dallas (3357)**	
Delay Line, 10-Tap	**DS1010**	**◊ Dallas (3357)**	
Digital Delay Line (for filter, noise reduction)	CXK1202	Sony	55
Digital Filter, 64-Tap Complex Matched Filter	**STEL3310**	**STEL (3664)**	
Digital Gain Set, for setting gain of op-amps	LF13006	National	
	LF13007	National	
Digital Neural Network Processor	**N64000**	**Inova (3484)**	
Digital to Synchro Converter (16-bit)	DSC10510	ILC-DDC	60
Digitally Controlled Transconductance Block	LV560	Gennum	
Digitally Programmable Delay Generator	AD9501	AD	
Divider, Divide by 2, Above 1 GHz	SP8606B	Plessey	
	SP8606M	Plessey	
Divider, Divide by 2, to 2 GHz, ECL Output	U822BS	AEG Corp	65
Divider, Divide by 2, 0.2 to 1 GHz	SP8602A	† Plessey	
	SP8602B	Plessey	
	SP8605B	Plessey	
	SP8605M	Plessey	
	SP8607A	† Plessey	70
	SP8607B	Plessey	
Divider, Divide by 2, 740 MHz	MC12090	Motorola	
Divider, Divide by 3/4, 40 to 300 MHz	SP8720	Plessey	
Divider, Divide by 4, 0.07 to 1 GHz	SP8613	Plessey	
Divider, Divide by 4, 0.1 to 1.5 GHz	S1534	Signetics	75
Divider, Divide by 4, 0.15 to 1 GHz	SP8600A	† Plessey	
	SP8600B	Plessey	
Divider, Divide by 4/10/11/20/21	TD6109	Toshiba	
Divider, Divide by 5/6, to 1 MHz	**RED5/6**	**LSI Comp (3527)**	
Divider, Divide by 5/6, 0.2 to 1 GHz	MC12009	Motorola	80
	SP8740A	† Plessey	
	SP8740B	Plessey	
Divider, Divide by 6/7, 0.2 to 1 GHz	SP8741A	† Plessey	
	SP8741B	Plessey	
Divider, Divide by 8, 0.25 to 1 GHz	SP8735B	Plessey	85
Divider, Divide by 8/9, 0.25 to 1 GHz	SP8743B	Plessey	
	SP8743M	Plessey	
Divider, Divide by 10, Above 1 GHz	SP8665B	Plessey	
	SP8668B	Plessey	
Divider, Divide by 10, 0.2 to 1 GHz	SP8630A	† Plessey	90
	SP8630B	Plessey	
Divider, Divide by 10/11, 0.2 to 1 GHz	MC12013	Motorola	
	SP8643B	Plessey	
	SP8647A	† Plessey	
	SP8647B	Plessey	95
	SP8680A	† Plessey	
	SP8680B	Plessey	
	SP8685A	† Plessey	
	SP8685B	Plessey	
	SP8690A	† Plessey	100
	SP8690B	Plessey	
Divider, Divide by 10/100/1000/10,000 to 2 MHz	**RDD104**	**LSI Comp (3527)**	
Divider, Divide by 16, 0.2 to 1 GHz	SP8659A	† Plessey	
	SP8659B	Plessey	
Divider, Divide by 20, 0.2 to 1 GHz	DS8628	National	105
	SP8657A	† Plessey	
	SP8657B	Plessey	
	SP8658	Plessey	
Divider, Divide by 20/21, to 225 MHz	DS8614	National	
Divider, Divide by 24, 0.2 GHz	DS8627	National	110
Divider, Divide by 32, 0.2 to 1 GHz	SP8655A	† Plessey	
	SP8655B	Plessey	
Divider, Divide by 32/33, to 225 MHz	DS8615	National	
Divider, Divide by 32/33, 225 MHz	MC12015	Motorola	
Divider, Divide by 40/41, to 225 MHz	DS8616	National	115
Divider, Divide by 40/41, 225 MHz	MC12016	Motorola	
Divider, Divide by 50/60, to 1 MHz	**RED50/60**	**LSI Comp (3527)**	
Divider, Divide by 64, above 1 GHz	SP8755A	† Plessey	
	SP8755B	Plessey	
Divider, Divide by 64, 0.03 to 1 GHz, ECL Output	U664B	AEG Corp	120
Divider, Divide by 64/65, to 225 MHz	DS8617	National	
Divider, Divide by 64/65, 225 MHz	MC12017	Motorola	
Divider, Divide by 64/256, 90–1000 MHz	CA3163	Harris	
	MC12071	Motorola	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

DIGITAL

DIGITAL—Special (Cont'd)

Function	Device	Source	Line
Divider, Divide by 64, 1.1 GHz	MC12073	Motorola	
Divider, Divide by 64, 225 MHz	MC12023	Motorola	
Divider, Divide by 100, to 150 MHz	DS8629	National	
	SP8629	Plessey	
Divider, Divide by 100/120	**RED100/120**	**LSI Comp (3527)**	5
Divider, Divide by 128/129, 520 MHz	MC12018	Motorola	
Divider, Divide by 239,240,255,256, to 0.5 GHz	SP8906	Plessey	
Divider, Divide by 256, 1.1 GHz	MC12074	Motorola	
Divider, Divide by 300/360	**RED300/360**	**LSI Comp (3527)**	
Divider, Divide by 478,480,510,512, to 1 GHz	SP8901	Plessey	10
Divider, Divide by 3000/3600	**RED3000/3600**	**LSI Comp (3527)**	
Divider Extender, Divide by 4, to Extend Division Ratios of Two Modulus Counters while Maintaining the Difference (i.e., 5/6 to 20/21)	SP8790A	† Plessey	
	SP8790B	Plessey	
Divider Extender, Divide by 8 (i.e., extends 5/6 to 40/41)	SP8794A	† Plessey	
	SP8794B	Plessey	15
Divider, Programmable; 6– 1/2 Decade, to 4.5 GHz	HEF4751	Signetics	
Filter, Digital Programmable High Order, Low-Pass	**FLJ-DC**	**Datel (3361)**	
	FLJ-D1	**Datel (3361)**	
	FLJ-D2	**Datel (3361)**	
	FLJ-D5	**Datel (3361)**	20
	FLJ-D6	Datel	
	FLT-C1	**Datel (3361)**	
Filter, FIR, 30 MHz	**HSP43481**	**Harris (3466)**	
	HSP43881	**Harris (3466)**	
	HSP43891	**Harris (3466)**	25
Filter, Resistor Tuneable	**FLJ-UR**	**Datel (3361)**	
Hall Effect Switch (senses magnetic field)	DN6835	Panasonic	
	DN6837	Panasonic	
	DN6838	Panasonic	
	DN6839	Panasonic	30
	DN834	Panasonic	
	DN835	Panasonic	
	DN837	Panasonic	
	DN838	Panasonic	
	DN839	Panasonic	35
	TL170C	TI	
Interpolation Pulse Generator (NC, robot, and drawing machine applications)	KM3701AD	Toko	
Latched Serial Register (combines functions of the LS373 and LS164 devices)	41KP	AT&T	
LED Driver System, 8 Decade 8x8 Memory, Decoder (versions either hardwire or processor controlled	ICM7218A	Harris	
	ICM7218B	Harris	40
	ICM7218C	Harris	
	ICM7218D	Harris	
	ICM7218A	◊ Maxim	
	ICM7218B	◊ Maxim	
	ICM7218C	◊ Maxim	45
	ICM7218D	◊ Maxim	
Linear, Digital Programmable Current Sinks	GP521	Gennum	

Function	Device	Source	Line
Linear Programmable Analog Signal Processor	GP520	Gennum	
LVDT/RVDT to Digital Converter (12 or 14-bit resolution)	DTC19300	ILC-DDC	
Multiplexer/Demultiplexer, 8-Channel Latched, Binary Addressable (supply –5 to –70 V)	**LS7110**	**LSI Comp (3527)**	50
Multiplier (16x16)	WTL1516	Weitek	
Multiplier-Accumulator (16x16)	WTL1010C	Weitek	
	WTL1010M	† Weitek	
Numerical Control Circuit (for rotary encoder interface)	KM3703D	Toko	
Numerically Controlled Oscillator (1 GHz, GaAs, 32-bit BPSK, QPSK)	**STEL2173**	**STEL (3663)**	55
Numerically Controlled Oscillator (60 MHz, 32-bit, full PM, FM, and quadrature)	**STEL1177**	**STEL (3663)**	
Numerically Controlled Oscillator (80 MHz, BCD decimal)	**STEL1176**	**STEL (3663)**	
PIN Diode Drivers	UDS5791H	† Allegro Micro	
	DH0035	† National	
	DH0035C	National	60
Precision Programmable Frequency Generator/Synthesizer	AV9101	Avasem	
Programmable Amplifier, Telphone Line Delay Equalizer	AT76C10	ATMEL	
Programmable Diode Martix, 8x10	**CA416**	**Newbridge (3569)**	
Programmable Diode Matrix, 10x16	S353	Siemens	
Random Bit Generator Component (hybrid)	**RBG1210**	**Newbridge (3569)**	65
Resistor Network, Logic Controlled	FLJ-ACR1	Datel	
	FLJ-ACR2	Datel	
Resolver to Digital Converter (10,12,14 or 16-bit resolution)	RDC19200	ILC-DDC	
Schmitt Trigger, Zener Clamped Output (supply 2.2 to 6 V)	CS102	Cherry Semi	
Signal Quality Estimator (provides front end processing)	**STEL2330**	**STEL (3664)**	70
Solid State Relay	DIH126	Dionics	
	DIH127	Dionics	
	DIH136	Dionics	
Solid State Relay (high voltage)	LH1191AAB	AT&T	
	LH1191AT	AT&T	75
	LH1192AAB	AT&T	
	LH1192AT	AT&T	
Solid State Relay, High Voltage (for isolation switching)	LH1156AAB	AT&T	
Solid-State Relay, High Voltage (for isolation switching)	LH1056AT	AT&T	
	LH1156AT	AT&T	80
Static RAM, 256x8, w/ Alarm Clock/Calendar	PCF8583	Signetics	
Synchro or Resolver-to-Digital Converter (12 or 14-bit)	SDC14532	ILC-DDC	
Synchro or Resolver-to-Digital Converter (14 or 16-bit)	SDC14531	ILC-DDC	
Synchro/Resolver-to-Digital Converter, 14-Bit	ADS244	AD	

Function	Device	Source	Line
Test-Bus Interface Unit (provides protocol and hardware support for interfacing between TM bus and ETM bus	HTIV2000	Honeywell	85
Video Frame Averager	67156	OEI	
Video Frame Buffer (512 x 512 x 8)	67145	OEI	
Video Processor (Subtraction, Overlay).	67149	OEI	
Waveform Synthesizer, Digitally Controlled (2-channel)	**MN1900**	**MicroNet (3549)**	
Dual Long Delay Timer (three modes: one-shot, time delay, monostable)	41HK	AT&T	90

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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Hearst Engineering Software

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INTRODUCTION TO MICROPROCESSORS

This section begins with a Master Selection Guide that covers all major parameters needed to choose a microprocessor for a particular application. The Microprocessors sections will be broken down into three main categories: Complex Instruction Set Computers (CISC), Reduced Instruction Set Computers (RISC), and finally Microcontrollers. Microprocessors are sequenced by increasing data word size and then alphabetically by manufacturer.

Once you've chosen the proper microprocessor for your application, go to the System Components section. These are arranged by bit size, then alphanumerically by microprocessor, and shows all of the available peripheral devices that work with a particular microprocessor.

Finally, there is a General Purpose section describing devices that can be used in many different microprocessor systems, not just in certain families.

MICROPROCESSORS

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General Purpose Devices 383

MICROPROCESSORS

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Complex Instruction Set														
4	BIP	5	24							10				
4	CMOS	−1.5	60	8		46	64x4/ 36x4	2016x8/ 128x6		0.032	92		x	
4	CMOS	−1.5	60	8		46	64x4/ 36x4	2016x8/ 128x8		0.032	92		x	
4	CMOS	−1.5	60	8	1260	45	32x4 + 20x4	1260		0.032 *	91.6		x	
4	CMOS	−1.5	80	8	2016	49	64x4 + 24x4	2016		0.032 *	91.6		x	
4	CMOS	−3	48	8	1197	52	64 40	1197		0.032 *	61		x	
4	CMOS	−3	60	8	14K	51	65x4	14K	x	0.032 *	61	—	x	
4	CMOS	−3	60	8	1827	51	65x4	1827		0.032 *	61			
4	CMOS	−3	60	8	2268	54	96x4	2268		0.032 *	61		x	
4	CMOS	−3	60	8	2772	49	96x4 + 32x4	2772		0.032 *	61		x	
4	CMOS	−3	60	8	4032	55	128x4	4032		0.032 *	61		x	
4	CMOS	−3.0	80	8		55	80x4/ 48x4	4032x8/ 256x6		0.032	61		x	
4	CMOS	−5	64	9	3072	93	160x4 + 16x2	3072		0.27 *	11	1	x	
4	CMOS	−5	64	10	30K	93	168x4	30K	x	0.09 *	11	1	x	
4	CMOS	2.5 to 6	64	10		99	512x4	8Kx10			1.78	5	x	x
4	CMOS	2.5–3.5	28	8,16	1K	72	64x4	1Kx8		2	3		x	x
4	CMOS	2.5–3.5	42	8,16	2K	70	128x4	2Kx8		2	3		x	x
4	CMOS	2.7 to 5.5	20	8		41	32x4	762x8		4	1		x	
4	CMOS	2.7 to 5.5	48	9		104	256x4	4096x9		4	4	6		
4	CMOS	2.7 to 5.5	64	4		94	1024	8Kx9		4	1	5	x	
4	CMOS	2.7 to 5.5	64	9		94	192x4	4096x9		4	2	5	x	
4	CMOS	2.7 to 5.5	64	9		94	256x4	6096x9		4	2	5	x	
4	CMOS	2.7 to 5.5	80	4		97	1280	6Kx8		2.5	1.6	5	x	
4	CMOS	2.7 to 5.5	80	4		97	1792	8Kx8		2.5	1.6	5	x	
4	CMOS	2.7 to 5.5	80	8		99	192x4	4096x4		2.5	1	5	x	
4	CMOS	2.7 to 5.5	80	8		99	256x4	6144x8		2.5	1	5	x	
4	CMOS	2.7–6.0	42	10	2048	98	160x4	2Kx10		2.25	4	3	x	x
4	CMOS	2.7–6.0	64	10	2048	99	160x4	2Kx10		2.25	4	5	x	x
4	CMOS	2.7–6.0	64	10	4096	99	256x4	4Kx10		2.25	4	5	x	x
4	CMOS	3	42	10	2048	71	160x4	2Kx10		0.5	20	3	x	x
4	CMOS	3	42	10	4096	71	256x4	4Kx10		0.9	20	3	x	x
4	CMOS	3	54	10	2048	71	160x4	2Kx10		0.5	20	3	x	x
4	CMOS	3	54	10	4096	71	256x4	4Kx10		0.9	20	3	x	x
4	CMOS	3	60	8	1K	54	96x4	2Kx8		0.3	6/120		x	
4	CMOS	3.5–6	28	8,16	1K	72	64x4	1Kx8		2	3		x	x
4	CMOS	3.5–6	42	8,16	2K	70	128x4	2Kx8		2	3		x	x
4	CMOS	4.0–6.0	42	10	2048	98	160x4	2Kx10		4.5	2	3	x	x
4	CMOS	4.0–6.0	64	10	2048	99	160x4	2Kx10		4.5	2	5	x	x
4	CMOS	4.0–6.0	64	10	4096	99	256x4	4Kx10		4.5	2	5	x	x
4	CMOS	4.5 to 6	64	10		99	512x4	8Kx10			3.55	5	x	x
4	CMOS	4.5–6.0	42	10	2048	98	160x4	2Kx10		6.2	1.33	3	x	x
4	CMOS	4.5–6.0	64	10	2048	99	160x4	2Kx10		6.2	1.33	5	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
					National	System Support, System Timing and Control Unit, special cycle for slow peripherals.	TI32201	TI	
x		x		x			SM535	Sharp	
x		x		x			SM534	Sharp	
x						Built-in LCD driver circuit.	SM531	Sharp	
x						Built-in melody generator circuit and LCD driver circuit.	SM530	Sharp	5
x						Built-in LCD driver.	SM500	Sharp	
x		x			—		SM5L	Sharp	
x						Built-in LCD driver.	SM5A	Sharp	
x						Optionally expandable for external RAM, built-in LCD driver circuit.	SM4A	Sharp	
x						Multi LCD display. Built-in LCD driver.	SM510	Sharp	10
x						Built-in melody generator circuit and LCD driver.	SM511	Sharp	
x		x		x			SM512	Sharp	
x						Optionally expandable for external RAM.	SM520	Sharp	
x		x			—		SM525	Sharp	
x		x	x	x		58 I/O lines, 26 high voltage (40 V max)	HMC408CL	Hitachi	15
x						23 I/O ports TTL/CMOS compatible.	MB8854L	Fujitsu	
x						37 I/O ports, TTL/CMOS compatible.	MB8851L	Fujitsu	
x		x		x			SM595	Sharp	
x		x		x			SM5F3	Sharp	
x		x		x			SM5J5	Sharp	20
x		x		x			SM578	Sharp	
x		x		x			SM579	Sharp	
x		x		x			LU5E4POP	Sharp	
x		x		x			SM5E5	Sharp	
x		x		x			SM5E3	Sharp	25
x		x		x			SM5E4	Sharp	
x		x	x	x		36 I/O Lines; 24 high voltage (40V max)	HMCS412CL	Hitachi	
x		x	x	x		58 I/O Lines; 26 high voltage (40V max), serial interface	HMCS402CL	Hitachi	
x		x	x	x		58 I/O Lines; 26 high voltage (40V max), serial interface	HMCS404CL	Hitachi	
x		x	x	x		32 I/O Lines, stand-by mode, on-chip counter	HMCS44CL	Hitachi	30
x		x	x	x		32 I/O Lines, stand-by mode, on-chip counter	HMCS46CL	Hitachi	
x		x	x	x		44 I/O Lines, stand-by moe, on-chip counter	HMCS45CL	Hitachi	
x		x	x	x		44 I/O Lines, stand-by mode, on-chip counter	HMCS47CL	Hitachi	
x		x	x	x		Built in LCD Driver Circuit	KS52000	Samsung	
x						23 I/O ports, TTL/CMOS compatible.	MB8854A	Fujitsu	35
x						37 I/O ports, TTL/CMOS compatible.	MB8851A	Fujitsu	
x		x	x	x		36 I/O Lines; 24 high voltage (40V max)	HMCS412C	Hitachi	
x		x	x	x		58 I/O Lines; 26 high voltage (40V max), serial interface	HMCS402C	Hitachi	
x		x	x	x		58 I/O Lines; 26 high voltage (40V max), serial interface	HMCS404C	Hitachi	
x		x	x	x		58 I/O lines, 26 high voltage (40 V max)	HMCS408AC	Hitachi	40
x		x	x	x		36 I/O Lines; 24 high voltage (40V max)	HMCS412AC	Hitachi	
x		x	x	x		58 I/O Lines; 26 high voltage (40V max), serial interface	HMCS402AC	Hitachi	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
4	CMOS	4.5–6.0	64	10	4096	99	256x4	4Kx10		6.2	1.33	5	x	x
4	CMOS	5		8			96x4 max	2000 max		0.44			x	
4	CMOS	5	16	8	512	48	16x4	512x8		0.5	10/20	1	x	x
4	CMOS	5	16	8,16	512	72	16x4	512x8		2	3		x	x
4	CMOS	5	16	8,16	1024	72	32x4	1Kx8		2	3		x	x
4	CMOS	5	16/18/20	8	508	40	32x4	508		2	2		x	
4	CMOS	5	16/18/20	8	1016	40	56x4	1016		2	2		x	
4	CMOS	5	18	8	512	50	16x4	512x8		0.5	10/20	1	x	x
4	CMOS	5	28	8	1K	43	64x4	1Kx8		0.6	15/60		x	
4	CMOS	5	28	8,16	1K	72	64x4	1Kx8		2	3		x	x
4	CMOS	5	40	8	1K	43	64x4	1Kx8		0.6	15/60		x	
4	CMOS	5	40	8	2K	75	128x4	2Kx8		0.5	10/20	1	x	x
4	CMOS	5	40	8	1024	75	64x4	1024		0.5	10/20	1	x	x
4	CMOS	5	42	8,16	1K	70	64Kx4	1Kx8		2	3		x	x
4	CMOS	5	42	8,16	1K	70	64Kx4	1Kx8		2	3		x	x
4	CMOS	5	42	8,16	2K	72	128x4	2Kx8		2	3		x	x
4	CMOS	5	42	8,16	2K	72	128x4	2Kx8		2	3		x	x
4	CMOS	5	42	10		98	160x4	4Kx10			2	3	x	x
4	CMOS	5	42	10		98	576x4			6.2	1.33	3	x	x
4	CMOS	5	42	10		98	576x4	4Kx10			2.0	3	x	x
4	CMOS	5	42	10	2048	71	160x4	2Kx10		0.5	10	3	x	x
4	CMOS	5	42	10	4096	71	256x4	4Kx10		0.9	5	3	x	x
4	CMOS	5	48	8	1024	94	80x4	1024		2.5	1.6	5	x	
4	CMOS	5	54	10	2048	71	160x4	2Kx10		0.5	10	3	x	x
4	CMOS	5	54	10	4096	71	256x4	4Kx10		0.9	5	3	x	x
4	CMOS	5	60/64	8	2048	94	128x4	2048		2.5	1.6		x	
4	CMOS	5	60/64	8	4096	94	256x4	4096		2.5	1.6	5	x	
4	CMOS	5	64	9		93	192x4	4064x9		4	2	5	x	
4	CMOS	5	64	10		99	576x4			6.2	1.33	5	x	x
4	CMOS	5	64	10		99	576x4	4Kx10			1.33	5	x	x
4	CMOS	5	70	8,16	4K	72	196x4	4Kx8		2	3		x	x
4	CMOS	5	80			70				4.5	6.67			
4	CMOS	5	80			71				4.5	6.67		x	x
4	CMOS	5	80			76	256x4			3	2.0		x	x
4	CMOS	5	80			80	256x4			3	2.0		x	x
4	CMOS	5	80			82	256x4			3	2.5		x	x
4	CMOS	5	80			82	256x4			3	2.5		x	x
4	CMOS	5	80			82	256x4			4	1.5		x	x
4	CMOS	5	80			82	256x4			4	1.5		x	x

Software Support									
Cross Assembler	High Level Language	Programs			Alternate Sources	Comments	Device	Source	Line
		Debug	Diagnostic	Edit					
x		x	x	x		58 I/O Lines; 26 high voltage (40V max), serial interface	HMCS404AC	Hitachi	
x						μCOM–4 single chip microprocessor family. Consists of 14 individual devices with various RAM, ROM, I/O subroutine stack level options.	μCOM-4	NEC	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1454	Panasonic	
x						12 I/O ports, TTL/CMOS compatible.	MB88201	Fujitsu	
x						12 I/O ports, TTL/CMOS compatible.	MB88202	Fujitsu	5
x						High-speed, low-end type.	SM590	Sharp	
x						High-speed, low-end type.	SM591	Sharp	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1453	Panasonic	
x		x	x	x			KS51000	Samsung	
x						23 I/O ports, TTL/CMOS compatible.	MB8854	Fujitsu	10
x		x	x	x			KS51200	Samsung	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1455	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1450	Panasonic	
x						37 I/O ports, TTL/CMOS compatible.	MB8851	Fujitsu	
x						37 I/O ports, TTL/CMOS compatible.	MB8853	Fujitsu	15
x						6 bit 3 Channel D/A, 34 I/O ports, TTL/CMOS compatible.	MB88535	Fujitsu	
x						6 bit 3 Channel, 13 bit D/A, 34 I/O ports, TTL/CMOS compatible.	MB88536	Fujitsu	
x		x	x	x		36 I/O lines, 24 high voltage (40 V max)	HMCS414C	Hitachi	
x		x	x	x		EPROM-on-package device (8K ROM max) for HMCS412 series	HD614P080C	Hitachi	
x		x	x	x		36 I/O lines, 24 high voltage (40 V max)	HD614P180S4	Hitachi	20
x		x	x	x		32 I/O Lines, stand-by mode, on-chip counter	HMCS44C	Hitachi	
x		x	x	x		32 I/O Lines, stand-by mode, on-chip counter	HMCS46C	Hitachi	
x						Capable of driving at 3V. Serial input/output.	SM550	Sharp	
x		x	x	x		44 I/O Lines, stand-by moe, on-chip counter	HMCS45C	Hitachi	
x		x	x	x		44 I/O Lines, stand-by mode, on-chip counter	HMCS47C	Hitachi	25
x						Capable of driving at 3V. Serial input/output.	SM551	Sharp	
x						Capable of driving at 3V. Serial input/output.	SM552	Sharp	
x		x		x			SM579A	Sharp	
x		x	x	x		EPROM-on-package device (8K ROM max) for HMCS402/404 series	HD614P080S	Hitachi	
x		x	x	x		58 I/O lines, 26 high voltage (40 V max)	HD614P0160S	Hitachi	30
x						LCD driver, 29 I/O ports, TTL/CMOS compatible.	MB88541	Fujitsu	
						On-chip LCD driver, PLL, A/D converter.	MB88561	Fujitsu	
x						On-chip VFD driver, PLL, A/D converter.	MB88562	Fujitsu	
x						On-chip LCD driver with 24-segment output.	MB88543	Fujitsu	
x						On-chip LCD driver with 32-segment output.	MB88545	Fujitsu	35
x						On-chip A/D converter, 68 I/O ports.	MB88551	Fujitsu	
x						On-chip A/D converter, 68 I/O ports.	MB88552	Fujitsu	
x						On-chip A/D converter, high speed version of 88551.	MB88551H	Fujitsu	
x						On-chip A/D converter, high speed version of 88552.	MB88552H	Fujitsu	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
4	CMOS	5	80	10		71	160x4	2.1Kx10		0.5	10	2	x	
4	CMOS	5	80	10	2048	71	160x4	2Kx10		0.5	10	3	x	x
4	CMOS	5	80	10	4096	71	256x4	4Kx10		1.0	5	3	x	x
4	CMOS	5,3.5–6	42	8,16	2K	70	128x4	2Kx8		2	3		x	x
4	CMOS	5,3.5–6	42	8,16	4K	70	192x4	4Kx8		2	3		x	x
4	NMOS	5	16	8	512	48	16x4	512		0.45	10/20	1	x	x
4	NMOS	5	18	8	512	50	16x4	512		0.45	10/20	1	x	x
4	NMOS	5	28	8	768	57	32x4	768		0.45	10/20	1	x	x
4	NMOS	5	40	8	1K	68	64x4			0.45	10/20	1	x	x
4	NMOS	5	40	8	4K	124	152x4	1536x8		4	2/4	4	x	x
4	NMOS	5	40	8	4K	124	152x4	2048x8		4	2/4	4	x	x
4	NMOS	5	40	8	4K	124	256x4	4096x8		4	2/4	4	x	x
4	NMOS	5	40	8	2048	75	128x4	2048		0.45	10/20	2	x	x
4	NMOS	5	64	8	2K	75	64x4			0.45	10/20	1	x	x
4	NMOS	5	64	8	2K	75	128x4			0.45	10/20	1	x	x
4	NMOS	5	64	8	4K	124	152x4	2048x8		4	2/4	4	x	x
4	NMOS	5	64	8	4K	124	256x4	4096x8		4	2/4	4	x	x
4	PMOS	–15	28	8	768	57	32x4	768		0.3	15/30	1	x	x
4	PMOS	–15	40	8	1024	75	64x4	1024		0.3	15/30	1	x	x
4	PMOS	–15	40	8	2048	75	128x4	2048		0.3	15/30	2	x	x
4	PMOS	–15V		8	1K		64x4			0.4	15/60			
4	PMOS	–15V		8	2K		128x4			.4	15/60			
4	PMOS	–15V		8	4K		128x4			0.55	11/60			
4	PMOS	9	28	8	4K	41	128x4	4Kx8		0.55	11/60		x	x
4	PMOS	9	28	8	4K	41	128x4	4Kx8		0.55	11/60		x	x
4	PMOS	9	28	8	4K	43	64x4	4Kx8		0.4	15/60		x	x
4	PMOS	9	40	8	4K	41	64x4	4Kx8		0.55	11/60		x	x
4	PMOS	9	40	8	4K	41	64x4	4Kx8		0.55	11/60		x	x
4	PMOS	9,15	28	8	1K	43	64x4	1Kx8		0.4	15/60		x	x
4	PMOS	9,15	28	8	1K	43	64x4	1Kx8		0.4	15/60		x	

Software Support									
Cross Assembler	High Level Language	Programs			Alternate Sources	Comments	Device	Source	Line
		Debug	Diagnostic	Edit					
x						Drives seven segment LCDs, on chip counter timer. 32 I/O lines.	HD44790	Hitachi	
x		x	x	x		32 I/O Lines, power-on-reset, on-chip LCD drive	LCD-III	Hitachi	
x		x	x	x		32 I/O Lines, power-on-reset, on-chip LCD drive	LCD-IV	Hitachi	
x						Other Vcc ranges available, 36 I/O ports TTL/CMOS compatible.	MB88503	Fujitsu	
x						Other Vcc ranges available, 36 I/O ports TTL/CMOS compatible.	MB88501	Fujitsu	5
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1404	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1403	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1402	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1498	Panasonic	
x		x	x	x		All the MN15XX series members have bidirectional I/O lines, 8 bit counter/timer, 8 bit serial shift register, and power down feature to save contents of RAM.	MN1541	Panasonic	10
x		x	x	x		All the MN15XX series members have bidirectional I/O lines, 8 bit counter/timer, 8 bit serial shift register, and power down feature to save contents of RAM.	MN1542	Panasonic	
x		x	x	x		All the MN15XX series members have bidirectional I/O lines, 8 bit counter/timer, 8 bit serial shift register, and power down feature to save contents of RAM.	MN1544	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1405	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1499	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1499A	Panasonic	15
x		x	x	x		All the MN15XX series members have bidirectional I/O lines, 8 bit counter/timer, 8 bit serial shift register, and power down feature to save contents of RAM.	MN1562	Panasonic	
x		x	x	x		All the MN15XX series members have bidirectional I/O lines, 8 bit counter/timer, 8 bit serial shift register, and power down feature to save contents of RAM.	MN1564	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1432	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1430	Panasonic	
x		x	x	x		All the MN14XX series members are available in at least one other process type.	MN1435	Panasonic	20
						ROMless system evaluator supports TMS1000/1070/1200/1270/1700 PMOS family members.	SE1000P	TI	
						ROMless system evaluator supports TMS1100/1170/1300/1370 PMOS family members.	SE2200P	TI	
						ROMless system evaluator supports TMS1400/1470/1600/1670 PMOS family members.	SE1400P	TI	
x		x	x	x		Expanded memory version of TMS1000. –9V VDD version available.	TMS1400	TI	
x		x	x	x		Vacuum fluorescent drive version of TMS1400. –9V VDD version available.	TMS1470	TI	25
x		x	x	x		21 I/O lines, increased ROM version of TMS1000. –9V VDD version available.	TMS1700	TI	
x		x	x	x		32 I/O lines. –9V VDD version available.	TMS1600	TI	
x		x	x	x		Vacuum fluorescent drive version of TMS1600. –9V VDD version available.	TMS1670	TI	
x		x	x	x		64 pin version, TMS–1099/SE–1, permits use of external PROM, RAM or ROM for program development. –9 volt VDD version available.	TMS1000	TI	
x		x	x	x		3.5 V output drive capability. –9 volt VDD version available.	TMS1070	TI	30

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
4	PMOS	9,15	28	8	2K	40	128x4	2Kx8		0.4	15/60		x	x
4	PMOS	9,15	28	8	2K	40	128x4	2Kx8		0.4	15/60		x	x
4	PMOS	9,15	40	8	1K	43	64x4	1Kx8		0.4	15/60		x	
4	PMOS	9,15	40	8	2K	40	128x4	2Kx8		0.4	15/60		x	x
4 BS	CMOS	5	40	4		60				43	.023			x
4BS	CMOS	5	40	9	User defined	512				33				
4BS	CMOS	5	40	9	User defined	512				41				
4BS	CMOS	5	40	9	User defined	512				50				
4BS	ECL	−2,−5.2		4		16							x	
4BS	ECL	−2,−5.2		8		16				10				
4BS	TTL	5	40	9	User defined					10			x	
4BS	TTL	5	40	9	User defined	16				10	115		x	
4BS	TTL	5	40	9	User defined	16				10	115		x	
4BS	TTL	5	48	4xN	User defined	16				8	174		x	
4BS	TTL	5	48	4xN	User defined	16				8	174		x	
4BS	TTL	5	48	4xN	User defined	16				8	174		x	
4BS	TTL/ECL	5		9	User defined	512				10			x	
4BS	TTL/ECL	5		9	User defined	512				10			x	
8	CHMOS	5	40	8,16,24	65K	111	128x8			12	1/4	5	x	x
8	CMOS	2.4–6	40	8–30	64K	150				1	1.6	5	yes	
8	CMOS	2.4–6	40	8–30	64K	150				2.5		5	yes	
8	CMOS	2.4–6	40	8–30	64K	150				4	1.0	5	yes	
8	CMOS	2.5–6	64	8–32	64K	258	256x8	16Kx8		15	0.8	15	x	x
8	CMOS	2.5–6	64	8–32	64K	258	256x8	4096x8		15	0.8	15	x	x
8	CMOS	2.7 to 5.5	64	8		81	256x8	6144x8		4	1	5	x	
8	CMOS	3–5	40	8						3.6		2		
8	CMOS	3–5	40	8,16,24	4K	59	176x8	7.7Kx8		2.1				
8	CMOS	3–6	28	8	1089		64	1089		5	2/10	1	x	x
8	CMOS	3–6	28	8,16,24	2K	51	64x8	1.1x8		1	2/10	4	x	x
8	CMOS	3–6	40	8	8K		112			5	2/10	1	x	x
8	CMOS	3–6	40	8	2106		112	2106		5	2/10	1	x	x
8	CMOS	3–6	40	8,16,24	4K	60	176	4Kx8		2.1	2/11	3	x	x
8	CMOS	3–6	40	8,16,24	8K	51	112x8	2.1Kx8		1	2/10	4	x	x
8	CMOS	3–6	40	8,16,24	8K	51	112x8	2106x8		1	2/10	4	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x		A 64-pin version, TMS1098/SE–2 permits use of external PROM/RAM/ROM for program development. –9 volt VDD version available.	TMS1100	TI	
x		x	x	x		Fluorescent drive capability otherwise same as TMS1100. –9V VDD version available.	TMS1170	TI	
x		x	x	x		3.5 V output drive capability. –9 volt VDD version available.	TMS1270	TI	
x		x	x	x		27 I/O lines, fluorescent drive capability. –9V VDD version available.	TMS1370	TI	
x	x	x	x	x		Bit Slice ALU	**WS5901**	**Waferscale (3717)**	5
							IDT39C01C	IDT	
							IDT39C01D	IDT	
							IDT39C01E	IDT	
							MC10800	Motorola	
					AMD, National, Raytheon		MC10902	Motorola	10
					AMD, Motorola, NEC, Raytheon	Interrupt capability requires peripheral chip.	IDM2901A-2	National	
x					National, NEC, Raytheon, SGS-Thomson		AM2901B	AMD	
x					Fairchild, National, NEC, Raytheon		SFC2901B	SGS-Thomson	
x					NEC, National, Raytheon	Expandable register file. Built-in normalization and division logic. Built-in parity generation.	AM2903	AMD	
x					NEC, National, Raytheon	Automatic BCD add, subtract and conversion between binary and BCD. Improved byte handling.	AM29203	AMD	15
x					NEC,National, Raytheon	Expandable register file. Built-in normalization and division logic. Built-in parity generation.	SFC-2903	SGS-Thomson	
x					NEC, National, Raytheon, SGS-Thomson	Eight function ALU. Four status flags. Microprogrammable. Interrupt requires AM2914 chip. 25% faster than AM2901B.	AM2901C	AMD	
x					NEC, National, Raytheon	Eight function ALU. Four status flags. Microprogrammable. Interrupt requires AM2914 chip. 25% faster than AM2901B.	SFC2901C	SGS-Thomson	
x	x	x	x	x	Intersil	Two 16 bit timer/counters, serial I/O port. Boolean processor. Can be used with external ROM or RAM.	80C31	Intel	
					National	Fully Compatible with Z80 instruction set, on chip bus controller and clock generator	MPU800-1	SMC	20
					National	Fully Compatible with Z80 instruction set, on chip bus controller and clock generator	MPU800	SMC	
					National	Fully Compatible with Z80 instruction set, on chip bus controller and clock generator	MPU800-4	SMC	
x	x			x		16-Bit ALU, A/D, USART	78C14	NEC	
x	x			x		16-Bit ALU, A/D, USART	78C11	NEC	
x		x		x			SM814	Sharp	25
						Encrytion, Federal Processing Standard	TMS75C00	TI	
						68HC054C4 with 8K bytes of ROM	MC68HC05C8	Motorola	
x	x				Motorola	Single chip CMOS CPU, 20 programmable bi-directional I/O lines, self check mode.	CDP6805F2	Harris	
x		x	x	x		EPROM version of 146805F2	MC1468705F2	Motorola	
x	x				Motorola	Single chip CMOS CPU, 16 programmable bi-directional I/O lines.	CDP6805E2	Harris	30
x	x				Motorola	Single chip CMOS CPU, 32 prog	CDP6805G2	Harris	
x		x	x	x		Single chip CPU, SCI SPI, 16-bit timer	MC68HC05C4	Motorola	
x		x	x	x		32 programmable bidirectional I/O lines, bootstrap, EPROM version of 146805F2.	MC1468705G2	Motorola	
x		x	x	x		Self check, frequency synthesis, audio tone output, dead man timer.	MC146805H2	Motorola	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
8	CMOS	3–6	40	8,16,24	64K					3		1		
8	CMOS	3–6	48 or 52	8,16,24,32	64K	145	256x8	8Kx8		2,1	1/10	21	x	x
8	CMOS	4–6.5	40	8,16,24	64K	91			x	3.2	5/7.5	1	x	x
8	CMOS	4–6.5	40	8,16,24	64K	91			x	5	3.2/4.8	1	x	x
8	CMOS	4–6.5	40	8,16,24	64K	123	64x8		x	5	3.2/16	1	x	x
8	CMOS	4–6.5	40	8,16,24	64K	123	64x8		x	5	3.2/16	1	x	x
8	CMOS	4–6.5	40	8,16,24	64K	123	64x8	2Kx8	x	5	3.2/16	1	x	x
8	CMOS	4–10.5	40	8,16,24	64K	91			x	6.4	5/7.5	1	x	x
8	CMOS	5	28	8	2K	45	128x8	16K		12	1.5/2.8	3		x
8	CMOS	5	28	8–16			64x8	1100x8			1	2	x	x
8	CMOS	5	28	8–16			64x8	1100x8			1	2	x	x
8	CMOS	5	28	8–16			64x8	1804x8			1	2	x	x
8	CMOS	5	28	8–16			64x8	2508x8			1	2	x	x
8	CMOS	5	28	8,16,24	4K	42	128x8	1.7Kx8		11	0.15/14	2	x	x
8	CMOS	5	40	8	Int.	71	512	16384		4	0.5	3	x	x
8	CMOS	5	40	8	64K	61				5	2	4		
8	CMOS	5	40	8	65K	64				4		1		
8	CMOS	5	40	8	65K	64				4		4		
8	CMOS	5	40	8	65K	64				4	0.5/3.5	1		
8	CMOS	5	40	8	65K	64			x	4		1		
8	CMOS	5	40	8	124K	45	144x8	32K	x	8	1.5	6	x	x
8	CMOS	5	40	8	128K	45	256x8	32K		20	1.5/2.8	6		x
8	CMOS	5	40	8, 16, 24	64K	246				10	1.02/6.4	5		
8	CMOS	5	40	8–24			86x8	3848x8			1	2	x	x
8	CMOS	5	40	8–24			96x8				1	2	x	x
8	CMOS	5	40	8–24			96x8	2056x8			1	2	x	x
8	CMOS	5	40	8–24			96x8	3848x8			1	2	x	x
8	CMOS	5	40	8–24			128x8				0.8	2	x	x
8	CMOS	5	40	8–24			128x8				1	2	x	x
8	CMOS	5	40	8–24			128x8	2Kx8			0.8	2	x	x
8	CMOS	5	40	8–24			128X8	2Kx8			1	2	x	x
8	CMOS	5	40	8–24			128x8	4Kx8			1	2	x	x
8	CMOS	5	40	8–24	64K	68				4	0.5/3.5	2	x	x
8	CMOS	5	40	8–24	64K	68				4	0.5/3.5	2		
8	CMOS	5	40	8–24	64K	68				4	0.5/3.5	2		
8	CMOS	5	40	8–32	64K	158				1	4/23	5	x	x
8	CMOS	5	40	8–32	64K	158				2.5	1.6	3	x	x
8	CMOS	5	40	8–32	64K	158				2.5	1.6	3	x	x
8	CMOS	5	40	8–32	64K	158				2.5	1.6/9.2	5	x	x
8	CMOS	5	40	8–32	64K	158				4	1	3	x	x
8	CMOS	5	40	8–32	64K	158				4	1	3	x	x
8	CMOS	5	40	8–32	64K	158				4	1/5.75	5	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
						CMOS version of MSM8085A.	MSM80C85A	OKI	
x	x	x	x	x		512 bytes EEPROM, 2 serial ports, 16-bit timer, pulse accumulator, 8-channel A/D	MC68HC11	Motorola	
x	x	x	x	x	Hughes		CDP1802AC	Harris	
	x	x	x		Hughes		CDP1802BC	Harris	
x	x				Hughes	8-bit counter on board.	CDP1805AC	Harris	5
x	x	x	x	x	Hughes	8-bit counter on board.	CDP1806AC	Harris	
x	x				Hughes	8-bit counter on board.	CDP1804AC	Harris	
x	x	x	x	x	Hughes		CDP1802A	Harris	
x							Z86C00	Zilog	
x		x	x	x		20 TTL/CMOS compatible I/O lines	HD6805S1	Hitachi	10
x		x	x	x		20 TTL/CMOS compatible I/O lines	HD680581	Hitachi	
x		x	x	x		20 TTL/CMOS compatible I/O lines	HD6805S6	Hitachi	
x		x	x	x		19 TTL/CMOS compatible I/O lines, PLL logic	HD6805T2	Hitachi	
x	x	x	x	x		Larger ROM Version of 68HC04P2	EF68HC04P3	SGS-Thomson	
x	x	x	x	x	NCR	Available in DIP and PLCC.	**R65C10**	**Rockwell (3575)**	15
x					Motorola	Enhanced 6805E22	CDP6805E3	Harris	
					Rockwell	Bus compatible with MC6800. On board clock oscillator.	G65SC112	CMD Micro	
					Rockwell	Pin compatible with NMOS 6500 processors, bus compatible with MC6800.	G65SC12	CMD Micro	
					Rockwell	Pin compatible with NMOS 6500 processors, bus compatible with MC6800. On-board clock oscillator.	G65SC02	CMD Micro	
					Rockwell	Bus compatible with MC6800. On board clock oscillator.	G65SC102	CMD Micro	20
x		x			—		SM803	Sharp	
x							Z86C11	Zilog	
					OKI, Harris	Static operation; compatible with NMOS 8085; supports extended instructions	**CA80C85S**	**Newbridge (3569)**	
x		x	x	x		23 TTL/CMOS compatible I/O lines	HD6805W1	Hitachi	
x		x	x	x		23 I/O lines, internal 8-Bit timer	HD6805W0	Hitachi	25
x		x	x	x		24 I/O lines	HD6805U1	Hitachi	
x		x	x	x		24 I/O lines	HD6805V1	Hitachi	
x	x	x	x			13 parallel I/O lines, serial communications interface	HD6803-1	Hitachi	
x	x	x	x			13 parallel I/O lines, serial communications interface	HD6803	Hitachi	
x		x	x	x		29 parallel I/O lines, two handshade control lines	HD6801S5	Hitachi	30
x		x	x	x		29 parallel I/O lines, two handshake control lines	HD680190	Hitachi	
x		x	x	x		29 parallel I/O lines, two handshade control lines	HD6801V0	Hitachi	
					GTE, NCR	CMOS R6502	**R65C02**	**Rockwell (3576)**	
						On-chip oscillator, bus three-state capability, quadrature clock, R6500 software compatibility.	**R65C102**	**Rockwell (3576)**	
						Slave processor, bus three-state capability	**R65C112**	**Rockwell (3576)**	35
x	x	x	x	x	SMC	Fully compatible with Z80 instruction set, power-save mode, system clock generator, NSC888 evaluation board available.	NSC800-1	National	
x	x	x	x	x			LH5080	Sharp	
x	x	x	x	x			LH5080L	Sharp	
x	x	x	x	x	SMC	Fully compatible with Z80 instruction set, power-save mode, system clock generator, NSC888 evaluation board available.	NSC800	National	
x	x	x	x	x			LH5080A	Sharp	40
x	x	x	x	x			LH5080AL	Sharp	
x	x	x	x	x	SMC	Fully compatible with Z80 instruction set, power-save mode, system clock generator, NSC888 evaluation board available.	NSC800-4	National	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
8	CMOS	5	40	8–32	64K	158			x	4		3	x	x
8	CMOS	5	40	8–32	64K	158			x	6		3	x	x
8	CMOS	5	40	8–32	64K	158			x	8		3	x	x
8	CMOS	5	40	8–32	64K	158			x	10		3	x	x
8	CMOS	5	40	8–48	1MB					5		1	x	x
8	CMOS	5	40	8–48	1MB					8		1	x	x
8	CMOS	5	40	8,16	4K	98	128x8	2Kx8		6	2.5	yes	1	
8	CMOS	5	40	8,16,24	64K	56				3	0.67/2.3	2	x	x
8	CMOS	5	40	8,16,24	64K	246				8	1.28/8	5		
8	CMOS	5	40	16	1M	101			x	8		3		x
8	CMOS	5	40/56	8	64K	180	192x8	4Kx8	x	2,4,6,8	0.25/4.0	8	x	x
8	CMOS	5	44	8–24	124K	129				4	1	6	x	x
8	CMOS	5	44	8–24	124K	129				6	1	6	x	x
8	CMOS	5	48/52	8, 16, 24, 32	64K	145	256x8	2Kx8		1/10	21		x	x
8	CMOS	5	60	8	64K		64x8	2Kx8		2		1	x	x
8	CMOS	5	64	8		64	256x8	10240x8		4	1	10	x	x
8	CMOS	5	64	8	64K	51	128x8	16K	x	4	1	5	x	x
8	CMOS	5	64	8	64K	51	192x8	32K	x	4	1	5	x	x
8	CMOS	5	64	8–24				128x8	4Kx8		0.67	6	x	x
8	CMOS	5	68	8	64K	180	192x8	4096x8	x	4	0.25/4	22	x	x
8	CMOS	5	68	8–32	1M	101			x	10	0.3/1.9	12	x	x
8	CMOS	5	100	8–32	2 MB				x	8	0.125/—			
8	HCMOS	5	68	8–24		62	176x8	6208x8	x	4	0.25/1.0	4		
8	HMOS	5			1M	56								
8	HMOS	5			1M	56								
8	HMOS	5			1M	56								
8	HMOS	5	20	8,16,24	4K	42	32x8	0.5x8		0.9	0.6/14	3	x	x
8	HMOS	5	20	8,16,24	4K	42	32x8	1Kx8		0.9	0.6/14	3	x	x
8	HMOS	5	20	8,16,24	4K	42	32x8	1Kx8		11	0.6/14	3	x	x
8	HMOS	5	28	8,16	1K	70	64x8	1Kx8		3.58	8.38/16.8		x	x
8	HMOS	5	28	8,16,24	2K	59	64x8	1.1Kx8		2	1/5.5	3	x	x
8	HMOS	5	28	8,16,24	2K	59	64x8	1.8Kx8		2	2/11	3	x	x
8	HMOS	5	28	8,16,24	2K	59	112x8	1.8Kx8		1	2/11	3	x	x
8	HMOS	5	28	8,16,24	2K	59	112x8	1804x8		1	2/11	3	x	x
8	HMOS	5	28	8,16,24	4K		32x8	1Kx8		11	0.6/14	3	x	x
8	HMOS	5	28	8,16,24	4K	42	32x8	1Kx8		0.9	0.6/14	3	x	x
8	HMOS	5	28	8,16,24	4K	59	64x8	1480x8		1	2/11	3	x	x
8	HMOS	5	28	8,16,24	4K	59	104x8	3.7Kx8		1	2/11	3	x	x
8	HMOS	5	28	8,16,24	4K	59	104x8	3.7Kx8		1	2/11	3	x	x
8	HMOS	5	40	8–32	64K	59			x	2	1/7.5	6	x	x

Software Support									
Cross Assembler	High Level Language	Programs: Debug	Programs: Diagnostic	Programs: Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x	x	x		8080A software compatible	Z80-4	Zilog	
x	x	x	x	x		8080A software compatible	Z80-6	Zilog	
x	x	x	x	x		8080A software compatible	Z80-8	Zilog	
x	x	x	x	x		8080A software compatible	Z80-10	Zilog	
x	x	x	x	x			80C88	Intel	5
x	x	x	x	x			80C88-2	Intel	
						Intel	MBL80C39	Fujitsu	
x	x	x	x	x	Rockwell	CMOS NCR6502	NCR65C02	NCR	
					OKI, Harris	Compatible with NMOS 8085; supports extended instruction set	**CA80C85B**	**Newbridge (3569)**	
x	x	x	x	x		High speed, CMOS 8088	μPD70108-8	NEC	10
x	x	x	x	x		I/O or External Memory Mode, Six I/O ports, two timers, serial port, W65C02 core, Toolbox Emulation Interface.	W65C124	WDC	
x		x	x	x			LU800V1	Sharp	
x		x	x	x			LU800AV1	Sharp	
x	x	x	x	x		2 Kbytes of EEPROM, enhanced 16-bit timer system, eight-channel 8-bit A/D converter	MC68HC81A2	Motorola	
x	x	x	x	x		Uses 65SC00 CPU, on board sine wave generator, 16 bit timer, bus compatible with 6800.	G65SC150	CMD Micro	15
x		x		x		VCR Servo Control Circuit	SM8201	Sharp	
x		x			—		SM812	Sharp	
x		x			—		SM813	Sharp	
x	x		x	x			HD64A05X0	Hitachi	
x	x	x	x	x		I/O or external memory mode; 7 I/O ports, four timers; UART, LAN, Toolbox Emulation Interface	W65C134	WDC	20
x	x	x	x	x	Hitachi	Compatible with Z80 CPU software	Z180	Zilog	
	x	x	x				TMPZ84C810A	Toshiba	
x	x	x	x	x		8-bit Microcomputer with Liquid Crystal Driver Circuitry	MC68HC05L6	Motorola	
						MC68008 completely code compatible with MC68000. 32 bit internal architecture, general purpose machine.	MC68008	Motorola	
						MC68008 completely code compatible with MC68000. 32 bit internal architecture, general purpose machine.	TS68008-10	SGS-Thomson	25
						MC68008 completely code compatible with MC68000. 32 bit internal architecture, general purpose machine.	TS68008-8	SGS-Thomson	
x		x	x	x		20-pin version of MC6804P2, 12 I/O, 512 byte ROM.	MC6804J1	Motorola	
x		x	x	x		20-pin version of 6804P2, 12 I/O, 1K byte ROM.	MC6804J2	Motorola	
x		x	x	x		20-pin version of 6804P2, extensive self check.	EF6804J2	SGS-Thomson	
x		x	x	x	Signetics, NEC	Software subset of 8048, 21 I/O lines.	8021H	Intel	30
x		x	x	x	AMI, Hitachi, Signetics	20 programmable bidirectional I/O lines, timer/counter.	MC6805P2	Motorola	
x		x	x	x	Signetics	20 programmable bidirectional I/O lines, self check, EPROM version available.	MC6805P6	Motorola	
x		x	x	x		20 programmable bidirectional I/O lines. Self programming bootstrap, EPROM version for 6805P2, P4, P6.	MC68705P3	Motorola	
x		x	x	x		Same as 68705P3 except PS has software security.	MC68705P5	Motorola	
x	x	x	x	x	Signetics	20 bidirectional I/O lines, 64 byte data ROM, self check.	EF6804P2	SGS-Thomson	35
x	x	x	x	x	Signetics	20 bidirectional I/O lines, 64 byte data ROM, self check.	MC6804P2	Motorola	
x		x	x	x	Signetics	4-channel 8-bit A/D converter, SPI, watchdog timer, self check.	MC6805S2	Motorola	
x		x	x	x		Four timers, A/D converter, serial communication port	MC6805S3	Motorola	
x		x	x	x		EPROM version of the MC6805S3	MC68705S3	Motorola	
x	x	x	x	x	AMI, Hitachi	On chip oscillator enhanced 6800 command set.	MC6809	Motorola	40

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
8	HMOS	5	40	8–32	64K	59			x	2	1/7.5	6	x	x
8	HMOS	5	40	8,16	4K	111	64x8	1Kx8		11	1.3	1	x	x
8	HMOS	5	40	8,16,24	4K		128x8	2Kx8		11		2	x	x
8	HMOS	5	40	8,16,24	4K	59	64x8	2Kx8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	64x8	2Kx8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	64x8	2Kx8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	64x8	3.8Kx8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	112x8	3.8K		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	112x8	3.8Kx8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	112x8	3.8Kx8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	112x8	3776x8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	4K	59	112x8	3776x8		1	2/11	3	x	x
8	HMOS	5	40	8,16,24	64K	82	128x8			1	1.6/9.6	8	x	x
8	HMOS	5	40	8,16,24	64K	82	128x8			1.5			x	x
8	HMOS	5	40	8,16,24	64K	82	128x8			2			x	x
8	HMOS	5	40	8,16,24	64K	82	128x8	2Kx8		1	2/12	2	x	x
8	HMOS	5	40	8,16,24	64K	82	192x8	4Kx8		1.25	1	1	x	x
8	HMOS	5	40	8,16,24	64K	89	192x8			1.25	1.6/9.6	8	x	x
8	HMOS	5	40	8,16,24	64K	89	192x8	4Kx8		1.25	1.6/9.6	8	x	x
8	HMOS	5	40	8,16,24	64K	89	192x8	4Kx8		1.25	1.6/9.6	8	x	x
8	HMOS	5	40	8,16,24	65K	102				3,5,6	0.67/1.3	4	x	x
8	HMOS	5	40	8,16,24	65K	111	128x8	4Kx8		12	4	2	x	x
8	NMOS	±5,12	40	8,16,24	65K	78				2	1.5/3.75	1	x	x
8	NMOS	5		8–16	1K		64x8	1Kx8		3	8.38/16.8		x	x
8	NMOS	5		8,16,24	64K					3			x	x
8	NMOS	5		8,16,24	64K					5			x	x
8	NMOS	5	18	12		29	32	256x12		4	2/10		x	x
8	NMOS	5	18	12	512x12	30	32x8	512x12		4	2/4		x	x
8	NMOS	5	28	8	64K	17	120	64K		3.12	1.56	0		
8	NMOS	5	28	8	64K	17	120	64K		3.12	1.56	0		
8	NMOS	5	28	8,16,24	64K	56				2	1/7	2	x	x
8	NMOS	5	28	12	512	29	32x8	512x12		4	2/10		x	x
8	NMOS	5	40	8						3.6		2		
8	NMOS	5	40	8	16K	71	1536	Ext.		2	1.0	10	x	x
8	NMOS	5	40	8	64K	61	128			5	2.4/19.2	3	x	x
8	NMOS	5	40	8	64K	61	128	2048x8		5	2.4/19.2	3	x	x
8	NMOS	5	40	8	64K	61	128x8	4Kx8		5	2.4/19.2	3	x	x
8	NMOS	5	40	8	64K	61	128x8	4Kx8		5	2.4/19.2	3	x	x
8	NMOS	5	40	8	64K	61	256x8			8	1/12.5	6	x	x
8	NMOS	5	40	8	64K	158	x	x	x	2.5	1.6	2		x
8	NMOS	5	40	8	64K	158	x	x	x	4	1	2		x
8	NMOS	5	40	8	64K	158	x	x	x	6	0.67	2		x
8	NMOS	5	40	8	124K	43	128x8	32K	x	8	1.5	6	x	x

Software Support									
	High Level Language	Programs							
Cross Assembler		Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x	x	x	AMI, Hitachi	External clocking for synchronization of multiprocessor systems.	MC6809E	Motorola	
x		x	x	x	AMD	1K EPROM. Can be used with external ROM and RAM.	8748H	Intel	
						27 I/O lines, programmable ROM, 8-bit counter/timer. Can be used with external RAM or ROM.	M8749H	Intel	
x		x	x	x	Signetics	A/D on chip, 31 I/O lines.	MC6805R2	Motorola	
x		x	x	x	Signetics	32 I/O lines, self check.	MC6805U2	Motorola	5
x		x	x	x	Signetics	4 channel 8-bit A/D converter, self check.	EF6805R3	SGS-Thomson	
x		x	x	x	Signetics	4 channel 8-bit A/D converter, self check.	MC6805R3	Motorola	
x		x	x	x		4 channel A/D, 31 I/O lines (24 programmable), EPROM.	MC68705R3	Motorola	
x		x	x	x	Signetics	24 bidirectional I/O, self check	MC6805U3	Motorola	
x		x	x	x		EPROM version of MC6805U3.	MC68705U3	Motorola	10
x		x	x	x		Same as 68705R3 except includes software security.	MC68705R5	Motorola	
x		x	x	x		Same as 68705U3 except includes software security.	MC68705U5	Motorola	
x	x	x	x	x	AMI, Hitachi	Expansion bus, ROMless 6801.	MC6803	Motorola	
x	x	x	x	x		1.5 MHz version of MC6803	MC68A03	Motorola	
x	x	x	x	x		Serial I/O, timer, expansion bus.	MC68B03	Motorola	15
x	x	x	x	x	AMI, Hitachi, Fujitsu	On-chip clock, 16-bit timer 31 I/O lines, serial I/O, four selectable baud rates.	MC6801	Motorola	
x	x	x	x	x		Same as 6801-U4 with1.25 MHz internal speed.	MC6801U4-1	Motorola	
x	x	x	x	x		ROMless 6801u4, external bus.	MC6803U4	Motorola	
x	x	x	x	x		Same as 6801 with 4K ROM and selectable baud rates.	MC6801U4	Motorola	
x	x	x	x	x		EPROM version of 680144.	MC68701U4	Motorola	20
x	x	x	x	x	AMD	8085AH–1 runs 6 MHz, AH–2 runs 5 MHz. M8085AH Mil version.	8085AH	Intel	
x	x	x	x	x		Two 16 bit counters, serial I/O port Boolean processor, 4K EPROM.	8751H	Intel	
x	x	x	x	x	AMD, NEC, TI, National, Mitsubishi	8080A–1 runs at 3.125 MHz max, –2 runs at 2.63 MHz max.	8080A	Intel	
		x	x	x	Intel		8021	Signetics	
x	x	x	x	x	AMD, Mitsubishi, NEC	8080A compatible with multiplexed bus operation.	TMP8085A	Toshiba	25
x	x	x	x	x	AMD, Mitsubishi, NEC		TMP8085A-2	Toshiba	
x		x	x			Pin for pin compatible with the PIC 1654. Available in 3 temperature ranges including –40°C to + 110°C.	PIC1652	Microchip	
x		x	x		Plessey	12 I/O lines, crystal oscillator. Available in three temperature ranges including –40°C to 110°C.	PIC1654	Microchip	
							SPO216	Microchip	
							SPO264	Microchip	30
x	x	x	x	x		Bus compatible with 6800.	**R6500**	**Rockwell (3575)**	
x		x	x			20 Bidirectional I/O lines. 2 μs instruction cycle time and mask programmable prescaler for RTCC.	PIC1657	Microchip	
						Encryption, Federal Processing Standard	TMS7500	TI	
x	x	x	x	x		Available in DIP and PLCC.	**R6518**	**Rockwell (3575)**	
x		x	x		TI		PIC7000	Microchip	35
x		x	x		TI	External memory expansion capability.	PIC7020	Microchip	
x		x	x			External memory expansion capability.	PIC7040	Microchip	
x		x	x			External memory expansion capability.	PIC7041	Microchip	
x							SE70P162	TI	
x		x		x			LH0080	Sharp	40
x		x		x			LH0080A	Sharp	
x		x		x			LH0080B	Sharp	
x		x				8 bit 1 chip microcomputer	LH0811	Sharp	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
8	NMOS	5	40	8	124K	43	128x8	32K	x	8	1.5	6	x	x
8	NMOS	5	40	8	126K	43	128x8	16K	x	8	1.5	6	x	x
8	NMOS	5	40	8	126K	43	128x8	16K	x	8	1.5	6	x	x
8	NMOS	5	40	8	128K	43	128x8		x	8	1.5	6	x	x
8	NMOS	5	40	8—32	64K	158			x	2.5		3	x	x
8	NMOS	5	40	8, 16, 24	16K	60	192x8	4096x8		2	1/7	10	x	x
8	NMOS	5	40	8–24	64K	59			x	2	1/1	3		
8	NMOS	5	40	8–24	124K	129	128Kx8		x	12	1	6	x	x
8	NMOS	5	40	8–24	124K	129	128Kx8	2Kx8	x	12	1	6	x	x
8	NMOS	5	40	8–24	124K	129	128x8			4			x	x
8	NMOS	5	40	8–24	124K	129	128x8		x	4	1/1.5	6	x	x
8	NMOS	5	40	8–24	128K		128x8			4			x	x
8	NMOS	5	40	8–32	64K	59			x	2	1/7.5	6		
8	NMOS	5	40	8–32	64K	158				8	0.5/2.875	3		x
8	NMOS	5	40	8–32	64K	158			x	2.5		3	x	x
8	NMOS	5	40	8–32	64K	158			x	4		3	x	x
8	NMOS	5	40	8–32	64K	158			x	6		3	x	x
8	NMOS	5	40	8–32	64K	158			x	8		3	x	x
8	NMOS	5	40	8,16,24		56	64x8	2Kx8		2	1/3.5	4	x	x
8	NMOS	5	40	8,16,24	4K	62	96x8	4K/8Kx8	x	4	1.0/10	9	x	x
8	NMOS	5	40	8,16,24	4K	70	128x8	4Kx8		4	1/6.5	1	x	x
8	NMOS	5	40	8,16,24	8K	56	64x8	2Kx8		2	1/7	4	x	x
8	NMOS	5	40	8,16,24	16K	60	192x8	3Kx8		2	1/3.5	10	x	x
8	NMOS	5	40	8,16,24	16K	60	192x8	3072x8		2	1/7	10	x	x
8	NMOS	5	40	8,16,24	64K					2	0.5/3.5	2	x	x
8	NMOS	5	40	8,16,24	64K	72			x	2	1/6	3	x	x
8	NMOS	5	40	8,16,24	64K	72	128x8			2	1/6	3	x	x
8	NMOS	5	40	8,16,24	64K	72	128x8			2	1/6	3	x	x
8	NMOS	5	40	8,16,24	64K	72	128x8	4K/8Kx8	x	1.25	0.8/10	7	x	x
8	NMOS	5	40	8,16,24	64K	80				5	1.4/2.8	4		
8	NMOS	5	40	8,16,24	64K	111	128x8			12	1/4	2	x	x
8	NMOS	5	40	8,16,24	64K	111	128x8			20	0.6/10	2	x	x
8	NMOS	5	40	8,16,24	65K	78	128x8		x	1.25	0.8/10	7	x	x
8	NMOS	5	40	8,16,24	65K	80				3	0.8/1.3	4	x	x
8	NMOS	5	40	8,16,24	65K	80				3	0.8/1.3	4	x	x
8	NMOS	5	40	8,16,24	65K	102				3	0.67/1.3	4	x	x
8	NMOS	5	40	8,16,24	124K	129	128x8			4	2.2/4.25	6	x	x
8	NMOS	5	40	8,16,24	124K	129	128x8	2Kx8	x	4	2.2/4.25	6	x	x
8	NMOS	5	40	8,16,24	124K	129	128x8	4Kx8	x	4	1/1.5	6	x	x
8	NMOS	5	40	8,16,24	2112	70	128x8	2Kx8		4	1/6.5	1	x	x
8	NMOS	5	40	13	1024x13	57	64x8	1024x13		8	1/2	1	x	x
8	NMOS	5	40	13	2048x13	57	64x8	2048x13		8	1/2	1	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x				Protopack Emulator	LH0813	Sharp	
x		x				8 bit 1 chip microcomputer	LH0801	Sharp	
x		x				Protopack Emulator	LH0803	Sharp	
x		x				ROMless Microcomputer	LH0881	Sharp	
x	x	x	x	x		Faster Versions also Available, Refurbished	**Z80CPU**	**Krueger (3513)**	5
x	x	x	x	x		R6500/11 with 4K ROM	**R6500/15**	**Rockwell (3575)**	
						Same as HD6809, but with external clock, various options available on HD6809EX family member chips.	HD6809E	Hitachi	
x		x	x	x			LH0881A	Sharp	
x		x	x	x			LH0801A	Sharp	
x	x	x	x	x		Single chip basic interpreter with Tiny Basic in ROM.	Z8671-MCU	Zilog	10
x	x	x	x	x		ROMless Z8. Has piggyback 24-pin socket for direct interface to program memory. Permits program storage in separate EPROMs.	Z8613-MCU	Zilog	
x	x	x	x	x		ROMless Z8.	Z8681-MCU	Zilog	
					AMI, SGS-Thomson	Various options available on HD6809X family member chips.	HD6809	Hitachi	
x	x	x	x				LH0080E	Sharp	
x	x	x	x	x	Mostek, NEC, SGS, Sharp	8080A software compatible.	Z80	Zilog	15
x	x	x	x	x	Goldstar, Sharp, SGS-Thomson, NEC	8080A software compatible	Z80-4	Zilog	
x	x	x	x	x		8080A software compatible	Z80-6	Zilog	
x	x	x	x	x		8080A software compatible	Z80-8	Zilog	
x	x	x	x	x	Rockwell	Software compatible with NCR6502, 32 I/O lines, 16-bit counter	NCR6500/1	NCR	
x		x	x	x			HD68P05V07	Hitachi	20
x		x	x	x	Motorola	One chip microcomputer. Programmable hardware, timer on-chip: 3K, 2K, 1K PROM versions available.	MK3870	SGS-Thomson	
x	x	x	x	x	NCR	Software compatible with R6502, 32 I/O lines, 16-bit counter.	**R6500/1**	**Rockwell (3575)**	
x	x	x	x	x	Rockwell	On-board UART, two 16-bit counters, 32 I/O lines.	NCR6500/11	NCR	
x	x	x	x	x	NCR	On board USART, two 16 bit counters, 32 I/O lines.	**R6500/11**	**Rockwell (3575)**	
x	x	x	x	x		Bus compatible with 6800, 68000.	**R6502**	**Rockwell (3576)**	25
x	x		x		AMI, Hitachi	DMA through HALT and three state control, addressing modes.	MC6800	Motorola	
x	x	x	x	x	AMI, Hitachi	6800 CPU plus clock and RAM, 32 bytes standby RAM.	MC6802	Motorola	
x	x	x	x	x	AMI, Hitachi	6800 CPU plus clock and RAM, 32 bytes standby RAM.	EF6802	SGS-Thomson	
x		x	x	x	Motorola	HD6801 with piggyback socket for EPROM 2732.	HD68P01M0	Hitachi	
x	x		x		AMD, Mitsubishi, Intel	8080A compatible.	μPD8085A-2	NEC	30
x	x	x	x	x	Intel	Two 16-bit timer/counters, serial I/O port Boolean processor.	MBL8031	Fujitsu	
x	x	x	x	x	AMD	Two 16-bit counters, serial I/O	SAB8031A	Siemens	
x		x	x	x		64 Bytes RAM retainable on powerdown.	HD68P01V07	Hitachi	
x	x	x	x	x	Intel, NEC, Mitsubishi	8085A–2 runs at 5 MHz.	8085A	AMD	
x	x	x	x	x		Faster Versions also Available, Refurbished	**8085A**	**Krueger (3513)**	35
x	x	x	x	x		Faster Versions also Available, Refurbished	**8085AH**	**Krueger (3513)**	
x	x	x	x	x		Program storage in separate 2716 EPROM, 4 external interrupts. Has piggyback 24-pin socket to program memory.	Z8603-MCU	Zilog	
x	x	x	x	x		On-chip UART, and 2 counter/timers. 4 external interrupts, 32 I/O lines.	Z8601-MCU	Zilog	
x	x	x	x	x		On-Chip UART and 2 counter/timers, 32 I/O lines. 4 external interrupts.	Z8611-MCU	Zilog	
x		x	x	x	Motorola	Programmable hardware timer, baud rate generator.	MK3873	SGS-Thomson	40
x		x	x		Plessey	Expanded PIC1650 instruction set. 1024x13 bit program ROM. 64 8-bit registers, 6 level stack, 2 external interrupts. 32 I/O lines.	PIC1670	Microchip	
x		x	x		Plessey	Expanded PIC1650 instruction set. 2Kx13 bit program ROM. 64 8-bit registers, 6 level stack, 2 external interrupts. 32 I/O lines.	PIC1672	Microchip	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
8	NMOS	5	40	81632	64K	56			x	4	0.25/40	1		
8	NMOS	5	64	8	124K	43	128x8	32K	x	8	1.5	6	x	x
8	NMOS	5	64	8	126K	43	128x8	16K	x	8	1.5	6	x	x
8	NMOS	5	64	8,16,24	16K	60	192x8	3072x8		2	1/7	10	x	x
8	NMOS	5	64	8,16,24	64K	60	192	-		2	1/7	10	x	x
8	NMOS	5	64	8,16,24	64K	60	192x8	256x8		2	1/7	10	x	x
8	NMOS	5	68	8–48	1M	150			x	8		1	x	x
8	NMOS	5,12	40	8,16,24	65K	78				2	1.5/3.75	1	x	x
8	NMOS	5,12	40	8,16,24	65K	78				2	1.5/3.75	1	x	x
8	XMOS	5	40	8,16	4K	96	64x8			11	1.36	1		
8	XMOS	5	48	8, 16, 24, 32	16 M	108				10	0.4/12	3		
8/16	CMOS	5	40	8	64K	91				8	1	2	x	x
8/16	CMOS	5	40	8–16	16M	91				8	1	2		
8/16	CMOS	5	40	8–32	1M					5		256	x	x
8/16	CMOS	5	40	8–32	1M					8		256	x	x
8/16	CMOS	5	40	8–32	1M					8		256	x	x
8/16	CMOS	5	40	8–48	1M	133				8			x	x
8/16	CMOS	5	68	8–48	1M	101			x	8		8	x	x
8/16	HCMOS	5	68	8–32	16M	56				8	0.125/0.25	10		
8/16	HCMOS	5	68	8–32	16M	56				10	0.1/0.25	10		
8/16	HCMOS	5	68	8–32	16M	56				12.5	0.08/0.25	10		
8/16	HCMOS	5	68	8–32	16M	56				16	0.06/0.125	10		
8/16	HMOS	5	40	8–48	1M					8		1	x	x
8/16	HMOS	5	40	8–48	1M	46				5	0.4/4		x	
8/16	NMOS	5	40	8—48	1M					5		1	x	x
8/16	NMOS	5	40	8–48	1M		64x8			5				
8–32	HCMOS	5	84	8–32	16 MB	56			x	16.67	.06/.125			
12	CMOS	5		12	32K					4				
16	CMOS	5	40	8–24	16M	256				10		5		x
16	CMOS	5	40	8–24	64K	256				10		4		x
16	CMOS	5	40	8–32	1M					5		256	x	x
16	CMOS	5	40	8–32	1M					8		256	x	x
16	CMOS	5	40	8–32	8M	110				6				
16	CMOS	5	40	8–32	8M	110				10				
16	CMOS	5	40	8–48	1M					8			x	x
16	CMOS	5	40	8–48	1M					8			x	x

Software Support									
Cross Assembler	High Level Language	Programs: Debug	Programs: Diagnostic	Programs: Edit	Alternate Sources	Comments	Device	Source	Line
					Rockwell	On-chip Clock, IRQ, NMI, RYD, BUS compatible with MC6800	**UM6502**	**UMC (3689)**	
x		x				Development Device	LH0812	Sharp	
x		x				Development Device	LH0802	Sharp	
x	x	x	x	x	NCR	On board USART, two 16 bit counters, 56 I/O lines.	**R6500/12**	**Rockwell (3575)**	
x	x	x	x	x		On board USART, 16 bit counter, 32 I/O lines without pullups.	**R6511Q**	**Rockwell (3575)**	5
x	x	x	x	x		On board USART, two 16 bit counters, 32 I/O lines.	**R6500/13**	**Rockwell (3575)**	
	x	x	x	x	Intel	High integration 16-bit microprocessor with 8-bit bus, 2 independent DMA channels, 3 programmable 16 bit timers, programmable memory and chip-select logic, clock generator, object code compatible with MBL8086/8088 software.	MBL80188	Fujitsu	
x	x	x	x	x		Faster Versions also Available, Refurbished	**8080A**	**Krueger (3513)**	
x	x	x	x	x		Faster Versions also Available, Refurbished	**8088A**	**Krueger (3513)**	
x		x	x	x	Intel, NEC, AMD, Fujitsu, Signetics	ROMless version of INS8048.	INS8035	National	10
x	x	x				32-bit internal architecture, 8-bit external data bus	NS32008	National	
x		x	x	x	Western Design Center, Hyundai	Runs G65SC02 code.	G65SC802	CMD Micro	
x				x	Western Design Center, Hyundai	Runs G65SC02 code.	G65SC816	CMD Micro	
x	x	x	x	x			80C88/883	Harris	
x	x	x	x	x			80C88	Harris	15
x	x	x	x	x			80C88-2/883	Harris	
x	x	x	x	x		Multiply and divide, Multibus compatible, military, industrial, commercial grades	80C88-2	Harris	
x	x	x	x	x		High integration with several peripherals on chip. Upwards compatible with μPD70108, μPD70116.	μPD70208	NEC	
x	x	x					MC68HC001-8	Motorola	
x	x	x					MC68HC001-10	Motorola	20
x	x	x					MC68HC001-12	Motorola	
x	x	x					MC68HC001-16	Motorola	
x	x	x	x	x	Intel	Same part as iAPX88/10.	8088	AMD	
		x	x	x	AMD	I/O processor concentrator and intelligent DMA controller. 4 special purpose input interrupts, 2 DMA request interrupts, 2 general purpose interrupt outputs.	8089	Intel	
x	x	x	x	x		Faster Versions also Available, Refurbished	**8088**	**Krueger (3513)**	25
					AMD, Intel		μPD8088	NEC	
							MC68HC002	Motorola	
					Intersil	PDP–8 instruction set compatible Fortrar, Basic, Focal, Pascal, available from outside vendors.	HM6100	Harris	
x	x	x	x	x		Software compatible with the 6500	W65C816	WDC	
x	x	x	x	x		Pin Compatible with the 6502	W65C802	WDC	30
x	x	x	x	x			80C86/883	Harris	
x	x	x	x	x			80C86-2/883	Harris	
x	x	x	x			Z-BUS compatible	Z8002-06CPU	Zilog	
x	x	x	x			Z-BUS compatible	Z8002-10CPU	Zilog	
x	x	x	x	x	Intel	Multiply and divide multibus system compatible, available in military temperature ranges.	HS80C86RH	Harris	35
x	x	x	x	x	Intel	Multiply and divide, multibus system compatible, 8 MHz version available.	MD80C86	Harris	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
16	CMOS	5	40	8–48	1M					8			x	x
16	CMOS	5	40	8–48	1M	133				5			x	x
16	CMOS	5	40	8–48	1MB	133				5	0.4/0.8		x	x
16	CMOS	5	40	8–48	1MB	133				8	0.4/0.8		x	x
16	CMOS	5	40	16	1M	101			x	10		3		x
16	CMOS	5	40	16	4 K	60	144x16	1.5 K	x	20.48	0.6/0.196	1	x	x
16	CMOS	5	40	16	4 K	60	144x16	1.5 K	x	25	0.6/0.16	1	x	x
16	CMOS	5	40	16	4 K	60	256x16	4 K	x	20.48	0.6/0.196	1	x	x
16	CMOS	5	40	16	4 K	60	256x16	4 K	x	20.48	0.6/0.196	1	x	x
16	CMOS	5	40	16	4 K	60	256x16	4 K	x	20.48	0.6/0.196	4	x	x
16	CMOS	5	40	16	4 K	60	256x16	4 K	x	20.48	0.6/0.196	4	x	x
16	CMOS	5	40	16	4 K	60	256x16	4 K	x	25.6	0.039/0.15	1	x	x
16	CMOS	5	40	16	4 K	60	256x16	4 K	x	25.6	0.39/0.15	4	x	x
16	CMOS	5	40	16	4k	60	144x16	1.5k	x	20.48	0.6/0.196	1	x	x
16	CMOS	5	40	16	4K	60	2304	24K		20.5	—/0.195	1		
16	CMOS	5	40	16	4K	60	2304	24K		25	—/0.16	1		
16	CMOS	5	40	16	4K	60	2304	24K		32	—/0.125	1		
16	CMOS	5	40	16	4K	60	4096	40K		20.5	—/0.195	1		
16	CMOS	5	40	16	8K	60	256x16	4Kx16		25.6	0.16/0.20	13	x	x
16	CMOS	5	48	8, 16, 24, 32	16 M	108				15	0.267/8	3	x	x
16	CMOS	5	48	8–32	8M	110				6	0.25/4	3		
16	CMOS	5	48	8–32	8M	110				10				
16	CMOS	5	48	8–32	16M	108			x	6			x	x
16	CMOS	5	48	8–32	16M	108			x	10			x	x
16	CMOS	5	48	8–32	16M	108			x	15			x	x
16	CMOS	5	52	8,16						10	0.1		x	
16	CMOS	5	52	8,16						11.1	0.09		x	
16	CMOS	5	52	8,16						12.5	0.08		x	
16	CMOS	5	64	9	User defined	16				21				
16	CMOS	5	64	9	User-defined					4		opt.		
16	CMOS	5	64	9	User-defined					4		opt.		
16	CMOS	5	64	16	2 MB					20		16		
16	CMOS	5	64	16	2 MB					30		16		
16	CMOS	5	64	16	2 MB					40		16		
16	CMOS	5	64/68	16						40				

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x	x	x	Intel	Multiply and divide, multibus system compatible, 8 MHz version available, available in industrial or military temperature ranges.	80C86	Harris	
x	x	x	x	x		Multiply/divide, Multibus compatible, Single Event Upset immune	HS80C86RRH	Harris	
	x	x	x	x			80C86	Intel	
	x	x	x	x			80C86-2	Intel	
x	x	x	x	x		High speed, CMOS 8086	μPD70116-10	NEC	5
x	x	x	x		GI	Harvard Architecture, Hardware Multiplier, Low Power, 8 I/O Ports	TMS320C10	TI	
x	x	x	x		GI	Harvard Architecture, Hardware Multiplier, Low Power, 8 I/O Ports	TMS320C10-25	TI	
x	x	x	x			Expanded RAM/ROM	TMS320C15	TI	
x	x	x	x			Expanded RAM/EPROM, Program Memory	TMS320E15	TI	
x	x	x	x			Expanded RAM/ROM, Serial Port, Timer, Compounding Hardware	TMS320C17	TI	10
x	x	x	x			Expanded RAM/EPROM Program Memory, Serial Port, Timer, Compounding Hardware	TMS320E17	TI	
x	x	x	x			Expanded RAM/ROM	TMS320C15-25	TI	
x	x	x	x			Expanded RAM/ROM, Serial Port, Timer, Compounding Hardware	TMS320C17-25	TI	
x	x	x	x		GI	Harvard Architecture, Hardware Multiplier, Low Power, 8 I/O Ports	SMJ320C10	TI	
					TI		DSP320C10	Microchip	15
					TI	25 MHz version of DSP320C10	DSP320C10-25	Microchip	
					TI		DSP320C10-32	Microchip	
						EEPROM-based DSP320C10	DSP320EE12	Microchip	
x	x	x	x	x		Two 16-bit timer/counters, serial I/O, two I/O configurations for microcontroller or microprocessor.	DSC320C14	Microchip	
x	x	x	x	x		32-bit internal architecture, 16-bit external data bus	NS32C016	National	20
x	x	x	x			Z-BUS compatible	Z8001-06CPU	Zilog	
x	x	x	x			Z-BUS compatible	Z8001-10CPU	Zilog	
x	x	x	x	x		32-bit Internal Architecture, 16-bit External Data Bus.	NS32C016RT-6	National	
x	x	x	x	x		32-bit Internal Architecture, 16-bit External Data Bus.	NS32C016RT-10	National	
x	x	x	x	x		32-bit Internal Architecture, 16-bit External Data Bus.	NS32C016RT-15	National	25
x							AM29C116	AMD	
x							AM29C116-1	AMD	
x							AM29C116-2	AMD	
						Four 2901, 2902 Look-ahead carry, 64 addressable registers, additional instructions	IDT49C402	IDT	
						Four 2901's and a 2902 Look-ahead Carry in one.	2901X4	IMI	30
						Four 2901's and a 2902 Look-ahead Carry in one.	4x2901B	IMI	
						SEAFAC Certified to MIL-STD–1750A	P1750A-20CM	Performance	
						SEAFAC Certified to MIL-STD–1750A	P1750A-30CM	Performance	
						SEAFAC Certified to MIL-STD–1750A	P1750A-40CM	Performance	
						Processor Interface Circuit with Built-In System Test	P1754	Performance	35

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
16	CMOS	5	64/68	16						40				
16	CMOS	5	64/68	16	2 MB					40				
16	CMOS	5	64/68	16	64K					40				
16	CMOS	5	64/68	16	64K					40		16		
16	CMOS	5	68	8–48	1M	101			x	8		8	x	x
16	CMOS	5	68	8–80	16M	150				10		256	x	x
16	CMOS	5	68	8–80	16M	150				10		256	x	x
16	CMOS	5	68	8–80	16M	150				12		256	x	x
16	CMOS	5	68	8–80	16M	150				12.5		256	x	x
16	CMOS	5	68	8–80	16M	150				12.5		256	x	x
16	CMOS	5	68	8–80	16M	150				16		256	x	x
16	CMOS	5	68	8–80	16M	150				16		256	x	x
16	CMOS	5	68	8–80	16M	150				20		256	x	x
16	CMOS	5	68	8–80	16M	150				25		256	x	x
16	CMOS	5	68	8–80	16M	150				25		256	x	x
16	CMOS	5	68	8–80	16M	150				25		256	x	x
16	CMOS	5	68	8,16						8	0.125		x	
16	CMOS	5	68	8,16	16M	186	256		x	10				x
16	CMOS	5	68	16	64 K	133	544x16	4 K	x	40	0.6/0.1	6	x	x
16	CMOS	5	80	8–40	1M	105	256x8		x	10	0.4	17		x
16	CMOS	5	80	8–40	1M	105	256x8	16Kx8	x	10	0.4	17		x
16	CMOS	5	100	16–32	16 MB	56			x			10		
16	CMOS	5	100	24	16K		32K		x		0.125	4	x	x
16	CMOS	5	132	24					x	16		12		
16	CMOS	5	144	16	2 MB					40				
16	CMOS	5	144	16	64	200+		128	x	40		16	x	x
16	HMOS	5		8–48	1M					10				
16	HMOS	5		8–48	16M					8	0.8			x
16	HMOS	5		8–48	16M					8	0.8			x
16	HMOS	5	40	1–4	500K	69				8	1.25/100	1	x	
16	HMOS	5	40	1–4	500K	69				8	1.25/100	1	x	
16	HMOS	5	40	8–48	1M	133				10	0.4/0.8		x	x
16	HMOS	5	68	8–80	16M					10		256	x	x
16	HMOS	5	68	8–80	16M	150				8		256	x	x
16	HMOS	5	68	8–80	16M	150				12		256	x	x
16	HMOS	5	68	8–80	16M	150				16		256	x	x
16	I^3L	5	40		64K					10				x

MICROPROCESSOR

Software Support									
	High Level Language	Programs							
Cross Assembler		Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
						Four channels, transfers from/to I/O, local and global memory supported, expandable up to eight channels	P1755	Performance	
						MIL-STD-1750D Memory Management and Protection Unit with block protect unit and EDAC	P1753	Performance	
						Enhanced MIL-STD-1750A CPU, available in 20/30/40 MHz versions	P1750AE	Performance	
						SEAFAC certified to MIL-STD-1750A	P1750A	Performance	
x	x	x	x	x		High integration with several peripherals on chip. Upwards compatible with μPD70108, μPD70116.	μPD70216	NEC	5
x	x	x	x	x	Intel	High performance 16-bit microprocessor with on-chip memory management and protection.	80C286-10	Harris	
x	x	x	x	x			80C286-10/883	Harris	
x	x	x	x	x	Intel		80C286-12	AMD	
x	x	x	x	x	Intel	High performance 16-bit microprocessor with on-chip memory management and protection.	80C286-12	Harris	
x	x	x	x	x			80C286-12/883	Harris	10
x	x	x	x	x	Intel		80C286-16	AMD	
x	x	x	x	x	Intel	High performance 16-bit microprocessor with on-chip memory management and protection.	80C286-16	Harris	
x	x	x	x	x			80C286-20	Harris	
x	x	x	x	x	Intel		80C286-20	AMD	
x	x	x	x	x	Intel		80C286-25	AMD	15
x	x	x	x	x			80C286-25	Harris	
x							AM29C117	AMD	
x	x	x				Enhanced Z80 CPU instruction set.	Z280-MPU	Zilog	
x	x	x	x			Repeat Instruction, Single Cycle Multiplier/accumulator, 16 I/O Ports, Carry Bit, Power Down	TMS320C25	TI	
x	x					ROMless Version of 70322	70320 (V25)	NEC	20
x	x					V20/8088 Software Compatible	70322 (V25)	NEC	
	x	x	x				**TMP68301**	**Toshiba (3672)**	
x	x	x	x	x		Digital Signal Processor with high speed numeric processing applications.	ADSP-2100	AD	
	x	x	x	x			μPD70236(V53)	NEC	
						P1750A, P1753, and P1754 in Hybrid Chip Carrier, 20/30/40 MHz versions available	P1757M	Performance	25
x	x	x	x	x		Implements MIL-STD-1750A Instruction Set. MMU Support Chip Available (L64550).	L64500	LSI Logic	
					Intel, Fujitsu, NEC	Same part as iAPX86/10.	8086	AMD	
	x	x	x		AMD	High performance 80286 processor with memory management. Upward compatible with iAPX86, 88 software.	iAPX268/10	Intel	
	x	x	x		AMD	High performance 80286 processor with memory management. Upward compatible with iAPX86, 88 software.	80286	Intel	
x	x	x	x	x		Numeric coprocessor for 8086, 8088, 80186, 80188	8087-2	Intel	30
x	x	x	x	x		Numeric coprocessor for 8086, 8088, 80186, 80188	**8087-2**	**Krueger (3513)**	
	x	x	x	x	NEC, Siemens, AMD	8086 runs 5 MHz, –1 runs 10 MHz, –2 runs 8 MHz.	8086	Intel	
x	x	x	x	x	Intel	On-chip MMU	80286-10	AMD	
x	x	x	x	x	Intel		80286-8	AMD	
x	x	x	x	x	Intel		80286-12	AMD	35
x	x	x	x	x	Intel		80286-16	AMD	
x	x	x	x	x			F9445	National	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
16	I^3L	5	64	16	2M					20		16		x
16	I^3L	5	64	16	2M					20		16		x
16	NMOS	5		8—48	1M	150			x			1	x	x
16	NMOS	5		8—48	16M						0.8/—			x
16	NMOS	5	24			16				10				
16	NMOS	5	24	24		16				10/15	2.4/23	64		
16	NMOS	5	40							10		16		
16	NMOS	5	40	8—48	1M	133				5	0.4/0.8		x	x
16	NMOS	5	40	8–48	1M					5			x	x
16	NMOS	5	40	8–48	1M	133				5				
16	NMOS	5	40	8–48	1M	133				8				
16	NMOS	5	40	8–48	1M	133				10	0.4/0.8		x	
16	NMOS	5	40	16	64K	110	x	x	x	4	1	3		x
16	NMOS	5	40	16	64K	110	x	x	x	6	0.67	3		x
16	NMOS	5	44	16	2M	110				10	0.3/74.9	3	x	x
16	NMOS	5	48			4				10				
16	NMOS	5	48	8–200	16 M	133			x	10	0.3	256		
16	NMOS	5	48	16	64M	110	x	x	x	4	1	3		x
16	NMOS	5	48	16	64M	110	x	x	x	6	0.67	3		x
16	NMOS	5	48	16–64	8M	110				4		5	x	x
16	NMOS	5	68	8–48	1M	150			x	8		1	x	x
16	NMOS	5	68	8–48	16M	150				8			x	x
16	SOS	5	64	16	64K					25		9		
16	TTL	5	52	8,16						10	0.1		x	
16	TTL	5	52	8,16						10	0.1		x	
16	TTL/ECL	5	52	8,16	User defined		32Kx16			10	0.1		x	
16	XMOS	5	24							15	4/12		x	x
16	XMOS	5	48		16 M					10			x	x
16	XMOS	5	48	8, 16, 24, 32	16 M	108				10	0.4/12	3	x	x
16	XMOS	5	48	8–32	16M	128				6	0.3/—	3		
16	XMOS	5	48	8–32	16M	128				10	0.3/—	3		
16 BS	CMOS	5	64	9			16x16						x	
16 BS	CMOS	5	64/68	16		60				32	0.31			x
16/32	HMOS	5	64	16–80	16M	56			x	4	0.4	7		
16/32	HMOS	5	64	16–80	16M	56			x	10	0.4	7	x	x
16/32	HMOS	5	64	24, 32	16 M	56				12.5	0.08/0.25		x	
16/32	NMOS	5	48	16—80	1M	56				8	0.75/0.78	7	x	x
16/32	NMOS	5	48	16–80	1M	56				12	0.75/0.78	7	x	x
16/32	NMOS	5	64	16—80	16M	56				8	0.75/0.78	7	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x				F9450C	National	
x		x	x				F9450M	National	
	x	x	x	x		Faster Versions also Available, Refurbished	**80186**	**Krueger (3513)**	
	x	x	x			Faster Versions also Available, Refurbished	**80286**	**Krueger (3513)**	
					National	Coprocessor, Floating Point Unit, 32-bit and 64-bit operations, supports proposed IEEE standard.	TI32081	TI	5
					National	Floating Point Coprocessor	T132081	TI	
					National	System Support, Interrupt Controller, cascadable to 256 sources, fixed or rotating priorities, 2 counters.	TI32202	TI	
	x	x	x	x		Faster Versions also Available, Refurbished	**8086**	**Krueger (3513)**	
	x	x	x	x	Intel, Siemens		μPD8086-2	NEC	
					Intel, NEC		SAB8086	Siemens	10
					Intel, NEC		SAB8086-2	Siemens	
					Intel, NEC		SAB8086-1	Siemens	
x	x	x		x			LH8002	Sharp	
x	x	x		x			LH8002A	Sharp	
x	x	x	x	x			Z160	Zilog	15
					National	Coprocessor, Demand Paged Virtual Memory Management, 32-entry associative cache, debugging features.	TI32082	TI	
					National	Full 32-bit internal architecture, 16-bit external data paths	TI32016	TI	
x	x	x		x			LH8001	Sharp	
x	x	x		x			LH8001A	Sharp	
x	x	x	x	x	AMD, SGS, Sharp	Segmented. 16 8-bit, 8 32-bit, 4 64-bit or 16 16-bit registers.	Z8001-CPU	Zilog	20
	x	x	x	x	Intel	High integration 16-bit microprocessor, 2 independent DMA channels, 3 programmable 16-bit timers, object code compatible with all MBL8086/88 software.	MBL80186	Fujitsu	
	x	x	x	x		High performance 16-bit microprocessor with on-chip memory management and protection, upward compatible with MBL8086/8088 software.	MBL80286-8	Fujitsu	
						MIL-STD–1750A Qualified	MAS281	Marconi	
x							AM29L116A	AMD	
x							AM29116A	AMD	25
x					SGS-Thomson	Three-operand ALU, 16-bit barrel shifter, instruction set optimized for high-performance intelligent controllers.	AM29116	AMD	
x	x	x	x	x	TI	Slave processor for floating point arithmetic	NS32081	National	
x	x	x	x	x	TI	Slave processor for virtual memory control	NS32082	National	
x	x	x	x	x	TI	32-bit internal architecture, 16-bit external data bus	NS32016	National	
	x	x	x	x		Real-Time Processor, 32-bit Internal Architecture, 16-bit External Data Bus.	NS32016RT-6	National	30
	x	x	x	x		Real-Time Processor, 32-bir Internal Architecture, 16-bit External Data Bus.	NS32016RT-10	National	
x						Low Power Version of Am2901C	AM29C101	AMD	
x	x	x	x			Contains 4 WS5901s and one 5902.	**WS59016D**	**Waferscale (3717)**	
							TS68000	SGS-Thomson	
x	x	x	x	x	Hitachi, Rockwell, Signetics	Enhanced 68000 supporting true virtual memory with taster instruction set. Relocatable vector table to support multiple operating systems.	MC68010	Motorola	35
	x	x	x	x		Low-Power HCMOS Microprocessor	MC68HC000	Motorola	
x	x	x	x	x		Faster Versions also Available, Refurbished	**68008**	**Krueger (3513)**	
x	x	x	x	x	Motorola		TS68008	SGS-Thomson	
x	x	x	x	x		Faster Versions also Available, Refurbished	**68010**	**Krueger (3513)**	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Complex Instruction Set (Cont'd)														
16/32	NMOS	5	64	16—80	16M	56			x	6	0.4/—	7		
32	CMOS	−0.3 to +7		32	4 GB	128			x	20		7	x	
32	CMOS	−0.3 to +7		32	4 GB	128			x	20		7	x	
32	CMOS	5	64	8, 16, 24, 32	16 M	108				15	0.267/8	3		x
32	CMOS	5	68	8,16,32	4 GB	128				6		3		
32	CMOS	5	68	8,16,32	4 GB	128				10		3		
32	CMOS	5	68	8,16,32	4 GB	128				15		3		
32	CMOS	5	68	16	64 M	130				50	0.16	4	x	x
32	CMOS	5	68	16	64 M	130				50	0.2	4	x	x
32	CMOS	5	68	16	64M	130				50	0.16/6	4	x	x
32	CMOS	5	84	32						25				
32	CMOS	5	84	32	4 GB					10		7	x	x
32	CMOS	5	96	16,32	4 GB	101				33	0.03/—	16	x	
32	CMOS	5	96	16,32	4 GB	101				50	0.02/—	16	x	
32	CMOS	5	100	32–64			4K		x	20	0.033		x	
32	CMOS	5	100	32–64			4K		x	25	0.033		x	
32	CMOS	5	100	32–64			4K		x	30	0.033		x	
32	CMOS	5	114	16—32	4G	65			x	12		7	x	x
32	CMOS	5	114	16–32	4 G	65			x	25		7	x	x
32	CMOS	5	132	8–56	4G	180				24	0.08/1.9	256	x	x
32	CMOS	5	144	32						16.7				
32	CMOS	5	172	32	2 GB					25				
32	CMOS	5	175		4 GB					30				
32	HCMOS	5		30		51			x	25	.05/.06		x	x
32	NMOS	5	40	32		53	17K			10	0.2			x
32	NMOS	5	48	8,16,24	16 M	128				10/15	0.3/22	256		x
32	NMOS	5	68	8–200	16 M	133			x	10	0.3	256		
32	NMOS	5	68	8,16,24	16 M	128				10/15	0.3/19	256		x
32	SOS	5	120	32	1 MB					12		0		
32	XMOS	5	64	8, 16, 24, 32	16 M	108				1	0.4/12	3		x
32	XMOS	5	84	8, 16, 24, 32	4 G	108				0.267/8	3			x
32	XMOS	5	84	8,16,32	4 GB	128				10		3		
32	XMOS	5	84	8,16,32	4 GB	128				12		3		
32	XMOS	5	84	8,16,32	4 GB	128				15		3		
32	XMOS	5	120		4 G					15				
32 BS	CMOS	5	101	32		60				33	0.042			x
4	CMOS	3.5 to 6	64	10		99	512x4	8Kx10			1.78	5	x	x

MICROPROCESSOR

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
						Faster Versions also Available, Refurbished	**68000**	**Krueger (3513)**	
						Second generation 32-bit enhanced microprocessor, object code compatible with MC68020 and MC68000 family	**68030**	**Krueger (3513)**	
						Second generation 32-bit enhanced microprocessor, object code compatible with MC68020 and MC68000 family	MC68030	Motorola	
x	x	x				32-bit internal architecture, 32-bit external data bus	NS32C032	National	
x	x	x	x			32-bit virtual memory processor	NS32C032-6	National	5
x	x	x	x			32-bit virtual memory processor	NS32C032-10	National	
x	x	x	x			32-bit virtual memory processor	NS32C032-15	National	
x	x	x				Graphics System Processor	TMS34010-50	TI	
x	x	x				Graphics System Processor	TMS34010-40	TI	
x	x	x				Graphics System Processor	SMJ34010-40	TI	10
						RISC processor available in 16, 20 and 25 MHz versions	PR3010	Performance	
x	x	x	x	x			Z80000	Zilog	
x	x	x	x	x		Module with CPU/FPU chip, 2 cache, MMUs and clock	CLIPPER C200	Intergraph	
x	x	x	x	x		Module with CPU/FPU, 2 cache, MMUs and clock	CLIPPER C300	Intergraph	
		x	x	x		Transputer with 64-bit FPU. Applications for Image processing, Pattern Recognition	IMST801-G20	SGS-Thomson	15
		x	x	x		Transputer with 64-bit FPU. Applications for Image processing, Pattern Recognition	IMST801-G25	SGS-Thomson	
		x	x	x		Transputer with 64-bit FPU: Applications for Image processing, Pattern Recognition	IMST801-G30	SGS-Thomson	
	x	x	x	x		Faster Versions also Available, Refurbished	**68020**	**Krueger (3513)**	
	x	x	x	x	Hitachi, Signetics	MC68000, 68010 and 68008 are upward compatible with 68020. Separate 32-bit data and address bus. On-chip cache for speed enhancement and co-processor interface to extend CPU functions.	MC68020	Motorola	
x	x	x	x	x		Binary compatible with 8088, 8086, 80188, 80286	80386	Intel	20
	x	x	x	x	Micro Power Systems, LSI Logic, Performance Semiconductor		IDT79R2000	IDT	
						RISC processor available in 16, 20 and 25 MHz versions	PR3000	Performance	
x	x	x	x			Advanced CMOS 32-bit CPU	NS32532	National	
x	x	x	x	x		32-Bit third generation RISC Microprocessor	MC88100	Motorola	
x	x	x	x	x		Image Pipeline Processor	μPD7281	NEC	25
x	x	x		x	National		TI32016T	TI	
					National	Full 32-bit internal architecture, 32-bit external data paths	TI32032	TI	
x	x	x		x	National		TI32032T	TI	
					Ferranti		MAS1908	Marconi	
x	x	x			TI	32-bit internal architecture, 32-bit external data bus	NS32032	National	30
x	x					32-bit advanced microprocessor with virtual memory	NS32332	National	
x	x	x	x			32-bit advanced processor with virtual memory	NS32332-10	National	
x	x	x	x			32-bit advanced processor with virtual memory	NS32332-12	National	
x	x	x	x			32-bit advanced processor with virtual memory	NS32332-15	National	
x	x	x				Advanced slave processor for virtual memory control	NS32382	National	35
x	x	x	x			Contains 8 WS5901s and 3 WS5902s.	**WS59032E**	**Waferscale (3717)**	
x		x	x	x		58 I/O lines, 26 high voltage (40 V max)	HMCS408C	Hitachi	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Reduced Instruction Set														
32		5	144	32					x	16.7				
32		5	144	32					x	16.7				
32		5	144	32					x	20				
32		5	144	32					x	25				
32		5	144	32					x	33				
32	CMOS	5		32						25	0.04/—			
32	CMOS	5	84	32	1 G	9				16.7	0.016/1.14		x	
32	CMOS	5	84	32	1 G	9				25	0.04/0.076		x	
32	CMOS	5	144	32	1 G	74				16.7	0.016/0.012	6	x	
32	CMOS	5	144	32	4 GB	74				16	0.062		x	
32	CMOS	5	144	32	4 GB	74				25	0.04		x	
32	CMOS	5	149	32	4M	25				20		16		
32	CMOS	5	160	32	4 GB					20	0.05/—			
32	CMOS	5	160	32	4 GB					25	0.04/—			
32	CMOS	5	168	32	4 GB	112				25	0.04/0.16	4	x	x
32	CMOS	5	168	64		113				16	.062/-		x	x
32	CMOS	5	172	32	1 G	74				25	0.04/0.08	6	x	
32	CMOS	5	179	32		4 GB	25	0.04/—						
32	CMOS	5	179	32	4 GB	70				25		64	x	x
32	CMOS	5	207	32	4 GB	60	136x32			25		8		
32	CMOS	5	207	32	4 GB	60	136x32			25		8		
32	CMOS	5	207	32	4 GB	60	136x32			33		8		
32	CMOS	5	207	32	4 GB	78				40	0.025/0.1	15	x	x
32	CMOS	5	256	32	4 GB					16.7	0.06/—			
32	CMOS	5	280	32	4 GB	16	16x64			25				
32	CMOS	5	280	32	4 GB	16	16x64			33				
32	CMOS	5	280	32	4 GB	16	16x64			33				
32	ECL	-5.2	279	64						80	12.5 ns/ 62.5 ns			
32	HCMOS	5	208	32	4 GB		136x32			33	0.03	15	x	
Microcontrollers														
4	CMOS	.7–6.02	64	8	16KB	136	512x4	16Kx8		5	0.95	7		x
4	CMOS	1.5	80	12	1K	100	80x4	1024x12		0.5	153/366	4	x	x
4	CMOS	1.5	100	12	4K	104	480x4	4096x12		0.5	153/366	9	x	x
4	CMOS	1.5–5	64	8		93	512	16K		0.5	17.6/122			
4	CMOS	2.0–6	20	8	1KB	47	64x4	1Kx8		0.7	2.86	3		x
4	CMOS	2.0–6	24	8	1KB	45	64x4	1Kx8		0.7	2.86	2		x
4	CMOS	2.4–5.0	20	8	1K		64x4	1Kx8		0.25	4/dc		x	x
4	CMOS	2.4–6.0	20	8	512	40	32x4	512		0.25	4/dc		x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
							LR2000-16	**LSI Logic (3534)**	
							LR3000-16	**LSI Logic (3534)**	
							LR3000-20	**LSI Logic (3534)**	
							LR3000-25	**LSI Logic (3534)**	
							LR3000-33	**LSI Logic (3534)**	5
						Floating Point Coprocessor for MB86901	MB86911	Fujitsu	
	x	x	x	x	IDT, Performance Semiconductor	Floating Point Coprocessor	**LR2010**	**LSI Logic (3534)**	
	x	x	x	x	IDT, Performance Semiconductor	Floating Point Coprocessor	**LR3010**	**LSI Logic (3534)**	
	x	x	x	x	IDT, Performance Semiconductor	CPU, MMU and Cache Controller on-chip	**LR2000**	**LSI Logic (3534)**	
	x	x	x		Performance, LSI Logic		79R2000	IDT	10
	x	x	x		Performance, LSI Logic		79R3000	IDT	
							VL86C020	**VLSI Tech (3701)**	
						SPARC Integer Unit	MB86902-20	Fujitsu	
						SPARC Integer Unit	MB86902-25	Fujitsu	
x		x	x	x		RISC processor, 32-bit three-bus architecture	AM29000	AMD	15
	x	x	x	x			AM29005	AMD	
	x	x	x	x	IDT, Performance Semiconductor	CPU, MMU and Cache Controller on-chip	**LR3000**	**LSI Logic (3534)**	
						SPARC processor	MB86901	Fujitsu	
x	x	x	x	x	Fujitsu	SPARC (RISC)	**L64801**	**LSI Logic (3533)**	
	x	x	x	x			CY7C601-25C	Cypress	20
	x	x	x	x			CY7C601-25M	Cypress	
	x	x	x	x			CY7C601-33C	Cypress	
x	x	x	x	x	TI	Interfaces to CY7C602 FPU	CY7C601	Cypress	
							MB86900	Fujitsu	
							CY7C608-25C	Cypress	25
							CY7C608-25M	Cypress	
							CY7C608-33C	Cypress	
						SPARC Compatible	B5000	Bipolar	
x	x	x	x	x	Cypress	SPARC	**L64811**	**LSI Logic (3533)**	
x	x						μPD75P116	NEC	30
x		x				Low power version of SMC6231	SMC62L31	S-MOS	
x		x				Low power version of SMC6234	SMC62L34	S-MOS	
x						Low Power on-chip LCD drivers	LC5733	Sanyo	
x							μPD7554A	NEC	
x							μPD7556A	NEC	35
x		x	x	x		COP424C less eight general purpose inputs.	COP426C	National	
x		x	x	x		4μs instruction cycle time, 16 I/O lines, 2 level subroutine stack, COP311C operates extended temperature range, COP211C operates full temperature range.	COP411C	National	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
4	CMOS	2.4–6.0	24	8	512	40	32x4	512		0.25	4/dc		x	x
4	CMOS	2.5–6.0	20	8	1K	45	64x4	1K		0.7	2.86	3	x	x
4	CMOS	2.5–6.0	20	8	1K	47	64x4	1K		0.7	2.86	3	x	x
4	CMOS	2.5–6.0	24	8	1K	45	64x4	1K		0.7	2.86	2	x	x
4	CMOS	2.5–6.0	24	8	1K	45	64x4	1K		0.7	2.86	2	x	x
4	CMOS	2.5–6.0	64	8	4K	106	256x4	4K		6.55	2.44	4	x	x
4	CMOS	2.5–6.0	64	8	6K	107	256x4	6K		6.55	2.44	4	x	x
4	CMOS	2.5–6.0	64	8	8K	43	497x4	8064		5	0.8	8	x	x
4	CMOS	2.7–5.5	28/40	8		92	224x4	4Kx8		0.28	10	4	x	x
4	CMOS	2.7–5.5	28/52	8		58	64x4	1Kx8		0.28	10	2	x	x
4	CMOS	2.7–5.5	40	8		92	208x4	4Kx8		0.28	10	4	x	x
4	CMOS	2.7–5.5	40/52	8		91	128x4	2Kx8		0.28	10	4	x	x
4	CMOS	2.7–5.5	40/52	8		92	128x4	2Kx8		0.28	10	4	x	x
4	CMOS	2.7–5.5	64	8		63	96x4	1Kx8		0.28	6.67	4	x	x
4	CMOS	2.7–5.5	64	8		92	128x4	2Kx8		0.28	6.67	4	x	x
4	CMOS	2.7–5.5	64	8		92	224x4	4Kx8		0.28	6.67	4	x	x
4	CMOS	2.7–5.5	64	8		92	256x4	4Kx8		0.2	10	4	x	x
4	CMOS	2.7–5.5	64	8		110	256x4			0.28	6.67		x	x
4	CMOS	2.7–6	20	8	1KB	47	64x4	1Kx8		0.7	2.86	3		x
4	CMOS	2.7–6	24	8	1KB	45	64x4	1Kx8		0.7	2.86	2		x
4	CMOS	2.7–6.0	28/44	5	1.92KB	59	64x4	1920x8		5	0.95	3		x
4	CMOS	2.7–6.0	28/44	8	1.92KB	59	64x4	1920x8		5	0.95	3		x
4	CMOS	2.7–6.0	40/44	8	2K	92	128x4	2K		4.19	2.86	4	x	x
4	CMOS	2.7–6.0	42	8	2K	67	128x4	2K		0.6	3.3	3	x	x
4	CMOS	2.7–6.0	42	8	2K	67	128x4	2K		0.6	3.3	3.0	x	x
4	CMOS	2.7–6.0	42	8	4K	67	160x4	4K		0.6	3.3	3	x	x
4	CMOS	2.7–6.0	42	8	4K	67	160x4	4K		0.6	3.3	3.0	x	x
4	CMOS	2.7–6.0	42/44	8	4K	67	160x4	4K		0.4	5	3	x	x
4	CMOS	2.7–6.0	42/44	8	4KB	104	512x4	4Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	42/44	8	6KB	104	512x4	6Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	42/44	8	8KB	104	512x4	8kx8Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	64	8	4K	43	320x4	4K		5	0.8	7	x	x
4	CMOS	2.7–6.0	64	8	6K	43	320x4	6016		5	0.8	7	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x		4μs instruction cycle time, 20 I/O lines, 2 level subroutine stack, COP310C operates extended temperature range, COP210C operates full temperature range.	COP410C	National	
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, direct drive LED–12 lines, mask option I/O.	μPD7564	NEC	
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, direct drive LED–12 lines, mask option I/O.	μPD7554	NEC	
x		x	x	x		8-Bit timer/counter, comparator-four channel, direct drive LED–14 lines, mask option I/O.	μPD7556	NEC	
x		x	x	x		8-Bit timer/counter, comparator-four channel, direct drive LED–14 lines, mask option I/O.	μPD7566	NEC	5
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, 14-Bit PWM, 10-Bit signal generator.	μPD7519H	NEC	
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, 14-Bit PWM, 10-Bit signal generator.	μPD7516H	NEC	
x		x	x	x		Four 8-Bit timers, 8-Bit SIO, 14-Bit PWM.	μPD75208	NEC	
x	x	x	x	x		Eight-bit timer/counter, 8-bit serial interface, 40 I/O lines	μPD7508	NEC	
x	x	x	x	x		Eight-bit timer/counter, 8-bit serial interface, 32 I/O lines	μPD7506	NEC	10
x	x	x	x	x		Vacuum fluorescent display driver, 8-bit timer/counter, 8-bit serial interface, 32 I/O lines	μPD7508A	NEC	
x	x	x	x	x		Eight-bit timer/counter, 8-bit serial interface, 20 I/O lines	μPD7507S	NEC	
x	x	x	x	x		Eight-bit timer/counter, 8-bit serial interface, 22 I/O lines	μPD7507	NEC	
x	x	x	x	x			μPD7501	NEC	
x	x	x	x	x			μPD7502	NEC	15
x	x	x	x	x			μPD7503	NEC	
x	x	x	x	x		Vacuum fluorescent display driver, 14-bit D/A, 28 I/O lines	μPD7519	NEC	
x	x	x	x	x		ROM-less evaluation chip, 8-bit timer/counter, 8-bit serial interface, 32 I/O lines	μPD7500	NEC	
x							μPD7564A	NEC	
x							μPD7566A	NEC	20
x	x						μPD75402	NEC	
x	x						μPD75P402	NEC	
x		x	x	x		8-Bit timer/conter, 8-Bit SIO, 32 I/O lines, direct drive LED–16 lines.	μPD7507H	NEC	
x		x	x	x		Direct drive FIP–31 lines, 8-Bit timer/counter, Zero cross detection circuit.	μPD7537A	NEC	
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, direct drive LED–16 lines.	μPD7527A	NEC	25
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, direct drive FIP–31 lines, direct drive LED–16 lines.	μPD7538A	NEC	
x		x	x	x		8-Bit timer/counter, 8-Bit SIO, direct drive FIP–31 lines.	μPD7528A	NEC	
x		x	x	x		Direct drive LED–16 lines, Four channel 8-Bit A/D converter.	μPD7533	NEC	
x	x						μPD75004	NEC	
x	x						μPD75006	NEC	30
x	x						μPD75008	NEC	
x		x	x	x		Three 8-Bit Timers, 8-Bit SIO, Four Comparators, LED direct drive	μPD75104	NEC	
x		x	x	x		Three 8-Bit timers, 8-Bit SIO, Four Comparators, LED direct drive.	μPD75106	NEC	

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MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Microcontrollers (Cont'd)														
4	CMOS	2.7–6.0	64	8	8K	43	512x4	8064		5	0.8	7	x	x
4	CMOS	2.7–6.0	64	8	8KB	104	512x4	8Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	64	8	8KB	104	1536x4	8Kx8		5	0.95	9		x
4	CMOS	2.7–6.0	64	8	8KB	104	1536x4	8Kx8		5	0.95	9		x
4	CMOS	2.7–6.0	64	8	8KB	136	512x4	8Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	64	8	12KB	136	512x4	12Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	64	8	12KB	136	512x4	12x8		5	0.95	8		x
4	CMOS	2.7–6.0	64	8	16KB	104	1Kx4	8Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	64	8	16KB	136	512x4	12Kx8		5	0.95	8		x
4	CMOS	2.7–6.0	64	8	16KB	136	512x4	16Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	64	8	24KB	136	768x4	24Kx8		5	0.95	8		x
4	CMOS	2.7–6.0	64	8	32KB	136	1Kx4	32Kx8		5	0.95	8		x
4	CMOS	2.7–6.0	80	8	4KB	104	512x4	4Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	6KB	104	512x4	6Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	8K	42	512x4	8064		5	0.8	6	x	x
4	CMOS	2.7–6.0	80	8	8KB	104	512x4	8Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	12KB	104	512x4	12KB		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	12KB	136	512x4	12Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	80	8	16KB	104	1Kx4	16Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	16KB	104	512x4	16Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	16KB	104	768x4	16Kx8		5	0.95	6		x
4	CMOS	2.7–6.0	80	8	16KB	136	512x4	16Kx8		5	0.95	7		x
4	CMOS	2.7–6.0	80	8	32KB	104	1Kx4	32Kx8		5	0.95	6		x
4	CMOS	3.0	80	12	1K	100	80x4	1024x12		0.5	153/366	4	x	x
4	CMOS	3.0	80	12	4K	100	208x4	4096x12		0.5	11/366	6	x	x
4	CMOS	3.0	100	12	4K	100	432x4	4096x12		0.5	11/366	6	x	x
4	CMOS	3.0	100	12	4K	104	480x4	4096x12		0.5	11/366	9	x	x
4	CMOS	3.0	100	12	4K	104	480x4	4096x12		0.5	153/366	9	x	x
4	CMOS	3.0–5.5	20	8	512	40	32x4	512x8		0.50	16/dc		x	x
4	CMOS	3–5	24	8	1K		64x4	1Kx4		4	4/dc		x	x
4	CMOS	3–5	24	8	2K		128x4	2Kx4		4	4/dc		x	x
4	CMOS	3–5	28	8	1K		64x4	1Kx4		4	4/dc		x	x
4	CMOS	3–5	28	8	2K		128x4	2Kx4		4	4/dc		x	x
4	CMOS	3–5	64	8		93	512	16K		2	4/122			
4	CMOS	3–6	42	8	—	98	128x4	—		2	16	2	x	x
4	CMOS	3–6	42	8	2K	98	128x4	2K		2	16	2	x	x
4	CMOS	4.5–5.5	20	8	512	40	32x4	512x8		2.0	4/dc		x	x
4	CMOS	4.5–5.5	40	8	4K	92	224x4	4K		0.4	5	x	x	x
4	CMOS	4.5–5.5	40	8	4K	92	224x4	4K		4.19	2.86	4	x	x
4	CMOS	4.5–5.5	42	8	4K	67	160x4	4K		0.4	5	3	x	x
4	CMOS	4.5–5.5	42	8	4K	67	160x4	4K		0.4	5	3	x	x
4	CMOS	4.5–5.5	42/44	8	8KB	104	512x4	8Kx8		5	0.95	6		x

Software Support									
Cross Assembler	High Level Language	Programs			Alternate Sources	Comments	Device	Source	Line
		Debug	Diagnostic	Edit					
x		x	x	x		Three 8-Bit timers, 8-Bit SIO, Four Comparators, LED direct drive.	μPD75108	NEC	
x	x						μPD75028	NEC	
x	x						μPD75P048	NEC	
x	x						μPD75048	NEC	
x	x						μPD75P108B	NEC	5
x	x						μPD75112	NEC	
x	x						μPD75212A	NEC	
x	x						μPD75P036	NEC	
x	x						μPD75216A	NEC	
x	x						μPD75116	NEC	10
x	x						μPD75217	NEC	
x	x						μPD75P218	NEC	
x	x						μPD75304	NEC	
x	x						μPD75306	NEC	
x		x	x	x		Three 8-Bit timers, 8-Bit SIO, 14-Bit PWM.	μPD75308	NEC	15
x	x						μPD75328	NEC	
x	x						μPD75312	NEC	
x	x						μPD75512	NEC	
x	x						μPD75P316A	NEC	
x	x						μPD75316	NEC	20
x	x						μPD75336	NEC	
x	x						μPD75516	NEC	
x	x						μPD75P338	NEC	
x		x				LCD Driver/Controller, BLD Circuit, Timer, stopwatch Timer	SMC6231	S-MOS	
x		x				LCD Driver/Controller, Analog Comparator, watchdog Timer, LED Remote Transmitter, BLD Circuit	SMC6214	S-MOS	25
x		x				Similar to SMC6214 with more RAM, LCD segments, Larger package	SMC6215	S-MOS	
x		x				Twin clock version of SMC6234	SMC62A34	S-MOS	
x		x				LCD Driver/Controller, Serial I/O, Event counter, BLD circuit, watchdog timer, timebase counter and stopwatch counter	SMC6234	S-MOS	
x		x	x	x		16 I/O lines, 20 pins COP313C has extended temperature range (−40°C to 85°C)	COP413C	National	
x		x	x	x		COP424C less 4 general-purpose inputs.	COP425C	National	30
x		x	x	x		COP444C less 4 general-purpose inputs.	COP445C	National	
x		x	x	x		23 I/O lines. COP324C has extended temperature range (−40°C to 85°C).	COP424C	National	
x		x	x	x		23 I/O Lines. COP344C has extended temperature range (−40°C to 85°C).	COP444C	National	
x						Low Power on-chip LCD drivers	LC5734	Sanyo	
x		x	x	x		Evaluator chip for Series 40 microcomputers.	MSM5840	OKI	35
x		x	x	x		30 I/O lines, 8-Bit programmable timer.	MSM5840RS	OKI	
x		x	x	x		16 I/O lines, 20 pins COP313CH has extended temperature range.	COP413CH	National	
	x	x	x			Piggyback version for uPD7507, and uPD7508.	μPD75CG08	NEC	
x		x	x	x		Piggyback version for uPD7507H and uPD7508H.	μPD75CG08H	NEC	
x		x	x	x		Piggyback version for uPD7527A, uPD7528A.	μPD75CG28A	NEC	40
x		x	x	x		Piggyback version for uPD7533.	μPD75CG33	NEC	
x	x						μPD75P008	NEC	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
4	CMOS	4.5–5.5	64	8	1K	45	64x4	1K		0.7	2.86	2	x	x
4	CMOS	4.5–5.5	64	8	4K	106	256x4	4K		4.19	7.63	4	x	x
4	CMOS	4.5–5.5	64	8	4K	106	256x4	4K		6.55	2.44	4	x	x
4	CMOS	4.5–5.5	64	8	6K	43	368x4	6016		5	0.8	8	x	x
4	CMOS	4.5–5.5	64	8	6K	107	256x4	6K		6.55	2.44	4	x	x
4	CMOS	4.5–5.5	64	8	8K	43	497x4	8K		5	0.8	8	x	x
4	CMOS	4.5–5.5	64	8	8K	43	512x4	8K		5	0.8	7	x	x
4	CMOS	4.5–5.5	64	8	8KB	136	497x4	8Kx8		5	0.95	8		x
4	CMOS	4.5–5.5	64	8	16KB	136	512x4	16Kx8		5	0.95	8		x
4	CMOS	4.5–5.5	64	8	16KB	136	512x4	16Kx8		5	0.95	8		x
4	CMOS	4.5–5.5	80	8	8K	42	512x4	8K		5	0.8	6	x	x
4	CMOS	4.5–5.5	80	8	8KB	104	512x4	8Kx8		5	0.95	6		x
4	CMOS	4.5–5.5	80	8	16KB	104	512x4	16Kx8		5	0.95	6		x
4	CMOS	4.5–5.5	80	8	16KB	136	512x4	16Kx8		5	0.95	7		x
4	CMOS	4.5–6	20	8	1KB	47	64x4	1Kx8		0.7	2.86	3		x
4	CMOS	4.5–6	20	8	1KB	47	64x4	1Kx8		0.7	2.86	3		x
4	CMOS	4.5–6	24	8	1KB	45	64x4	1Kx8		0.7	2.86	2		x
4	CMOS	4.5–6	24	8	1KB	45	64x4	1Kx8		0.7	2.86	2		x
4	CMOS	4.5–6.0	42	8	4K	67	160x4	4K		0.4	5	3	x	x
4	CMOS	4–6	60	8	1536	52	40x4	1536x8		4	8/16		x	x
4	CMOS	5	16/28	8		44	32x4	512 to 1024		5/2	1.0/2.5			x
4	CMOS	5	40	9	User Defined	512				31				
4	CMOS	5	40	9	User Defined	512				31				
4	CMOS	5	40	9	User Defined	512				32				
4	CMOS	5	42	8		90	256x4	4Kx8		4	2	6		x
4	CMOS	5	42	8		92	512x4	8Kx8		6	1.33	6		x
4	NMOS		20	8	512		64x4	512		.25	16		x	x
4	NMOS	4.5–5.5	20	8	512	40	32x4	512x8		0.50	16/40		x	x
4	NMOS	4.5–6.3		8	1K	49	64x4	1Kx8		2.1		3	x	x
4	NMOS	4.5–6.3	20	8	512	40	32x4	512x8		0.25	15/40	2	x	x
4	NMOS	4.5–6.3	24	8	2K		160x4	2Kx8			4/10	4	x	x
4	NMOS	4.5–6.3	24	8	2K	49	128x4	2Kx8		2.1	15/40	3	x	x
4	NMOS	4.5–6.3	24	8	512	40	32x4	512		0.25	15/40		x	x
4	NMOS	4.5–6.3	28	8	1K	49	64x4	1Kx8		2.1	4/10	3	x	x
4	NMOS	4.5–6.3	28	8	2K		160x4	2Kx8			4/10	4	x	x
4	NMOS	4.5–6.3	28	8	2K	49	128x4	2Kx8		2.1	15/40	3	x	x

Software Support									
Cross Assembler	High Level Language	Programs: Debug	Programs: Diagnostic	Programs: Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x		8-Bit timer/counter, comparator-four channel, direct drive LED–14 lines, mask option I/O.	μPD7500H	NEC	
x		x	x	x		Piggyback version for uPD7519.	μPD75CG19	NEC	
x		x	x	x		Piggyback version for uPD7519H.	μPD75CG19H	NEC	
x		x	x	x		Four 8-Bit timers, 8-Bit SIO, 14-Bit PWM.	μPD75206	NEC	
x		x	x	x		Piggyback version for uPD7516H.	μPD75CG16H	NEC	5
x		x	x	x		Piggyback version for uPD76206, uPD75208.	μPD75CG208	NEC	
x		x	x	x		EPROM version for uPD75104, uPD75106, uPD75108	μPD75P108	NEC	
x	x						μPD75CG.208A	NEC	
x	x						μPD75CG216A	NEC	
x	x						μPD75P216A	NEC	10
x		x	x	x		EPROM version for uPD75308.	μPD75P308	NEC	
x	x						μPD75P328	NEC	
x	x						μPD75P316	NEC	
x	x						μPD75P516	NEC	
x							μPD75P54	NEC	15
x							μPD75P64	NEC	
x							μPD75P56	NEC	
x							μPD75P66	NEC	
x		x	x	x		Piggyback version for uPD7537, uPD7538.	μPD75CG38	NEC	
x		x	x	x		13 I/O lines, 40 LCD segment outputs, 12-bit timer.	MSM58421GS	OKI	20
x		x				Frequency Divider; Low Power	TLCS42-CMOS	Toshiba	
							CY7C901-27M	Cypress	
							CY7C901-31C	Cypress	
							CY7C901-23C	Cypress	
x	x	x				LCD, VFT, DTMF, A/D, Watchdog, Low Power.	TLCS47-CMOS	Toshiba	25
x	x	x				Upward Version of TLCS47	TLCS470	Toshiba	
x		x	x	x			COP414L	National	
x		x	x	x		15 I/O lines, 20 pins, COP313L has extended temperature range.	COP413L	National	
x		x	x	x		Basically the same as COP420 except piggyback microcontroller. CPU, RAM, I/O and EPROM socket. Accepts: MM2716, NMC27C16, MM2758A, MM2758B. 1K byte accessable.	COP420R	National	
x		x	x	x	Western Digital	13 I/O lines, 20 pins, COP311L has extended temperature range (–40°C to –85°C).	COP411L	National	30
x		x	x	x		CPU version of COP2440 series, COP342 is extended temperature range version. 24 pins. 19 I/O lines.	COP442	National	
x		x	x	x	Western Digital	24 pin package, no interrupt, 12 I/O lines.	COP445L	National	
x		x	x	x	Western Digital	16 I/O lines, 24 pins, COP310L has extended temperature range (–40°C to –85°C).	COP410L	National	
x		x	x	x	Western Digital	COP32X is extended temperature range version. Also available in smaller packages: COP421 series–24 pins, COP422 series–20 pins.	COP420	National	
x		x	x	x		CPU version of COP2440 series, COP341 is extended temperature range version. 28 pins. 23 I/O lines.	COP441	National	35
x		x	x	x	Western Digital	28 pins, 16 I/O lines.	COP444L	National	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Microcontrollers (Cont'd)														
4	NMOS	4.5–6.3	28	8	2K	49	128x4	2Kx8		2.1	15/40	3	x	x
4	NMOS	4.5–6.3	40	8	1K	49	64x4	See comments		4	4/10		x	x
4	NMOS	4.5–6.3	40	8	1K	49	64x4	See comments		4	4/10	3	x	x
4	NMOS	4.5–6.3	40	8	2K	49	160x4	2Kx8			4/10	4	x	x
4	NMOS	4.5–6.3	40	8	2K	49	160x4	2Kx8		1.0	4/10	4	x	x
4	NMOS	4.5–6.3	48	8	2K		160x4	.25/1			4/10	4/CPU	x	x
4	NMOS	4.5–9.5	28	8	1K	49	64x4	1Kx8		2.1	4/dc	3	x	x
4	NMOS	4.5–9.5	40	8	2K	49	128x4	See comments		2.1	16/40	3	x	x
4	NMOS	4.5–9.5	40	8	512	40	32x4	see comments		0.50	16/40		x	x
4	NMOS	4.5–9.5	40	8	512	40	32x4	see comments		0.50	16/40		x	x
4	NMOS	4.5–9.5	40	8	512	40	32x4	see comments		2.097	15/40		x	x
4	NMOS	4.5–9.5	40	8	2048	49	128x4	See comments		2.1	16/40	3	x	x
4	NMOS	5		8	4K		256x4			0.25			x	
4	NMOS	5	16/28	8		42	32x4	512 to 1024		2	2.5/25			x
4	NMOS	5	42/66	8		90	256x4	4Kx8		4	2	6		x
4	PMOS	–6 to –10	28	8	750	47	48x4	768		0.45			x	x
4BS	CMOS	5	40	9	User Defined	512				15				
4BS	CMOS	5	40	9	User Defined	512				16				
4BS	CMOS	5	40	9	User Defined	512				16				
4BS	CMOS	5	40	9	User Defined	512				31				
8	CHMOS	5	40	8	4K	97	128x8			11	1.4/2.8	2	x	x
8	CHMOS	5	40	8	4K	97	128x8	2K		11	1.4/2.8	2	x	x
8	CHMOS	5	40	8,16	4K	96	128x8	2x8		11	1.4/2.8	1	x	x
8	CHMOS	5	40	8,16	4K	97	128x8			11	1.4/2.8		x	x
8	CHMOS	5	40	8,16,24	64K	111	128x8			12	1/4	2	x	x
8	CHMOS	5	40	8,16,24	64K	111	128x8	4Kx8		12	1/4	2	x	x
8	CHMOS	5	40	8,16,24	65K	111	128x8	4Kx8		12	1/4	5	x	x
8	CMOS		20	8	32K	44	64x8	1Kx8		20	1	3	x	x
8	CMOS		20	8	32K	44	64x8	1Kx8		20	1	3	x	x
8	CMOS		24	8	32K	44	64x8	1Kx8		20	1	3	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x		Piggyback Microcontroller: CPU, RAM, I/O and EPROM socket. Accepts: MM2716, NMC27C16, MM2758A, MM27588 EPROMs. Same electrical specs as base P/N.	COP444LR	National	
x		x	x	x	Western Digital	Has piggyback EPROM socket. Will accept: MM2716, NM27C16, MM2758A, MM2758B. 1K byte accessable.	COP402M	National	
x		x	x	x	Western Digital	Has piggyback EPROM socket. Will accept: MM2716, NM27C16, MM2758A, MM2758B. 1K byte accessable.	COP402	National	
x		x	x	x		Piggyback Microcontroller: CPU, RAM, I/O and EPROM socket. Accepts: MM2716, NMC27C16, MM2758A, MM27588 EPROMs. Same electrical specs as base P/N.	COP440R	National	
x		x	x	x		CPU version of COP2440 series, COP340 is extended temperature range version. 40 pins. 35 I/O lines.	COP440	National	5
x		x	x	x		Same as COP2440 except no on chip ROM and faster execution time (4μs). Interfaces with MM2716 EPROM. COP2304 is extended temperature range device.	COP2404	National	
x		x	x	x	Western Digital	Same as COP420 except 23 I/O lines.	COP420L	National	
x		x	x	x	Western Digital	Has piggyback EPROM socket. Will accept MM2716, 2758A, 2758B or NM27C16 EPROM. 2K Byte accessable. Open drain memory interface drivers.	COP404LP	National	
x		x	x	x		Same as COP401L except emulates COP413L with selected RC oscillator option.	COP401L-R13	National	
x		x	x	x		Same as COP401L except emulates COP413L with selected RC oscillator option.	COP401L-X13	National	10
x		x	x	x		Romless microcontroller, emulated COP410L/COP411L, interfaces with external memory, will accept MM2716, NM27C16, MM2758A, MM2758B 1K byte accessories.	COP401L	National	
x		x	x	x	Western Digital	Same as COP404LP except push pull memory interface drivers.	COP404LS	National	
x						Evaluator chip for TLCS–47 series microprocessors. Use with external 4K ROM, 35 I/O lines.	TMP4700C	Toshiba	
x		x				Frequency Divider	TLCS42-NMOS	Toshiba	
x	x	x				LED Driver	TLCS47-NMOS	Toshiba	15
x	x	x	x	x		Directly drives 8 digit, 8 segment LED display, 24 I/O lines.	μPD7520	NEC	
							CY7C901-88M	Cypress	
							CY7C901-32M	Cypress	
							CY7C901-69C	Cypress	
							CY2901C	Cypress	20
x		x	x	x	NEC, National, Toshiba	Low power operation. 27 I/O lines. Can be used with external RAM and ROM.	80C39	Intel	
		x	x	x		Low power operation. 27 I/O lines. Can be used with external RAM and ROM.	80C49	Intel	
x		x	x	x		27 I/O lines, programmable ROM, 8-bit counter/timer. Can use external RAM or ROM, MIL temp.	M80C49	Intel	
x		x	x	x		27 I/O lines, 8-bit counter/timer. Can use external RAM or ROM, MIL temp.	M80C39	Intel	
x		x	x	x		Two 16-bit timer/counters, serial port, Boolean processor, MIL temp.	M80C31	Intel	25
x		x	x	x		M80C31 with mask programmable ROM, MIL temp.	M80C51	Intel	
x	x	x	x	x	Intersil	Two 16 bit timer/counters, serial I/O port. Boolean processor. Can be used with external ROM or RAM.	80C51	Intel	
x		x	x	x	Sierra	Software Selectable I/O Options.	COP822C	National	
x		x	x	x	Sierra	EEPROM Version of COP822C	COP8722C	National	
x		x	x	x	Sierra	Software Selectable I/O Options	COP821C	National	30

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	CMOS		24	8	32K	44	64x8	1Kx8		20	1	3	x	x
8	CMOS		28	8	32K	44	64x8	1Kx8		20	1	3	x	x
8	CMOS		28	8	32K	44	64x8	1Kx8		20	1	3	x	x
8	CMOS		28	8	32K	44	128x8	2Kx8		20	1	3	x	x
8	CMOS	2.5–6	28	8		61	128x8	2Kx8		6.5	1.5/15	3	x	x
8	CMOS	2.5–6	28	8		61	128x8	4Kx8		6.5	1.5/15	3	x	x
8	CMOS	2.5–6	40	8–16	4K	97	64x8			6	2.5/5	1	x	
8	CMOS	2.5–6	40	8–16	4K	97	64x8	1Kx8		6	2.5/5	1	x	
8	CMOS	2.5–6	40	8–24	4K	98	256x8	4Kx8		12	1.2	1.0		x
8	CMOS	2.5–6	40/44	8	64K	61	128x8			6.5	1.5/15	3	x	x
8	CMOS	2.5–6	40/44	8	64K	61	128x8	4Kx8		6.5	1.5/15	3	x	x
8	CMOS	2.5–6	40/44	8	64K	61	256x8			7.5	1.3/13.1	5	x	x
8	CMOS	2.5–6	40/44	8	64K	61	256x8	4Kx8		7.5	1.3/13.1	5	x	x
8	CMOS	2.5–6	40/44	8	64K	61	256x8	4Kx8		7.5	1.3/13.1	5	x	x
8	CMOS	2.5–6.0	20	8	32K	44	64x8			20.0	1.0/00	3		
8	CMOS	2.5–6.0	20	8	32K	44	64x8	1Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	20	8	32K	44	64x8	1Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	24	8	32K	44	64x8			20.0	1.0/00	3		
8	CMOS	2.5–6.0	24	8	32K	44	64x8	1Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	24	8	32K	44	64x8	1Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	24	8	32K	44	128x8	2Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	28	8	32K	44	64x8			20.0	1.0/00	3		
8	CMOS	2.5–6.0	28	8	32K	44	64x8	1Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	28	8	32K	44	64x8	1Kx8		20.0	1.0/00	3		
8	CMOS	2.5–6.0	28	8	32K	44	128x8	2Kx8		20.0	1.0/00	3		
8	CMOS	3.6	20	8,16,24	8K	26	32.8	1.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	20	8,16,24	8K	26	32x8	1.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	20	8,16,24	8K	26	32x8	1.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	20	8,16,24	8K	26	64.8	1.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	20	8,16,24	8K	26	64.8	1.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	20	8,16,24	8K	26	64x8	1.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	20	8,16,24	8K	26	64x8	3.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	20	8,16,24	8K	26	64x8	3.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	28	8,16,24	8K	26	32x8	1.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	28	8,16,24	8K	26	32x8	1.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	28	8,16,24	8K	26	64x8	1.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	28	8,16,24	8K	26	64x8	3.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	28	8,16,24	8K	26	64x8	3.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	40	8,16,24	8K	26	64x8	3,8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	44	8,16,24	8K	26	64x8	3.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	44	8,16,24	8K	26	64x8	3.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	44	8,16,24	8K	26	96x8	2.5Kx8		5.5	4.4/10.9	4	x	x

Software Support									
Cross Assembler	High Level Language	Programs: Debug	Programs: Diagnostic	Programs: Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x	Sierra	EEPROM Version of COP821C	COP8721C	National	
x		x	x	x	Sierra	Software Selectable I/O Options	COP820C	National	
x		x	x	x	Sierra	EEPROM Version of COP820C	COP8720C	National	
x		x	x	x	Sierra	Software Selectable I/O Options	COP840C	National	
x		x				13-bit timer, 28 Pin PDIP	TMS70CT20	TI	5
x		x				13-bit timer, 28 Pin PDIP	TMS70CT40	TI	
x		x	x	x	Intersil	CMOS version of PD8035L.	μPD80C35	NEC	
x			x		Intersil, Intel	CMOS version of PD8048.	μPD80C48	NEC	
x				x	Toshiba, OKI, Fujitsu, Mitsubishi	8-Bit, 4K ROM Version of 80C48	80C50	NEC	
x		x				13-bit timer, 40 PDIP and 44 PLCC package	TMS70C00	TI	10
x		x				13-bit timer, 40 PDIP and 44 PLCC package	TMS70C40	TI	
x		x				3 timers, UART, 40 PDIP and 44 PLCC package	TMS70C02	TI	
x		x				4K bytes Prog. EPROM, 3 timers, UART, 40 PDIP and 44 PLCC package	SE77C42	TI	
x		x				3 timers, UART, 40 PDIP and 44 PLCC package	TMS70C42	TI	
x		x	x	x	National	1Kx8 EEROM & additional 64x8 EERAM.	SC48722	Sierra	15
x		x	x	x	National COP822C		SC44822	Sierra	
x		x	x	x	National	Additional 64x8 EERAM.	SC48622	Sierra	
x		x	x	x	National	1Kx8 EEROM & additional 64x8 EERAM.	SC48721	Sierra	
x		x	x	x	National COP821C		SC44821	Sierra	
x		x	x	x	National	Additional 64x8 EERAM.	SC48621	Sierra	20
x		x	x	x	National		SC44841	Sierra	
x		x	x	x	National	1Kx8 EEROM & Additional 64x8 EERAM.	SC48720	Sierra	
x		x	x	x	National COP820C		SC44820	Sierra	
x		x	x	x	National	Additional 64x8 EERAM.	SC48620	Sierra	
x		x	x	x	National		SC44840	Sierra	25
x		x	x	x		Built-in Watchdog Timer and Prescaler, A/D	ST6010	SGS-Thomson	
x		x	x	x		Built-in Watchdog Timer and Prescaler, A/D	ST6011	SGS-Thomson	
		x	x	x		Built-in watchdog, timer + prescaler, A/D	ST6014	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, A/D, EPROM and OTP versions	ST6210	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, EPROM and OTP versions	ST6211	SGS-Thomson	30
x		x	x	x		Built-in watchdog, timer + prescaler, EPROM and OTP versions	6211	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, A/D, EPROM and OTP versions	ST6220	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, EPROM and OTP versions	ST6221	SGS-Thomson	
x		x	x	x		Built-in Watchdog Timer and Prescaler, A/D	ST6012	SGS-Thomson	
x		x	x	x		Built-in watchdog,timer + prescaler, A/D	ST6013	SGS-Thomson	35
x		x	x	x		Built-in watchdog, timer + prescaler, A/D, EPROM and OTP versions	ST6215	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, EPROM and OTP versions	ST6226	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, Pre-Amp, pulse Detector	ST6031	SGS-Thomson	
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, Preamp.	ST6052	SGS-Thomson	
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, LCD driver	ST6040	SGS-Thomson	40
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, Preamp	ST6050	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, LCD Driver, PSS, EPROM version	ST6124	SGS-Thomson	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	CMOS	3.6	44	8,16,24	8K	26	96x8	2.5Kx8		5.5	4.4/10.9	4	x	x
8	CMOS	3.6	48	8,16,24	8K	26	64x8	3.8Kx8		4	6.5/13	4	x	x
8	CMOS	3.6	48	8,16,24	8K	26	64x8	3.8Kx84		4	6.5/13	4	x	x
8	CMOS	3.6	52	8,16,24	8K	26	64x8	3.8Kx8		5.5	4.4/10.9	4	x	x
8	CMOS	3.6	52	8,16,24	8K	26	128x8	3.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	68	8,16,24	128K	114	512x8	16Kx8	x	24	1.2/2.4	14	x	x
8	CMOS	3.6	80	8,16,24	8K	26	192x8	7.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3.6	84	8,16,24	16M	114	1.5Kx8		x	24	1.2/2.4	14	x	x
8	CMOS	3.6	84	8,16,24	16M	114	256Kx8		x	24	1.2/2.4	14	x	x
8	CMOS	3.6	28	8,16,24	8K	26	64.8	1.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	3–5	80		16K	69	128x8	4Kbx8	4	4	2/9	5	x	x
8	CMOS	3–5	80	8	16K	69	512x8	4Kbx8		4	2/9	5	x	x
8	CMOS	3–5	100	8		67	1344	32K		13	1/366	5		
8	CMOS	3–5	100	8		67	1344	64K		13	1/366	5		
8	CMOS	3–6	28	8,16,24	6K	62	128x8	2Kx8		8	2/4	4	x	x
8	CMOS	3–6	40	8–16	4K	97	64x8	1Kx8		6	2.5/5	1	x	x
8	CMOS	3–6	40	8–16	4K	97	64x8	1Kx8		6	2.5/5	1	x	x
8	CMOS	3–6	40	8–16	4K	97	128x8			11	1.4/2.8	1	x	x
8	CMOS	3–6	40	8,16,24	64K	62	176x8	4Kx8		8	2/4	4	x	x
8	CMOS	3–6	40	8,16,24	64K	62	208x8	8Kx8		8	2/4	4	x	x
8	CMOS	3–6	48	8,16,24	64K	62	176x8	6Kx8		8	2/4	4	x	x
8	CMOS	3–6	48	8,16,24	128K	114	256x8	8Kx8	YES	24	1.2/2.4	14	x	x
8	CMOS	3–6	68	8,16,24	128K	114	256x8	8Kx8	x	24	1.2/2.4	14	x	x
8	CMOS	4.5–5.5	64/68	8	1MB	65	384x8	8Kx8	x	12	0.333	19	x	x
8	CMOS	4.5–5.5	64/68	8	1MB	65	512x8		x	12	0.333	19	x	x
8	CMOS	4.5–5.5	64/68	8	1MB	65	512x8	16Kx8	x	12	0.333	19	x	x
8	CMOS	4.5–5.5	64/68	8	1MB	65	512x8	16Kx8	x	12	0.333	19	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	1Kx8	32Kx8	x	12	0.333	19	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	1Kx8	32Kx8	x	12	0.333	19	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	640x8		x	12	0.333	17	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	640x8		x	12	0.333	19	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	640x8	16Kx8	x	12	0.333	17	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	640x8	16Kx8	x	12	0.333	17	x	x
8	CMOS	4.5–5.5	84/94	8	1MB	65	640x8	16Kx8	x	12	0.333	19	x	x
8	CMOS	5		8–16	4K		128			11			x	x
8	CMOS	5		8	64K	69	144x8	4Kx8		4	2/9	6	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x	x	Built-in watchdog, timer + prescaler, LCD Driver, PSS, EPROM version	ST6125	SGS-Thomson	
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, LCD driver	ST6041	SGS-Thomson	
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, Preamp.	ST6051	SGS-Thomson	
x		x	x	x		Built-in timer + prescaler, LCD Driver, PLL, EPROM version	ST6154	SGS-Thomson	
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, LCD driver, PSS, SPI, Real time clock, 128 bytes of EEPROM, EPROM	ST6245	SGS-Thomson	5
x	x	x	x	x		Built-in watchdog, two 16 bit timer + prescaler, SCI, SPI, A/D, 512 bytes of EEPROM	ST9040	SGS-Thomson	
x		x	x	x		Built-in watchdog, 2 timers + prescaler, A/D, LCD driver, PSS, SPI, Real time clock, 128 bytes of EEPROM, EPROM	ST6240	SGS-Thomson	
x	x	x	x	x		Built-in watchdog, three 16 bit timers + prescaler, 2xSCI, SPI, A/D, MMU	ST9054	SGS-Thomson	
x	x	x	x	x		Built-in watchdog, three 16 bit timers + prescaler, 2xSCI, SPI, A/D, MMU	ST90R50	SGS-Thomson	
x		x	x	x		Built-in watchdog, timer + prescaler, EPROM and OTP versions	ST6216	SGS-Thomson	10
x		x		x	Rockwell	LCD controller, serial I/O	M50930	Mitsubishi	
x		x		x	Rockwell	512 byte RAM version of M50930	M50931	Mitsubishi	
x						Low Power LCD Dot Matrix Driver	LC86104	Sanyo	
x						Low Power LCD Dot Matrix Driver	LC86108	Sanyo	
x		x	x	x		Built-in watchdog, 16 bit timer + prescaler	ST8002	SGS-Thomson	15
x		x	x	x	NEC, National	CMOS version of MSM8035, low stand by power mode.	MSM80C35	OKI	
x		x	x	x	NEC, National	CMOS version of MSM8048, low stand by power mode.	MSM80C48	OKI	
x		x	x	x	NEC, National	CMOS version of MSM8039, low standby power mode.	MSM80C39	OKI	
x		x	x	x		Built-in watchdog, 16 bit timer + prescaler, SPI	ST8004	SGS-Thomson	
x		x	x	x		Built-in watchdog, 16 bit timer + prescaler, SPI, SCI	ST8108	SGS-Thomson	20
x		x	x	x		Built-in watchdog, 16 bit timer + prescaler, SCI, A/D, 256 bytes of EEPROM	ST8206	SGS-Thomson	
x	x	x	x	x		Built-in watchdog, 16 bit timer + prescaler, SCI, SPI	ST9020	SGS-Thomson	
x	x	x	x	x		Built-in watchdog, two 16 bit timer + prescaler, SCI, SPI, A/D	ST9030	SGS-Thomson	
x	x						μPD78212	NEC	
x	x						μPD78213	NEC	25
x	x						μPD78P214	NEC	
x	x						μPD78214	NEC	
x	x						μPD78P238	NEC	
x	x						μPD78238	NEC	
x	x						μPD78220	NEC	30
x	x						μPD78233	NEC	
x	x						μPD78P224	NEC	
x	x						μPD78224	NEC	
x	x						μPD78234	NEC	
x		x	x	x	NEC, National, OKI		TMP80C39A	Toshiba	35
x		x		x			M50744-PGYS	Mitsubishi	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	CMOS	5	24	8–24	2K	255	64x8	2Kx8		16	0.75/3	5		x
8	CMOS	5	28	8		73	128x8	4Kx8	N/A	20	1/12.6	5	x	x
8	CMOS	5	28	8		73	128x8	4Kx8	N/A	20	1/12.6	5	x	x
8	CMOS	5	28	8		73	128x8	4Kx8	N/A	20	1/12.6	5	x	x
8	CMOS	5	28	8–16		90	256x8	0		12				
8	CMOS	5	28	8–16		90	256x8	4Kx8		12				
8	CMOS	5	28	8–16		90	256x8	4Kx8		12				
8	CMOS	5	28	8–24			64x8	1Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	1Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	1Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	1Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	1Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	1Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	2Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	2Kx8			1		x	x
8	CMOS	5	28	8–24			64x8	2Kx8			1		x	x
8	CMOS	5	28	8–24			128x8				1		x	x
8	CMOS	5	28	8–24			128x8				1		x	x
8	CMOS	5	28	8–24			128x8				1		x	x
8	CMOS	5	28	8–24			128x8				1		x	x
8	CMOS	5	28	8–24			128x8	2Kx8		20	1		x	x
8	CMOS	5	28	8–24			128x8	2Kx8		20	1		x	x
8	CMOS	5	28	8–24			128x8	4Kx8			1		x	x
8	CMOS	5	28	8–24			128x8	4Kx8			1		x	x
8	CMOS	5	28	8–24			128x8	4Kx8		20	1		x	x
8	CMOS	5	28	8–24			128x8	8Kx8			1		x	x
8	CMOS	5	28	8–24			192x8				1		x	x
8	CMOS	5	28	8–24			192x8				1		x	x
8	CMOS	5	28	8–24			192x8	4Kx8			1		x	x
8	CMOS	5	28	8–24	2K	255	64x8	2Kx8		16	0.75/3	7		x
8	CMOS	5	28	8–24	32K		64x8				1		x	x
8	CMOS	5	28	8–24	32K		64x8				1		x	x
8	CMOS	5	40			44	128	2408		5	—/2	3	x	x
8	CMOS	5	40	8	4K	97	128	2K		6	2.5/5	1		
8	CMOS	5	40	8	4K	98	64	1K		1.2	1.25/2.5	1		
8	CMOS	5	40	8	4K	98	64	1K		6	25/5	1		
8	CMOS	5	40	8–24	64K	255	128x8	4Kx8		20	0.6/2.4	5		x
8	CMOS	5	40	8–24	64K	255	256x8	8Kx8		12	1/4	6		x
8	CMOS	5	40	8–24	64K	255	256x8	8Kx8		16	0.75/3	6		x
8	CMOS	5	40	8–24	64K	255	256x8	16Kx8		12	1/4	6		
8	CMOS	5	40	8,16,24	64K	111	128x8			16	0.7/24	2	x	x
8	CMOS	5	40	8,16,24	64K	111	128x8	4K		16	0.7/24	2	x	x
8	CMOS	5	40	8,16,24	64K	111	256x8			20	.6/10	6	x	x
8	CMOS	5	40	8,16,24	64K	111	256x8	8Kx8		20	.6/10	6	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x	x	x		80C51 Core architecture; EPROM version is 87C751; has I²C serial inteerface.	S83C751	Signetics	
x	x	x				256 bytes data EEPROM, watchdog timer, PWM output, serial port	TMS370C010	TI	
x	x	x				Watchdog timer, PWM output, serial port	TMS370C310	TI	
x	x	x				256 bytes data EEPROM, 4K prog. EEPROM, watchdog timer, PWM output, serial port	TMS370C810	TI	
						I²C and NBAP Protocols	SCC84C00	Signetics	5
						I²C and NBAP Protocols	SCC84C20	Signetics	
						I²C and NBAP Protocols	SCC84C40	Signetics	
	x	x	x				COP820CB	National	
	x	x	x				COP821CB	National	
	x	x	x				COP822CB	National	10
	x	x	x				COP8620C	National	
	x	x	x				COP8621C	National	
	x	x	x				COP8622C	National	
	x	x	x				COP8640C	National	
	x	x	x				COP8641C	National	15
	x	x	x				COP8642C	National	
	x	x	x				COP884CFP	National	
	x	x	x				COP884CLP	National	
	x	x	x				COP888CFP	National	
	x	x	x				COP888CLP	National	20
	x	x	x				COP841C	National	
	x	x	x				COP842C	National	
	x	x	x				COP888CF	National	
	x	x	x				COP888CL	National	
	x	x	x				COP880	National	25
	x	x	x				COP888CLMH	National	
	x	x	x				COP884CGP	National	
	x	x	x				COP888CGP	National	
	x	x	x				COP888CG	National	
x	x	x	x	x		80C51 core architecture, 8-Bit A/D, PWM, EPROM version is 87C752.	S83C752	Signetics	30
	x	x	x				COP820CP-X	National	
	x	x	x				COP840CP-X	National	
	x	x					COP943C	National	
						Single-Chip 8-bit Microcomputer.	M5MC49A	Mitsubishi	
						Slave Microcomputer	M508041AH	Mitsubishi	35
						Slave Microcomputer	M5L8041A	Mitsubishi	
x	x	x	x	x	Intel, AMD, Matra, Siemens	Available with EPROM (UV or OTP)	SC80C51	Signetics	
x	x	x	x	x		Pin compatible with80C51; I²C serial interface.	S83C652	Signetics	
x	x	x	x	x	Matra-Harris	Pin compatible with 80C51, has third timer, 87C52 is EPROM version.	SC80C52	Signetics	
x	x	x	x	x		Pin compatible with 80C51, I²C serial interface, 16K ROM.	S83C654	Signetics	40
x	x	x	x	x	AMD	Two 16-bit counters, serial I/O	SAB80C31	Siemens	
x	x	x	x	x	AMD	Two 16-bit counters, serial I/O	SAB80C51	Siemens	
x	x	x	x	x	AMD	CMOS Version of the SAB8032B	SAB80C32	Siemens	
x	x	x	x	x	AMD	ROM Version of the SAB80C32	SAB80C52	Siemens	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	CMOS	5	42	8	4K	97	128	2K		11	1.36/2.72	1		
8	CMOS	5	44	8		73	256x8	8Kx8		20	1/2.6	9	x	x
8	CMOS	5	44	8		73	256x8	8Kx8		20	1/12.6	9	x	x
8	CMOS	5	44	8		73	256x8	8Kx8		20	1/12.6	9	x	x
8	CMOS	5	44	8–16		62	1408	62K		2.1	0.5	5	x	x
8	CMOS	5	44	8–24			128x8	8Kx8			1		x	x
8	CMOS	5	44	8–24			192x8	8Kx8			1		x	x
8	CMOS	5	52	8	4K	69	320x8	4Kx8		10	0.8/3.2	10		x
8	CMOS	5	52	8	8K	69	96x8	3Kx8		4	2/9	&5	x	x
8	CMOS	5	52	8	8K	69	96x8	3Kx8		4	2/9	5	x	x
8	CMOS	5	52	8	8K	69	96X8	3Kx8		4	2/9	5	x	x
8	CMOS	5	52	8	8K	69	96x8	4Kx8		4	2/9	5	x	x
8	CMOS	5	52	8	8K	69	128x8	4Kx8		4	2/9	5	x	x
8	CMOS	5	52	8	16K	69	144x8	4Kx8		5	1.6/7.2	6	x	x
8	CMOS	5	52	8	16K	69	144x8	8Kx8		5	1.6/7.2	6	x	x
8	CMOS	5	52	8	16K	69	144x8	64x8		5	1.6/7.2	6	x	x
8	CMOS	5	52	8–32		179	2048			2.1	0.5	18	x	x
8	CMOS	5	52	8–32		179	2048	4096		2.1	0.5	18	x	x
8	CMOS	5	52	8–32		179	2048	4096		2.1	0.5	18	x	x
8	CMOS	5	52	8–32		179	4096			2.1	0.5	18	X	X
8	CMOS	5	52	8–32		179	4096	4096		2.1	0.5	18	x	x
8	CMOS	5	52	8–32		179	4096	4096		2.1	0.5/20	18	x	x
8	CMOS	5	60	8	64	69	192x8	64bx8		4	2/9	5	x	x
8	CMOS	5	60	8	64K	69	192x8	6K		4	2/9	6	x	x
8	CMOS	5	60	8	64K	69	192x8	8Kx8		8	1/4.5	6	x	x
8	CMOS	5	64	8	64K	69	128x8	4Kbx8		4	2/9	5	x	x
8	CMOS	5	64	8	64K	69	128x8	4Kbx8		8	1/4.5	5	x	x
8	CMOS	5	64	8	64K	69	128x8	4Kx8	4	2/9	5	x	x	x
8	CMOS	5	64	8	64K	69	128x8	6Kx8		4	2/8	6		x
8	CMOS	5	64	8	64K	69	144x8	4Kx8		4	2/8	6		x
8	CMOS	5	64	8	64K	69	144x8	64bx8		4	2/9	5	x	x
8	CMOS	5	64	8	64K	69	144x8	64bx8		4	2/9	5	x	x
8	CMOS	5	64	8	64K	69	144x8	64bx8	4	4	2/9	5	x	x
8	CMOS	5	64	8	64K	69	160x8	16Kx8		4	2/9	6	x	x
8	CMOS	5	64	8	64K	69	160x8	16Kx8		4	2/9	6	x	x
8	CMOS	5	64	8	64K	69	192x8	6Kx8		4	2/9	5	x	x
8	CMOS	5	64	8	64K	69	192x8	8Kbx8		11	2/9	5	x	x
8	CMOS	5	64	8	64K	69	192x8	10Kx8		4	2/9	6		x
8	CMOS	5	64	8	64K	69	192x8	10Kx8		4	2/9	6		x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
						Single-Chip 8-bit Microcomputer.	M5MC49H	Mitsubishi	
x	x	x				8K ROM, PACT (Programmable Acquisition and Control Timer)	TMS370C332	TI	
x	x	x				8K ROM, 256 bytes EEPROM, PACT (Programmable Acquisition and Control Timer)	TMS370CO32	TI	
x	x	x				8K EPROM, 26 bytes EEPROM, PACT (Programmable Acquisition and Control Timer)	TMS370C732	TI	
	x	x				16-Bit Timer 31 I/O	**TMP68CO5C8**	**Toshiba (3673)**	5
	x	x	x				COP888CFMH	National	
	x	x	x				COP888CGMH	National	
x		x		x		Dual Port RAM (192x8 bits)	M37409M2	Mitsubishi	
x		x		x	Rockwell	High-voltage (–35V) I/O	M50757	Mitsubishi	
x		x		x	Rockwell		M50740	Mitsubishi	10
x		x		x	Rockwell	Mask ROM version of M50740	M50740A	Mitsubishi	
x	x	x		x	Rockwell	4 Kb version of M50740	M50741	Mitsubishi	
x		x		x	Rockwell	4Kb version of M50757	M50752	Mitsubishi	
x		x		x			M50951	Mitsubishi	
x		x		x			M50950-PGYS	Mitsubishi	15
x		x		x			M50950	Mitsubishi	
	x	x				A/D Converter (8-ch) 16-Bit Timer, 8-Bit Counter 38 I/O, Watchdog Timer	**TMP68HC11A0**	**Toshiba (3673)**	
	x	x				A/D Converter (8-ch) 16-Bit Timer, 8-Bit Counter 38 I/O, Watchdog Timer	**TMP68HC11A1**	**Toshiba (3673)**	
	x	x				A/D Converter (8-ch) 16-Bit Timer, 8-Bit Counter 38 I/O, Watchdog Timer	**TMP68HC11A8**	**Toshiba (3673)**	
	X	X				A/D Converter (8-ch) 16-Bit Timer, 8-Bit Counter 38 I/O, Watchdog Timer	**TMP68HC11E0**	**Toshiba (3673)**	20
	x	x				A/D Converter (8-ch) 16 Bit Timer, 8-Bit Counter 38 I/O, Watchdog Timer	**TMP68HC11E9**	**Toshiba (3673)**	
	x	x			MOTOROLA	A/D Converter(8-ch) 16-BIT Timer, 8-BIT CTR 38I/O, Watchdog Timer	**TMP68HC11E1**	**Toshiba (3673)**	
x		x		x	Rockwell	Serial I/O, A/D, PWM	M50753	Mitsubishi	
x		x		x			M50753T	Mitsubishi	
x		x		x			M50943	Mitsubishi	25
x		x		x	Rockwell	A/D Converter, VFD	M50940	Mitsubishi	
x		x		x	Rockwell	56 Serial I/Os	M50743	Mitsubishi	
		x		x	Rockwell	56 I/O lines, serial I/O	M50742	Mitsubishi	
x		x		x			M50708	Mitsubishi	
x		x		x			M50744	Mitsubishi	30
x		x		x	Rockwell	EPROM version of M50746S	M50746ES	Mitsubishi	
x		x		x	Rockwell	A/D, D/A, PWM	M50746S	Mitsubishi	
x		x		X	Rockwell	One-time programmable (OTP) version of M50746S	M50746E	Mitsubishi	
x		x		x			M50955-PGYS	Mitsubishi	
x		x		x			M50964-PGYS	Mitsubishi	35
x		x		x	Rockwell	Serial I/O	M50745	Mitsubishi	
x		x		x	Rockwell		M50941	Mitsubishi	
x		x		x			M50957	Mitsubishi	
x		x		x			M50957ES	Mitsubishi	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	CMOS	5	64	8	64K	69	192x8	10Kx8		4	2/9	46	x	x
8	CMOS	5	64	8	64K	69	192x8	16Kx8		4	2/9	6	x	x
8	CMOS	5	64	8	64K	69	256x8	8K	8	8	1/4.5	6	x	x
8	CMOS	5	64	8	64K	69	256x8	8Kbx8		8	1/4.5	5	x	x
8	CMOS	5	64	8	64K	69	256x8	8Kbx8		8	1/4.5	5	x	x
8	CMOS	5	64	8	64K	69	256x8	8Kbx8		12	0.6/2.7	5	x	x
8	CMOS	5	64	8	64K	71	384	16K		5	0.8	15	x	x
8	CMOS	5	64	8	64K	71	384	16K		5	0.8	15	x	x
8	CMOS	5	64	8	64K	71	384	16K		10	0.8/2.8	15	x	x
8	CMOS	5	64	8	64K	71	384	20K		4.19	0.96	15	x	x
8	CMOS	5	64	8	64K	71	384	20K		4.19	0.96—	15	x	x
8	CMOS	5	64	8	64K	71	384	20K		4.19	0.96	15	x	x
8	CMOS	5	64	8	64KB	159	256x8	16Kx8		15	0.8	12	x	x
8	CMOS	5	64	8	64KB	159	256x8	16Kx8		15	0.8	12	x	x
8	CMOS	5	64	8	128	69				10	0.8/3.6	6	x	x
8	CMOS	5	64	8	128K	69				8	&1/4.5	11		
8	CMOS	5	64	8	128Kx8	135	260x8			8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	260x8	8Kx8		8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	260x8	8Kx8		8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8			8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8			8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8			8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8			8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8	16Kx8		8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8	16Kx8		8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8	16Kx8		8	0.5/6	11	x	x
8	CMOS	5	64	8	128Kx8	135	516x8	16Kx8		8	0.5/6	11	x	x
8	CMOS	5	64	8–32	64K	101	128x8							
8	CMOS	5	64	8–32	64K	101	128x8	4Kx8						
8	CMOS	5	64	48	64K	71	384	16K		10	0.8/2.8	15	x	x
8	CMOS	5	64/68	8	64KB	159	256x8			15	0.8	12	x	x
8	CMOS	5	64/68	8	64KB	159	256x8			15	0.8	12	x	x
8	CMOS	5	64/68	8	64KB	159	256x8	4Kx8		15	0.8	12	x	x
8	CMOS	5	64/68	8	64KB	159	256x8	4Kx8		15	0.8	12	x	x
8	CMOS	5	64/68	8	64KB	159	256x8	8Kx8		15	0.8	12	x	x
8	CMOS	5	64/68	8	64KB	159	256x8	16Kx8		15	0.8	12	x	x
8	CMOS	5	64/68	8	64KB	159	256x8	16Kx8		15	0.8	12	x	x
8	CMOS	5	64/68	8–24	64K	255	128x8	4Kx8		16	0.75/3	5		x
8	CMOS	5	68	8	112K	73	256x8	none	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	256x8	none	N/A	20	1/12.6	9	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x		x			M50955	Mitsubishi	
x		x		x			M50941-PGYS	Mitsubishi	
x		x		x			M50747ES	Mitsubishi	
x		x		x	Rockwell	Serial I/O, UART	M50747	Mitsubishi	
x		x		x	Rockwell	EPROM version of M50747	M50747E	Mitsubishi	5
x		x		x	Rockwell	12-MHz version of M50747	M50747H	Mitsubishi	
x	x	x		x		OTP Version	M38002E4	Mitsubishi	
x	x	x		x		EPROM Version, High Voltage	M38002E4SS	Mitsubishi	
x		x		x			M37450M4	Mitsubishi	
x	x	x		x		OTP Version	M38102ES	Mitsubishi	10
x	x	x	x			EPROM Version	M38102E5SS	Mitsubishi	
x	x	x		x		Port Clock Function	M38102M5	Mitsubishi	
x	x						μPD78CG14	NEC	
x	x						μPD78C14A	NEC	
x		x		x			M50734-10	Mitsubishi	15
x		x		x	Rockwell	Serial I/O, A/D Converter, UART, step motors, PWM	M50734	Mitsubishi	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O, ROM-less	MB89T713	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O, OTP	MB89P713	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O and Masked ROM	MB89713	Fujitsu	
x	x	x	x	x		Piggyback Emulation Device for MB89713/89715	MB89PV718	Fujitsu	20
x	x	x	x	x		Piggyback Emulation Device for MB89765	MB89PV765	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O, ROM-less	MB89T715	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, U/D Counter, ROM-less	MB89T765	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O, OTP	MB89P715	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O, Windowed EPROM	MB89W715	Fujitsu	25
x	x	x	x	x		A/D, UART, Serial I/O, PWM, Real-Time I/O and Masked ROM	MB89715	Fujitsu	
x	x	x	x	x		A/D, UART, Serial I/O, PWM, U/D Counter and Masked ROM	MB89765	Fujitsu	
						ROM-less μPD78C06.	μPD78C05	NEC	
						46 I/O Lines, 8-bit timer.	μPD78C06	NEC	
x		x		x			M37450M8	Mitsubishi	30
x	x						μPD78C10	NEC	
x	x						μPD78C10A	NEC	
x	x						μPD78C11	NEC	
x	x						μPD78C11A	NEC	
x	x						μPD78C12A	NEC	35
x	x						μPD78CP14	NEC	
x	x						μPD78C14	NEC	
x	x	x	x	x		80C51 core architecture; has three additional 8-Bit Ports; EPROM version is 87C451	SC83C451	Signetics	
x	x	x				UART, A/D, watchdog timer, PWM output, serial port	TMS370C150	TI	
x	x	x				256 bytes data EEPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS370C250	TI	40

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	CMOS	5	68	8	112K	73	256x8	4Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	256x8	4Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	256x8	4Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	256x8	8Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	256x8	8Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	512x8	none	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	512x8	none	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	512x8	16Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	512x8	16Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8	112K	73	512x8	16Kx8	N/A	20	1/12.6	9	x	x
8	CMOS	5	68	8–24	64K	255	256x8	8Kx8		16	0.75/3	15		x
8	CMOS	5	68	8,16,24	64K	111	256x8			16	.75/10	12	x	x
8	CMOS	5	68	8,16,24	64K	111	256x8	8Kx8		16	.75/10	12	x	x
8	CMOS	5	72	8	64K	69	144x8	4Kx8		4	2/9	6	x	x
8	CMOS	5	72	8	64K	69	144x8	64Kx8		4	2/9	6	x	x
8	CMOS	5	72	8	64K	69	192x8	8Kx8	4	2/9	46	x	x	X
8	CMOS	5	72	8	64K	69	256x8	8K	8	8	1/4.5	6	x	x
8	CMOS	5	80	8	16K	69	128x8	4K		4	2/9	6	x	x
8	CMOS	5	80	8	16K	69	192x8	6Kx8	8	8	1/3.5	9	x	x
8	CMOS	5	80	8	16K	69	256x8	8kX8		8	1/3.5	9	x	x
8	CMOS	5	80	8	16K	69	512x8	8Kx8		3.2	2.5/10	6		x
8	CMOS	5	80	8	16K	69	512x8	12Kx8		4	2/9	6	x	x
8	CMOS	5	80	8	64K	71	128x8	4Kx8		10	0.8/3.6	16	x	x
8	CMOS	5	84	8,16,24	64K	111	256x8			12	1/10	14	x	x
8	CMOS	5	84	8,16,24	64K	111	256x8	8Kx8		12	1/10	14	x	x
8	CMOS	5	464	8	64	69	256x8	16Kx8		4	2/9	6	x	x
8	CMOS	5.0	64	8	64K	69	128x8	4096x8		8	1.0/4.5	7	x	x
8	CMOS	5.0	64	8	64K	69	256x8	8192x8		8	1.0/4.5	7	x	x
8	CMOS	15	64	8	64K	71	384	16K		5	0.8	15	x	x
8	CMOS	25–6	40–44	8	64K	61	128x8	2Kx8		6.5	1.5/15	3	x	x
8	CMOS	3.6	28	8,16,24	8K	26	64x8	3.8Kx8		8	3.3/8.2	5	x	x
8	CMOS	45	64	8	65K	69	160x8	10Kx8		4	2/9	6	x	X
8	CMOS	5	44	8–16		62	1408	14592		2.1	0.5	5	x	x
8	ECL	5	64	20		32				10			x	x
8	HCMOS	5	40	8–32			176x8	4108x8				5		
8	HCMOS	5	52	8–32			512x8	12Kx8						
8	HMOS	5	40	8	4K		256x8			11	1.4/2.8	1	x	x
8	HMOS	5	40	8	4K	96	256x8	4Kx8		11	1.4/2.8	1	x	x
8	HMOS	5	40	8,16	4K	96	64x8			8	1.9	2	x	x

Software Support									
	High Level Language	Programs							
Cross Assembler		Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x				256 bytes data EEPROM, 4K prog. EEPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS30C850	TI	
x	x	x				256 bytes data EEPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS370C050	TI	
x	x	x				UART, A/D, watchdog timer, PWM output, serial port	TMS370C350	TI	
x	x	x				256 bytes data EEPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS370C052	TI	
x	x	x				UART, A/D, watchdog timer, PWM output, serial port	TMS370C352	TI	5
x	x	x				UART, A/D, watchdog timer, PWM output, serial port	TMS370C156	TI	
x	x	x				512 bytes data EEPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS370C256	TI	
x	x	x				512 bytes data EEPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS370C056	TI	
x	x	x				UART, A/D, watchdog timer, PWM output, serial port	TMS370C356	TI	
x	x	x				512 bytes data EEPROM, 16K prog EPROM, UART, A/D, watchdog timer, PWM output, serial port	TMS370C756	TI	10
x	x	x	x	x		80C51 core architecture, 10-Bit A/D, PWM, watch-dog timer, capture/compare, EPROM version is 87C552.	S83C552	Signetics	
x	x	x	x	x		CMOS Version of the SAB80535	SAB80C535	Siemens	
x	x	x	x	x		ROM Version of the SAB803535	SAB80C515	Siemens	
x		x		x			M50744T	Mitsubishi	
x		x		x			M50746	Mitsubishi	15
x		x		x			M50954	Mitsubishi	
x		x		x			M50747T	Mitsubishi	
x		x		x			M50930T	Mitsubishi	
x		x		x			M37410M3	Mitsubishi	
x		x		x			M37410M4	Mitsubishi	20
x		x		x		DTMF Generator LCD (128 segments)	M37415M4	Mitsubishi	
x		x		x			M50931-PGYS	Mitsubishi	
x	x	x		x			M37450M2	Mitsubishi	
x	x	x	x	x		SAB80C535 + Math Unit + Data Pointers + Serial Port and more.	SAB80C537	Siemens	
x	x	x	x	x		ROM Version of the SAB80C537	SAB80C517	Siemens	25
x		x		x			M50959	Mitsubishi	
x		x				Timers, clock Sync. Serial I/O	SMC7464	S-MOS	
x		x				Timers, Serial I/O (Sync/Async)	SMC7468	S-MOS	
x	x	x		x			M38002M4	Mitsubishi	
x		x				13-bit timer, 40 PDIP and 44 PLCC package	TMS70C20	TI	30
x		x	x	x	x	Built-in watchdog, timer + prescaler, A/D, EPROM and OTP versions	ST6225	SGS-Thomson	
x		x		x			M50963	Mitsubishi	
	x	x				16-Bit Timer 31 I/O	TMP68HC05C4	Toshiba	
x		x	x	x		35% faster than 8x305	8X401	Signetics	
	x	x					MC68HC05A6	Motorola	35
	x	x					MC68HC711E9	Motorola	
		x	x	x		27 I/O lines. Can be used with external RAM and ROM.	8040AHL	Intel	
		x	x	x		27 I/O lines. Can be used with external RAM and ROM.	8050AH	Intel	
						CPU with power down mode. Can be used with external RAM or ROM.	M8035HL	Intel	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (µs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	HMOS	5	40	8,16	4K	96	64x8			11	1	1	x	x
8	HMOS	5	40	8,16	4K	96	64x8	1Kx8		8	1.4/2.8	1	x	x
8	HMOS	5	40	8,16	4K	96	128x8			8	1.9	2	x	x
8	HMOS	5	40	8,16	4K	96	128x8			11	1.4/2.8	2	x	x
8	HMOS	5	40	8,16	4K	96	128x8	2Kx8		11	1.4/2.8	1	x	x
8	HMOS	5	40	8,16,24	64K	111	128x8			12	1/4	2	x	x
8	HMOS	5	40	8,16,24	64K	111	128x8	4Kx8		12	4	2	x	x
8	HMOS	5	40	8,16,24	65K	111	256x8			12	1/4	2	x	x
8	HMOS	5	40	8,16,24	65K	111	256x8	8Kx8		12	1.4/2.8	2	x	x
8	NMOS	5		8–16	4K			2K		11			x	x
8	NMOS	5		8–16	4K		64	1K		6			x	x
8	NMOS	5		8–16	4K		256x8	4Kx8		11	1.4/2.8	1		
8	NMOS	5		8–16	4K	90	64x8	1Kx8		6	1.4/2.8	1		
8	NMOS	5		8–16	4K	90	128x8	2Kx8		11	1.4/2.8	1		
8	NMOS	5		8–16	4K	96	64x8			6	1.4/2.8	1		
8	NMOS	5		8–16	4K	96	128x8			11	1.4/2.8	1		
8	NMOS	5		8–16	4K	96	256x8			11	1.4/2.8	1		
8	NMOS	5		8,16	4K		64x8	1Kx8		11	1.36	1	x	x
8	NMOS	5		8,16	4K		256x8			11	1.36	1	x	x
8	NMOS	5		8,16	4K		256x8	4Kx8		11	1.36	1		
8	NMOS	5	40	8–16	4K		64			6			x	x
8	NMOS	5	40	8–16	4K		64x8	1Kx8		6	2.5/5	1		
8	NMOS	5	40	8–16	4K		128			11			x	x
8	NMOS	5	40	8–16	4K	96	64x8			6	2.5/5	1		
8	NMOS	5	40	8–16	4K	96	64x8	1Kx8		6	2.5/5	1		
8	NMOS	5	40	8–16	4K	96	128x8			11	1.4/2.8	1	x	x
8	NMOS	5	40	8–16	4K	96	128x8	2Kx8		11	1.4/2.8	1	x	x
8	NMOS	5	40	8–24	64K	255	128x8	4Kx8		15	0.8/3.2	5		x
8	NMOS	5	40	8–24	64K	255	256x8	8Kx8		15	0.8/3.2	6		x
8	NMOS	5	40	8–32	64K	158	26x8			4	2	3		
8	NMOS	5	40	8,16	4K		256x8			11	1.36	1	x	x
8	NMOS	5	40	8,16	4K		256x8	4Kx8		11	1.36	1	x	x
8	NMOS	5	40	8,16	4K		256x8	4Kx8		11	1.36	1	x	x
8	NMOS	5	40	8,16	4K	96	64x8			11	1.36	1	x	x
8	NMOS	5	40	8,16,24	64K	111	128x8	4K		20	0.6/10	2	x	x
8	NMOS	5	40	8,16,24	64K	111	256x8			18	0.7/10	2	x	x
8	NMOS	5	40	8,16,24	64K	111	256x8	8K		18	0.7/10	2	x	x
8	NMOS	5	40	8,16,24	64K	111	256x8	16Kx8		16	0.75/10	6	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x		x	x	x		Can be used with external ROM and RAM. 27 I/O lines, 8-bit timer/counter.	8035AHL	Intel	
x		x	x	x	AMD	1K ROM. 27 I/O lines. 8048H-1 has 11 MHz clock. Can be used with external RAM and ROM.	8048AH	Intel	
						CPU with power down mode. Can be used with external RAM or ROM.	M8039HL	Intel	
x		x	x	x	AMD	Can be used with external ROM and RAM.	8039AHL	Intel	
x		x	x	x	AMD, NEC, Fujitsu, Signetics, Mitsubishi	Can be used with external ROM and RAM.	8049AH	Intel	5
x	x	x	x	x	AMD	Two 16 bit counters, serial I/O port Boolean processor.	8031AH	Intel	
x	x	x	x	x	AMD	Two 16 bit counters, serial I/O port Boolean processor.	8051AH	Intel	
x	x	x	x	x		Three 16-bit timer/counters. Serial I/O port.	8032	Intel	
x	x	x	x	x		Three 16-bit timer/counters. Serial I/O port.	8052	Intel	
		x	x	x	NEC, Fujitsu, Signetics		TMP8049	Toshiba	10
		x	x	x	AMD, Intel, NEC, Fujitsu, Signetics	8748 has U.V. PROM.	TMP8048	Toshiba	
							8050	Signetics	
					AMD, Fujitsu, Intel, National, NEC		8048	Signetics	
					AMD, Fujitsu, Intel, National, NEC		8049	Signetics	
					AMD, Fujitsu, Intel, National, NEC		8035	Signetics	15
					AMD, Fujitsu, Intel, National, NEC		8039	Signetics	
					AMD, Fujitsu, Intel, National, NEC		8040	Signetics	
x		x	x	x	Intel	Lowpower version of INS8048.	INS8048L	National	
x		x	x	x	Intel	ROMless version of INS8050L.	INS8040L	National	
x		x	x	x	Intel		INS8050L	National	20
		x	x	x	AMD, Intel, National, NEC, Fujitsu, Signetics		TMP8035	Toshiba	
x				x	AMD, Intel, Signetics, Siemens	Same as PD8048 but with 1K EPROM.	μPD8748	NEC	
		x	x	x	AMD, Intel, National, NEC, Fujitsu, Signetics		TMP8039	Toshiba	
x				x	AMD, Intel, Signetics, Siemens	Can be used with external RAM and ROM, 27 I/O lines, 8 bit interval timer/counter.	μPD8035L	NEC	
x				x	AMD, Intel, Signetics, Siemens	27 I/O lines, 8 bit interval timer/events counter.	μPD8048	NEC	25
		x	x	x	Fujitsu, Intel, Signetics	Can be used with external RAM and ROM, 27 I/O lines, programmable, interval timer. Pin compatible with 8039.	μPD8039L	NEC	
		x	x	x	Fujitsu, Intel, Signetics	Same as PD8039L but with 2K ROM.	μPD8049	NEC	
x	x	x	x	x	Intel	NMOS version of 80C51	SCN8051	Signetics	
x	x	x	x	x	Intel	Pin compatible with 8051 with twice the ROM and RAM; third timer.	SCN8052	Signetics	
x	x			x		Z80 compatible, 158 instructions, 8080A software compatible, 26 bytes R/W memory, on chip dynamic RAM refresh circuitry.	μPD780	NEC	30
x		x	x	x		ROMless INS8050UL	INS8040UL	National	
x		x	x	x		Microwire/Plus Serial Port	INS8050U	National	
x		x	x	x		Microwire/Plus Serial Port Low Power	INS8050UL	National	
x		x	x	x	Intel	Lowpower version of INS8035.	INS8035L	National	
x	x	x	x	x	AMD	Two 16-bit counters, serial I/O	SAB8051A	Siemens	35
x	x	x	x	x	AMD	Three 16-bit counters, serial I/O	SAB8032B	Siemens	
x	x	x	x	x	AMD	Three 16-bit counters, serial I/O	SAB8052B	Siemens	
x	x	x	x	x	x	SAB80328 + 16K ROM	SAB80513	Siemens	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capa-bility	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Proto-typing System	In-Circuit Emulator
Microcontrollers (Cont'd)														
8	NMOS	5	40	8,16,24	64K	111	256x8	32Kx8		16	0.75/10	6	x	x
8	NMOS	5	64	8	64KB	158	256x8			15	0.8	12	x	x
8	NMOS	5	64	8	64KB	158	256x8	4Kx8		15	0.8	12	x	x
8	NMOS	5	64	8	64KB	158	256x8	4Kx8		15	0.8	12	x	x
8	NMOS	5	64	8–32	56K	165	256x8	1Kx8	x	12	1 *			
8	NMOS	5	64	8–32	56K	165	256x8	1Kx8	x	12	1 *			
8	NMOS	5	64	8–32	60K	153	256X8	4096X8	x	12	1 *			
8	NMOS	5	64	8–32	65K	153	256x8		x	12	1 *			
8	NMOS	5	64	8–32	65K	165	256x8		x	12				
8	NMOS	5	68	8,16,24	64K	111	128x8			16	0.7/10	2	x	x
8	NMOS	5	68	8,16,24	64K	111	128x8	4K		16	0.7/10	2	x	x
8	NMOS	5	68	8,16,24	64K	111	256x8			15	0.8/10	4	x	x
8	NMOS	5	68	8,16,24	64K	111	256x8	8Kx8		12	1/10	12	x	x
8	NMOS	5	68	8,16,24	64K	111	256x8	16Kx8		12	1/10	12	x	x
8	TTL	5		16	8K					8			x	x
8	TTL	5		16	8K					10			x	x
8	XMOS	5		8,16	4K		256	See comments		11				x
8	XMOS	5	40	8,16	4K		64x8	1Kx8		11	1.36	1		
8	XMOS	5	40	8,16	4K		128x8	2Kx8		11	1.36	1		
8	XMOS	5	40	8,16	4K		128x8	2Kx8		11	1.36	1		
8	XMOS	5	40	8,16	4K		256x8			11	1.36	1		
8	XMOS	5	40	8,16	4K		256x8	4Kx8		11	1.36	1		
8	XMOS	5	40	8,16	4K	97	128x8			11	1.36	1	x	x
8	XMOS	5	40	8,16	4K	97	128x8			11	1.36	1	x	x
16	CMOS	5	28	23		20	128x16	510x13 and 512x23	x	8.3	0.24	1.0	x	x
16	CMOS	5	40	16	4K	60	144x16	1.5K/4K	x	14	0.26	15	x	x
16	CMOS	5	40	16	4K	60	256x8	4Kx8		25	0.16	1	x	x
16	CMOS	5	40	16	4K	60	256x16	4K	x	25	0.6	15	x	x
16	CMOS	5	52	8,16		32x16				22.2				
16	CMOS	5	52	8,16	User Defined		32x16			10.1				
16	CMOS	5	52	8,16	User Defined		32x16			12.7				
16	CMOS	5	52	8,16	User Defined		32x16			12.7				
16	CMOS	5	52	8,16	User Defined		32x16			15.4				
16	CMOS	5	52	8,16	User Defined		32x16			15.4				
16	CMOS	5	52	8,16	User Defined		32x16			15.4				
16	CMOS	5	52	8,16	User Defined		32x16			15.4				
16	CMOS	5	52	8,16	User Defined		32x16			18.9				

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x	x	x		SAB8032B + 32K	SAB8352-5	Siemens	
x	x						μPD7810H	NEC	
x	x						μPD78PG11H	NEC	
x	x						μPD7811H	NEC	
						16-Bit Multiply/Divide, EPROM, USART	μPD78P09	NEC	5
						16-Bit Multiple/Divide, ROM bus, USART	μPD7809	NEC	
						16-Bit ALU, A/D Converter, USART	μPD7811	NEC	
						16-Bit ALU, A/D Converter, USART	μPD7810	NEC	
						16-Bit Multiple/Divide, ROM bus, USART	μPD7807	NEC	
x	x	x	x	x		8-Input A/D, two 16-bit counters, serial I/O	SAB80532	Siemens	10
x	x	x	x	x		8-Input A/D, two 16-bit counters, serial I/O	SAB80512	Siemens	
x	x	x	x	x	AMD	8-Input A/D, three 16-bit counters, serial I/O	SAB80535	Siemens	
x	x	x	x	x		ROM Version of the SAB80535	SAB80515	Siemens	
x	x	x	x	x	x	SAB80535 + 16K ROM	SAB83515-4	Siemens	
x		x	x	x	AMD		8X300	Signetics	15
x		x	x	x	AMD		8X305	Signetics	
x		x	x	x		Piggy-back microcomputer, emulates 8048/49/50, socket for program module and EPROM.	NS87P50	National	
x		x	x	x	Intel, NEC, AMD		INS8048	National	
x		x	x	x	Intel, NEC, AMD	Lowpower standby mode, on-chip bettery charging.	INS8049	National	
x		x	x	x		Low power version of INS8049.	INS8049L	National	20
x		x	x	x	Intel	ROMless version of INS8050.	INS8040	National	
x		x	x	x	Intel		INS8050	National	
x		x	x	x	Intel, NEC, AMD	ROMless version of INS8049.	INS8039	National	
x		x	x	x		Low power version of INS8039.	INS8039L	National	
x					OKI	CMOS Version of 7720	μPD77C20	NEC	25
x	x	x	x			Harvard architecture, hardware multiplier, eight I/O ports	TMS320C10-14	TI	
x		x	x	x			TMS320C15-25	TI	
x	x	x	x			EPROM program memory	TMS320E15-25	TI	
					AMD, SGS-Thomson		CY7C9116-45C	Cypress	
					AMD, SGS-Thomson		CY7C9117-99M	Cypress	30
					AMD, SGS-Thomson		CY7C9117-79C	Cypress	
					AMD, SGS-Thomson		CY7C9117-79M	Cypress	
					AMD, SGS-Thomson		CY7C9116-65C	Cypress	
					AMD, SGS-Thomson		CY7C9116-65M	Cypress	
					AMD, SGS-Thomson		CY7C9117-35C	Cypress	35
					AMD, SGS-Thomson		CY7C9117-65M	Cypress	
					AMD, SGS-Thomson		CY7C9117-53C	Cypress	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Microcontrollers (Cont'd)														
16	CMOS	5	52	8,16	User Defined		32x16			22.2				
16	CMOS	5	64	8	16M	103	2Kx8	32Kx8		16	0.25/4.5	20		X
16	CMOS	5	64	8	16M	103	512x8	16Kx8		8	0.5/9	20		x
16	CMOS	5	64	8	16M	103	512x8	16Kx8		16	0.25/4.5	20		x
16	CMOS	5	64	9	User Defined	512				27	0.024/0.037		x	x
16	CMOS	5	64	9	User Defined	512				32	0.024/0.037		x	x
16	CMOS	5	64	9	User Defined	512				35	0.024/0.037		x	x
16	CMOS	5	64	9	User Defined	512				41	0.024/0.037		x	x
16	CMOS	5	68	16	4K	60	256x16	4K	x	25	0.16	15	x	x
16	CMOS	5	68	16	4K	60	256x16	4K	x	25	0.16	15	x	x
16	CMOS	5	68	16	128K	133	1.5Kx16	256x8	x	40	0.1	6	x	x
16	CMOS	5	68	16	128K	133	544x16	4K	x	40	0.6	6	x	x
16	CMOS	5	68	16	128K	133	544x16	4K	x	50	0.6	6	x	x
16	CMOS	5	80	8	16M	103	2Kx8	32Kx8		8	0.5/9		x	x
16	CMOS	5	80	8	16M	103	2Kx8	32Kx8		16	0.25/4.5	20		x
16	CMOS	5	80	8	16M	103	512x8		x	16	0.25/4.5	20		x
16	CMOS	5	80	8	16M	103	512x8	16Kx8		8	0.5	20		x
16	CMOS	5	80	8	16M	103	512x8	16Kx8		16	0.25/4.5	20		x
16	CMOS	5	80	8	16M	103	512x8	16Kx8		16	0.25/4.5	20		x
16	CMOS	5	80	8	16M	103	512x8	16Kx8		16	0.25/4.5	20		x
16	CMOS	5	80	8	16M	103	512x8	16K8		20	0.20/3.6	20		x
16	CMOS	5	84							8	—/0.125	7		
16	CMOS	5	84	16	1M	300				8	0.123/0.250	14	x	
16	CMOS	5	84	16	1M	300				8	0.125/0.25	14	x	
16	CMOS	5	84	16	1M	300				8	0.125/0.250	14	x	
16	CMOS	5	84	16	1M	300				10	0.1/0.2	14	x	
16	CMOS	5	84	16	1M	300				10	0.1/0.2	14	x	
16	CMOS	5	84	16	1M	300				10	0.1/0.2	14	x	
16	CMOS	5	84	16	128K	256	8.5Kx16	2Kx16	x	40	0.05	7	x	x
16	CMOS	5	100	16,32	128K	200+	1Kx8			40	0.1/2	51	x	x
16	CMOS	5	100	16,32	128K	200+	1Kx8	8Kx8		40	.1/2	51	x	x
16	CMOS	5	144	16									x	x
16	CMOS	5	144	16	64 KB	256		128 KB		25		16	x	x
16	HMOS	5	68	8–48	1M	150			x	8	0.25/8.6	256		x
16/8	CMOS	5	64	8	64K	96	256x8		x	12	0.5/8.3	18	x	x
16/8	CMOS	5	64	8	64K	96	256x8	8Kx8	x	12	0.5/8.3	18	x	x

Software Support									
		Programs							
Cross Assembler	High Level Language	Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
					AMD, SGS-Thomson		CY7C9117-45C	Cypress	
X	X	X		X			M37701M4A	Mitsubishi	
x	x	x		x			M37701M2	Mitsubishi	
x	x	x		x			M37701M2A	Mitsubishi	
x	x	x	x	x	AMD	Replaces four 2901s and carry look-ahead logic	CY7C9101-36M	Cypress	5
x	x	x	x	x	AMD	Replaces four 2901s and carry look-ahead logic	CY7C9101-31C	Cypress	
x	x	x	x	x	AMD	Replaces four 2901s and carry look-ahead logic	CY7C9101-28M	Cypress	
x	x	x	x	x	AMD	Replaces four 2901s and carry look-ahead logic	CY7C9101-24C	Cypress	
x	x	x	x			Optimized for digital control systems applications	TMS320C14	TI	
x	x	x	x			Optimized for digital control systems appl., EPROM program memory.	TMS320E14	TI	10
x	x	x	x			Expand on-chip RAM	TMS320C26	TI	
x	x	x	x			Repeat instruction single cycle multiplier/accumulator, 16 I/O ports, EPROM program memory	TMS320E25	TI	
x	x	x	x			Repeat instruction single cycle multiplier/accumulator, 16 I/O ports	TMS320C25-50	TI	
x	x	x		x		A/D, two UARTs, eight 16-bit Timers, EPROM/OTP Versions Available	M37700M4	Mitsubishi	
x	x	x		x		A/D, two UARTs, eight 16-bit Timers, EPROM/OTP Versions Available	M37700M4A	Mitsubishi	15
x	x	x		x		Four DMA Channels, DRAM Controller, two UARTs, A/D	M37720	Mitsubishi	
x	x	x		x		A/D,two UARTS, eight 16-bit Timers, EPROM/OTP Versions Available	M37700M2	Mitsubishi	
x	x	x		x		A/D, two UARTs, eight 16-bit Timers, EPROM/OTP Versions Available	M37700M2A	Mitsubishi	
x	x	x		x		Additional Features Include: 3 & 4-Phase Motor Controls	M37704	Mitsubishi	
x	x	x		x		Additional Features Include: 3 & 4-Phase Motor Controls	M37705	Mitsubishi	20
x	x	x		x		10-bit A/D, sixteen 16-bit Timers	M37702	Mitsubishi	
							RTX2000/883	Harris	
x	x	x	x	x		High performance microcontroller with 3 timers, 2 stacks, interrupt controller, allon chip. Quadbus Architecture	RTX2001-8	Harris	
x	x	x	x	x			RTX2001A-8	Harris	
x	x	x	x	x		High proformance microcontroller with multiplier, 3 timers, 2 stacks, interrupt controller, allon chip. Quadbus Architecture	RTX2000-8	Harris	25
x	x	x	x	x		High performance microcontroller with multiplier, 3 timers, 2 stacks, interrupt controller, allon chip. Quadbus Architecture	RTX2000-10	Harris	
x	x	x	x	x		High performance microcontroller with 3 timers, 2 stacks, interrupt controller, allon chip. Quadbus Architecture	RTX2001-10	Harris	
x	x	x	x	x			RTX2001A-10	Harris	
x	x	x	x			Next generation fixed point DSP	TMS320C50	TI	
x	x	x	x	x		ROMless Version of the SAB83C166	SAB80C166	Siemens	30
x	x	x	x	x			SAB83C166	Siemens	
x	x	x	x	x		MBU	LR64551	LSI Logic	
x	x	x	x	x			LR64501	LSI Logic	
x	x	x	x	x	Fujitsu, AMD, Siemens		80188	Intel	
x	x	x					μPD78310A	NEC	35
x	x	x					μPD78P312A	NEC	

Bold face indicates additional data is provided on the page noted.

MICROPROCESSORS (Cont'd)

General				Architecture									Hardware Support	
							(For Microcomputers Only)							
Data Word Size (bits)	Process Type	Supply Voltage (V)	No. of Pins	Instruction Word Size (bits)	Directly Addressable Memory (words)	No. of Basic Instructions	On-Chip RAM (bits)	On-Chip (P)ROM (bits)	DMA Capability	Maximum Clock Frequency (MHz)	Instruction Time Min/Max (μs)	No. of Interrupt Levels	Prototyping System	In-Circuit Emulator
Microcontrollers (Cont'd)														
16/8	CMOS	5	64	8	64K	96	256x8	8Kx8	x	12	0.5/8.3	18	x	x
16/8	CMOS	5	64	8	64KB	109	512x8		x	16	0.25/5.4	23	x	x
16/8	CMOS	5	64	8	64KB	109	512x8	16Kx8	x	16	0.25/5.4	23	x	x
16/8	CMOS	5	64	8	64KB	109	512x8	16Kx8	x	16	0.25/5.4	23	x	x
16/8	CMOS	5	64	8	64KB	109	640x8		x	16	0.25/5.4	23	x	x
16/8	CMOS	5	64	8	64KB	109	640x8	16Kx8	x	16	0.25/5.4	23	x	x
16/8	CMOS	5	64	8	64KB	109	640x8	16Kx8	x	16	0.25/5.4	23	x	x
32	CMOS	5	68	16	64M	130				40	0.2	4	x	x
32	CMOS	5	68	16	64M	130				50	0.16	4	x	x
32	CMOS	5	68	16	64M	130				60	0.132	4	x	x
32	CMOS	5	68	32	32M	86				60	0.132	16	x	x
32	CMOS	5	144	16	128M	155				40	0.125	8	x	x
32	CMOS	5	144	32	128M	106				40	0.1	16	x	
32	CMOS	5	175	32						33			x	
32	CMOS	5	175	32	2 GB	70				33		6	x	x
32	CMOS	5	180	32	16M	114	32x8	4Kx32	x	33	0.06	32	x	x
16	HMOS	5		16–80	16M	56				10				
44	CMOS	2.7–6.0	64	8	8KB	136	512x4	8Kx8		5	0.95	8		x
48	CMOS	5	64	8	64	69	160x8	6Kx8		8	1/4.5	5	x	x
48	CMOS	5	72	8	64K	69	160x8	64x8		4	2/9	6	x	x

Software Support									
	High Level Language	Programs							
Cross Assembler		Debug	Diagnostic	Edit	Alternate Sources	Comments	Device	Source	Line
x	x	x					μPD78312A	NEC	
x	x	x					μPD78327	NEC	
x	x	x					μPD78P328	NEC	
x	x	x					μPD78328	NEC	
x	x	x					μPD78320	NEC	5
x	x	x					μPD78P322	NEC	
x	x	x					μPD78322	NEC	
x	x	x				Graphic Signal Processor	TMS34010-40	TI	
x	x	x				Graphics Signal Processor	TMS34010-50	TI	
x	x	x				Graphics Signal Processor	TMS34010-60	TI	10
x	x	x	x	x		Graphics System	TMS34010	TI	
x	x	x				Second generation Graphic Signal Processor	TMS34020-40	TI	
x	x	x	x	x		Graphics System	TMS34020	TI	
						Co-Processor	**LR3010A**	**LSI Logic (3534)**	
x	x	x	x	x			**LR3000A**	**LSI Logic (3534)**	15
x	x	x	x			32-Bit floating point DSP	TMS320C30	TI	
						General purpose register machine, supports memory to memory operations.	SCN68000	Signetics	
x	x						μPD75268	NEC	
x		x		x	Rockwell	High-voltage I/Os, VFD, PWMs	M50754	Mitsubishi	
x		x		x			M50964	Mitsubishi	20

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components

This section presents the major microprocessor system devices organized into system groups, ie 6800, 8080, 68000, etc. It includes those RAM's, ROM's and PROM's which are unique to a system. It omits most general purpose memories as they are listed in the Memory section. Similarly, buffers, line drivers,transceivers, UART's, etc. are covered briefly here as they are presented in depth in the Digital and Interface sections.

Bit Slice

Macrologic Bipolar

Function	Device	Source	Line
Buffer (16x4 First-in first-out memory. See also Memory-FIFO's)			
	9403AC	National	
	9403AM	† National	
	N9403	Signetics	
CRC Generator/Checker (See also Interface-Error Checking Circuits)			
	N9401	Signetics	
	S9401	† Signetics	5

Macrologic CMOS

Function	Device	Source	Line
Microprogram Sequencer			
	GD4708B	GoldStar	
Programmable Bit Rate Generator			
	HD4702-9	◊† Harris	
Programmable Bit Rate Generator (See also Digital-CMOS-Miscellaneous-Bit Rate Generator)			
	GD4702B	GoldStar	
	HD4702	◊° Harris	
	HD4702-2	◊† Harris	10
	HD4702/883	◊† Harris	
RAM (16x4, clocked) Write-While-Read (See also Digital-CMOS-Memories)			
	GD4710B	GoldStar	
RAM (256x4) (See also Memory-RAM's)			
	GD4721B	GoldStar	
RAM (1024x1) (See also memory-RAM's)			
	GD4736B	GoldStar	
ROM (256x8) (See also Memory-ROMS)			
	GD4735B	GoldStar	15

2 Bit Slice

3000

Function	Device	Source	Line
Central Processing Element			
	N3002	Signetics	
	S3002	† Signetics	
Microprogram Control Unit			
	N3001	Signetics	
	S3001	† Signetics	

4 Bit Slice

2900

Function	Device	Source	Line
Microprocessor Slice			
	MAS2901	◊‡ Marconi	20
Microprocessor Slice, 4-Bit			
	AM29C01	AMD	
Microprocessor Slice, 4-Bit Cascadable			
	VS29G01C	Vitesse	
	VS29G01C-1	Vitesse	
	VS29G01M	† Vitesse	
Microprocessor, Four 2901's and a 2902 Look-Ahead Carry in one device			
	2901X4	IMI	25
	4x2901B	IMI	
Microprocessor, 4-Bit Slice, Cascadable			
	AM2901BC	◊ AMD	
	AM2901BM	◊† AMD	
	AM2903AC	AMD	
	AM2903AM	† AMD	30
	AM2903C	AMD	

(Continued)

Function	Device	Source	Line
Microprocessor, 4-Bit Slice, Cascadable (Cont'd)			
	AM2903M	† AMD	
	CY2901CM	† Cypress	
	CY7C901-32M	◊† Cypress	
	CY7C901-88M	◊† Cypress	35
	CY7C901C	◊ Cypress	
	CY7C901M	◊† Cypress	
	IDT39C01C	IDT	
	2901-Cell	° LSI Logic	
	IDM2901A-2	National	40
	IDM2901AC	National	
	NCR2910-Cell	° NCR	
	SFC2901B	SGS-Thomson	
	SFC2901C	SGS-Thomson	
	SFC2903	SGS-Thomson	45
	2901-Cell	° SGS-Thomson	
	2901-Cell	° Waferscale	
ALU (4-bit slice)			
	H2901	Harris	
Bus Transceivers (See also Interface-Line Transceivers)			
	AM2907C	AMD	
	AM2907M	† AMD	50
	AM2917AC	AMD	
	AM2917AM	† AMD	
	AM2946C	AMD	
	AM2947C	AMD	
	AM2948C	AMD	55
	AM2949C	AMD	
	SFC2915A	SGS-Thomson	
	SFC2917	SGS-Thomson	
Clock Generator and Driver			
	AM2925C	AMD	
	AM2925M	† AMD	60
DMA Address Generator			
	AM2940C	AMD	
	AM2940M	† AMD	
DMA Address Generator/Programmable Timer/Counter			
	AM2942C	◊ AMD	
	AM2942M	◊† AMD	
Dynamic Memory Controller			
	AM2964B	AMD	65
	AM2964BC	AMD	
	AM2964BM	† AMD	
	AM2968	AMD	
	MC74F2968	Motorola	
Error Correction and Detection Circuit, 16-Bit			
	AM2960-1	AMD	70
	AM2960C	AMD	
	AM2960M	† AMD	
	IDT39C60	◊ IDT	
	IDT39C60-1	◊ IDT	
	MC74F2960	Motorola	75
Error Correction and Detection Circuit, 32-bit			
	IDT49C460	◊ IDT	
	IDT49C460A	◊ IDT	
	IDT49C460B	◊ IDT	
	IDT49C460C	◊ IDT	
Error Correction Multiple Bus Buffer, 4-Bit (datapath interface between AM2960, data bus, and RAM)			
	AM2904C	AMD	80
	AM2904M	† AMD	
	AM2961C	AMD	
	AM2961M	† AMD	
	AM2962C	AMD	
	MC74F2961	Motorola	85
	MC74F2962	Motorola	
I/O Ports, 8-Bit Bidirectional			
	AM2950A	AMD	
	AM2951A	AMD	
	AM2952A	AMD	
	AM2953A	AMD	90
	IDT29FCT52AT	IDT	
	IDT29FCT52BT	IDT	
	IDT29FCT52C	IDT	
	IDT29FCT52CT	IDT	

(Continued)

Function	Device	Source	Line
I/O Ports, 8-Bit Bidirectional (Cont'd)			
	IDT29FCT53AT	IDT	95
	IDT29FCT53BT	IDT	
	IDT29FCT53C	IDT	
	IDT29FCT53CT	IDT	
Look-Ahead Carry Generator			
	AM2902AC	AMD	
	AM2902AM	† AMD	100
	IDT39C02A	IDT	
	IDM2902C	National	
	IDM2902M	† National	
	SFC2902A	SGS-Thomson	
Memory Timing Controller with EDAC			
	AM2969	† AMD	105
	MC74F2969	Motorola	
Memory Timing Controller without EDAC			
	MC74F2970	Motorola	
Micro Sequencer (12-bit)			
	H2910	Harris	
Microprogram Controller (20 MHz)			
	AM29C10A	AMD	
Microprogram Controller (25 MHz)			
	AM29C10A-1	AMD	110
Microprogram Sequencer, 4-Bit			
	AM2909AC	AMD	
	AM2911A	AMD	
	CY2909AC	Cypress	
	CY2909AM	† Cypress	
	CY2911AC	Cypress	115
	CY2911AM	† Cypress	
	CY7C909-30C	◊ Cypress	
	CY7C909-30M	◊† Cypress	
	CY7C909-40C	◊ Cypress	
	CY7C909-40M	◊† Cypress	120
	CY7C911-30C	◊ Cypress	
	CY7C911-30M	◊† Cypress	
	CY7C911-40C	◊ Cypress	
	CY7C911-40M	◊† Cypress	
	IDM2909AC	National	125
	IDM2911AC	National	
	SFC2909	SGS-Thomson	
	SFC2909A	SGS-Thomson	
	SFC2911	SGS-Thomson	
	SFC2911A	SGS-Thomson	130
Multiplier/Accumulator (16x16)			
	CY7C510C	◊ Cypress	
Multiplier Accumulator, 16x16 bit			
	CY7C510M	◊† Cypress	
Multiplier, 16x16 bit			
	CY7C516C	◊ Cypress	
	CY7C516M	◊† Cypress	
	CY7C517C	◊ Cypress	135
	CY7C517M	◊† Cypress	
Next Address Control Unit (use with 2911)			
	AM29811AC	AMD	
	AM29811AM	† AMD	
	IDM29811C	National	
	IDM29811M	† National	140
Pipeline Register (Writable Control Store and SSR diagnostics)	AM29818-1	AMD	
Priority Encoder			
	IDM29902C	National	
	IDM29902M	† National	
Priority Interrupt Encoder, Vectored			
	AM2914C	AMD	
	AM2914M	† AMD	145
	SFC2914	SGS-Thomson	
Programmable Event Generator			
	AM2971C	AMD	
	AM2971M	† AMD	
RAM, 16-Word by 4-Bit			
	AM29705A	AMD	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

4 Bit Slice

2900 (Cont'd)

Function	Device	Source
RAM (16x4) Two Outputs Ports		
	AM29705C	◊ AMD
	AM29705M	◊† AMD
	IDM29705AC	National
Quad D Flip-Flop with Two Output Ports		
	AM2919C	AMD
	AM2919M	† AMD
	SFC2919	SGS-Thomson
Quad D Register with Both Standard and Three-State Outputs (See also Digital-TTL-Flip-Flops)		
	AM2918C	AMD
	AM2918M	† AMD
	SFC2918	SGS-Thomson
Octal Memory Driver, Three-State		
	AM2965C	AMD
	AM2965M	† AMD
	AM2966C	◊ AMD
	AM2966M	◊† AMD
Octal Register, Three-State		
	AM2954C	AMD
8-Bit Bidirectional I/O Port		
	AM2952C	AMD
	AM2952M	† AMD
	AM2953C	AMD
	AM2953M	† AMD
	29F52C	◊ National
	29F52M	◊† National
	29F53C	◊ National
	29F53M	◊† National
8-Bit Diagnostic Register with Serial Shadow Register		
	AM29818	AMD
8-Bit Parallel I/O Port		
	AM2950C	AMD
	AM2950M	† AMD
	AM2951C	AMD
	AM2951M	† AMD
16-Way Branch Control Unit (use with 2909)		
	AM29803AC	AMD
	AM29803AM	† AMD
	IDM29803C	National
	IDM29803M	† National
64-Bit (16x4) Edge-Triggered Register, Three-State		
	IDM29903C	National

10800

Function	Device	Source
Arithmetic Logic Unit		
	MC10800	Motorola
Bidirectional Translator with Latch		
	MC10804	Motorola
	MC10805	Motorola
ECL Transceiver with Latch		
	MC10807	Motorola
Microprogram Control Function		
	MC10801	Motorola
Multibit Shifter (16-Bit programmable shifter)		
	MC10808	Motorola
Dual Address Register (32x9 stack)		
	MC10806	Motorola

8 Bit Slice

10900

Function	Device	Source
ALU, 8-Bit Slice		
	MC10900	Motorola
Microcode Sequencer		
	MC10904	Motorola

EPIC

Function	Device	Source
Microprocessor, CMOS		
	GP001AD	‡ Harris
Address Select Unit (Double)		
	GP514AD	‡ Harris
Bus Interface Unit		
	GP516	Harris
Double Address Select Unit		
	GP514	Harris
Double Register Select Unit		
	GP515	Harris
Emulating Controller		
	GP501AD	‡ Harris
Interrupt Control and Timing Unit		
	GP517	Harris
	GP517AD	‡ Harris
Level Shifter	GP511AD	‡ Harris
Microprogram Sequencer (2910)		
	GP502	Harris
Multiplier (8x8-bit)		
	GP503AD	‡ Harris
Register Select Unit (Double)		
	GP515AD	‡ Harris
ROM (512x16)		
	GP305AD	‡ Harris
ROM (4096 bit)		
	GP301AD	‡ Harris
	GP302AD	‡ Harris

16 Bit Slice

2900

Function	Device	Source
Microprocessor, 16-Bit Slice, Cascadable		
	CY7C9101C	◊ Cypress
	CY7C9101M	◊† Cypress

1 Bit

14500

Function	Device	Source
Microprocessor, Industrial Control Unit		
	MC14500B	Motorola
Latch, 8-Bit	MC14597BA	† Motorola
	MC14597BC	Motorola
	MC14598BA	† Motorola
	MC14598BC	Motorola
	MC14599BA	† Motorola
	MC14599BC	Motorola

4 Bit

1400

Function	Device	Source
Microcomputer		
	MN1400	Panasonic
	MN1402	Panasonic
	MN1403	Panasonic
	MN1404	Panasonic
	MN1405	Panasonic
	MN1430	Panasonic
	MN1432	Panasonic
	MN1435	Panasonic
	MN1450	Panasonic
	MN1453	Panasonic
	MN1454	Panasonic
	MN1455	Panasonic
	MN1498	Panasonic
Microcomputer, Evaluator		
	MN1499	Panasonic
	MN1499A	Panasonic

1500

Function	Device	Source
Microcomputer		
	MN1541	Panasonic
	MN1542	Panasonic
	MN1544	Panasonic
	MN1562	Panasonic
	MN1564	Panasonic
Microcomputer, Evaluator		
	MN1599	Panasonic
I/O Expander	MN1591	Panasonic

2100

Function	Device	Source
Program Development Device		
	SE2400P	TI

8840/50

Function	Device	Source
Microcomputer, Clock, RAM, ROM, I/O		
	MB8851	Fujitsu
	MB8851A	Fujitsu
	MB8851L	Fujitsu
	MB8853	Fujitsu
	MB8854A	Fujitsu
	MB8854L	Fujitsu
	MB8855	Fujitsu
	MB8858	Fujitsu

COP200

Function	Device	Source
Microcontroller, RAM, ROM, I/O		
	COP224C	National
	COP225C	National
	COP226C	National
	COP244C	National
	COP245C	National

COP400

Function	Device	Source
Microcontroller, Piggyback EPROM		
	COP402M	National
Microcontroller, Piggyback with EPROM Socket		
	COP420P	National
	COP420R	◊ National
	COP440R	National
	COP444CP	National
	COP444LP	National
	COP444LR	National
Microcontroller, RAM, ROM, I/O		
	COP313C	National
	COP313CH	National
	COP313L	National
	COP324C	National
	COP325C	National
	COP326C	National
	COP342	National
	COP344C	National
	COP345C	National
	COP413C	National
	COP413CH	National
Microcontroller, ROMless		
	COP402	National
	COP404	National
	COP404C	National
Microcontroller (with ROM)		
	COP210C	† National
	COP211C	† National
	COP310C	National
	COP310L	National
	COP311C	National
	COP311L	National
	COP320	National
	COP320L	National
	COP321	National
	COP321L	National
	COP322	National
	COP322L	National

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

4 Bit

COP400 (Cont'd)

Function	Device	Source
Microcontroller (with ROM) (Cont'd)		
	COP340	† National
	COP341	† National
	COP344L	◊ National
	COP345L	◊ National
	COP410C	◊ National
	COP410L	◊ National
	COP411C	◊ National
	COP411L	◊ National
	COP414L	◊ National
	COP420	◊ National
	COP420L	◊ National
	COP421	◊ National
	COP421L	◊ National
	COP422	National
	COP422L	◊ National
	COP440	National
	COP441	National
	COP442	National
	COP444L	◊ National
	COP445L	◊ National
	ETC9410	SGS-Thomson
	ETC9411	SGS-Thomson
	ETC9420	SGS-Thomson
	ETC9421	SGS-Thomson
	ETC9422	SGS-Thomson
	ETC9444	SGS-Thomson
	ETC9445	SGS-Thomson
	ETL9410	SGS-Thomson
	ETL9411	SGS-Thomson
	ETL9413	SGS-Thomson
	ETL9420	SGS-Thomson
	ETL9421	SGS-Thomson
	ETL9422	SGS-Thomson
	ETL9444	SGS-Thomson
	ETL9445	SGS-Thomson
	ET9413	SGS-Thomson
	ET9420	SGS-Thomson
	ET9421	SGS-Thomson
	ET9422	SGS-Thomson
Microcontroller (512x8 ROM, 32x4 RAM)		
	COP314L	National
Converter (8-bit A/D)		
	COP431	National
	COP432	National
	COP434	National
	COP438	National
LCD Display Controller		
	COP472-3	National
Liquid Crystal Display Controller		
	COP472	National
Vacuum Fluorescent Display Driver		
	COP370	National
	COP470	National

51000

Function	Device	Source
Microcomputer, RAM, ROM, I/O		
	KS51000	Samsung
	KS51200	Samsung
	KS52000	Samsung

OLMS40

Function	Device	Source
Microcomputer, I/O, Display Outputs, Timer		
	MSM58421	◊ OKI
	MSM58422	◊ OKI
Microcomputer, ROM, RAM, Timer/Counter, I/O		
	MSM5842	◊ OKI
	MSM5845	OKI
Microprocessor, Real-Time Clock Calendar		
	MSM5832	OKI
	MSM58321	OKI
	L5832	SGS-Thomson
Column Data Register for LCD		
	MSM5839	OKI
LCD Driver, 5-Digit		
	MSM58292	◊ OKI
LED Driver, 4-Digit		
	MSM58282	OKI
Row Scanning Controller for LCD DOT Matrix Driver		
	MSM5838	OKI

88200

Function	Device	Source
Microcomputer, Clock, RAM, ROM, I/O		
	MB88200	Fujitsu
	MB88201	Fujitsu
	MB88202	Fujitsu
	MB88205	Fujitsu

88500

Function	Device	Source
Microcomputer, Clock, RAM, ROM, I/O		
	MB88501	Fujitsu
	MB88503	Fujitsu
	MB88535	Fujitsu
	MB88536	Fujitsu
	MB88541	Fujitsu

SM Series

Function	Device	Source
Microcomputer		
	SM590	Sharp
	SM591	Sharp
Microcomputer, Expandable for External RAM/ROM		
	SM520	Sharp
Microcomputer, Multi-LCD Display, On-Chip LCD Driver		
	SM510	◊ Sharp
Microcomputer, On-Chip LCD Driver		
	SM5A	Sharp
	SM500	◊ Sharp
	SM531	◊ Sharp
Microcomputer, On-Chip LCD Driver, Expandable for External RAM	SM4A	Sharp
Microcomputer, On-Chip Melody Generator and LCD Driver	SM511	◊ Sharp
	SM530	◊ Sharp
Microcomputer, Serial Input/Output		
	SM550	◊ Sharp
	SM551	◊ Sharp
	SM552	◊ Sharp

TLCS47

Function	Device	Source
Microcomputer (single-chip, 2K ROM)		
	HMCS402C	Hitachi
	HMCS402CL	Hitachi
	HMCS412AC	Hitachi
	HMCS412C	Hitachi
	HMCS412CL	Hitachi
	HMCS44C	Hitachi
	HMCS44CL	Hitachi
	HMCS45C	Hitachi
	HMCS45CL	Hitachi
Microcomputer (single-chip, 2K ROM, LCD driver)		
	LCD-III	Hitachi
Microcomputer (single-chip, 4K ROM)		
	HMCS404AC	Hitachi
	HMCS404C	Hitachi
	HMCS404CL	Hitachi
	HMCS414AC	Hitachi
	HMCS414C	Hitachi
	HMCS414CL	Hitachi
	HMCS46C	Hitachi
	HMCS46CL	Hitachi
	HMCS47C	Hitachi
	HMCS47CL	Hitachi
Microcomputer (single-chip, 4K ROM, LCD driver)		
	LCD-IV	Hitachi
Microcomputer (single-chip, 4K ROM, 256x4 RAM)		
	HMCS424	Hitachi
Microcomputer (single-chip, 8K ROM)		
	HMCS408AC	Hitachi
	HMCS408C	Hitachi
Microcomputer, 1K ROM, Zero Cross Detector		
	TMP42C66	**Toshiba (3669)**
Microcomputer, 1K ROM, 11 I/O Lines		
	TMP42C60	**Toshiba (3669)**
	TMP4260	**Toshiba (3669)**
Microcomputer, 1K ROM, 23 I/O Lines		
	TMP42C70	**Toshiba (3669)**
	TMP4270	**Toshiba (3669)**
Microcomputer, 2K ROM		
	TMP47C200	Toshiba
Microcomputer, 2K ROM, DTMF		
	TMP47C25	Toshiba
	TMP47C26	Toshiba
Microcomputer, 2K ROM, LED Drive		
	TMP4720	Toshiba
Microcomputer, 2K ROM, PWM		
	TMP47C231A	Toshiba
	TMP47C232	Toshiba
Microcomputer, 2K ROM, VFT Drivers		
	TMP47C210A	Toshiba
Microcomputer, 4K ROM		
	TMP47C400	Toshiba
Microcomputer, 4K ROM, A/D, Watchdog Timer		
	TMP47C440A	Toshiba
Microcomputer, 4K ROM, A/D, Watchdog Timer, VFT Driver	TMP47C441A	Toshiba
Microcomputer, 4K ROM, I/O		
	TMP47C460A	Toshiba
Microcomputer, 4K ROM, LCD Drivers, Dual Clock		
	TMP47C425A	Toshiba
Microcomputer, 4K ROM, LED Drive		
	TMP4740	Toshiba
	TMP4746	Toshiba
Microcomputer, 4K ROM, PWM		
	TMP47C432	Toshiba
Microcomputer, 4K ROM, RAM, DTMF		
	TMP47C451A	Toshiba
	TMP47C452A	Toshiba
Microcomputer, 4K ROM, VFT Drivers		
	TMP47C410A	Toshiba
Microcomputer, 6K ROM, A/D, Watchdog Timer		
	TMP47C660	**Toshiba (3669)**
Microcomputer, 6K ROM, VFT Drivers, Watchdog Timer		
	TMP47C670	**Toshiba (3669)**
Microcomputer, 8K ROM, A/D, Watchdog Timer		
	TMP47C860	**Toshiba (3669)**
Microcomputer, 8K ROM, VFT Drivers, Watchdog Timer		
	TMP47C870	**Toshiba (3669)**
Microcomputer, 8K ROM, Watchdog Timer		
	TMP47C800	**Toshiba (3669)**
Microcomputer, 512 byte ROM, 11 I/O Lines		
	TMP42C40	**Toshiba (3669)**
	TMP4240	**Toshiba (3669)**
Microcomputer, 512 byte ROM, 23 I/O Lines		
	TMP42C50	**Toshiba (3669)**
	TMP4250	**Toshiba (3669)**

TLCS470

Function	Device	Source
Microcomputer (LCD, Timer/Counter, 36 I/O, E^2PROM, dual clock)	TMP47E820	Toshiba
Microcomputer (OTP, LED driver, 36 I/O, dual clock)	TMP47P800	Toshiba
Microcomputer (OTP, VFT, D/A, A/D, 53 I/O, dual clock)	TMP47P860	Toshiba
	TMP47P870	Toshiba

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

4 Bit

TLCS470 (Cont'd)

Function	Device	Source
Microcontroller, 4-Bit (DTMF generator, LCD driver)	**TMP47C858**	**Toshiba (3669)**
Microcontroller, 4-Bit (LED driver, 8-bit A/D)	**TMP47C1260**	**Toshiba (3669)**
	TMP47C1660	**Toshiba (3669)**
Microcontroller, 4-Bit (VFT driver, D/A, 12Kx8 ROM, 768x4 RAM)	**TMP47C1270**	**Toshiba (3669)**
Microcontroller, 4-Bit (16Kx8 ROM, VFT driver, 768x4 RAM)	**TMP47C1670**	**Toshiba (3669)**
Microcontroller, 4-Bit (4kx8 ROM, 256x4 RAM)	**TMP47C434**	**Toshiba (3669)**
Microcontroller, 4-Bit (6144x8 ROM, 384x4 RAM)	**TMP47C634**	**Toshiba (3669)**
	TMP47C635	**Toshiba (3669)**
Microcontroller, 4-Bit (8-bit A/D, LED driver, 6144x8 ROM, 384x4 RAM)	**TMP47C662**	**Toshiba (3669)**
Microcontroller, 4-Bit (8-bit A/D, 8Kx8 ROM, 512x4 RAM)	**TMP47C862**	**Toshiba (3669)**
Microcontroller, 4-Bit (8Kx8 ROM, 512x4 RAM)	**TMP47C850**	**Toshiba (3669)**

TMS2000

Function	Device	Source
ROMless TMS2000 Family Evaluator	SE2100P	TI
	SE2400P	TI

μCOM-75

Function	Device	Source
Microcomputer	μCOM-75	NEC
	μPD7527	NEC
Microcomputer, General Purpose Driver	μPD7506	◊ NEC
	μPD7507	◊ NEC
	μPD7507S	◊ NEC
	μPD7508	◊ NEC
	μPD7508A	◊ NEC
	μPD7508H	◊ NEC
	μPD75106	NEC
	μPD7517	NEC
	μPD75206	NEC
	μPD7528	NEC
	μPD75308	NEC
	μPD7538	NEC
	μPD7554	NEC
	μPD7556	NEC
Microcomputer, LCD Driver	μPD7501	◊ NEC
	μPD7502	◊ NEC
	μPD7503	◊ NEC
	μPD7514	◊ NEC
Microcomputer, LED Driver	μPD7520	NEC
Microcomputer, Vacuum Fluorescent Driver	μPD7508A	◊ NEC
	μPD7517	NEC
	μPD7519	◊ NEC
	μPD7528	NEC
	μPD7537	NEC
	μPD7538	NEC

Miscellaneous

Function	Device	Source
Microcomputer, 4-Bit (LCD driver, 3K-word ROM, 1K RAM)	LC5863H	Sanyo
Microcomputer, 4-Bit (LCD driver, 4K-word ROM, 1K RAM)	LC5864H	Sanyo
Microcomputer, 4-Bit (LCD driver, 6K-word ROM, 1K RAM)	LC5866H	Sanyo
Microcomputer, 4-Bit (LCD driver, 8K-word ROM, 1K RAM)	LC5868H	Sanyo
Microcomputer, 4-Bit with LCD Drivers	LC5733	Sanyo
	LC5734	Sanyo
Microcomputer, 4-Bit (12K ROM)	LC66512B	Sanyo
Microcomputer, 4-Bit (16K ROM)	LC66516B	Sanyo
Microcomputer, 4-Bit (6K ROM)	LC66506B	Sanyo
Microcomputer, 4-Bit (8K ROM)	LC66508B	Sanyo

8 Bit

Function	Device	Source
Microcontroller, RAM, ROM, I/O	COP820	National
	COP821	National
	COP822	National
	COP840	National
	COP841	National
Programmable Communication Interface (See also Interface Transmitters-Receivers)	INS8250	National
RAM(128x8) and I/O	INS8154	National
4-Bit Latch	DM74LS175	National
8-Bit I/O Port	DP8212	National
	INS8212	National

740

Function	Device	Source
Microprocessor, External ROM	M50734	Mitsubishi
Microprocessor, Piggy-Back for M50740/M50741	M50740-PGYS	Mitsubishi
Microprocessor, Piggy-Back for M50742	M50742-PGYS	Mitsubishi
Microprocessor, Piggy-Back for M50743	M50743-PGYS	Mitsubishi
Microprocessor, Piggy-Back for M50745	M50745-PGYS	Mitsubishi
Microprocessor, Piggy-Back for M50753	M50753-PGYS	Mitsubishi
Microprocessor, Piggy-Back for M50757/M50752	M50752-PGYS	Mitsubishi
Microprocessor, RAM, External ROM	M50740ASP	Mitsubishi
Microprocessor, RAM, ROM	M50740	Mitsubishi
	M50740A	Mitsubishi
	M50741	Mitsubishi
	M50742	Mitsubishi
	M50743	Mitsubishi
	M50745	Mitsubishi
	M50747	Mitsubishi
	M50752	Mitsubishi
	M50753	Mitsubishi
	M50754	Mitsubishi
	M50757	Mitsubishi
Microcontroller, 8K ROM, RAM	M50932	Mitsubishi
	M50943	Mitsubishi

1650

Function	Device	Source
Microcomputer	PIC16C54	Microchip
	PIC16C55	Microchip
	PIC16C56	Microchip
	PIC16C57	Microchip
	PIC1652	Microchip

(Continued)

Function	Device	Source
Microcomputer	PIC1654	Microchip
	PIC1655	Microchip
	PIC1657	Microchip
	PIC1670	Microchip
	PIC1672	Microchip

1800

Function	Device	Source
Microcomputer, RAM, ROM, Counter/Timer	CDP1804AC	† Harris
Microprocessor	CDP1802A	† Harris
	CDP1802AC	† Harris
	CDP1802BC	† Harris
	HB1802A	† Hughes
	HB1802AC	† Hughes
	HC1802A	◊ Hughes
	HC1802AC	Hughes
Microprocessor, Counter/Timer	CDP1806AC	† Harris
Microprocessor, RAM, Counter/Timer	CDP1805AC	† Harris
Keyboard Encoder	CDP1871A	Harris
	CDP1871AC	Harris
Latch/Decoder Memory Interface	CDP1881	Harris
	CDP1881C	Harris
	CDP1882	Harris
	CDP1882C	Harris
	CDP1883	Harris
Multiply-Divide Circuit	CDP1855	† Harris
	CDP1855C	† Harris
N-Bit Decoder (for I/O interface)	CDP1853	† Harris
	CDP1853C	† Harris
	HB1853	† Hughes
	HB1853C	† Hughes
	HC1853	◊ Hughes
	HC1853C	◊ Hughes
Programmable I/O Interface	CDP1851	† Harris
	CDP1851C	† Harris
Programmable Interrupt Controller	CDP1877	Harris
	CDP1877C	Harris
RAM (32x8) (See also Memory-RAM's)	CDP1824	† Harris
	CDP1824C	† Harris
	HB1824	† Hughes
	HC1824	◊ Hughes
	HC1824C	◊ Hughes
RAM (64x8) (See also Memory-RAM's)	CDP1826C	Harris
RAM (128x8) (See also Memory-RAM's)	CDP1823	† Harris
	CDP1823C	† Harris
RAM (256x4) (See also Memory-RAM's)	CDP1822	† Harris
	CDP1822C	† Harris
	HB1822C	† Hughes
	HC1822C	Hughes
Real-Time Clock (time and calendar information in BCD format from seconds to months)	CDP1879	† Harris
	CDP1879C-1	† Harris
ROM (512x8) (See also Memory-ROM's)	CDP1832	† Harris
	CDP1832C	† Harris
	HB1831	† Hughes
	HB1831C	† Hughes
	HB1832	† Hughes

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8 Bit

1800 (Cont'd)

Function	Device	Source
ROM (512x8) (See also Memory-ROM's) (Cont'd)		
	HB1832C	† Hughes
	HC1831	◊ Hughes
	HC1831C	◊ Hughes
	HC1832	◊ Hughes
	HC1832C	◊ Hughes
ROM (1024x8) (See also Memory-ROM's)		
	CDP1833	† Harris
	CDP1833C	† Harris
	CDP1834	† Harris
	CDP1834C	† Harris
	HB1833	† Hughes
	HB1833C	† Hughes
	HB1834	† Hughes
	HB1834C	† Hughes
	HC1833	◊ Hughes
	HC1833C	◊ Hughes
	HC1834	◊ Hughes
	HC1834C	◊ Hughes
ROM (2048x8) (See also memory-ROMs)		
	CDP1835C	† Harris
	CDP1837C	† Harris
	HB1835	† Hughes
	HB1835C	† Hughes
	HC1835	◊ Hughes
	HC1835C	◊ Hughes
UART	CDP1854A	† Harris
	CDP1854AC	† Harris
	CDP65C51-1	Harris
	CDP6853	Harris
Dual Counter/Timer (two 16-bit programmable down counters independently controlled by separate control registers)	CDP1878	† Harris
	CDP1878C	† Harris
4-Bit Buffer/Separator (for memory interface)		
	HB1856	† Hughes
	HB1856C	† Hughes
	HC1856	Hughes
	HC1856C	Hughes
4-Bit Bus Buffer/Separator (for I/O interface)		
	HB1857	† Hughes
	HB1857C	† Hughes
	HC1857	Hughes
	HC1857C	Hughes
4-Bit Latch with Dual 1 of 4 Decoders		
	HB1858	† Hughes
	HB1858C	† Hughes
	HC1858	Hughes
	HC1858C	Hughes
4-Bit Latch with 1 of 4 Decoder		
	HB1859	† Hughes
	HB1859C	† Hughes
	HC1859	Hughes
	HC1859C	Hughes
7-Bit Latch with Decoder for 8Kx8 Memories		
	CDP1883C	Harris
8-Bit Input/Output Port		
	CDP1852	† Harris
	CDP1872	† Harris
	CDP1872C	† Harris
	CDP1874C	† Harris
	CDP1875C	† Harris
	HB1852	† Hughes
	HB1852C	† Hughes
	HC1852	◊ Hughes
	HC1852C	◊ Hughes

2650

Function	Device	Source
Advanced Video Display Controller		
	SCN2674	◊ Signetics
Asynchronous Communications Interface		
	SCN2641	◊ Signetics
Display Character and Graphics Generator		
	SC2670AC3	Signetics
	SC2670BC3	Signetics
Programmable Communication Interface		
	SCN2651C	Signetics
	SCN2661A	◊ Signetics
	SCN2661B	◊ Signetics
	COM2661	SMC
Programmable Video Timing Controller		
	SCN2672A	◊ Signetics
Dual Universal Asynchronous Receiver/Transmitter		
	SCN2681T	◊ Signetics
Quad Transceivers (See also Interface-Line Transceivers)	MC8T26A	Motorola
	MC8T28	Motorola
	DS8T26A	National
	DS8T28	National
Hex Buffers/Inverters (See also Digital-TTL-Buffers/Inverters 8T95, 8T96, 8T97, 8T98)		
	MC8T95	Motorola
	MC8T96	Motorola
	MC8T97	Motorola
	MC8T98	Motorola
	N8T95	Signetics
	N8T96	Signetics
	N8T97	Signetics
	N8T98	Signetics
	S8T95	† Signetics
	S8T97	† Signetics
	S8T98	† Signetics

3870

Function	Device	Source
Microcomputer, Piggyback EPROM, Emulates all MK3870 Devices		
	MK38P70/02	SGS-Thomson
Microcomputer, ROM, PLL, Shadow RAM, I/O, A/D		
	M8910	SGS-Thomson
Microcomputer, ROM, 64-Byte Executable RAM, 64-Byte Scratchpad RAM, Timer, I/O		
	U2870	AEG Corp
	MK2870	SGS-Thomson
	MK38P70	SGS-Thomson
	MK3870/10	SGS-Thomson
	MK3870/12	SGS-Thomson
	MK3870/20	SGS-Thomson
	MK3870/22	SGS-Thomson
	MK3870/30	SGS-Thomson
	MK3870/32	SGS-Thomson
	MK3870/40	SGS-Thomson
	MK3870/42	SGS-Thomson
	M2870	SGS-Thomson
	M2872	SGS-Thomson
	M2876	SGS-Thomson
	M38ADP70	◊ SGS-Thomson
	M38P74	SGS-Thomson
	M38P78	SGS-Thomson
	M38SB72	◊ SGS-Thomson
	M38SH72	◊ SGS-Thomson
	M3870	◊ SGS-Thomson
	M3872	◊ SGS-Thomson
	M3875	◊ SGS-Thomson
	M3876	◊ SGS-Thomson
	M3878	SGS-Thomson

6000

Function	Device	Source
Microcomputer, Piggyback EPROM, emulate S6010, S6011, S6012		
	S60P12	° SGS-Thomson
Microcomputer, ROM, 64 Byte RAM, A/D, I/O, Timer		
	S6010	◊° SGS-Thomson
	S6011	◊° SGS-Thomson
Microcomputer, ROM, 64 Byte RAM, A/D, I/O, Timer, Watchdog Timer		
	S6012	◊° SGS-Thomson
Microcomputer, ROM, 64 Byte RAM, A/D, LCD drivers, 2 Timer, I/O	S6040	◊° SGS-Thomson
Microcomputer, ROMless emulate S6040		
	S60R40	◊° SGS-Thomson

6300

Function	Device	Source
Microcomputer (single-chip, 4K ROM, 128 byte RAM, 29 I/O, 1.5 MHz)		
	HD63A01V1	Hitachi
	HD6301V1	Hitachi
Microcomputer (2K EPROM, 128 byte RAM, 31 I/O, 1 MHz)	HD63705V0C	Hitachi
Microcomputer (2K EPROM, 128 byte RAM, 31 I/O, 1.5 MHz)	HD637A05V0C	Hitachi
Microcomputer (2K EPROM, 128 byte RAM, 31 I/O, 2 MHz)	HD637B05V0C	Hitachi
Microcomputer (2K ROM, 128 byte RAM, 31 I/O, 1 MHz)	HD6305U0	Hitachi
Microcomputer (4K EPROM)		
	HD63P01M1	Hitachi
Microcomputer (4K EPROM, 1 MHz)		
	HD63P05Y0	Hitachi
	HD63P05Y1	Hitachi
Microcomputer (4K EPROM, 1.5 MHz)		
	HD63PA05Y0	Hitachi
	HD63PA05Y1	Hitachi
Microcomputer (4K EPROM, 128 byte RAM, 29 I/O, 1 MHz)	HD63701V0C	Hitachi
Microcomputer (4K EPROM, 128 byte RAM, 29 I/O, 1.5 MHz)	HD637A01V0C	Hitachi
Microcomputer (4K EPROM, 128 byte RAM, 29 I/O, 2 MHz)	HD637B01V0C	Hitachi
Microcomputer (4K EPROM, 192 byte RAM, 53 I/O, 1 MHz)	HD63701X0C	Hitachi
Microcomputer (4K EPROM, 192 byte RAM, 53 I/O, 1.5 MHz)	HD637A01X0C	Hitachi
Microcomputer (4K EPROM, 192 byte RAM, 53 I/O, 2 MHz)	HD637B01X0C	Hitachi
Microcomputer (4K EPROM, 2 MHz)		
	HD63PB05Y0	Hitachi
	HD63PB05Y1	Hitachi
Microcomputer (4K ROM, 128 byte RAM, 29 I/O, 2 MHz)	HD63B01V1	Hitachi
Microcomputer (4K ROM, 128 byte RAM, 31 I/O, 12K memory expansion, 1 MHz)		
	HD6305X1	Hitachi
Microcomputer (4K ROM, 192 byte RAM, 31 I/O, 1 MHz)	HD6305V0	Hitachi
Microcomputer (4K ROM, 192 byte RAM, 53 I/O, 1 MHz)	HD6301X0	Hitachi
Microcomputer (4K ROM, 192 byte RAM, 53 I/O, 2 MHz)	HD63B01X0	Hitachi
Microcomputer (4K ROM, 96 byte RAM, 20 I/O, 0.125 MHz)	HD63L05F1	Hitachi
Microcomputer (4K ROM,128 byte RAM, 55 I/O, 1 MHz)	HD6305X0	Hitachi
Microcomputer (8K ROM, 256 byte RAM, 31 I/O, 8K memory expansion, 1 MHz)		
	HD6305Y1	Hitachi
Microcomputer (8K ROM, 256 byte RAM, 55 I/O, 1 MHz)	HD6305Y0	Hitachi
Microcomputer (16K EPROM, 256 byte RAM, 53 I/O, 1.5 MHz)	HD637A01Y0C	Hitachi
Microcomputer (16K EPROM, 256 byte RAM, 53 I/O, 2 MHz)	HD637B01Y0C	Hitachi
Microcomputer (16K ROM, 256 byte RAM, 53 I/O, 1 MHz)	HD6301Y0	Hitachi

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8 Bit

6300 (Cont'd)

Function	Device	Source
Microcomputer (16K ROM, 256 byte RAM, 53 I/O, 2 MHz)	HD63B01Y0	Hitachi

6500

Function	Device	Source
Microcomputer		
	6500/1	Commodore
	NCR6500/1	NCR
	W65C124	WDC
	W65C134	WDC
Microcomputer, 8-Bit		
	R65F11	Rockwell
	R65F12	Rockwell
Microprocessor		
	G65SC02	◊ CMD Micro
	G65SC102	◊ CMD Micro
	G65SC112	◊ CMD Micro
	G65SC12	◊ CMD Micro
	65CE02	Commodore
	6502	Commodore
	6503	Commodore
	6504	Commodore
	6505	Commodore
	6506	Commodore
	6507	Commodore
	6512	Commodore
	6513	Commodore
	6514	Commodore
	6515	Commodore
	NCR65CX02-Cell	° NCR
	NCR65C02	NCR
	6502-Cell	° NCR
	RP65C02	Ricoh
	RP65C02A	Ricoh
	R6500	**Rockwell (3575)**
	R6501Q	**Rockwell (3575)**
	R6502	**Rockwell (3576)**
	R6511Q	**Rockwell (3575)**
	L6506	SGS-Thomson
	VL65NC02	VLSI Tech
	W65C02	◊ WDC
Microprocessor, Clock, RAM, I/O		
	NCR6500/11	NCR
	R6500/11	**Rockwell (3575)**
	R6500/12	**Rockwell (3575)**
	R6500/13	**Rockwell (3575)**
	R6500/15	**Rockwell (3575)**
Microprocessor, Communications		
	G65SC150	CMD Micro
	G65SC151	CMD Micro
Microprocessor, I/O		
	6510	Commodore
Microprocessor, RAM, I/O		
	6508	Commodore
Microprocessor with Memory Management		
	6509	Commodore
Microprocessor, 7-bit (bidirectional I/O, IRQ, RDY)		
	8501	Commodore
Microprocessor, 7-Bit (bidirectional I/O, IRQ, RDY, NMI)		
	8502	Commodore
Microprocessor, 8-Bit		
	UM6502E	**UMC (3689)**
	UM6512	UMC
Asynchronous Communications Interface Adapter		
	G65SC51	◊ CMD Micro
	6551	Commodore
	MD65SC51B	Mitel
	R65C51	**Rockwell (3576)**
	R6551	**Rockwell (3576)**
Communications, Dual Asynchronous Communications Interface Adapter (DACIA)		
	R65C52	**Rockwell (3576)**
CRT Controller	6545-1	Commodore
Dot-Matrix Printer Controller		
	R6592	Rockwell
Emulator Device		
	R6500/1E	**Rockwell (3575)**
Mini-Floppy Disk Controller		
	MB8876A	Fujitsu
	MB8877A	Fujitsu
Peripheral Interface Adapter		
	G65SC21	◊ CMD Micro
	G65SC22	CMD Micro
	6522	Commodore
	6526	Commodore
	NCR65C21	NCR
	NCR65C22	NCR
	R65C21	**Rockwell (3576)**
	R65C22	**Rockwell (3576)**
	R6520	**Rockwell (3576)**
	R6522	**Rockwell (3576)**
	W65C22	◊ WDC
	W65C29	WDC
	W65C90	WDC
Peripheral Interface Adapter/Timer		
	R65C24	**Rockwell (3576)**
RAM, ROM, I/O and Interval Timer		
	6530	Commodore
	R6530	Rockwell
RAM(128x8), I/O, and Timer		
	G65SC32	CMD Micro
	6532	Commodore
	UM6532	**UMC (3689)**
	UM6532A	**UMC (3689)**
RAM(128x8), ROM, I/O, and Counter/Timer		
	R6531	**Rockwell (3576)**
Sound Interface Device		
	6582	Commodore
Tri-Port Interface		
	6525	Commodore
Single Port Interface		
	6529	Commodore
8-Bit Microprocessor		
	UM6507	UMC

6800

Function	Device	Source
Microcomputer		
	MC68A01	Motorola
	MC68B01	Motorola
	MC68HC11F1	Motorola
	MC6801	Motorola
	MC6801-1	Motorola
	MC6801C	Motorola
	MC6801U4	Motorola
	MC6801U4-1	Motorola
	MC6803U4-1	Motorola
	EF6801	SGS-Thomson
	EF6805P2	SGS-Thomson
	EF6805P4	SGS-Thomson
	EF6805P6	SGS-Thomson
	EF6805U2	SGS-Thomson
Microcomputer, A/D Converter, Serial Peripheral Interface, Three Timers		
	MC6805S2	Motorola
	MC6805S3	Motorola
Microcomputer, Clock, ROM, EEPROM, RAM, I/O, Timers, Programmable Prescaler, Serial Interface		
	MC6805K3	Motorola
Microcomputer, Clock, Timer, RAM, ROM, I/O		
	MC6804J1	Motorola
	MC6804J2	Motorola
	MC6804P2	Motorola
	EF68HC04P3	SGS-Thomson
	EF6804J2	SGS-Thomson
	EF6804P2	SGS-Thomson
Microcomputer Emulator, 8-Bit (piggyback device)		
	CDP68EM05C4	Harris
	CDP68EM05D2	Harris
Microcomputer (EPROM)		
	MC1468705F2	Motorola
	MC68701	Motorola
	MC68701-1	Motorola
	MC68701C	Motorola
	MC68701C-1	Motorola
	MC68701U4	Motorola
	MC68701U5	Motorola
	MC68704P2	Motorola
	MC68705P3	Motorola
	MC68705P5	Motorola
	MC68705R3	Motorola
	MC68705R5	Motorola
	MC68705U3	Motorola
	MC68705U5	Motorola
Microcomputer, EPROM, RAM, Timer, I/O		
	MC1468705G2	Motorola
Microcomputer, (EPROM), ROM, Clock, Timer, A/D, I/O		
	MC68705R3	Motorola
Microcomputer (external ROM)		
	MC68A03	Motorola
	MC68B03	Motorola
	MC6803	Motorola
	MC6803-1	Motorola
	MC6803C	Motorola
	MC6803U4	Motorola
	EF68A03	SGS-Thomson
	EF68B03	SGS-Thomson
	EF6803	SGS-Thomson
	EF6803U4	SGS-Thomson
Microcomputer, RAM, EEPROM, Timer, I/O		
	MC68HC11A1	Motorola
Microcomputer, RAM, ROM, Clock, Timer, A/D, I/O		
	MC6805R2	Motorola
Microcomputer, RAM, ROM, EEPROM, Timer, I/O		
	MC68HC11E9	Motorola
	MC68HC811E2	Motorola
Microcomputer, RAM, ROM, I/O		
	MC6805P2	Motorola
	MC6805P6	Motorola
	MC6805U2	Motorola
	MC6805U3	Motorola
	EF6805U3	SGS-Thomson
Microcomputer, RAM, ROM, I/O, A/D		
	MC6805R3	Motorola
Microcomputer, RAM, ROM, I/O, Timer		
	MC68HC05C2	Motorola
	MC68HC05C3	Motorola
	MC68HC805C4	Motorola
Microcomputer, RAM, ROM, I/O, 2 Serial Interfaces, Timer	CDP68HC05C4	Harris
	CDP68HC05D2	Harris
	MC68HC05C4	Motorola
	MC68HC05C8	Motorola
Microcomputer, RAM, ROM, Timer, I/O		
	CDP6805F2	Harris
	CDP6805G2	Harris
Microcomputer, RAM, Timer, I/O		
	CDP6805E2	Harris
	MC68HC811A0	Motorola
Microcomputer, ROM, EEPROM, RAM, 16-Bit Timer, 8-Bit Pulse Accumulator, Serial Interface		
	MC68HC11A8	Motorola
Microcomputer (2K EPROM)		
	MC68HC11A6	Motorola
Microcomputer, 8-Bit (4K OTP ROM, 176 bytes RAM)		
	MC68HC705C4	Motorola
Microcomputer, 8-Bit (4K OTP ROM, 192 bytes RAM)		
	MC68HC711D3	Motorola

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8 Bit
6800 (Cont'd)

Function	Device	Source	Line
Microcomputer, 8-Bit (7.6K OTP ROM, 304 bytes RAM)	MC68HC705C8	Motorola	
Microcomputer, 8-Bit (8K OTP ROM, 256 bytes RAM)	MC68HC711A8	Motorola	
Microcomputer (512-byte RAM, 512-byte EEPROM)	MC68HC11E1	Motorola	
Microprocessor	MC68A00	Motorola	
	MC68B00	Motorola	5
	MC6800	Motorola	
	NCR68C05	◊° NCR	
	EF6805R2	SGS-Thomson	
Microprocessor (CMOS), RAM, Timer, I/O	CDP6805E3	Harris	
Microprocessor (external clock)	MC68A09E	Motorola	10
	MC68B09E	Motorola	
	MC6809E	◊ Motorola	
	EF68A09E	SGS-Thomson	
	EF68B09E	SGS-Thomson	
	EF6809E	SGS-Thomson	15
Microprocessor (internal clock)	HD68B09	Hitachi	
	HD6809	Hitachi	
	MC68A09	Motorola	
	MC68B09	Motorola	
	MC6809	◊ Motorola	20
	EF68A09	SGS-Thomson	
	EF68B09	SGS-Thomson	
	EF6809	SGS-Thomson	
Microprocessor (internal clock, 128x8 RAM)	MC68A02	Motorola	
	MC68B02	Motorola	25
	MC6802	Motorola	
	MC6802NS	Motorola	
	EF68A02	SGS-Thomson	
	EF68B02	SGS-Thomson	
	EF6802	SGS-Thomson	30
Microcontroller, 8-Bit (176 bytes RAM, 7744 bytes ROM)	CDP68HC05C8	Harris	
Microcontroller, 8-Bit (15K ROM, 352 bytes RAM)	MC68HC05C9	Motorola	
Microcontroller, 8-Bit (2K ROM, 128 bytes RAM)	MC68HC05P1	Motorola	
Microcontroller, 8-Bit (2K ROM, 128 bytes RAM, 16-bit timer, watchdog)	MC68HC05P7	Motorola	
Microcontroller, 8-Bit (256 bytes RAM, 2K EEPROM, 16-bit timer, watchdog)	MC68HC11E2	Motorola	35
Microcontroller, 8-bit (32K ROM, 1K RAM, A/D, 3 16-bit timers)	HD6475328	Hitachi	
Microcontroller, 8-Bit (4K ROM, 128 bytes RAM)	MC68HC05M4	Motorola	
Microcontroller, 8-Bit (4K ROM, 176 bytes RAM)	MC68HC05B4	Motorola	
Microcontroller, 8-Bit (4K ROM, 192 bytes RAM)	MC68HC11D3	Motorola	
Microcontroller, 8-Bit (512 bytes RAM, 512 bytes EEPROM, 16-bit timer, watchdog)	MC68HC11E0	Motorola	40
Microcontroller, 8-Bit (6K EEPROM, 176 bytes RAM)	MC68HC805B6	Motorola	
Microcontroller, 8-Bit (6K OTP ROM, 176 bytes RAM)	MC68HC705B5	Motorola	
Microcontroller, 8-Bit (6K ROM, 176 bytes RAM)	MC68HC05B6	Motorola	
	MC68HC05L7	Motorola	
	MC68HC05L9	Motorola	45

Function	Device	Source	Line
Microcontroller, 64 Bytes RAM, 1040 Bytes User ROM	MC68HC05J1	Motorola	
Advanced Data Link Controller	MC68A54	Motorola	
	MC68B54	Motorola	
	MC6854	Motorola	
	EF68A54	SGS-Thomson	50
	EF68B54	SGS-Thomson	
	EF6854	SGS-Thomson	
Asynchronous Communications Interface Adapter (ACIA)	HD63A50	Hitachi	
	HD6350	Hitachi	
	HD68A50	Hitachi	55
	HD6850	Hitachi	
	MC68A50	Motorola	
	MC68B50	Motorola	
	MC6850	Motorola	
	EF68A50	SGS-Thomson	60
	EF68B50	SGS-Thomson	
	EF6850	SGS-Thomson	
Bus Transceiver, (The 6880 is also called 8T26 and the 6889 the 8T28, See Interface-Transceivers)	MC6880A	Motorola	
	MC6889	Motorola	
Clock Generator	8701	Commodore	65
Clock Generator, 2-Phase	MC6870	Motorola	
Clock (real time) Plus RAM	CDP6818	Harris	
	146818	◊ **Krueger (3513)**	
	MC146818A	◊ Motorola	
CRT Controller	HD68A45	Hitachi	70
	HD68B45	Hitachi	
	HD6845	Hitachi	
	MC68A45	Motorola	
	MC68B45	Motorola	
	UM6845	**UMC (3689)**	75
	UM6845E	**UMC (3689)**	
	UM6845R	**UMC (3689)**	
CRT Controller, Character and Screen Programmable, Cursor, Light Pen Detection	MB89321	Fujitsu	
D/A Converter	MC6890	Motorola	
	MC6890A	† Motorola	80
Data Security Device (data encryption standard)	MC6859	Motorola	
DMA Controller	HD68A44	Hitachi	
	HD68B44	Hitachi	
	HD6844	Hitachi	
	MC68A44	Motorola	85
	MC68B44	Motorola	
	MC6844	Motorola	
	MC6844M	† Motorola	
DMA Processor (serial)	MC6855	Motorola	
Floating Point ROM (for MC6809)	MC68A39	Motorola	90
	MC68B39	Motorola	
Floppy Disk Controller	FDC1793	SMC	
	FDC1793-02	◊ SMC	
	FDC1797	SMC	
	FDC1797-02	◊ SMC	95
	FD1793-02	Western	
	FD1797-02	Western	
General Purpose Interface Adapter (IEEE 488 bus)	MC68A488	Motorola	
	MC68B488	Motorola	
	HEF4738	Signetics	100
Industrial Interface Adaptor	MC6822	Motorola	

Function	Device	Source	Line
Memory Controller for 4K to 64K Dynamic RAMs	MC3480	Motorola	
Memory Management Unit	C68A29	Motorola	
Parallel Interface	CDP6823	Harris	
Peripheral Interface Adapter, (PIA)	HD68A21	Hitachi	105
	HD68B21	Hitachi	
	HD6821	Hitachi	
	MC146823	◊ Motorola	
	MC68A21	Motorola	
	MC68B21	Motorola	110
	MC6821	◊ Motorola	
	EF68A21	SGS-Thomson	
	EF68B21	SGS-Thomson	
	EF6821	SGS-Thomson	
Port Replacement Unit for MC68HC11, PIA	MC68HC24	◊ Motorola	115
Priority Interrupt Controller	MC8507	Motorola	
Programmable Timer	HD63A40	Hitachi	
	HD6340	Hitachi	
	HD68A40	Hitachi	
	HD68B40	Hitachi	120
	HD6840	Hitachi	
	MC68A40	Motorola	
	MC68B40	Motorola	
	MC6840	Motorola	
	MC6840M	† Motorola	125
	EF68A40	SGS-Thomson	
	EF68B40	SGS-Thomson	
	EF6840	SGS-Thomson	
RAM, Dual Port	MC68HC34	Motorola	
ROM, I/O, Timer	MC68A46	Motorola	130
	EF6846	SGS-Thomson	
Synchronous Address Multiplexer	SN74LS783	Motorola	
Synchronous Serial Data Adapter (SSDA)	HD68A52	Hitachi	
	HD6852	Hitachi	
	MC68A52	Motorola	135
	MC68B52	Motorola	
	MC6852	Motorola	
Video Converter	TS8306	SGS-Thomson	
	TS8307	SGS-Thomson	
	TS8308	SGS-Thomson	140
	TS8328	SGS-Thomson	
	TS8408	SGS-Thomson	
	TS8428	SGS-Thomson	
	UA1005	SGS-Thomson	
Video Display Generator	MC6847	Motorola	145
Single Chip Color Palette	EF9369	SGS-Thomson	
Triple Bidirectional Bus Switch (also MC3449)	MC6881	Motorola	
Hex Buffers/Inverters (See also Digital-TTL-Buffers/Inverters 8T95, 8T96, 8T97, 8T98)	MC6885	Motorola	
	MC6886	Motorola	
	MC6887	Motorola	150
	MC6888	Motorola	
Octal Buffer/Latch, Three-State	MC6882A	Motorola	
	MC6882B	Motorola	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8 Bit (Cont'd)

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Function	Device	Source	Line
Microcomputer, RAM, I/O (microlanguage processor)			
	PIC7000	Microchip	
	TMS70C00	◊ TI	
Microcomputer, RAM, ROM, I/O (microlanguage processor)	PIC7020	Microchip	
	PIC7040	Microchip	
	TMS70C20	◊ TI	5
	TMS70C40	◊ TI	
Microcomputer, RAM, ROM, Serial I/O			
	PIC7041	Microchip	
Microcomputer, ROM			
	PIC70100	Microchip	
	PIC70120	Microchip	
	PIC7060	Microchip	10
	PIC7080	Microchip	
Microcomputer with UART			
	PIC7001	Microchip	
Encryption, Federal Processing Standard Pub. 46			
	TMS75C00	TI	
	TMS7500	TI	

8048

Function	Device	Source	Line
Microcomputer (erasable PROM)			
	M8748	† Intel	15
	8748-8	Intel	
	8748H	Intel	
	8749H	◊ Intel	
	8749H-8	◊ Intel	
	μPD8748	NEC	20
	μPD8749	NEC	
Microcomputer (external ROM)			
	MBL80C39	Fujitsu	
	M8035L	† Intel	
	80A35	Intel	
	80A39	Intel	25
	80C35	Intel	
	80C39	Intel	
	8035AHL	Intel	
	8039AHL	Intel	
	8039HL	Intel	30
	8040AHL	Intel	
	INS8035	National	
	INS8035L	National	
	INS8039	National	
	INS8039L	National	35
	INS8040	National	
	INS8040L	National	
	μPD80C35	◊ NEC	
	μPD80C39	◊ NEC	
	μPD8035L	NEC	40
	μPD8039L	NEC	
	MSM80C35	OKI	
	MSM80C39	OKI	
	MSM80C40	OKI	
	SCN8039A	◊ Signetics	45
	SCN8040	◊ Signetics	
	TMP80C35A	Toshiba	
	TMP80C39A	Toshiba	
	TMP80C39A-6	Toshiba	
	TMP80C40A	Toshiba	50
	TMP80C40A-6	Toshiba	
	TMP8035	Toshiba	
	TMP8039	Toshiba	
	TMP8039-6	Toshiba	
Microcomputer (mask programmed ROM)			
	MBL80C49	Fujitsu	55
	M8048H	† Intel	
	M8049H	Intel	
	80A48L	Intel	
	80A49	Intel	

(Continued)

Function	Device	Source	Line
Microcomputer (mask programmed ROM) (Cont'd)			
	80C48	Intel	60
	80C49	Intel	
	8048	Intel	
	8048AH	Intel	
	8048H	Intel	
	8049AH	Intel	65
	8049H	Intel	
	8049HL	Intel	
	8050AH	Intel	
	INS8048	◊ National	
	INS8048L	◊ National	70
	INS8049	◊ National	
	INS8049L	◊ National	
	INS8050	◊ National	
	INS8050L	◊ National	
	μPD80C48	◊ NEC	75
	μPD80C49	◊ NEC	
	μPD80C50	NEC	
	μPD8048	NEC	
	μPD8049	NEC	
	MSM80C48	◊ OKI	80
	MSM80C49	◊ OKI	
	MSM80C50	OKI	
	SCN8049A	◊ Signetics	
	SCN8050A	◊ Signetics	
	TMP80C48A	Toshiba	85
	TMP80C49A	Toshiba	
	TMP80C49A-6	Toshiba	
	TMP80C50A	Toshiba	
	TMP80C50A-6	Toshiba	
	TMP8048	Toshiba	90
	TMP8049	Toshiba	
	TMP8049-6	Toshiba	
Microcomputer, Piggyback EPROM			
	NS87P50	National	
Microcomputer, RAM, ROM, I/O			
	M5L8035	Mitsubishi	
	M5L8039-11	Mitsubishi	95
	M5L8040H	Mitsubishi	
	M5L8042	Mitsubishi	
	M5L8048	Mitsubishi	
	M5L8049	Mitsubishi	
	M5L8049-6	Mitsubishi	100
	M5M80C39-6	Mitsubishi	
	M5M80C49	Mitsubishi	
Microcomputer, RAM, ROM, I/O (11 MHz)			
	TMP8048A	Toshiba	
	TMP8049A	Toshiba	
Microcomputer, ROM, RAM, I/O			
	8020H	Intel	105
	8021H	Intel	
Microcomputer (ROM, RAM, I/O, on-board A/D)			
	8022	Intel	
Microcontroller, 8-Bit (has 8048 instruction set)			
	PCD3346	**Signetics (3625)**	
Bidirectional Bus Driver. See 8216, 8226, etc. under 8080	8216	Intel	
	8226	Intel	110
	μPB8216	NEC	
	μPB8226	NEC	
CRT Controller. See 8275, etc. under 8080.			
	8275	Intel	
	SCN2672	◊ Signetics	
Decoder, 1 of 8. See 8205, etc. under 8080.			
	8205	Intel	115
Floppy Disk Controller. See 8271, etc. under 8080.			
	8271	Intel	
	8271-6	Intel	
	μPD765A	NEC	
	FDC1793	SMC	
	FDC1793-02	◊ SMC	120
	FDC1797	SMC	
	FDC1797-02	◊ SMC	

(Continued)

Function	Device	Source	Line
Floppy Disk Controller. See 8271, etc. under 8080. (Cont'd)			
	FD1793-02	Western	
	FD1797-02	Western	
GPIB Talker/Listener			
	8291	Intel	125
I/O Expander for 8048 Family			
	M8243	† Intel	
	8243	Intel	
	M5L8243	Mitsubishi	
	M5M82C43	Mitsubishi	
	μPD82C43	NEC	130
	μPD8243	NEC	
	MCM82C43	OKI	
	TMP82C43	Toshiba	
Multi-Universal Asynchronous Receiver Transmitter			
	SAB8256A	Siemens	
Priority Interrupt Control. See 8214, etc. under 8080.			
	8214	Intel	135
Priority Interrupt Controller			
	82C59	°† SMC	
Programmable Communication Interface (USART) See 8251, etc. under 8080.			
	8251A	AMD	
	8251A	◊ Intel	
	μPD71051	◊ NEC	
	μPD8251	NEC	140
	μPD8251A	NEC	
	μPD8251AF	NEC	
	71051	NEC	
	MSM82C51A	OKI	
	TMP8251A	Toshiba	145
Programmable Interrupt Controller. See 8259, etc. under 8080.	8259	Intel	
	8259-5	Intel	
	8259A	Intel	
	8259A-2	Intel	
	8259A-8	Intel	150
	μPD8259	NEC	
	μPD8259-2	NEC	
	μPD9259A	NEC	
	TMP8259A	Toshiba	
Programmable Interval Timer			
	82C54	°† SMC	155
Programmable Interval Timer. See 8253, etc. under 8080.	μPD8253-2	NEC	
	μPD8253-5	NEC	
Programmable Peripheral Interface. See 8255, etc. under 8080.	8255A	◊ Intel	
	μPD8255	NEC	
	μPD8255A-5	NEC	160
PROM (erasable), I/O			
	8755A	Intel	
	μPD8755A	NEC	
RAM, I/O, Timer			
	HS81C55RH	‡ Harris	
	HS81C56RH	‡ Harris	
	M8155H	† Intel	165
	8155	Intel	
	8155-2	Intel	
	8155H	Intel	
	8155H-2	Intel	
	8156	Intel	170
	8156-2	Intel	
	8156H	Intel	
	8156H-2	Intel	
	μPD8155	NEC	
	μPD8156	NEC	175
	MSM81C55	OKI	
	TMP8155	Toshiba	
	TMP8156	Toshiba	
ROM, I/O	HS83C55RH	‡ Harris	
	8355	Intel	180
	8355-2	Intel	
	MSM83C55	OKI	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8 Bit

8048 (Cont'd)

Function	Device	Source
SDLC/HDLC Protocol Controller. See 8273, etc. under 8080.	8273	Intel
	μPD7201A	NEC
Universal Peripheral Interface (slave microprocessor)	M8741A	† Intel
	8041AH	Intel
	8041AH-2	Intel
	8042	Intel
	8641A	Intel
	8741A	Intel
	8742	Intel
	M5L8041A	Mitsubishi
	μPD8041	NEC
	μPD8041A	NEC
	μPD8741A	Signetics
Octal Bus Transceiver	M8286	† Intel
	M8287	† Intel

8051

Function	Device	Source
Microcomputer and HDLC/SDLC Serial Interface	8044	Intel
	8744	Intel
Microcomputer (erasable PROM)	8751H	AMD
	M8751H	† Intel
	8751	Intel
Microcomputer (external ROM)	8031AH	AMD
	8031AH-15	AMD
	80C31	◊ Intel
	8031AH	◊ Intel
	SAB80C32	◊ Siemens
	SAB80C535	◊ Siemens
	SAB8032B	◊ Siemens
	SCC80C31	**◊ Signetics (3613)**
	SCN8031	Signetics
Microcomputer (mask programmed ROM)	M80C51	† Intel
	80C51	Intel
	8051AH	◊ Intel
	8052	Intel
	MCM80C51	OKI
	SAB80C515	◊ Siemens
	SAB80C52	◊ Siemens
	SAB8052B	◊ Siemens
	SCC80C51	**◊ Signetics (3613)**
	SCN8051	Signetics
Microcomputer (mask programmed 16k ROM)	SAB80513	◊ Siemens
Microcomputer (4K ROM)	SDA2040	Siemens
Microcomputer (6K ROM)	SDA2060	Siemens
Microcomputer, 8-Bit	80C31BH	AMD
	80C51BH	AMD
Microcomputer (8K ROM)	SDA2080	Siemens
Microcomputer (8K ROM), with external memory access	SDA2082	Siemens
Microcontroller, (extended temp. range –40 to + 85°C)	SAB8031A-T40/85	◊ Siemens
	SAB8051A-T40/85	◊ Siemens
	SAB80512A-T40/85	◊ Siemens
Microcontroller, (extended temp. range –40 to + 100°C)	SAB8032B-T40/100	◊ Siemens
	SAB8052B-T40/100	◊ Siemens
Microcontroller, (extended temp. range –40 to + 110°C)	SAB8031A-T40/110	◊ Siemens
Microcontroller, (extended temp. range –40 to + 85°C)	SAB80C32-T40/85	◊ Siemens
	SAB80C515-T40/85	◊ Siemens
	SAB80C52-T40/85	◊ Siemens
	SAB80C535-T40/85	◊ Siemens
	SAB80515-T40/85	◊ Siemens
	SAB80532A-T40/85	◊ Siemens
	SAB80535-T40/85	◊ Siemens
Microcontroller, (extended temp. range –40 to 110°C)	SAB8051A-T40/110	◊ Siemens
Microcontroller, (extended temp. range –40 to + 110°C)	SAB80515-T40/110	◊ Siemens
Microcontroller, (extended tmp. range –40 to 110°C)	SAB80535-T40/110	◊ Siemens
Microcontroller, I/O Expanded (mask programmable ROM)	SC80C451	Signetics
	SC83C451	Signetics
Microcontroller, Serial Bus	SCC83C351	◊ Signetics
Microcontroller, 4 PWM outputs	SAB80515	◊ Siemens
Microcontroller, 8 input A/D	SAB80512	◊ Siemens
	SAB80532	◊ Siemens
	SAB80535	◊ Siemens
Microcontroller, 8-Bit	8051AH	AMD
	80515	AMD
	8053AH	AMD
	8753H	† AMD
	P83C52	Signetics
	SC80C31	Signetics
	80C31	Signetics
	80C51	Signetics
Microcontroller, 8-Bit (A/D, capture/compare timer, PWM)	**S80C552**	**Signetics (3590)**
	S83C552	Signetics
Microcontroller, 8-Bit (A/D, 8kx8 ROM, 256x8 RAM)	PCB80C562	Signetics
	PCB83C562	Signetics
	S87C552	Signetics
	80C552	Signetics
	80C562	**Signetics (3618)**
	83C552	**Signetics (3617)**
	83C562	**Signetics (3618)**
	87C552	**Signetics (3617)**
Microcontroller, 8-Bit (ROMless)	P80C32	Signetics
	80C32	**Signetics (3614)**
Microcontroller, 8-Bit (ROMless version)	P80C528	Signetics
	P80C550	Signetics
	P80C592	Signetics
	80C451	**Signetics (3616)**
Microcontroller, 8-Bit (ROMless version, 128x8 RAM)	SCN8031AH	◊ Signetics
	SCN8039	◊ Signetics
Microcontroller, 8-Bit (ROMless version, 256x8 RAM)	SCN8032AH	◊ Signetics
	SCN8040	◊ Signetics
Microcontroller, 8-bit (16 MHz)	SAB80513-16	Siemens
	SAB80533-16	Siemens
Microcontroller, 8-Bit (16kx8 EPROM)	P87C592	Signetics
Microcontroller, 8-Bit (16kx8 ROM)	P83C592	Signetics
Microcontroller, 8-Bit (16kx8 ROM, 256x8 RAM)	S83C654	Signetics
	S87C654	Signetics
	83C654	**Signetics (3620)**
	87C654	**Signetics (3620)**
Microcontroller, 8-Bit (2kx8 EPROM)	87C51	Signetics
	87C751	**Signetics (3621)**
	87C752	**Signetics (3622)**
Microcontroller, 8-Bit (2Kx8 EPROM, 64x8 RAM)	S87C751	◊ Signetics
	S87C752	◊ Signetics
Microcontroller, 8-Bit (2kx8 ROM)	**83C751**	**Signetics (3621)**
	83C752	**Signetics (3622)**
Microcontroller, 8-Bit (2Kx8 ROM, 128x8 RAM)	SCN80C49	◊ Signetics
Microcontroller, 8-Bit (2Kx8 ROM, 64x8 RAM)	S83C751	◊ Signetics
Microcontroller, 8-bit (20 MHz)	SAB8032B-20	Siemens
Microcontroller, 8-Bit (32kx8 EPROM)	P87C528	Signetics
Microcontroller, 8-Bit (32kx8 ROM)	P83C528	Signetics
Microcontroller, 8-Bit (4kx8 EPROM)	P87C550	Signetics
	87C451	**Signetics (3616)**
Microcontroller, 8-Bit (4Kx8 EPROM, 128x8 RAM)	SC87C451	◊ Signetics
	SC87C51	**◊ Signetics (3613)**
Microcontroller, 8-Bit (4kx8 ROM)	P83C550	Signetics
	83C451	**Signetics (3616)**
Microcontroller, 8-Bit (4Kx8 ROM, 128x8 RAM)	SCN8051AH	◊ Signetics
	SC80C31B	**◊ Signetics (3613)**
	SC80C51B	**◊ Signetics (3613)**
	S80C851	Signetics
	S83C851	Signetics
	80CL410	**Signetics (3615)**
	80C851	**Signetics (3623)**
	83CL410	**Signetics (3615)**
	83C851	**Signetics (3623)**
Microcontroller, 8-Bit (4Kx8 ROM, 256x8 RAM)	SCN8050	◊ Signetics
Microcontroller, 8-Bit (8kx8 EPROM)	P87C52	Signetics
	87C52	**Signetics (3614)**
Microcontroller, 8-Bit (8kx8 ROM)	P80C52	Signetics
	80C52	**Signetics (3614)**
Microcontroller, 8-Bit (8Kx8 ROM, 256x8 RAM)	SCN8052AH	◊ Signetics
	S80C652	◊ Signetics
	S83C652	◊ Signetics
	S87C652	Signetics
	80C652	**Signetics (3619)**
	83C652	**Signetics (3619)**
	87C652	**Signetics (3619)**
Microcontroller, 12 input A/D	SAB80C517	◊ Siemens
Microcontroller, 16 MHz (external ROM)	SAB80C32-16	◊ Siemens
	SAB8031A-16	Siemens
	SAB8032B-16	◊ Siemens
	SAB80532-16	◊ Siemens
Microcontroller, 16 MHz (mask programmed ROM)	SAB80C52-16	◊ Siemens
	SAB8051A-16	Siemens
	SAB80512-16	◊ Siemens
	SAB8052B-16	◊ Siemens
Microcontroller, 20 MHz (external ROM)	SAB8031A-20	◊ Siemens
Microcontroller, 20 MHz (Mask programmed ROM)	SAB8051A-20	◊ Siemens

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source
8 Bit		
8051 (Cont'd)		
Bus Compatible Digital Pulse Width Modulator.	IXDP610	◊ IXYS
8080		
Microcomputer, 8-Bit	8031AH-15	AMD
Microcomputer, 8-Bit (external ROM)	SAB8031A	Siemens
Microcomputer, 8-Bit (mask programmable ROM)	SAB8051A	Siemens
Microprocessor	M8080A	† Intel
	8080A	Intel
	8080A-1	Intel
	8080A-2	Intel
Microcontroller, 8-Bit (external ROM)	SAB80533	Siemens
Microcontroller, 8-Bit (mask programmable ROM)	SAB80513	Siemens
Analog Input, MUX, A/D Converter	ADC0816C	National
	μPD7001	NEC
	μPD7002	NEC
Arithmetic Processing Unit	AM9511A-1	AMD
	M8231A	† Intel
	8231A	◊ Intel
Asynchronous Communication Element	**8250**	**Krueger (3513)**
	INS8250	National
Asynchronous Communications Element	**SSI73M450**	◊ **SiliconSys (3647)**
	82C50	°† SMC
Bidirectional Bus Driver	8216	Intel
	8226	Intel
Bidirectional Bus Driver (See also Digital-Miscellaneous-Bus Drivers, Interface-Line Transceivers.)	HS82C08RH	‡ Harris
	M8216	† Intel
	M8226	† Intel
	DP7304	† National
	DP8216	National
	DP8216M	† National
	DP8226	National
	DP8226M	† National
	DP8304	National
	DS8833	National
	DS8835	National
	INS8216	National
	INS8226	National
	μPB8216	NEC
	μPB8226	NEC
Bus Controller	8218	Intel
Clock Generator and Driver	M8224	† Intel
	8224	Intel
	DP8224	National
	INS8224	National
Counter, CMOS Programmable	82C54	°† SMC
CRT Controller	8275	Intel
	8276	Intel
CRT Controller, Character and Screen Programmable, Cursor, Light Pen Detection	MB89322	Fujitsu
Data Acquisition System, 8 Channel, 8-Bit Conversion	AD7581A	◊ AD
	AD7581B	◊ AD
	AD7581C	◊ AD
	AD7581J	◊ AD
	AD7581K	◊ **AD (3227, 3231)**
	AD7581L	◊ AD
Data Ciphering Processor	AM9518	AMD
Data-Encryption Device (encrypts and decrypts data according to NBS standard)	8294	Intel
Decoder, 1 of 8 (See also Digital-TTL-Decoders, 3222, 74LS138, etc.)	8205	Intel
	DM74LS138	National
	INS82LS05	National
	SN74LS138	TI
Display Controller	INS8247	National
	INS8248	National
Dynamic RAM Controller	82C03	Intel
	82C08	Intel
	8202A	Intel
	8203	Intel
Error Detection & Correction Chip	8206	Intel
Floating Point Processor	8232	Intel
Floppy Disk Controller	8271	Intel
	μPD765A	NEC
	FDC1793	SMC
	FDC1793-02	◊ SMC
	FDC1797	SMC
	FDC1797-02	◊ SMC
	FD1793-02	Western
	FD1797-02	Western
GPIB Controller	8292	Intel
GPIB Interface Controller, Intelligent	COM7210	SMC
GPIB Talker/Listener Interface	8291A	Intel
GPIB Transceiver	8293	Intel
GPIB Universal Interface	μPD7210	NEC
I/O Expander for 8041A/8741A	8243	Intel
	TMP8243	Toshiba
I/O Latch (see also Digital-CMOS and TTL, Latches)	INS82C06	National
I/O Port	HS82C12RH	‡ Harris
	M8212	† Intel
	8212	Intel
	DP8212	National
	DP8212M	† National
	INS8212	National
	μPB8212	NEC
	MSM82C12	OKI
Keyboard Display Controller	8279	Intel
	8279-5	Intel
	μPD8279-5	NEC
	KR9600	SMC
	KR9601	SMC
	KR9602	SMC
Keyboard Encoder (See also Interface-Keyboard Encoders)	INS8245	National
	INS8246	National
Multi-Universal Asynchronous Receiver Transmitter	8256	Intel
	TIM8228	TI
	TIM8238	TI
Multifunction Microprocessor Support Controller	8256AH	Intel
Priority Interrupt Controller	82C59	°† SMC
Programmable Communication Interface (USART) (See also Interface-Transmitters, Receivers)	8251	AMD
	M8251A	† Intel
	8251A	◊ Intel
	μPD8251	NEC
	μPD8251A	NEC
	71051	NEC
	MSM82C51A	OKI
	SCN2651C	Signetics
	SCN2661A	◊ Signetics
	SCN2661B	◊ Signetics
	SCN2661C	◊ Signetics
Programmable Counter	μPD71054	◊ NEC
Programmable Direct Memory Access Controller	AM9517A-5	AMD
	M8257	† Intel
	8257	Intel
	8257-5	Intel
	μPD71055	◊ NEC
	μPD8257	NEC
	μPD8257-5	NEC
Programmable Interrupt Controller	8259A	Intel
	8259A-2	Intel
	8259A-8	Intel
	μPD8259	NEC
	μPD8259-2	NEC
	μPD9259A	NEC
Programmable Interval Timer	μPD8253-2	NEC
	μPD8253-5	NEC
Programmable Peripheral Interface	8255A-5	AMD
	M8255A	† Intel
Programmable Peripheral Interface	82C55A	Intel
Programmable Peripheral Interface	8255A	◊ Intel
	μPD8255	NEC
	μPD8255A-5	NEC
	MSM82C55A	OKI
	MSM8255A	OKI
RAM(128x8) with 16-Bit I/O	INS8154	National
SDLC/HDLC Protocol Controller	8273	Intel
	μPD7201A	NEC
Serial Data Communications Controller	8274	Intel
Synchronous Receiver/Transmitter (BiSync, SDLC)	μPD7201A	NEC
System Controller and Bus Driver	M8228	† Intel
	8228	Intel
	8238	Intel
	DP8228	National
	DP8228M	† National
	DP8238	National
	DP8238M	† National
	INS8228	National
	INS8238	National
Universal Peripheral Interface (slave microprocessor)	8041AH	Intel
	8041AH-2	Intel

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source	Line
8 Bit			
8080 (Cont'd)			
Universal Peripheral Interface (slave microprocessor) (Cont'd)			
	8641A	Intel	
	8741A	Intel	
	μPD8041	NEC	
	μPD8741A	NEC	
Octal Bus Transceiver			
	M8286	† Intel	5
	M8287	† Intel	
8085A			
Microcomputer, 8-Bit			
	8031AH-15	AMD	
Microprocessor			
	8085A	AMD	
	8085AH	AMD	
	8085AH-2	AMD	10
	HS80C85RH	‡ Harris	
	M8085A	† Intel	
	M8085AH	† Intel	
	8085AH	Intel	
	8085AH-2	Intel	15
	M5L8085A	Mitsubishi	
	μPD8085A-2	NEC	
	μPD8085AH	NEC	
	CA80C85B	**Newbridge (3569)**	
	MSM80C85A	◊ OKI	20
	TMP8085A	Toshiba	
Microprocessor Bus Controller			
	8219	Intel	
	CA82C88	**° † Newbridge (3569)**	
Asynchronous Communications Element			
	CA82C50A	**Newbridge (3569)**	
Bidirectional Bus Driver. See 8216, 8226, etc. under 8080.			
	8216	Intel	25
	8226	Intel	
	M5L8226	Mitsubishi	
	μPB8216	NEC	
	μPB8226	NEC	
Bus Driver, Bi-Directional			
	M5L8216	Mitsubishi	30
Clock/Calendar, Real-Time			
	146818	°† SMC	
Clock Generator and Driver			
	M5L8284A	Mitsubishi	
	CA82C84A	**° † Newbridge (3569)**	
Converter, A/D (8-bit)			
	M58990	Mitsubishi	
Counter, CMOS Programmable			
	82C54	°† SMC	35
CRT Controller. See 8275, etc. under 8080.			
	8275	Intel	
Data Acquisition System, 8 Channel, 8-Bit Conversion			
	AD7581A	◊ AD	
	AD7581B	◊ AD	
	AD7581C	◊ AD	
	AD7581J	◊ AD	40
	AD7581K	**◊ AD (3227, 3231)**	
	AD7581L	◊ AD	
Decoder, 1 of 8. See 8205, etc. under 8080.			
	8205	Intel	
DMA Controller			
	TMP82C37A-5	Toshiba	
Dynamic RAM Controller			
	82C03	Intel	45
	8202A	Intel	
	8203	Intel	
Erasable PROM, I/O			
	M8755A	† Intel	
	8755A	Intel	
	μPD8755A	NEC	50
	MSM8755	OKI	
Floppy Disk Controller. See 8271, etc. under 8080.			
	8271	Intel	
	μPD765A	NEC	
	FDC1793	SMC	
	FDC1793-02	◊ SMC	55
	FDC1797	SMC	
	FDC1797-02	◊ SMC	
	FD1793-02	Western	
	FD1797-02	Western	
GPIB Controller			
	8292	Intel	60
GPIB Interface Controller, Intelligent			
	COM7210	SMC	
GPIB Talker/Listener Interface			
	8291A	Intel	
I/O Expander	8243	Intel	
	μPD82C43	NEC	
	μPD8243	NEC	65
I/O Port	M5L8212	Mitsubishi	
Interrupt Controller, Programmable			
	TMP82C59	Toshiba	
Keyboard/Display Controller, Programmable			
	M5L8279-5	Mitsubishi	
	TMP82C79-2	Toshiba	
	TMP8279-5	Toshiba	70
Multi-Universal Asynchronous Receiver Transmitter			
	SAB8256A	Siemens	
Priority Interrupt Controller			
	82C59	°† SMC	
Programmable Communication Interface (USART)			
	8251	AMD	
	8251A	◊ Intel	
	μPD8251	NEC	75
	μPD8251A	NEC	
	71051	NEC	
	MSM82C51A	OKI	
	TMP82C51A-2	Toshiba	
	TMP82C51A-8	Toshiba	80
Programmable Communications Interface (USART)			
	M5L8251A-5	Mitsubishi	
Programmable Direct Memory Access Controller			
	8237A	AMD	
	8237A-5	AMD	
	HS82C37ARH	‡ Harris	
	MD82C37A	°† Harris	85
	82C37A	◊ Harris	
	82C37A-5	◊ Harris	
	M8257	† Intel	
	8237A	Intel	
	8237A-4	Intel	90
	8237A-5	Intel	
	8257	Intel	
	8257-5	Intel	
	M5L8257-5	Mitsubishi	
	μPD71055	◊ NEC	95
	μPD8237A-5	NEC	
	μPD8257	NEC	
	μPD8257-5	NEC	
	CA82C37A	**° † Newbridge (3569)**	
	MSM82C57	OKI	100
	TMP8237A	Toshiba	
	TMP8237A-5	Toshiba	
	VL82C37A	VLSI Tech	
Programmable Interrupt Controller			
	M8259A	† Intel	
	8259A	Intel	105
	8259A-2	Intel	
	8259A-8	Intel	
	M5L8259A	Mitsubishi	
	M5M82C59A	◊ Mitsubishi	
	μPD8259	NEC	110
	μPD8259-2	NEC	
	μPD9259A	NEC	
	CA82C59A	**Newbridge (3569)**	
	TMP82C59A-2	Toshiba	
Programmable Interval Timer			
	8253-5	◊ AMD	115
	M8253	† Intel	
Programmable Interval Timer			
	82C54	Intel	
Programmable Interval Timer			
	8253	Intel	
	8253-5	Intel	
	8254	◊ Intel	120
	M5L8253-5	Mitsubishi	
	μPD8253-2	NEC	
	μPD8253-5	NEC	
	CA82C54	**Newbridge (3569)**	
	MSM82C53-5	OKI	125
	TMP82C53-2	Toshiba	
	TMP82C54	Toshiba	
	TMP82C54-2	Toshiba	
	TMP8253-5	Toshiba	
Programmable Peripheral Interface			
	8255A-5	Intel	130
	M5L8255A-5	Mitsubishi	
	M5M82C55A	◊ Mitsubishi	
	μPD8255A-2	NEC	
	μPD8255A-5	NEC	
	CA82C55A	**° † Newbridge (3569)**	135
	TMP8255A-5	Toshiba	
PROM (erasable), I/O			
	8755A	Intel	
	μPD8755A	NEC	
RAM, I/O, Timer			
	HS81C55RH	‡ Harris	
	HS81C56RH	‡ Harris	140
	M8155	† Intel	
	8155	Intel	
	8155-2	Intel	
	8156	Intel	
	8156-2	Intel	145
	M5L8155	Mitsubishi	
	M5L8156	Mitsubishi	
	M5M81C55	◊ Mitsubishi	
	M5M81C56	Mitsubishi	
	μPD8155	NEC	150
	μPD8156	NEC	
	MSM81C55	OKI	
	MSM8155	OKI	
RAM, I/O, Timer			
	TMP8155-2	Toshiba	
	TMP8156-2	Toshiba	155
RAM (1024x8) (See also: Memory-RAMs)			
	M8185	† Intel	
	8185	Intel	
	8185-2	Intel	
ROM, I/O	HS83C55RH	‡ Harris	
	8355	Intel	160
	8355-2	Intel	
	MSM83C55	OKI	
	TMP8355	Toshiba	
SCSI Interface Controller			
	CA53C80	**° † Newbridge (3569)**	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source	Line
8 Bit			
8085A (Cont'd)			
SDLC/HDLC Protocol Controller. See 8273, etc. under 8080.	8273	Intel	
	μPD7210	NEC	
Serial Controller Interface	**CA82C52**	**Newbridge (3569)**	
Static Microprocessor with Extended Instruction Set	**CA80C85S**	**° † Newbridge (3569)**	
Universal Peripheral Interface (slave microprocessor)	8041A	Intel	5
	8741A	Intel	
	μPD8041	NEC	
	μPD8741A	NEC	
Octal Bus Transceiver, Inverting	M8287	† Intel	
	8287	◊ Intel	10
	M5L8287	Mitsubishi	
Octal Bus Transceiver, Non-Inverting	M8286	† Intel	
	8286	◊ Intel	
	M5L8286	Mitsubishi	
Octal Latch, Inverting	M5L8283	Mitsubishi	15
Octal Latch, Non-Inverting	M5L8282	Mitsubishi	
8086/88			
Asynchronous Communications Element	**SSI73M450**	**◊ SiliconSys (3647)**	
Bus Arbiter	M5L8289	Mitsubishi	
	SAB8289-1	Siemens	
Bus Compatible Digital Pulse Width Modulator	IXDP610	IXYS	20
Bus Controller	M5L8288	Mitsubishi	
Clock/Calendar, Real-Time	146818	°† SMC	
Clock Generator and Driver for 8086 MPU (8 MHz)	SAB8284B	Siemens	
Clock Generator and Driver for 8086 MPU (10 MHz)	SAB8284B-1	Siemens	
Dynamic RAM Controller Interface Circuit	DP84432	National	25
Interrupt Controller, Programmable	TMP82C59	Toshiba	
Keyboard Interface Controller	KyBRD	°† SMC	
Multi-Protocol Serial Communications Controller	SAB7201A	Siemens	
Priority Interrupt Controller	82C59	°† SMC	
Programmable Interval Timer	**CA82C54**	**Newbridge (3569)**	30
	82C54	°† SMC	
8088			
Microprocessor, 8-Bit (10 MHz)	SAB80188-1	◊ Siemens	
	SAB8088-1	◊ Siemens	
PC/XT Chip Set (8086)	**VL82C031/2**	**VLSI Tech (3700)**	
NSC800			
Microprocessor	NSC800	National	35
	NSC800-1	National	
	NSC800-4	National	
Bidirectional Transceiver	MM82PC08	National	
Bidirectional Transceiver (CMOS)	MM82PC08	National	
Intelligent I/O, 3 Programmable Ports	NSC831	National	40
	NSC831-1	National	
	NSC831-4	National	
RAM, I/O, Timer	NSC810	National	
	NSC810-1	National	
	NSC810-4	National	45
UART	NSC858	National	
8-Bit I/O Port	MM82PC12	National	
8X300			
Microprocessor	N8X305	Signetics	
	S8X305	† Signetics	
FIFO RAM Controller	N8X60	Signetics	50
	S8X60	† Signetics	
I/O Port, Asynchronous, Field Programmable Address	N8T36	Signetics	
	N8X376	Signetics	
	S8T35	† Signetics	
	S8T36	† Signetics	55
I/O Port, Latched Bidirectional	N8T31	Signetics	
	N8X371	Signetics	
	S8X371	† Signetics	
I/O Port, Synchronous, Field Programmable Address	N8T32	Signetics	
	N8T33	Signetics	60
	N8X372	Signetics	
	N8X42	Signetics	
	S8T33	† Signetics	
	S8X372	† Signetics	
I/O Register Array (16x8 or 8x16)	N8X320	Signetics	65
Interrupt Controller	N8X310	Signetics	
	S8X310	† Signetics	
RAM, Static (256x8)	N8X350	Signetics	
	S8X350	† Signetics	
TLCS90			
Microcomputer (CPU, timer, serial channel, A/D, stepping motor driver, RAM and ROM)	TMP90C840	Toshiba	70
	TMP90C841	Toshiba	
Z8			
Microcomputer	EF68HC04J3	◊ SGS-Thomson	
	EF68HC04P2	◊ SGS-Thomson	
	Z8681	◊‡ SGS-Thomson	
	Z8681A	◊‡ SGS-Thomson	75
	Z86C08-MCU	Zilog	
	Z86C10-MCU	Zilog	
	Z86C20-MCU	Zilog	
	Z86C21-MCU	Zilog	
	Z86E21-MCU	Zilog	80
	Z8601-MCU	◊ Zilog	
	Z8603-MCU	Zilog	
		(Continued)	
Microcomputer (Cont'd)	Z8611-MCU	◊ Zilog	
	Z8613-MCU	Zilog	
	Z8671-MCU	Zilog	85
	Z8681-MCU	◊ Zilog	
	Z8800-MCU	Zilog	
Microcomputer, FORTH Interpreter	Z8874-MCU	Zilog	
Microcomputer, ROMless, DMA Controller	Z8801-MCU	Zilog	
Microcomputer (ROMless, 12 MHz)	Z86R91A	† SGS-Thomson	90
Microcomputer, ROMless, 24 I/O Lines, UART	Z86C91-MCU	Zilog	
	Z8691-MCU	Zilog	
Microcomputer (ROMless, 8 MHz)	Z86R91	† SGS-Thomson	
Microcomputer, Tiny Basic	Z8671	◊ SGS-Thomson	
Microcomputer, 2K bytes of ROM, 128 bytes of RAM, 22 I/O Lines	Z8600-MCU	Zilog	95
Microcomputer, 2K ROM	Z8601	◊‡ SGS-Thomson	
	Z8601A	◊‡ SGS-Thomson	
Microcomputer (2K ROM, 12 MHz)	Z8600A	† SGS-Thomson	
Microcomputer (2K ROM, 8 MHz)	Z8600	† SGS-Thomson	
Microcomputer, 4K EPROM	Z86E11	† SGS-Thomson	100
	Z86E11A	† SGS-Thomson	
Microcomputer (4K EPROM, OTP, 12 MHz)	Z8611E	† SGS-Thomson	
Microcomputer, 4K ROM	Z8611	◊‡ SGS-Thomson	
	Z8611A	◊‡ SGS-Thomson	
Microcomputer (4K ROM, 12 MHz)	Z8610A	† SGS-Thomson	105
Microcomputer (4K ROM, 8 MHz)	Z8610	† SGS-Thomson	
Microcomputer (8 MHz)	Z84C00H	◊† SGS-Thomson	
Microcomputer (8K EPROM, OTP, 12 MHz)	Z8621E	† SGS-Thomson	
Microcomputer (8K EPROM, 12 MHz)	Z86E21A	† SGS-Thomson	
Microcomputer (8K EPROM, 8 MHz)	Z86E21	† SGS-Thomson	110
Microcomputer, 8K ROM	Z8621	◊‡ SGS-Thomson	
	Z8621A	◊‡ SGS-Thomson	
Microcomputer, 8K ROM, DMA Controller	Z8820-MCU	Zilog	
	Z8822-MCU	Zilog	
Microcomputer (8K ROM, 12 MHz)	Z8620A	† SGS-Thomson	115
Microcomputer (8K ROM, 8 MHz)	Z8620	† SGS-Thomson	
Microcomputer (16 MHz)	TS68000-16	◊† SGS-Thomson	
Z80			
Microprocessor	Z8400	GoldStar	
	μPD70008	NEC	
	μPD70008A	NEC	120
	μPD780	NEC	
	μPD780-1	NEC	
	μPD780-2	NEC	
	LH0080	Sharp	
	LH0080A	Sharp	125
		(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8 Bit

Z80 (Cont'd)

Function	Device	Source
Microprocessor (Cont'd)		
	TMPZ84C00	Toshiba
	TMPZ84C00-3	Toshiba
	TMPZ84C01	Toshiba
	Z180-MPU	Zilog
	Z80	Zilog
	Z80180-MPU	Zilog
	Z84C00-CPU	Zilog
	Z8400-CPU	◊ Zilog
Microprocessor and Clock Generator Controller		
	TMPZ84C02-6	Toshiba
Microprocessor (2.5 MHz)		
	Z8400	◊ SGS-Thomson
Microprocessor (4 MHz)		
	Z84C00A	◊‡ SGS-Thomson
	Z8400A	◊‡ SGS-Thomson
	TMPZ84C00A	Toshiba
Microprocessor (6 MHz)		
	Z84C00B	◊‡ SGS-Thomson
	Z8400B	◊‡ SGS-Thomson
	TMPZ84C00A-6	Toshiba
Microprocessor (8 MHz)		
	Z8400H	◊‡ SGS-Thomson
	TMPZ84C00A-8	Toshiba
Microprocessor, 16-Bit		
	Z80280-MPU	Zilog
Microprocessor, 16-Bit with Enhanced Z80 Instruction Set	Z280-MPU	Zilog
Bus Compatible Digital Pulse Width Modulator		
	IXDP610	IXYS
Clock Generator and Controller		
	TMPZ84C60	Toshiba
	TMPZ84C61	**Toshiba (3672)**
	T6497	Toshiba
Counter/Timer Circuit		
	Z8430	GoldStar
	Z84C30	◊‡ SGS-Thomson
	Z8430	◊‡ SGS-Thomson
	LH0082	Sharp
	LH0082A	Sharp
	LH0082B	Sharp
	LH0082E	Sharp
	TMPZ84C30	Toshiba
	TMPZ84C30A	Toshiba
	TMPZ84C30A-6	Toshiba
	TMP82C53	Toshiba
	Z84C30-CTC	Zilog
	Z8430-CTC	◊ Zilog
Counter/Timer Circuit, CMOS (2.5 MHz)		
	LH5082	Sharp
	LH5082L	Sharp
Counter/Timer Circuit, CMOS (4 MHz)		
	LH5082A	Sharp
	LH5082AL	Sharp
Counter/Timer Circuit, CMOS (6 MHz)		
	LH5082B	Sharp
	LH5082BL	Sharp
Data Acquisition System, 8 Channel, 8-Bit Conversion		
	AD7581A	◊ AD
	AD7581B	◊ AD
	AD7581C	◊ AD
	AD7581J	◊ AD
	AD7581K	**◊ AD (3227, 3231)**
	AD7581L	◊ AD
	AD8581B	AD
Direct Memory Access Controller		
	Z8410	◊‡ SGS-Thomson
	LH0083	Sharp
	LH0083A	Sharp
	TMPZ84C10	Toshiba
	TMPZ84C10A	Toshiba

(Continued)

Function	Device	Source
Direct Memory Access Controller (Cont'd)		
	TMPZ84C10A-6	Toshiba
	TMP82C37	Toshiba
	TMP8237	Toshiba
	Z84C10-DMA	Zilog
	Z8410-DMA	Zilog
General Logic Unit (Interfaces the Z80 to a system environment)	Z84C80-GLU	Zilog
Keyboard/Display Interface, Programmable		
	TMP82C79	Toshiba
	TMP8279	Toshiba
Parallel I/O, CMOS (2.5 MHz)		
	LH5081	Sharp
	LH5081L	Sharp
Parallel I/O, CMOS (4 MHz)		
	LH5081A	Sharp
	LH5081AL	Sharp
Parallel I/O, CMOS (6 MHz)		
	LH5081B	Sharp
	LH5081BL	Sharp
Parallel I/O Controller		
	Z8420	GoldStar
	Z84C20	◊‡ SGS-Thomson
	Z8420	◊‡ SGS-Thomson
	LH0081	Sharp
	LH0081B	Sharp
	LH0081E	Sharp
	TMPZ84C20	Toshiba
	TMPZ84C20A	Toshiba
	TMPZ84C20A-6	Toshiba
	Z84C20-PIO	Zilog
	Z8420-PIO	◊ Zilog
Parallel I/O, NMOS (4 MHz)		
	LH0081A	Sharp
Parallel I/O, NMOS (6 MHz)		
	LH0084B	Sharp
	LH0085B	Sharp
	LH0086B	Sharp
Programmable Peripheral Interface		
	TMP82C55	Toshiba
Serial I/O Controller		
	Z8440	GoldStar
	Z84C40	‡ SGS-Thomson
	Z84C41	‡ SGS-Thomson
	Z84C42	‡ SGS-Thomson
	Z84C44	◊‡ SGS-Thomson
	Z8440	‡ SGS-Thomson
	Z8441	‡ SGS-Thomson
	Z8442	‡ SGS-Thomson
	Z8444	◊‡ SGS-Thomson
	LH0084	Sharp
	LH0084A	Sharp
	LH0085	Sharp
	LH0085A	Sharp
	LH0085E	Sharp
	LH0086	Sharp
	LH0086A	Sharp
	LH0087	Sharp
	LH0087A	Sharp
	LH0087B	Sharp
	TMPZ84C40	Toshiba
	TMPZ84C40A	Toshiba
	TMPZ84C40A-6	Toshiba
	TMPZ84C41	Toshiba
	TMPZ84C41A	Toshiba
	TMPZ84C41A-6	Toshiba
	TMPZ84C42	Toshiba
	TMPZ84C42A	Toshiba
	TMPZ84C42A-6	Toshiba
	TMPZ84C43	Toshiba
	TMPZ84C44A	Toshiba
	Z80-SIO	Zilog
	Z8440-SIO	◊ Zilog

Function	Device	Source
Serial Input/Output Controller		
	Z84C40-SIO	Zilog
	Z84C41-SIO	Zilog
	Z84C42-SIO	Zilog
	Z84C44-SIO	Zilog
	Z8441-SIO	Zilog
	Z8442-SIO	Zilog
	Z8444-SIO	◊ Zilog
UART, Dual (2.5 MHz NMOS)		
	LH0088	Sharp
UART, Dual (4 MHz NMOS)		
	LH0088A	Sharp
UART, Dual (6 MHz NMOS)		
	LH0088B	Sharp
Dual Asynchronous Receiver/Transmitter		
	Z8470	◊‡ SGS-Thomson
	Z80-DART	Zilog
	Z8470-DART	Zilog
Z80 MPU (4 MHz), Clock Generator Controller, Counter/Timer, I/O		
	TMPZ84C011A	**Toshiba (3672)**
	TMPZ84C013A	**Toshiba (3672)**
	TMPZ84C015A	**Toshiba (3672)**
Z80 MPU (6 MHz), Clock Generator Controller, Counter/Timer Controller, I/O		
	TMPZ84C011A-6	**Toshiba (3672)**
	TMPZ84C013A-6	**Toshiba (3672)**
	TMPZ84C015A-6	**Toshiba (3672)**

μPD7810

Function	Device	Source
Microcomputer		
	μPD78P09	NEC
	μPD7807	NEC
	μPD7809	NEC
Microcomputer with A/D Converter		
	μPD7810	NEC
	μPD7811	NEC

Miscellaneous

Function	Device	Source
Microcomputer, 8-Bit (LCD controller/driver, 4K ROM, 168 bytes RAM)		
	LC86104A	Sanyo
Microcomputer, 8-Bit (LCD controller/driver, 8K ROM, 168 bytes RAM)		
	LC86108A	Sanyo

8/16 Bit

1600

Function	Device	Source
Asynchronous/Synchronous Transmitter/Receiver (ASTRO) (See also Interface-Serial Transmitters-Receivers)		
	UC1671	Western
Floppy Disk Controller/Formatter		
	MB8866	Fujitsu
	FDC1791-02	SMC
	FDC1795-02	SMC
	FD1791-02	◊ Western
	FD1795-02	Western

8086

Function	Device	Source
Microprocessor, Operating System		
	80130	Intel
Microprocessor, 16-Bit		
	8086	◊ AMD
	8086-1	◊ AMD
	8086-2	◊ AMD
	HS80C86RH	‡ Harris
	MD80C86	† Harris
	80C86	◊ Harris
	80C86-2	◊ Harris
	M8086	† Intel
	80286	Intel
	8086	◊ Intel

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source	Line
8/16 Bit			
8086 (Cont'd)			
Microprocessor, 16-Bit (Cont'd)			
	8086-1	◊ Intel	
	8086-2	◊ Intel	
	μPD8086	NEC	
	μPD8086-2	NEC	
	MSM80C86	OKI	5
Bus Controller	82288	Intel	
Clock and Ready Interface, for iAPX286			
	82284	Intel	
Programmable DMA Controller			
	82C237	◊ Harris	
8086/88			
Microprocessor, High Integration			
	80186	Intel	
Microprocessor, I/O Preprocessor			
	8089	◊ Intel	10
Microprocessor, 8-Bit			
	80188	Intel	
	SAB80188	Siemens	
	SAB8088	Siemens	
	SAB8088-2	Siemens	
Microprocessor, 16-Bit			
	SAB80186	Siemens	15
A Clock Generator and Driver (5 MHz)			
	82C84A-5	Intel	
Asynchronous Communications Element			
	82C50A	◊ Harris	
	82C50A-Cell	° Harris	
	CA82C50A	**Newbridge (3569)**	
	82C50	°† SMC	20
Bus Arbiter	82C89	◊ Harris	
	82C89/883	◊ Harris	
	M8289	† Intel	
	8289	◊ Intel	
	μPB8289	NEC	25
	SAB8289	Siemens	
Bus Arbiter (for 8088, 8086, and 80186 microprocessors)			
	MBI8289A	PLX Tech	
	MBI8289B	PLX Tech	
Bus Controller	8288	AMD	
	82C88	◊ Harris	30
	82C88-Cell	◊° Harris	
	82C88/883	◊ Harris	
	M8288	† Intel	
	82C88	Intel	
	82188	Intel	35
	8288	◊ Intel	
	8288-1	◊ Intel	
	μPB8288	NEC	
	μPD71088	◊ NEC	
	CA82C88	**° † Newbridge (3569)**	40
	MSM82C88	OKI	
	SAB8288	Siemens	
Bus Driver, Inverting, Octal Latching			
	82C83H/883	◊† Harris	
Bus Driver, Octal Latching			
	82C82/883	◊† Harris	
Bus Interface Controller			
	SAB82220	Siemens	45
Bus Transceiver, Octal			
	82C86H/883	◊† Harris	
Bus Transceiver, Octal Inverting			
	82C87H/883	◊† Harris	
Chipset, 8088/8086/V30 (PC/XT Compatible)			
	82C100	Chips&Tech	
CHIPSpak, PC Compatible Multifunction Controller			
	82C606	Chips&Tech	
CHIPSport, PC Compatible Multifunction Controller			
	82C605	Chips&Tech	50
Clock/Calendar, Real-Time			
	146818	°† SMC	
Clock Generator and Controller			
	HS82C85RH	‡ Harris	
	82C85	◊ Harris	
Clock Generator and Driver			
	8284A	AMD	
	MD82C84A	◊°† Harris	55
	82C84A	◊° Harris	
	82C84A/883	◊° Harris	
	M8284	† Intel	
	82C84A	Intel	
	8284A	◊ Intel	60
	8284A-1	Intel	
	μPB8284A	NEC	
	μPD71084	◊ NEC	
	CA82C84A	**° † Newbridge (3569)**	
	MSM82C84A	OKI	65
	82C84	°† SMC	
Control Buffer (For 80386/AT Chipset)			
	82A306	Chips&Tech	
Data Buffer (For 80386/AT Chipset)			
	82A305	Chips&Tech	
Direct Memory Access (DMA) Controller, PS2 Model 30 CMOS, IBM-Compatible, 2 Chip Set, 10			
	VL82C37A	◊ VLSI Tech	
DMA Controller			
	82258	Intel	70
DMA Controller (CMOS)			
	82C37A/883	◊† Harris	
Dynamic RAM Controller			
	8202A	Intel	
	8203	Intel	
	8207	Intel	
	8208	Intel	75
	DP84422	National	
GPIB Interface Controller			
	COM7210	SMC	
GPIB Talker/Listener			
	8291A	Intel	
Keyboard Interface Controller			
	KyBRD	SMC	
Multi-Universal Asynchronous Receiver Transmitter			
	8256	Intel	80
	SAB8256A	Siemens	
Multiprotocol Serial I/O Controller			
	μPD7210	NEC	
Printer Adapter Interface			
	UM82C11	**UMC (3689)**	
Priority Interrupt Controller			
	HS82C59ARH	‡ Harris	
	MD82C59A	◊† Harris	85
	82C59A	◊ Harris	
	82C59A-Cell	° Harris	
	82C59A-5	◊ Harris	
	82C59A/883	◊ Harris	
	MSM82C59A	OKI	90
Programmable Asychronous Communications Interface			
	HD6406	◊ Harris	
	HD6406-Cell	◊° Harris	
Programmable DMA Controller			
	CA82C37A	**° † Newbridge (3569)**	
Programmable Interrupt Controller			
	82C59A-2	Intel	
	8259A	Intel	95
	CA82C59A	**° † Newbridge (3569)**	
		(Continued)	
Programmable Interrupt Controller (Cont'd)			
	SAB8259A	Siemens	
	SAB8259A-2	Siemens	
	82C59	°† SMC	
Programmable Interval Timer			
	HS82C54RH	‡ Harris	100
	82C54	◊ Harris	
	82C54-Cell	◊° Harris	
	82C54	°† SMC	
Programmable Interval Timer (CMOS)			
	MD82C54	† Harris	
	82C54/883	◊† Harris	105
Programmable Interval Timer (8 MHz)			
	82C54	AMD	
Programmable Interval Timer (10 MHz)			
	82C54-2	AMD	
Programmable Interval Timer (12.5 MHz)			
	82C54-12	AMD	
Programmable Peripheral Interface			
	HS82C55ARH	‡ Harris	
	MD82C55A	◊ Harris	110
	82C55A	◊ Harris	
	82C55A-Cell	° Harris	
	82C55A-5	◊ Harris	
	CA82C55A	**° † Newbridge (3569)**	
	UM82C55A	**UMC (3689)**	115
Programmable Peripheral Interface (CMOS)			
	82C55A/883	◊† Harris	
Serial Communications Controller			
	CA85C30	**Newbridge (3569)**	
Serial Communications Interface			
	HS82C52RH	‡ Harris	
	82C52	◊ Harris	
	82C52-Cell	◊° Harris	120
Serial Controller Interface			
	CA82C52	**Newbridge (3569)**	
Serial Controller Interface (CMOS)			
	82C52/883	◊† Harris	
Text Coprocessor			
	82730	Intel	
Universal DMA Controller, 16-Bit, 10 MHz			
	AM9516A-1	AMD	
Universal DMA Controller, 16-Bit, 4 MHz			
	AM9516A-4	AMD	125
Universal DMA Controller, 16-Bit, 6 MHz			
	AM9516A-6	AMD	
Universal DMA Controller, 16-Bit, 8 MHz			
	AM9516A-8	AMD	
Video Interface Controller			
	82731	Intel	
Octal Bus Transceiver, Inverting			
	8287	AMD	
	MD82C87H-5	◊† Harris	130
	82C87H	◊† Harris	
	82C87H-5	◊ Harris	
	M8287	† Intel	
	μPB8287	NEC	
	μPD71087	◊ NEC	135
Octal Bus Transceiver, Non-Inverting			
	8286	AMD	
	MD82C86H-5	◊† Harris	
	82C86H	◊† Harris	
	M8286	† Intel	
	μPB8286	NEC	140
	μPD71086	◊ NEC	
Octal Latch, Inverting			
	MD82C83H	◊† Harris	
	82C83H	◊† Harris	
	M8283	† Intel	
	8283	◊ Intel	145
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

8/16 Bit

8086/88 (Cont'd)

Function	Device	Source
Octal Latch, Inverting (Cont'd)		
	μPB8283	NEC
	μPD71083	◊ NEC
	SAB8283	Siemens
Octal Latch, Non-Inverting		
	MBL8282	Fujitsu
	MD82C82	† Harris
	82C82	◊ Harris
	M8282	† Intel
	8282	◊ Intel
	μPB8282	NEC
	μPD71082	◊ NEC

8088

Function	Device	Source
Microprocessor, 8-Bit		
	8088	◊ AMD
	8088-1	◊ AMD
	8088-2	◊ AMD
	80C88	◊ Harris
	8088	**◊ Intel (3493)**
	8088-2	**◊ Intel (3493)**
	μPD8088	NEC
	μPD8088-2	NEC
	MSM80C88	OKI

9900

Function	Device	Source
Microcomputer ROM-Less		
	TM9995	TI
Microprocessor		
	TMS9981	TI
Microprocessor, 16-Bit		
	TMS9900	TI
Addressable Latch, 8-Bit		
	SN54LS259B	◊† TI
	SN74LS259B	TI
	TIM9906	TI
Asynchronous Communications Controller		
	TMS9902A	TI
Clock Generator and Driver (4-phase for 9900)		
	TIM9904	TI
Data Selector/Multiplexer (See also Digital-TTL-Multiplexers 74LS251)		
	SN54LS251	◊† TI
	SN74LS251	TI
	TIM9905	TI
GPIB Controller		
	SMJ9914A	† TI
	TMS9914A	TI
Modem, 300 Baud		
	SC11002	Sierra
	SC11003	Sierra
Multi-Processor Interface		
	TMS9650	TI
Priority Encoder (See also Digital-TTLMiscellaneous, Priority Encoder, 74LS148)		
	TIM9907	TI
Priority Encoder, 8-Line to 3-Line, Three State		
	SN74LS348	TI
	TIM9908	TI
Priority Encoder, 8-Line to 3-Line, Three-State		
	SN74LS148	TI
Programmable Systems Interface		
	TMS9901	TI
Pulse DTMF Encoder		
	TMS99531	TI
Synchronous Communications Controller		
	TMS9903	TI
Four-Phase Clock Generator and Driver		
	TMS9904A	TI

80286

Function	Device	Source
Microprocessor, Numeric Data		
	80287	Intel

μCOM-70K

Function	Device	Source
Microprocessor (8-Bit external bus)		
	μPD70108-5	◊ NEC
	μPD70108-8	◊ NEC
Microprocessor (16-Bit external bus)		
	μPD70116-5	◊ NEC
	μPD70116-8	◊ NEC

12 Bit

2900

Function	Device	Source
Microprogram Sequencer, 12-Bit		
	IDT39C10B	◊ IDT
	IDT39C10C	◊ IDT

2900 Controller

Function	Device	Source
Microprogram Controller, 12-Bit		
	CY7C910C	◊ Cypress
	CY7C910M	◊† Cypress
	GP502AD	‡ Harris
	SFC2910	SGS-Thomson

6100

Function	Device	Source
Universal Asynchronous Receiver-Transmitter (UART) (See also Interface-Serial Transmitters-Receivers)		
	HD6402-Cell	° Harris
	HD6402/883	° Harris

16 Bit

2900

Function	Device	Source
Microprocessor Slice, 16-Bit		
	CY7C9101	◊ Cypress
Error Detection and Correction		
	IDT39C60A	◊ IDT
Microprogram Sequencer, 16-Bit		
	IDT49C410	◊ IDT
	IDT49C410A	◊ IDT
Quad 2901 with 64x16 Dual Port Memory Capacity		
	IDT49C402	◊ IDT
	IDT49C402A	◊ IDT

6500

Function	Device	Source
Microprocessor (software compatible with 8-bit 6500 series)		
	G65SC802	◊ CMD Micro
	G65SC816	◊ CMD Micro
	W65C802	◊ WDC
	W65C816	◊ WDC

8000

Function	Device	Source
Microprocessor, Non-Segmented		
	Z8002	◊ SGS-Thomson
	Z8002A	◊ SGS-Thomson
	Z8002B	◊‡ SGS-Thomson
	LH8002	Sharp
	LH8002A	Sharp
Microprocessor, Segmented		
	Z8001	SGS-Thomson
	Z8001A	SGS-Thomson
	Z8001B	◊‡ SGS-Thomson
	LH8001	Sharp
	LH8001A	Sharp
	Z8000	Zilog
	Z8001-CPU	◊ Zilog
Asynchronous Serial Communications Controller		
	Z8031	SGS-Thomson
	Z8031A	SGS-Thomson
Burst Error Processor		
	AMZ8065	AMD
Clock Generator and Controller		
	Z8581-CGC	Zilog
Counter Timer I/O		
	Z8036-CIO	◊ SGS-Thomson
	Z8036A-CIO	◊ SGS-Thomson
	LH8036	Sharp
	LH8036A	Sharp
	Z8036-Z-CIO	◊ Zilog
CRT Controller	AM8052	◊ AMD
Data Ciphering Processor (for data encryption)		
	AMZ8068	AMD
	Z8068-DCP	Zilog
	Z9518-DCP	Zilog
Direct Memory Access		
	Z8016-Z-DTC	Zilog
DMA Transfer Controller		
	Z8516-DTC	Zilog
DMA Transfer Controller		
	Z9516-DTC	Zilog
FIFO Buffer Unit (128x8)		
	Z8560-FIFO	Zilog
First In/First Out Buffer		
	Z8060-FIFO	SGS-Thomson
	Z8060A-FIFO	SGS-Thomson
	LH8060	Sharp
	Z8060-Z-FIFO	Zilog
First In/First Out I/O		
	Z8038-FIO	◊ SGS-Thomson
	Z8038A-FIO	◊ SGS-Thomson
	LH8038	Sharp
	LH8038A	Sharp
	Z8038-Z-FIO	◊ Zilog
Floppy Disk Controller		
	FDC1793	SMC
	FDC1793-02	◊ SMC
	FDC1797	SMC
	FDC1797-02	◊ SMC
	FD1793-02	Western
	FD1797-02	Western
General Purpose Interface Bus, NMOS		
	LH8073	Sharp
Intelligent Peripheral Controller		
	LH8090	Sharp
	LH8090A	Sharp
Key Encoder Data Transmitter/Receiver, NMOS		
	LH8661	Sharp
Memory Management Unit		
	Z8010-MMU	SGS-Thomson
	Z8010A-MMU	SGS-Thomson
	LH8010	Sharp
	LH8010A	Sharp
Multi-Task Support Peripheral, NMOS		
	LH8075	Sharp
Output Interface Unit (with 128 byte FIFO Unit)		
	Z8538-FIO	Zilog
Real-Time Clock/Calendar (8 and 10 MHz)		
	CA82C55A	**Newbridge (3569)**
Serial Communications Controller		
	Z8030A	◊‡ SGS-Thomson
	Z85C30-SCC	Zilog
	Z8530-SCC	◊ Zilog
Serial I/O Controller		
	Z8030-SCC	◊ SGS-Thomson
	LH8030	Sharp
	LH8030A	Sharp
	Z8030-Z-SCC	◊ Zilog
Serial/Parallel Combination Controller, NMOS		
	LH8071	Sharp
	LH8072	Sharp

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source	Line
16 Bit			
8000 (Cont'd)			
Universal Peripheral Controller, NMOS (6 MHz)	LH8093A	Sharp	
8086			
Microprocessor, 16-Bit (10 MHz)	SAB80186-1	◊ Siemens	
	SAB80286-1	◊ Siemens	
Bus Controller for SAB80286 Processor (8 MHz)	SAB82288	Siemens	
Bus Controller for SAB80286 Processor (10 MHz)	SAB82288-1	Siemens	5
Clock Generator and Interface for SAB80286 Processor (16 MHz)	SAB82284	Siemens	
	SAB82284-1	Siemens	
256x8-Bit CMOS Static RAM	SAB81C52	Siemens	
	SAE81C52	Siemens	
8096			
Microcomputer, 232x8 RAM, 10-Bit A/D, IO, 12 MHz	8096	Intel	10
Microcomputer, 232x8 RAM, 10-Bit A/D, 8Kx8 ROM, I/O, 12 MHz	8396	Intel	
9450			
Memory Management Unit	F9451	◊† National	
16000			
Microprocessor, Enhanced 16-Bit MIL-STD–1750A (CMOS)	P1750AE-30XM	◊† Performance	
	P1750AE-35XM	◊† Performance	
	P1750AE-40XM	◊† Performance	15
Microprocessor Hybrid System Module (P1750A MPU, P1753 MMU, and P1754 Processor Interface Circuit)	P1757M-20M	◊† Performance	
	P1757M-30M	◊† Performance	
	P1757M-40M	◊† Performance	
Microprocessor, 16-Bit MIL-STD–1750A (CMOS)	P1750A-20XM	◊† Performance	
	P1750A-30XM	◊† Performance	20
	P1750A-40XM	◊† Performance	
Microcontroller Emulator (for the HPC16083, 8K EPROM, 256x8 RAM)	HPC46083MH	National	
Microcontroller (external ROM)	HPC16003	† National	
	HPC26003	National	
	HPC36003	National	25
	HPC46003	National	
Microcontroller with HDLC Controller	HPC16400	National	
	HPC36400	National	
	HPC46400	National	
Microcontroller, 16-Bit (A/D, ROMless version)	HPC16104	† National	30
	HPC26104	National	
	HPC36104	National	
	HPC46104	National	
Microcontroller, 16-Bit (A/D, 16K ROM)	HPC16164	† National	
	HPC26164	National	35
	HPC36164	National	
	HPC46164	National	
Microcontroller, 16-Bit (ROMless version)	HPC16004	† National	
	HPC26004	National	
		(Continued)	

Function	Device	Source	Line
Microcontroller, 16-Bit (ROMless version)		(Cont'd)	
	HPC36004	National	40
	HPC46004	National	
Microcontroller, 16-Bit (16K ROM)	HPC16064	† National	
	HPC26064	National	
	HPC36064	National	
	HPC46064	National	45
Microcontroller (8K ROM, 256 bytes RAM)	HPC16083	† National	
	HPC26083	National	
	HPC36083	National	
	HPC46083	National	
CMOS Serial Network Interface	DP83910	National	50
MMU, BPU, I/O. and Fault Controller	L64550	◊°† LSI Logic	
Serial Network Interface	DP8391	National	
Universal Asynchronous Receiver/Transmitter	INS8250-B	◊ National	
	PC8250C	◊ National	
Universal Asynchronous Receiver/Transmitter (with FIFO's, parallel interface and decode logic)	PC16551C	◊ National	55
68000			
Microprocessor	HD68000-10	Hitachi	
	MC68000-10	Motorola	
	MC68000-12	Motorola	
	MC68000-8	Motorola	
	R68000	Rockwell	60
	EF68000	SGS-Thomson	
	EF68000-10	SGS-Thomson	
	EF68000-12	SGS-Thomson	
	EF68000-16	SGS-Thomson	
	EF68000-8	SGS-Thomson	65
	SCN68000	◊ Signetics	
Microprocessor 8-Bit (bus interface version of MC68000)	MC68008	Motorola	
	EF68008	SGS-Thomson	
Microprocessor 16-Bit (virtual machine version of MC68000)	MC68010	Motorola	
Address Decoder, 68000 Compatible	USC68HC138	Universal	70
Broadband Interface Controller (IEEE 802.4 Broadband Physical Layer)	MC68184	Motorola	
Bus Arbitration Module	MC68452	Motorola	
Bus Interrupter Module	MC68153	Motorola	
Carrierband Modem (IEEE 802.4 Phase Coherent Physical Layer)	MC68194	Motorola	
CMOS 16/32-Bit Microprocessor	**SCC68070**	**◊ Signetics (3629)**	75
Communications, Asynchronous Communications Adapter Interface (ACIA)	USC68HC551	Universal	
Communications, Multi-protocol Communications Controller	MC2652	Motorola	
Communications, Programmable Communications Interface	MC2661	Motorola	
	MC68661	Motorola	
Communications, Dual Asynchronous Communications Interface Adapter (DACIA)	**R68C552**	**Rockwell (3576)**	80
Communications, Dual Universal Serial Communications Controller	**SCN68562**	**◊ Signetics (3594)**	

Function	Device	Source	Line
Controller, Programmable Interrupt	USC68HC908	Universal	
Disk, Intelligent Multiple Disk Controller	SCN68454	Signetics	
Disk, Phase Locked Loop	SCB68459	Signetics	
Display Processor	EF68483	SGS-Thomson	85
DMA Controller	HD68450-10	◊ Hitachi	
	HD68450-8	◊ Hitachi	
	MC68450	Motorola	
	SCB68430	◊ Signetics	
DMA Controller, Extended Address	MC68442	Motorola	90
DMA Controller, Dual	MC68440	Motorola	
	EF68440	SGS-Thomson	
Dynamic RAM Controller Interface Circuit	DP84322	National	
Error Detection and Correction Circuit	MC74F2960	Motorola	
Memory Access Controller	SCC68905	◊ Signetics	95
	SCC68906	Signetics	
Memory Management Controller (supports 68010, 68020)	MC68641	Motorola	
Memory Management Unit	MC68451	Motorola	
Multi-Function Peripheral	MC68901	Motorola	
	EF68901	SGS-Thomson	100
	MK68901	SGS-Thomson	
Multibus II Message Passing Coprocessor	**VL82C389**	**VLSI Tech (3701)**	
Parallel Interface/Timer	MC68230-12	Motorola	
	MC68230L10	Motorola	
	MC68230L8	Motorola	105
	EF68230-10	SGS-Thomson	
	EF68230-8	SGS-Thomson	
Protocol Controller (X.25)	MC68605	Motorola	
SCSI Interface Controller	**CA53C80**	**°† Newbridge (3569)**	
Serial Communications Controller	**CA85C30**	**Newbridge (3569)**	110
Serial I/O	EF68564	SGS-Thomson	
	MK68564	SGS-Thomson	
Token Bus Controller (IEEE 802.4 Media Access Control sublayer)	MC68824	Motorola	
Video Display Generator	MC6847	Motorola	
VMEbus Controller (BUSCON)	SCB68172	◊ Signetics	115
Dual UART	MC68681	Motorola	
	SCN68681C	◊ Signetics	
RTX2000			
Microcontroller, On-Chip Interrupt Controller, Three 16-Bit Timer/Counters, ASIC Bus	RTX2000	Harris	
	RTX2001A	Harris	
TLCS68000			
Microcomputer (DMA controller, transfer rate up to 5 MB/s)	**TMP68450**	**Toshiba (3673)**	120

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

16 Bit

TLCS68000 (Cont'd)

Function	Device	Source
Microcomputer (dual direct memory address, async., block transfer)	**TMP68440**	**Toshiba (3673)**
Microcomputer (multifunction peripheral, 8 I/O, timers, sync/async)	**TMP68901**	**Toshiba (3673)**
Microcomputer (32-bit CPU, UNIX compatible)	**TMP68000**	**Toshiba (3673)**
Microcomputer (32-bit CPU, UNIX compatible, virtual memory)	**TMP68010**	**Toshiba (3673)**
Microcomputer (68000 bus compatible, parallel interface timer)	**TMP68230**	**Toshiba (3673)**

TMS380

Function	Device	Source
Token-Ring COMMprocessor (16 Mb/s)	TMS380C16	◊ TI
Token-Ring LAN Communications Processor (Part of TMS380 Chip Set)	TMS38010	TI
Token-Ring LAN Protocol Handler (Part of TMS380 Chip Set)	TMS38020	TI
Token-Ring LAN Ring Interface Controller (Part of TMS380 Chip Set)	TMS38052	TI
Token-Ring LAN Ring Interface Transceiver (Part of TMS380 Chip Set)	TMS38051	TI
Token-Ring LAN System Interface (Part of TMS380 Chip Set)	TMS38030	TI

Transputer

Function	Device	Source
Link Adapter, 10 or 20 Mb/s	IMSC011	SGS-Thomson
	IMSC012	SGS-Thomson
Transputer, 16-Bit (10 MIPs performance, 4 Kbytes RAM on chip)	IMST222M	† SGS-Thomson

Z8000

Function	Device	Source
Counter/Timer, Parallel I/O	Z8536-CIO	◊ Zilog
DMA Transfer Controller	Z8516-DTC	Zilog
General Logic Unit (Interfaces the Z80 to a system environment)	Z80C20-Z-GLU	Zilog
SCSI Interface Chip	Z5380-SCSI	Zilog
Serial Communications Controller	Z80C30Z-SCC	Zilog
Serial Controller Multi-Protocol	Z8530-SCC	◊ Zilog

16/32 Bit

16000

Function	Device	Source
LAN Coax Receiver Interface	DP8392	National

32000

Function	Device	Source
Microprocessor, 32-Bit, CMOS, with 16-Bit External Data Bus	NS32C016	National
Microprocessor, 32-Bit, CMOS, with 32-Bit External Data Bus	NS32C032	National
Microprocessor, 32-Bit, with Virtual M	NS32332	National
Microprocessor, 32-Bit, with 32-Bit External Data Bus	NS32032	National
Microprocessor, 32-Bit, with 8-Bit External Data Bus	NS32008	National
Arithmetic, Floating Point Processor	NS32081	National
DMA Controller	NS32203	National
Floating Point Unit	NS32081-10	National
	NS32081-15	National
	NS32081-6	National
Floating Point Unit (15 MHz)	NS32381-15	National
Floating Point Unit (16 or 32-bit slave protocol support)	NS32381	National
Floating Point Unit (20 MHz)	NS32381-20	National
Interrupt Control Unit	NS32202	National
Memory Management Unit	NS32082	National
	NS32382	National
	NS32382-10	National
	NS32382-15	National
Serial Communications Controller	**CA85C30**	**Newbridge (3569)**
Timing Control Unit	NS32C201	National
	NS32201	National

80286

Function	Device	Source
Microprocessor, 16-bit (with memory management, 10 MHz)	SAB80286-1	Siemens
Microprocessor, 16-bit (with memory management, 12 MHz)	SAB80286-12	Siemens
Microprocessor, 16-bit (with memory management, 16 MHz)	SAB80286-16	Siemens
Microprocessor, 16-Bit (with memory management, 8 MHz)	SAB80286	Siemens
Address/Data Buffer	82C225	◊ Chips&Tech
Advanced Memory Controller	82C222	◊ Chips&Tech
Asynchronous Communications Element	**CA82C50A**	**Newbridge (3569)**
	73M450	◊ SiliconSys
Bus Arbiter (synchronizes 80286 with Multi-Master bus.)	82289	Intel
Bus Arbiter (10 MHz)	KS82C289-10	Samsung
Bus Arbiter (12 MHz)	KS82C289-12	Samsung
Bus Arbiter (16 MHz)	KS82C289-16	Samsung
Bus Controller.	82C288-10	Harris
	82C288-10/883	† Harris
	82C288-12	Harris
	82C288-12/883	† Harris
Bus Controller	**CA82C88**	**° † Newbridge (3569)**
Bus Controller for 80C286 Processor	82C288/883	Harris
Bus Controller (10 MHz)	KS82C288-10	Samsung
Bus Controller (12 MHz)	KS82C288-12	Samsung
Bus Controller (16 MHz)	KS82C288-16	Samsung
Clock Driver and Ready Interface (for iAPX 286 processors)	82284	AMD
Clock Generator and Driver	**CA82C84A**	**° † Newbridge (3569)**
Clock Generator and Ready Interface.	82C284-10	Harris
	82C284-10/883	† Harris
	82C284-12	Harris
	82C284-12/883	† Harris
Clock Generator and Ready Interface	82C284-10	Intel
	82C284-12	Intel
	82C284-6	Intel
	82C284-8	Intel
Clock Generator (10 Mhz)	KS82C284-10	Samsung
Clock Generator (12 MHz)	KS82C284-12	Samsung
Clock Generator (16 MHz)	KS82C284-16	Samsung
CPU Controller	82C211	Chips&Tech
	82C221	◊ Chips&Tech
CS8220 with Integrated Peripheral Controller	CS8226	◊ Chips&Tech
Data Address Buffer	82C215	Chips&Tech
Data Bus Buffer and Parity Generator, for PC/AT	82A205	Chips&Tech
DMA Controller	82C223	◊ Chips&Tech
DMA Coprocessor	SAB82257	Siemens
	SAB82257-6	Siemens
	SAB82258-1	Siemens
EMS Mapper Chip	82C631	◊ Chips&Tech
High Address Bus Buffer and Port, for PC/AT	82A203	Chips&Tech
IBM PC/AT Compatible Chip Set (replaces major logic functions of all microprocessor peripherals)	POACH/AT	ZyMOS
IBM PC/AT Compatible Chip Set (replaces most address and data buffers on the AT motherboard)	POACH/ATB	ZyMOS
IBM PC/AT Compatible Chip Set (replaces the major logic functions of the AT motherboard)	POACH/ATF	ZyMOS
IBM PS/2 Model 50/60 Compatible Chipset	CHIPS/250	◊ Chips&Tech
Low Address Bus Buffer and Refresh Counter, for PC/AT	82A204	Chips&Tech
Memory Interleave Controller	82C212	Chips&Tech
Micro-Channel Controller I	82C611	Chips&Tech
Micro-Channel Controller II	82C612	Chips&Tech
Multibus II Message Passing Coprocessor for 80186/80286/80386 and 6800	**VL82C389**	**VLSI Tech (3701)**
Multifunction Controller	82C607	◊ Chips&Tech
Numeric Coprocessor (12 MHz)	80EC287-12	◊ AMD
Numeric Coprocessor (16 MHz)	80EC287-16	◊ AMD
Numeric Coprocessor, 80-Bit (10 MHz)	80C287-10	AMD

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR—System Components (Cont'd)

16/32 Bit

80286 (Cont'd)

Function	Device	Source
Numeric Coprocessor, 80-Bit (16 MHz)	80C287-16	AMD
Numeric Coprocessor, 80-Bit (8 MHz)	80C287-8	AMD
PC/AT Chip Set (TOPCAT 286/386sx)	**VL82C286-SET**	**VLSI Tech (3698)**
PC/AT Chip Set (TOPCAT 386DX)	**VL82C386-SET**	◊° **VLSI Tech (3698)**
PC/AT Compatible Chipset	CS8220	◊ Chips&Tech
PC/AT Compatible Combination Chip (20 MHz CMOS)	**VL82C106**	**VLSI Tech (3702)**
Programmable DMA Controller	82C237	◊ Harris
	CA82C37A	**° † Newbridge (3569)**
Programmable Interrupt Controller	**CA82C59A**	**° † Newbridge (3569)**
Programmable Interval Timer	**CA82C54**	**° † Newbridge (3569)**
Programmable Peripheral Interface	**CA82C55A**	**° † Newbridge (3569)**
RAM/ROM Decode, I/O Control, for PC/AT	82C202A	Chips&Tech
SCSI Interface Controller	**CA53C80**	**° † Newbridge (3569)**
Serial Communications Controller	**CA85C30**	**Newbridge (3569)**
	VM85C30	† VLSI Tech
Serial Controller Interface	**CA82C52**	**Newbridge (3569)**
Super VGA Controller	82C451	◊ Chips&Tech
System Control Chip, for PC/AT	82C201	Chips&Tech
System Peripheral Chip	82C226	◊ Chips&Tech
UART (Universal Asynchronous Receiver/Transmitter)	73M450	◊ SiliconSys
Single Chip AT Mid-Range Performance Chip - Desktop (SCAMP-DT)	**VL82C311**	◊° **VLSI Tech (3699)**
Single Chip AT Mid-Range Performance Chip - Laptop (SCAMP-LT)	**VL82C310**	◊° **VLSI Tech (3699)**
286/NEAT Chipset	KS82C201	◊ Samsung
	KS82C202	◊ Samsung
	KS82C204	◊ Samsung
	KS82C205	◊ Samsung

32 Bit

32

Function	Device	Source
Microprocessor (32-bit RISC)	**VL86C010**	**VLSI Tech (3701)**
RISC Microprocessor, Enhanced	**VL86C020**	◊ **VLSI Tech (3701)**
SPARC ECL Floating Point ALU (32/64-bit)	B5120	Bipolar
SPARC ECL Floating Point Controller	B5100	Bipolar
SPARC ECL Floating Point Multiplier/Divider (32/64-bit)	B5110	Bipolar
SPARC ECL Integer Unit Microprocessor	B5000	Bipolar
SPARC ECL Register File, Five-Port (64x18-bit)	B5210	Bipolar

32000

Function	Device	Source
Microprocessor	NS32016	National
Microprocessor (full 32-bit architecture)	NS32532-20	National
	NS32532-30	National
Microprocessor, 32-Bit (on chip MMU, instruction and data caches)	NS32532	National
Microprocessor, 32-Bit RISC (CMOS)	PR3000-16XC	◊ Performance
	PR3000-16XM	◊† Performance
	PR3000-20XC	◊ Performance
	PR3000-20XM	◊† Performance
	PR3000-25XC	◊ Performance
	PR3000-25XM	◊† Performance
Asynchronous Communications Element with FIFOs	NS16550	National
Direct Memory Access Controller	NS32202-10	National
Floating Point Unit	NS32381-15	National
	NS32381-20	National
	NS32381-25	National
	NS32381-30	National
Floating Point Unit (15 MHz)	NS32181-15	National
Floating Point Unit (20 MHz)	NS32181-20	National
Floating Point Unit (25 MHz)	NS32181-25	National
High Performance 32-Bit Embedded System Processor	NS32GX32-30	National
High-Performance 32-Bit Embedded System Processor	NS32GX32-20	National
	NS32GX32-25	National
MicroCMOS Programmable 1M Dynamic RAM Controller/Driver	NS32CG821	National
Microporcessor (full 32-bit architecture)	NS32532-25	National
Universal Asynchronous Receiver/Transmitter (with FIFOs)	NS16550A	National
	NS16550AF	National
Dual Universal Asynchronous Receiver/Transmitter with FIFOs	NS16C552	National

68000

Function	Device	Source
Microprocessor, 16/32-Bit	TS68000	SGS-Thomson
Microprocessor, 32-Bit. See 16-Bit series for additional system components.	MC68020	Motorola
DRAM Controller	KS84C31	◊ Samsung
	KS84C32	◊ Samsung
Floating-Point Co-processor	**68881**	**Krueger (3513)**
	MC68881	Motorola
Paged Memory Management Unit	MC68851	Motorola
VMebus Advanced Interface Control Circuit (ACC)	**CA91C014**	**† Newbridge (3569)**
	CA91C014	**† Newbridge (3569)**
VMebus interface chip-digital address register file	**CA91C015**	**† Newbridge (3569)**
	CA91C015	**† Newbridge (3569)**

80000

Function	Device	Source
Microprocessor	Z80000-CPU	Zilog
Microprocessor, 32-Bit	Z80320	Zilog

80386

Function	Device	Source
Microprocessor	80386-16	Intel
	80386-20	Intel
	8086-20	◊ Intel
Advanced DMA Controller	82C223	◊ Chips&Tech
Advanced Page/Interleaved Memory Controller	82C322	◊ Chips&Tech
AT/386 Chipset	CS8230	◊ Chips&Tech
	CS8231	◊ Chips&Tech
	CS8232	◊ Chips&Tech
Cache Controller (included with CS831)	82C307	◊ Chips&Tech
Cache/DRAM Controller (32-bit)	82C327	◊ Chips&Tech
Clock Generator	82384	Intel
Control Signal Buffer	82C306	◊ Chips&Tech
Data Buffer	**VL82C332**	**VLSI Tech (3698)**
Data/Buffer Controller	82C325	◊ Chips&Tech
Data Buffer (two included in CS8232–16)	82C305	◊ Chips&Tech
DMA Controller	82258	Intel
	8237	Intel
Enhanced Graphics Controller	82C435	Chips&Tech
Floating Point Processor	80287	Intel
	80387	Intel
	80387	Weitek
Graphics Processor	82786	Intel
High Address Buffer	82C303	◊ Chips&Tech
IBM PS/2 Model 70/80 Compatible Chipset	CHIPS/280	◊ Chips&Tech
ISA Bus Controller	VL82C386	VLSI Tech
LAN Processor	82586	Intel
	82588	Intel
LCD/CRT Controller	82C425	◊ Chips&Tech

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source	Line
32 Bit			
80386 (Cont'd)			
Low Address Buffer	82C304	◊ Chips&Tech	
Micro-Channel/80386 CPU Controller	82C321	◊ Chips&Tech	
Multifunction Controller	82C607	◊ Chips&Tech	
Programmable Interrupt Controller	8259	Intel	
Super VGA Chip	82C452	◊ Chips&Tech	5
Super VGA Controller	82C451	◊ Chips&Tech	
System Controller/Data Buffer	**VL82C320**	**VLSI Tech (3698)**	
System Peripheral Chip	82C226	◊ Chips&Tech	
VGA Bus Interface	82C442	◊ Chips&Tech	
VGA Chipset	CS8245	◊ Chips&Tech	10
386SX Cache Controller Chip for 286 ATs and PS/2s (requires 368SX CPU and Cache RAM)	SY300SX	Nexel	
386SX Cache Controller Chip for 386SX Systems (16/20/25 MHz)	SY380SX	Nexel	
Transputer			
Processor, Memory, Communications.	Transputer	SGS-Thomson	
Transputer, 32-Bit (10 MIPs performance, 4 Kbytes RAM on chip)	IMST800M	† SGS-Thomson	
Peripheral Controllers			
Microprocessor Bus Controller	**CA82C88**	**° † Newbridge (3569)**	15
Microcontroller, Mask Programmable ROM (8Kx8)	SAB80515	Siemens	
Microcontroller, RAM and I/O Facilities	SAB80535	Siemens	
Microcontroller, 4-Bit	KS56000	◊ Samsung	
Address Bus Buffer Controller	82B305	Chips&Tech	
Advanced Peripheral Interface Controller (dual channel)	SAB82C250	Siemens	20
Advanced Peripheral Interface Controller (single channel)	SAB82C251	Siemens	
Analog Data Separator Support Circuit (ADSSC)	HDC9223	SMC	
Arithmetic Processor, Floating Point	MSM6992	OKI	
Asynchronous Communication Element	**UM8250A**	**UMC (3690)**	
	UM8250B	**UMC (3690)**	25
Asynchronous Communication Element w/16 Bit FIFO	UM82550	◊ UMC	
Asynchronous Communications Controller	**16450**	**Krueger (3513)**	
	NS16450	National	
	SCN2641	◊ Signetics	
Asynchronous Communications Controller, Intelligent Octal Channel	**CL-CD180**	**Cirrus (3354)**	30
Asynchronous Communications Controller (8 MHz)	KS82C50-8	Samsung	
Asynchronous Communications Controller (10 MHz)	KS82C50-10	Samsung	
Asynchronous Communications Element	82C50	°† SMC	
	VG-82C450	Vadem	
	VG-82C50A	Vadem	35
	VG-82C50B	Vadem	
Asynchronous SCSI Interface (ASI)	DP5380	National	
Asynchronous Serial Communication Controller	Z8531	◊‡ SGS-Thomson	
	Z8531A	◊‡ SGS-Thomson	
Asynchronous Serial Communications Controller	Z8531	AMD	40
	SCC	°† SMC	
AT to ESDI Interface (ATI)	MSD95C15	◊° SMC	
Austek Cache Interface	**UM82C389**	**◊ UMC (3689)**	
Bargraph and Numeric Display Controller (vacuum fluorescent or LED)	**10951**	**Rockwell (3577)**	
Battery Fast Charge Controller and Discharge Monitor	bq2001	◊ Benchmarq	45
Baud Rate Generator	AY-5-8126T	Microchip	
	AY-5-8146	Microchip	
	AY-5-8146T	Microchip	
	AY5-8126	Microchip	
BITBLT Processing Unit (BIT boundary Block Transfer)	DP8511	National	50
Buffer Manager with ECC	9802A	◊ Stac	
Bus Arbiter for SAB80286 Processor Family	SAB82289	Siemens	
Bus Arbitration Module	MC68452	Motorola	
Bus Compatible Digital PWM for Direct Control of a Power H-Bridge (provision for dead time, output protection)	IXDP610	IXYS	
Bus Controller for SAB80286 Processors	SAB82288	Siemens	55
Bus Controller for 80C286	82C288	† Harris	
Bus Controller (8 MHz)	KS82C88-8	Samsung	
Bus Controller (10 MHz)	KS82C88-10	Samsung	
Bus Extender/Repeater	N8X41	Signetics	
Bus Interface Controller, Programmable	5CBIC	Intel	60
Cable Driver/Receiver, SCSI Interface for MC68HC99	MC6898	Motorola	
Cache Controller	**UM82152**	**◊ UMC (3689)**	
Character Generator For CGA	VG-23C00	Vadem	
Character Generator For MDA, MGA	VG-23C01	Vadem	
CHIPSLink Protocol Controller	82C570	Chips&Tech	65
Click Generator and Ready Interface for 80c286Co	82C284	Harris	
Clock Generator and Driver	**CA82C84A**	**° † Newbridge (3569)**	
Clock Generator (8 MHz)	KS82C84A-8	Samsung	
Clock Generator (10 MHz)	KS82C84A-10	Samsung	
Clock Timer Chip (4 MHz)	MK3801-4	SGS-Thomson	70
Color Graphics and Monochrome Adapter Host Interface Chip	NCR72C81	◊ NCR	
Color LCD Interface Controller Chip	CL-GD6340	◊ Cirrus	
Color/Monochrome Attributes Controller	SCB2675	◊ Signetics	
Color Palette With Triple 6-Bit DAC	**UM70C171**	**UMC (3689)**	
Communication Interface Programmable	AY2661A	Microchip	75
	AY2661B	Microchip	
	AY2661C	Microchip	
	SCN2661A	◊ Signetics	
	SCN2661B	◊ Signetics	
	SCN2661C	◊ Signetics	80
Communication Micro-Channel Interface Chip	82C575	◊ Chips&Tech	
Communications, Advanced Multi-Protocol Serial Controller (HDLC/SDLC, bisynchronous/asynchronous with four baud rate generators)	μPD72001	NEC	
Communications, Enhanced Programmable Communications Interface (EPCI)	MC2661A	Motorola	
	MC2661B	Motorola	
	MC2661C	Motorola	85
	MC68661A	Motorola	
	MC68661B	Motorola	
	MC68661C	Motorola	
	COM2661	SMC	
Communications Interface, Programmable	26C61	°† SMC	90
Communications, Local Area Network (OmniNet)	μPD72105	NEC	
Communications, Multi-Protocol Serial Controller (HDLC/SDLC, bisynchronous/asynchronous)	μPD7201A	NEC	
	SAB7201A	Siemens	
Communications, TWINAX Controller	52C50	°† SMC	
Controller, FDC (floppy disk controller)	**TC8565AF**	**Toshiba (3670)**	95
	TC8565AP	**Toshiba (3670)**	
Controller (for 4-bit microcontroller)	BM1020	Toshiba	
Controller, Hard Disk (ST406/512 format)	TMPZ80C47P	Toshiba	
	UM83C001	**UMC (3689)**	
Controller, IBM System/3X Interface Controller	COM52C50	◊ SMC	100
Controller Programmable	AM9519A	AMD	
	CY750	Cybernetic	
Counter/Timer, Parallel I/O	Z8536	◊‡ SGS-Thomson	
	Z8536A	◊‡ SGS-Thomson	
	Z8536-CIO	◊ Zilog	105
CRT, Advanced Graphics Display Controller	μPD72120	◊ NEC	
CRT, Advanced Terminal Logic Controller	CRT92C07	SMC	
CRT, Advanced Video Display Controller	SCN2674	◊ Signetics	
CRT, Bus Interface for EGA Controllers	82A436	Chips&Tech	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source	Line
CRT, Color Video Display Generator, Videotext and Teletext. See also Telecommunications Circuits.	**R6549**	**Rockwell (3576)**	
CRT Controller	8276	Intel	
	MC6845	◊ Motorola	
	NCR7250	◊ NCR	
	R6545	**Rockwell (3576)**	5
	68C45	°† SMC	
	SMJ34061	† TI	
	TMS34061	◊ TI	
	TC8505AF	**Toshiba (3670)**	
	TC8505AP	**Toshiba (3670)**	10
	VL68C45R	**VLSI Tech (3702)**	
	VL68C45S	**VLSI Tech (3702)**	
	WD8276	Western	
CRT Controller For CGA	VG-86C14	◊ Vadem	
CRT Controller For MDA, MGA	VG-86C12	◊ Vadem	15
CRT Controller For MDA, MGA, CGA	VG-86C16	◊ Vadem	
CRT Controller, Video Engine for Windows (127 independent Windows per screen)	CRT97C11	SMC	
CRT Controller (4 MHz)	KS68C45-4	Samsung	
CRT Controller (6 MHz)	KS68C45-6	Samsung	
CRT Controller, 3.7 MHz Display Operation (TTL compatible, on-screen, line bufferless refreshing)	**GM6845S**	**GoldStar (3438)**	20
CRT Cursor Controller	BT431	Brooktree	
CRT Data Row Buffer	CRT9006-135	SMC	
	CRT9006-83	SMC	
CRT, Double Row Buffer (RAM-based buffer that appears to the system as two octal shift registers of dynamically variable length)	CRT9212	SMC	
	CRT9212H	STC	25
CRT, Flat Panel/CRT VGA Controller	CL-GD610	◊ Cirrus	
	CL-GD620	◊ Cirrus	
CRT, Graphic Display Processor	EF9365	SGS-Thomson	
	EF9366	SGS-Thomson	
	EF9367	SGS-Thomson	30
CRT, Graphics Color Palette (video DAC and 256x8 color map)	AM8151C	AMD	
CRT Graphics Controller	μPD7220A	NEC	
	μPD7220A-1	NEC	
	μPD7220A-2	NEC	
CRT, Graphics Display Controller	82720	Intel	35
	μPD7220A	NEC	
	CRT7220A	SMC	
	CRT7220A-1	SMC	
	CRT7220A-2	SMC	
CRT Preamplifier and Driver	LH2440	National	40
	LH2440A	National	
CRT Processor	EF9364	SGS-Thomson	
CRT, Programmable CRT Controller	8275	Intel	
	WD8275	Western	
CRT, Programmable Video Timing Controller	SCN2672A	◊ Signetics	45
CRT, Raster Operations Device	**VL16160**	**VLSI Tech (3702)**	
CRT (RGB video DAC)	RGBDAC8E	Adv Analog	
	VDAC444	Adv Analog	
	BT101	Brooktree	
	BT101KC30	Brooktree	50
	BT102	Brooktree	
	BT103	Brooktree	
	BT103KC30	Brooktree	
	BT106KC30	Brooktree	
	BT109	Brooktree	55
	SCD6038	STC	
CRT (RGB video DAC and 16x12 RAM)	BT450	Brooktree	
	BT454	Brooktree	
CRT (RGB video DAC and 256x2 RAM)	BT451	Brooktree	
CRT (RGB video DAC and 256x24 RAM)	BT453	Brooktree	60
CRT Terminal Controller	NS455	National	
CRT Text Coprocessor	82730	Intel	
CRT, TV-CRT Processor; Performs Text Refresh, Character Writing and Cursor Management on TV Screen; 1.6 MHz Clock Rate (typ.)	SFF96364	SGS-Thomson	
CRT, TV-CRT Processor; 96364 with External Sync	SFF96366	SGS-Thomson	
CRT, VGA Bus Interface Controller	82C442	Chips&Tech	65
CRT, VGA Single-Chip Controller	82C441	Chips&Tech	
CRT, Video Attributes Controller	CRT9041A	SMC	
	CRT9041B	SMC	
	CRT9041C	SMC	
CRT Video Attributes Controller (graphic logic, attributes logic, data and attributes latches, cusor control and shift register)	CRT9021B	SMC	70
CRT Video Attributes Controller/Video Generator (video shift register, horizontal and vertical retrace blanking, graphics generation, attributes buffer)	CRT8021	SMC	
	CRT8021-003	SMC	
CRT, Video Controller, composite output	6560	Commodore	
	6561	Commodore	
	6567	Commodore	75
	6569	Commodore	
	6572	Commodore	
	6573	Commodore	
	8360	Commodore	
	8365	Commodore	80
	8366	Commodore	
	8562	Commodore	
	8564	Commodore	
	8565	Commodore	
	8566	Commodore	85
	8569	Commodore	
CRT Video Controller, digital RGB output	8563	Commodore	
	8568	Commodore	
CRT, Video Data Serializer	AM8177	AMD	
CRT, Video Display Generator, Reads Data from Memory to Produce Composite Video Signal, Internal Display Memory Mux	MC6847	Motorola	90
CRT, Video Display Processor	TMS9118	TI	
	TMS9128	TI	
	TMS9129	TI	
CRT Video Display-Controller Video Generator	CRT8002	SMC	
CRT, Video Interface Controller	82731	Intel	95
CRT, Video Palette (color lookup table and video DAC)	TMS34070	TI	
CRT, Video Processor and Controller	CRT9007A	SMC	
	CRT9007A1	SMC	
	CRT9007A2	SMC	
	CRT9007A	STC	100
	CRT9007B	STC	
	CRT9007C	STC	
CRT, Video System Controller (See 8052 CRT Controller)	AM8152AC	AMD	
	AM8152AM	† AMD	
CRT, Video Terminal Logic Controller	CRT9028	SMC	105
	CRT9053	◊ SMC	
	CRT9128	SMC	
	CRT9153	◊ SMC	
CRT Video Timer-Controller	CRT5027	SMC	
CRT Video Timer-Controller, Line Lock Feature	CRT5057	SMC	110
CRT Video Timer-Controller, Preprogrammed	CRT5047	SMC	
CRT Video Timer-Controller, ROM Programmed	CRT5037	SMC	
CRT, Quad Row Buffer (part of CRT9007 family)	CRT94C12	SMC	
Data Bit Processor	CT1555	† Marconi	
	CT1608	† Marconi	115
Data Bus Buffer Controller	82A303	Chips&Tech	
	82A304	Chips&Tech	
Direct Memory Access Controller	AM9517A-4	AMD	
	NS32203-6	National	
	NS32203-8	National	120
	μPD71071	◊ NEC	
Direct Memory Access Controller (dual)	MC68440	Motorola	
	EF68440	SGS-Thomson	
Direct Memory Access Controller (programmable)	8237	Intel	
	8257	Intel	125
	μPD71055	◊ NEC	
	SAB8237A	Siemens	
	SAB8237A-5	Siemens	
Direct Memory Access (DMA) Controller, CMOS	P1755-XM	◊† Performance	
Disk, Hard Disk Controller	μPD7261A	NEC	130
Display Controller, 4-Character Alphanumeric	MM74C956	National	
Display Controller, 14 to 18 Segment Vacuum Flourescent Displays (16 characters)	**10937**	**Rockwell (3577)**	
	10957	**Rockwell (3577)**	
Display/Terminal Management Processor	NS405	National	
DMA, Advanced Coprocessor for 16-Bit Microcomputer Systems	SAB82258	Siemens	135

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source
DMA Controller, Programmable	M5M82C37A	◊ Mitsubishi
DMA Controller (5 MHz)	KS82C37A-5	Samsung
DMA Controller (8 MHz)	KS82C37A-8	Samsung
DMA Controller (10 MHz)	KS82C37A-10	Samsung
DMA Controller, 32-Bit	MB92411	Fujitsu
Dot Matrix Display Controller (vacuum fluorescent or LED)	**10938**	**Rockwell (3577)**
	10939	**Rockwell (3577)**
	10941	**Rockwell (3577)**
	10942	**Rockwell (3577)**
	10943	**Rockwell (3577)**
Dot Matrix LCD Controller/Driver, Intelligent	μPD7227	◊ NEC
	μPD7228	◊ NEC
DRAM Controller (25 MHz)	KS84C21-25	◊ Samsung
	KS84C22-25	◊ Samsung
Driver/Receiver for Disk Head Amplifier	MB4316	Fujitsu
Dynamic Memory Controller (for 256K DRAMs)	AM2968A	AMD
Dynamic Memory Controller, 1 Megabit	AM29368	AMD
Dynamic RAM Controller (256K)	**VL4502**	**VLSI Tech (3702)**
Emulator (for TLCS47 series)	BM47212	Toshiba
	BM47213	Toshiba
	BM47214	Toshiba
	BM47215	Toshiba
	BM47216	Toshiba
	BM47218	Toshiba
	BM47219	Toshiba
Emulator (for TLCS470 series)	BM47C800	Toshiba
	BM47C820	Toshiba
	BM47C860	Toshiba
	BM47C870	Toshiba
	BM47C884	Toshiba
Enhanced Asynchronous SCSI Interface (EASI)	DP8490	National
Enhanced Character Generator For MDA, MGA	VG-23C07	Vadem
Enhanced Programmable Communications Interface (EPCI)	IM26C61	Harris
	IM26C62	Harris
	SCN68661B	◊ Signetics
	SCN68661C	◊ Signetics
Enhanced Terminal Logic Controller	CRT93C07	◊ SMC
Enhanced VGA Compatible Graphics Chip Set (graphics attributes controller)	CL-GD510A	Cirrus
Enhanced VGA Compatible Graphics Chip Set (sequencer/CRT controller)	CL-GD520A	Cirrus
Error Detection and Correction Circuit (CMOS cascadable 32-bit)	AM29C660	AMD
Error Detector and Correction Unit	54HST630	◊‡ Marconi
ESDI Disk Controller	MSD7262	SMC
ESDI Winchester Disk Controller	WD5020-10	Western
Ethernet Data Link Controller	AM7990	AMD
	CS8005	◊ Crystal
	MB8795B	Fujitsu
	8003	SEEQ
	8005	SEEQ
Ethernet Local Area Network Controller	COM82C501	SMC
	COM82C502	SMC
	COM82586	SMC
Ethernet Manchester Code Converter	CS8023A	◊ Crystal
	8020	SEEQ
	8023A	◊ SEEQ
Ethernet Serial Interface	COM82C501AD	SMC
FDMC (Floppy Disk Mechanism Control, 3.5")	TC8601F	Toshiba
	TC8602F	Toshiba
FDMC (Floppy Disk Mechanism Control, 5– 1/4")	TC8680F	Toshiba
Floating Point Controller (FPC)	**L64802**	**LSI Logic (3533)**
Floppy Disk Controller	MB89312	Fujitsu
Floppy Disk Controller	82072	Intel
Floppy Disk Controller	FDC37C65B	◊° SMC
	FDC72C65	SMC
	FDC72C66	SMC
	FDC765A-2	SMC
	FDC92C81	SMC
	UM8387	◊ UMC
	UM8388	◊ UMC
	UM8398	**◊ UMC (3689)**
	Z765A-FDC	Zilog
Floppy Disk Controller, Data Separator	FDC9268	◊ SMC
Floppy Disk Controller (Digital Data Separator), 16 MHz	VL1772-16	VLSI Tech
Floppy Disk Controller (for PC/XT, AT and PS/2)	DP8473	National
Floppy Disk Controller for Sony format	μPD7265	NEC
	R6265	Rockwell
Floppy Disk Controller/Formatter	DP8472	National
	DP8474	National
Floppy Disk Controller/Formatter (IBM 3740 and System 34)	FDC9793	SMC
	FDC9797	SMC
Floppy Disk Controller/Formatter (single and double density)	MB89311	Fujitsu
	SAB2793B	Siemens
	SAB2797B	Siemens
	FDC1791-02	SMC
	FDC1793	SMC
	FDC1793-02	◊ SMC
	FDC1794	SMC
	FDC1795-02	SMC
	FDC1797	SMC
	FDC1797-02	◊ SMC
	VL1772-02	**VLSI Tech (3702)**
	FD1791-02	◊ Western
	FD1793-02	Western
	FD1795-02	Western
	FD1797-02	Western
	WD1770	Western
	WD1772	Western

(Continued)

Function	Device	Source
Floppy Disk Controller/Formatter (single and double density) (Cont'd)	WD1773	Western
	WD2791-02	Western
Floppy Disk Controller, Head Driver	XR3448	Exar
	MC3469	Motorola
	MC3471	◊ Motorola
Floppy Disk Controller, IBM PC/XT/AT, PS/2 Compatible	**GM82C765B**	**GoldStar (3438)**
Floppy Disk Controller/Interface (single and double density)	FDC9266	◊ SMC
Floppy Disk Controller, Programmable	8271	Intel
Floppy Disk Controller/Transmitter (IBM 3740 compatible)	MB8866	Fujitsu
	MB8876A	Fujitsu
	MB8877A	Fujitsu
	μPD765A	NEC
Floppy Disk Controller/Transmitter, Single Chip	TMS2797	TI
	WD2791	Western
	WD2793-02	Western
	WD2795-02	Western
	WD2797-02	Western
Floppy Disk Controller (with VFO)	**TC8566AF**	**Toshiba (3670)**
Floppy Disk Controller, Single/Double Density	8272A	◊ Intel
	μPD72065	◊ NEC
	μPD765A	NEC
	R6765	Rockwell
	FDC765A	SMC
	UM8272A	**UMC (3689)**
Floppy Disk Controller, Single- or Double Density	μPD765A-2	NEC
	μPD765B	NEC
Floppy Disk Controller, Single- or Double-Density	μPD72065B	◊ NEC
Floppy Disk Controller, Single- or Double-Density (IBM and ECMA formats)	μPD72067	◊ NEC
Floppy Disk Controller, Two-Sided	μPD765A	NEC
Floppy Disk Data Separator	MB4107A	Fujitsu
	μPD71065	◊ NEC
	μPD71066	NEC
	SED9420CAC	S-MOS
	SED9420D	S-MOS
	FDC9216	SMC
	FDC9216B	SMC
	UM8326B	**UMC (3689)**
	WD9216-01	Western
Floppy Disk Data Separator and Clock Generator	FDC92C38	SMC
Floppy Disk Data Separator (for 3.5, 5.25 and 8-inch drives)	FDC91C36	SMC
	FDC92C36	SMC
Floppy Disk Digital Data Separator, Enhanced	WD92C32	Western
Floppy Disk Interface Circuit	μPB9201	NEC
	FDC9229	◊ SMC
	FDC9229B	◊ SMC
Floppy Disk Interface Circuit (for 3.5, 5.25 and 8-inch drives)	FDC92C39	SMC
Floppy Disk Logic Circuit and Stepper Motor Driver	CS279	Cherry Semi
Floppy Disk Mechanism Control (5 1/4 ")	TC8600F	Toshiba

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source
Floppy Disk Read Amplifier System	CS3470A	Cherry Semi
Floppy Disk Read/Write Circuit, 2-Channel	CS570	Cherry Semi
Floppy Disk Subsystem Chip	WD37C65B/A	Western
Floppy Disk Support Device	WD16C92A	Western
Floppy Disk Write Amplifier	XR3471	Exar
Floppy Disk Write Control	CS3471	Cherry Semi
Floppy/Hard Disk Controller	μPD7260	NEC
Floppy Support Logic	WD1691	Western
Function Generator, Peripheral Controller	CY360	Cybernetic
GPIB Controller	8292	Intel
	WD9914	Western
GPIB, General Purpose Interface Adapter (IEEE 488 bus)	HEF4738	Signetics
GPIB Interface Controller, Intelligent	COM7210	SMC
GPIB Talker/Listener Interface	8291A	Intel
GPIB Transceiver	8293	Intel
Graphic Display Processor	EF9345	SGS-Thomson
Graphics Display Controller	Z7220A-GDC	Zilog
Hard Disc Controller	**UM83C021**	**UMC (3689)**
Hard Disc Controller Interface	**UM83C022**	**UMC (3689)**
Hard Disk Buffer Controller	**SSI32C453**	**SiliconSys (3646)**
Hard Disk Controller	MC68HC99	Motorola
Hard Disk Controller for PC/XT/AT Computers	CL-SH260	◊ Cirrus
Hard Disk Controller, Head Driver	XR117	Exar
Hard Disk Controller Interface	**UM83C003**	**◊ UMC (3689)**
Hard Disk Controller (ST506/ESMD format)	μPD72061	NEC
	μPD7261B	NEC
Hard Disk Controller supports ST506/412 and IBM double-density formats)	AM9580A	AMD
	AM9590	AMD
Hard Disk Data Separator	DP8460	National
	DP8461	National
	SSI32D535	**SiliconSys (3645)**
	SSI32D536	SiliconSys
	SSI32D5362	**SiliconSys (3645)**
	SSI32D537	SiliconSys
	HDC92C26	SMC
Hard Disk Data Synchronizer	DP8451	National
Hard Disk Interface Circuit	μPD9306	NEC
Hard Disk Pulse Detector	XR541	Exar
	XR8464B	Exar
	ML8464X	MicroLinear
	DP8464	National
Hard Disk Read/Write Controller with Internal Damping Resistor (6 channel)	XR501R-6	Exar
	XR501R-8	Exar
	XR510R	Exar
Hard Disk Read/Write Controller (4 channel)	XR510	Exar
Hard Disk Read/Write Controller (6 channel)	XR501-6	Exar
Hard Disk Read/Write Controller (8 channel)	XR501-8	Exar
Hard Disk Read/Write Interface with Internal Damping Resistors (2 heads)	XR117R-2C	Exar
	XR117R-4C	Exar
	XR117R-6C	Exar
Hard Disk Read/Write Interface (2 heads)	XR117-2C	Exar
Hard Disk Read/Write Interface (4 heads)	XR117-4C	Exar
Hard Disk Read/Write Interface (6 heads)	XR117-6C	Exar
Hard Disk Synchronizer	MSD95C90	◊° SMC
Hard/Floppy Disk Controller	HDC7260	SMC
HDLC Protocol Controller	MT8952B	◊ Mitel
Hercules Color Graphic Adapter Controller	**UM487**	**◊ UMC (3689)**
High Impedance Transceiver for Twisted Pair	HYC9088	SMC
I/O Controller (IOC)	**VL86C410**	**VLSI Tech (3701)**
IBM 3274/3276 Compatible COAX Receiver/Transmitter	COM90C84	SMC
IEEE 802.3 Ethernet Controller	8001	SEEQ
Integrated Controller with on-chip DMA, Interrupt, Timer/Counter, Real-Time Clock	82C206	Chips&Tech
Integrated Peripheral Controller	**UM82C206**	**◊ UMC (3689)**
Intel Cache Interface	**UM82C388**	**◊ UMC (3689)**
Intelligent Multi-Protocol Communications Controller Chip	**CL-CD2401**	**◊ Cirrus (3356)**
Intelligent Multi-Protocol Peripheral	**CL-CD2400**	**◊ Cirrus (3356)**
Integrated Peripheral Controller (for PC/AT)	SAB82C206	Siemens
Interrupt Controller Programmable	8259A-2	Intel
	8259A-5	Intel
Interrupt Controller (8 MHz)	KS82C59A-8	Samsung
Interrupt Controller (10 MHz)	KS82C59A-10	Samsung
Interval Timer, Programmable, High Performance	μPD71054	◊ NEC
Interval Timer (8 MHz)	KS82C54-8	Samsung
Interval Timer (10 MHz)	KS82C54-10	Samsung
Keyboard/Display Interface	8279	Intel
Keyboard Interface Controller	KyBRD	°† SMC
LCD Alphanumeric Controller/Driver. See also Interface-Display Drivers	μPD7225	◊ NEC
LCD Controller For 640X200, 640X400 CGA/ATT	VG-600	◊ Vadem
LCD/CRTC Controller (640x400 dot matrix)	**T7779**	**Toshiba (3670)**
LCD Windows, Graphics, Text Controller	CY325	◊ Cybernetic
	CY327	◊ Cybernetic
Local Area Network Coax Receiver Interface	S83C92C	◊ Crystal
	DP8392	National
Local Area Network Communications, Ethernet Serial Interface	82501	Intel
	82586	Intel
Local Area Network Controller	R68802	Rockwell
	COM90C26	SMC
	COM9026	SMC
Local Area Network Controller/Transceiver	COM90C62	SMC
Local Area Network Controller/Transceiver for ARCNET with PC/XT Interface and 2Kx8 Dual-Port RAM	COM90C165	SMC
	COM90C62I	◊ SMC
Local Area Network Controller/Transceiver/Support Logic	COM90C65	SMC
Local Area Network Jitter Attenuator	CS80600	Crystal
Local Area Network Token Access Controller	WD2840A	Western
Local Area Network Transceiver	COM90C32	SMC
	COM9032	SMC
	COM91C32	SMC
Local Area Network Transceiver, Enhanced (converts data to NRZ or Manchester format)	COM92C32	SMC
Magnetic Disk Controller (ESDI/ESMD and ST–506 format)	AM95C95	AMD
Manchester Encoder/Decoder	MB502A	Fujitsu
	MA15530	Marconi
Manchester Encoder/Decoder.	JMEDM-2010	† Technitrol
	JMEDM-2020	† Technitrol
	JMEDM-2050	† Technitrol
	JMEDM-2100	† Technitrol
Manchester Encoder/Decoder	JMEDM-2120	Technitrol
	JMEDM-2150	† Technitrol
	JMEDM-5186	† Technitrol
	JMEDM-5200	† Technitrol
	JMEDM-5230	† Technitrol
	JMEDM-5300	† Technitrol
	JMEDM-5400	† Technitrol
	JMEDM-5500	† Technitrol
	MEDM2010	Technitrol
	MEDM2020	Technitrol
	MEDM2050	Technitrol
	MEDM2100	Technitrol
	MEDM2120	Technitrol
	MEDM5186	Technitrol
	MEDM5200	Technitrol
	MEDM5230	Technitrol
	MEDM5300	Technitrol

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MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source
Manchester Encoder/Decoder (Cont'd)		
	MEDM5400	Technitrol
	MEDM5500	Technitrol
Manchester Encoder/Decoder, Remote Control	MC145030	Motorola
MAP Broadband Interface Controller (IEEE 802.4 Broadband Physical Layer)	MC68184	Motorola
MAP Carrierband Modem (IEEE 802.4 Phase Coherent Physical Layer)	MC68194	Motorola
MAP Token Bus Controller (IEEE 802.4 Media Access Control sublayer)	MC68824	Motorola
Memory Interleaving Controller	82C302	Chips&Tech
Micro Channel Interface Circuit	MCI94C18	SMC
Micro Channel Memory Controller	EL2010	EdsunLabs
Micro-Channel Interface Chip	82C574	◊ Chips&Tech
Microchannel TO ESDI Interface (MIDAS)	MSD95C10	◊° SMC
MicroCMOS Programmable 256K/1M/4M Dynamic RAM Controller/Drivers	DP8420A	National
	DP8421A	National
	DP8422A	National
Microfloppy Disk Controller for Sony Format	FDC7265	SMC
Microprogram Controller	AM2910A	AMD
Microprogram Controller (20 MHz)	AM29C10A	AMD
Microprogram Controller (25 MHz)	AM29C10A-1	AMD
MIL-STD-1553 MacAir/Grumman Bus Controller and Remote Terminal	**UT1553 BCRTMP**	**◊‡ UTMC (3693, 3695)**
MIL-STD-1553A/B Remote Terminal Controller—Multiprotocol	**UT1553RTMP**	**◊‡ UTMC (3693, 3695)**
MIL-STD-1553B Bus Controller—Remote Terminal Controller	**UT1553B BCRT**	**◊‡ UTMC (3693, 3695)**
	UT1553B BCRTM	**◊‡ UTMC (3693, 3695)**
MIL-STD-1553B Remote Terminal Controller	MA805	Marconi
	COM1553B	◊ SMC
MIL-STD-1553B Remote Terminal Interface Controller	**UT1553B RTI**	**◊‡ UTMC (3693, 3695)**
MIL-STD-1553B Subsystem Interface Circuit	MA8055	Marconi
MIL-STD-1555 Interface Circuit	CT1611	† Marconi
MIL-STD-1750A MBU Peripheral	L64550	LSI Logic
MIL-STD-1760A Remote Terminal Controller with RAM	UT1760ARTS	◊‡ UTMC
Modem Circuit, Component Modem (1200 bps)	XE1212E	XECOM
	XE1214E	XECOM
Modem Circuit, Component Modem (2400 bps)	XE2400A-E	XECOM
Modem Circuit, Error Correcting Modem (2400 bps)	XE2400MNP-E	XECOM
Modem Circuit, Modem Development Board (PC card)	XE1212MB	XECOM
	XE1251	XECOM
	XE1253	XECOM
Modem Circuit, Modem Development Board (stand alone)	XE1214MB	XECOM
	XE2400MB	XECOM
Motion Control/Buffer Manager and Read Write Formatter (WD2400 Chip Set)	WD24C02	Western
Motor, Intelligent Stepper Motor Controller	CY500	Cybernetic
	CY512	Cybernetic
Multi I/O for XT	UM82C852	◊ UMC
Multi-Protocol Communications Controller	**R68561**	**Rockwell (3576)**
	R68650	**Rockwell (3576)**
Multi-Protocol Serial Controller	Z8530A	◊ AMD
Multi-System Control Chip. Interfaces any two CYxxx Devices to a Computer, Keyboard or RS232 Terminal	CY250	Cybernetic
Multibus II Bus Arbiter/Controller	BAC84110	Toshiba
Multibus II Message Interrupt Controller	MIC84120	Toshiba
Multifunction Controller	82C607	◊ Chips&Tech
Multifunction I/O	VG-603	Vadem
	VG-82C451	Vadem
	VG-82C452	Vadem
Multiple Protocol Controller, Serial	MB89372	Fujitsu
Optical Disk Control (supports X3B11 and ISO Continuous Composite Serud Standard)	AM95C96	AMD
Optical Storage Support Device	WD60C80	Western
Parallel Interface Timer/	**VL65C22V**	**VLSI Tech (3702)**
Parallel to Serial Interface	CY232	Cybernetic
PC/AT - Compatible Enhanced TOPCAT Combo 1/0	**VL82C109**	**◊° VLSI Tech (3702)**
PC/AT - Compatible SCAMP Combo 1/0	**VL82C107**	**◊° VLSI Tech (3699, 3702)**
PC/AT - Compatible TOPCAT Combo 1/0 Chip	**VL82C108**	**◊° VLSI Tech (3702)**
PC Bus Interface Controller (handles PC interrupt, DMA, and data bus control)	WD83C580A	Western
PC Mouse Controller (CMOS)	5720	Commodore
(PC XT/AT); Fully compatible with Cirrus Logic's CL-SH260 on page 880 line 128.	AV8520	◊° Avasem
PC XT/AT Enhanced Hard Disk Controller	CL-SH265	Cirrus
PC XT/AT Hard Disk Controller Chip	CL-SH360	◊ Cirrus
PC/XT Integration Chip	UM82C088	◊ UMC
Peripheral Interface (8 MHz)	KS82C55A-8	Samsung
Peripheral Interface (10 Mhz)	KS82C55A-10	Samsung
Peripheral, Multifunction	TS68HC901	◊ SGS-Thomson
Peripheral, Programmable Peripheral Interface	8255A	◊ Intel
Phase-Locked Oscillator For Winchester	ML405	◊ MicroLinear
Phase-Locked-Loop (for picture-in-picture applications)	MB3511	◊ Fujitsu
Picture-in-Picture Controller	MB86150N	◊ Fujitsu
Printer Adapter Interface	COM82C11	SMC
Printer Controller, for 5x7 Dot Matrix Printer	CY480	Cybernetic
Printer, Dot Matrix Printer Controller	8295	Intel
Priority Interrupt Controller	82C59	°† SMC
Processor Signal Converter (accelerator for 8088 based system)	EL286-88-10	EdsunLabs
Programmable Communications Interface	AM95C85	AMD
	M5M82C51A	◊ Mitsubishi
Programmable DMA Controller	**UM8237AE**	**UMC (3689)**
Programmable Interrupt Controller (with CMOS interface to 68000)	USC68HC908	Universal
Programmable Interval Timer	82C54	°† SMC
	UM8253	**UMC (3689)**
Programmable Peripheral Interface	**CA82C55A**	**°† Newbridge (3569)**
Programmable Sound Generator	AY3-8913	Microchip
Protocol Controller, LAPD (link access procedure protocol for ISDN networks)	MC68606	Motorola
Protocol Controller, X.25 (supports single-channel LAPD)	WD25C84	Western
Protocol Controller, X.25 (supports 8-bit data bus)	T7100A	AT&T
Protocol Controller, X.25/X.75 (supports 8/16-bit data bus)	T7102A	AT&T
Protocol Processor, MIL-STD-1553	CT1560	† Marconi
	CT1561	† Marconi
	CT1562	† Marconi
	CT1563	† Marconi
	CT1601	† Marconi
	CT1602	† Marconi
	CT1603	† Marconi
	CT1604	† Marconi
	CT1605	† Marconi
	CT1606	† Marconi
	CT1610	† Marconi
	CT1612	† Marconi
	CT1615	† Marconi
	CT1617	† Marconi
RAM Buffer Controller	**UM83C002**	**UMC (3689)**
RAMDAC, High-Performance	NCR77C171	◊ NCR

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source	Line
Raster Printer Accelerator (coprocessor for laser printers, up to 15 ppm)	CL-GP315	Cirrus	
Raster Printer Accelerator (laser coprocessor)	CL-GP360	◊ Cirrus	
	CL-GP425	◊ Cirrus	
Real Time Clock	**UM82C8167**	**UMC (3689)**	
Real-Time Clock	MM58167A	National	5
	MM58174A	National	
	RP5C01	Ricoh	
	RP5C15	Ricoh	
	146818	°† SMC	
	TC8250	**Toshiba (3670)**	10
Real-Time Clock/Calendar	**TC8205P**	**Toshiba (3670)**	
	TC8250A	**Toshiba (3670)**	
Real-Time Clock/μP Interface	MSM5832	OKI	
	L5832	SGS-Thomson	
SCSI Bus Controller Device	WD33C92A	Western	15
	WD33C93A	Western	
SCSI Bus Interface Adapter	AV8500	Avasem	
SCSI Bus Interface Controller for External Drivers	WD33C92	Western	
SCSI Bus Interface Controller with 48 mA Drivers	WD33C93	Western	
SCSI Controller	MSD95C00	SMC	20
SCSI Controller (1 MHz)	KS53C80-1	◊ Samsung	
SCSI Controller (3 MHz)	KS53C80-3	◊ Samsung	
SCSI Hard Disk Controller	CL-SH250	◊ Cirrus	
SCSI Hard Disk Controller (uses asynch. protocol)	CL-SH255	Cirrus	
SCSI Host Adapter	NCR53C400	◊ NCR	25
SCSI Interface Controller	AM5380	AMD	
SCSI Processor	NCR53C90	◊ NCR	
	NCR53C90A	◊ NCR	
	NCR53C90B	◊ NCR	
	NCR53C94	◊ NCR	30
	NCR53C95	◊ NCR	
SCSI Protocol Controller	MB87031	◊ Fujitsu	
	MB87033	◊ Fujitsu	
	MB89532	◊ Fujitsu	
SCSI Protocol Controller (Small Computer Systems Interface)	AM9582	AMD	35
	5380	AMD	
	AV8580	Avasem	
	MB87030	Fujitsu	
	MB89351	Fujitsu	
	L53C80-2	◊† LogicDev	40
	L53C80-4	◊† LogicDev	
	L5380-2	◊† LogicDev	
	L5380-4	◊† LogicDev	
	NCR53C80	NCR	
	NCR53C81	NCR	45
	NCR5380	◊ NCR	
	NCR5381	NCR	
	NCR5385E	◊ NCR	
		(Continued)	

Function	Device	Source	Line
SCSI Protocol Controller (Small Computer Systems Interface) (Cont'd)	NCR5386	◊ NCR	
	CA53C80	**°† Newbridge (3569)**	50
SCSI Dual-Ported Buffer Controller	NCR53C300	◊ NCR	
SCSI.2 Protocol Controller (16-bit FAST)	MB86602	Fujitsu	
SCSI.2 Protocol Controller (8-bit FAST)	MB86601	Fujitsu	
Segmented Display Driver (drives grids and anodes of vacuum fluorescent displays)	10955	Rockwell	
Serial Communications Controller, High-Level (X.25, LAPB/LAPD protocol)	AM82520	AMD	55
Serial Communications Controller (multi-protocol)	Z8530	◊ AMD	
	μPD7210	NEC	
	Z8530	◊‡ SGS-Thomson	
	Z8530A	◊‡ SGS-Thomson	
	VL85C30	**VLSI Tech (3702)**	60
Serial Communications Controller (8 MHz)	KS85C30-8	Samsung	
	Z8030B	◊† SGS-Thomson	
	Z8530B	◊† SGS-Thomson	
Serial Communications Controller (10 MHz)	KS85C30-10	Samsung	
Serial Controller (8 MHz)	KS82C52-8	Samsung	65
Serial Controller (10 MHz)	KS82C52-10	Samsung	
Serial/Parallel Asynchronous Communication Engine	**CL-CD1400**	**◊ Cirrus (3355)**	
Serial Timer Interrupt Controller	MK3801-6	SGS-Thomson	
Small Computer System Interface (SCSI) Controller	MB87034	Fujitsu	
	MB87035	Fujitsu	70
	MB87036	Fujitsu	
SMD Controller/Formatter	WD1050	◊ Western	
Sound Generator	AY3-8910A	Microchip	
	AY3-8912A	Microchip	
SPARC ECL Floating Point Controller	B5100	Bipolar	75
Stand Alone Microcontroller, Programmable	**PAC1000-12**	**† Waferscale (3716)**	
	PAC1000-16	**† Waferscale (3716)**	
	PAC1000-20	**Waferscale (3716)**	
StarLAN Hub Controller	WD83C510	Western	
StarLAN Hub Controller (IEEE 802.3)	82C551	Chips&Tech	80
StarLAN Hub Controller (IEEE 802.3 1BASE5 compatible)	WD83C510A	Western	
StarLAN Mini Hub Controller	WD83C503	Western	
StarLAN PC Bus Interface Controller	WD83C580	Western	
StarLAN, Serial Interface (IEEE 802.3)	82C550A	Chips&Tech	
StarLAN Transceiver	XRT82C516	Exar	
	XRT82515	Exar	85

Function	Device	Source	Line
Stepper Motor Controller and Peripheral Interface	CY545	Cybernetic	
Stepper Motor Controller, Intelligent Ramping	CY525	Cybernetic	
Storage Controller	MSD95C02	SMC	
Storage Controller (20 Mbps)	**SSI32C452**	**SiliconSys (3646)**	90
String Proximity Computer and Ranker	PF474C	Proximity	
Sync/Async SCSI Disk Controller	CL-SH350	◊ Cirrus	
Sync/Async SCSI Hard Disk Controller Chip	CL-SH370	◊ Cirrus	
Synchronous Data Link Controller	COM5025	SMC	
System Clock Generator	μPD71011	◊ NEC	95
System Controller for 80386 Based Systems	82C301	Chips&Tech	
Tape Drive Controller Device	ADS4360	Western	
Tape Formatter with PLL,Counter,Timer,I/O	9820	◊ Stac	
Token Ring Controller, IEEE 802.5 LAN Controller	**TC35802**	**Toshiba (3671)**	
Trajectory Generator For Winchester	ML404	◊ MicroLinear	100
TV Display Controller	MB88303	Fujitsu	
UART, Programmable High-Speed CMOS (with baud rate generator)	COM81C17	SMC	
Universal Asynchronous Receiver/Transmitter (UART)	**GM16C450**	**◊ GoldStar (3438)**	
	GM82C50A	**◊ GoldStar (3438)**	
Universal Asynchronous Receiver/Transmitter (UART with parallel printer port)	**GM16C451**	**◊ GoldStar (3438)**	105
	GM82C550	**◊ GoldStar (3438)**	
Universal Asynchronous Reciever/Transmitter	SAB16C450	Siemens	
	SAB82C50	Siemens	
Universal Peripheral Interface, I/O Expander	8243	Intel	
Universal Peripheral Interface (slave I/O processor)	UPI-452	Intel	110
Universal Peripheral Interface (8-Bit slave microcontroller–6 MHz)	UPI-41	Intel	
	UPI-42	Intel	
Universal Peripheral Interface, 1K EPROM	8741A	Intel	
Universal Peripheral Interface, 1K ROM	8041AH	Intel	
Universal Peripheral Interface, 2K EPROM	8742	Intel	115
Universal Peripheral Interface, 2K ROM	8042	Intel	
Universal Peripheral Interface, 4K EPROM	8744	Intel	
Universal Peripheral Interface, 4K ROM	8044	Intel	
Universal Serial Controller (two independent 0 to 10 Mbit/s, full duplex channels)	Z16C30	◊ Zilog	
User-configurable Microprocessor Peripheral Device with 8-bit Bus Port (expandable to 16 and 32-bits)	EPB1400	◊°† Altera	120

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source	Line
Versatile Interface Adapter			
	UM6522	**UMC (3689)**	
	UM6522A	**UMC (3689)**	
VGA-Compatible Graphics Controller Chip			
	CL-GD5320	◊ **Cirrus (3353)**	
Video Controller (VIDC)			
	VL86C310	**VLSI Tech (3701)**	
Video Dot Clock Generator			
	ICS1394	IntCirSys	5
Video Dot Clock Generator, ECL outputs			
	ICS1560	IntCirSys	
Video Graphics Array (VGA) Chip			
	NCR77C22	◊ NCR	
Video Line Driver			
	VS620	**VTC (3713)**	
	VS621	**VTC (3713)**	
Video System Controller–12 MHz (generates user programmable control signals, horizontal sync, vertical sync, and blanking)			
	TMS34061-12	◊ TI	10
Videotext CRT Display Processor			
	EF9340	SGS-Thomson	
	EF9341	SGS-Thomson	
VMEbus, Bus Controller			
	SCB68175	Signetics	
VMEbus Interface Controller			
	MPC	VTC	
	VIC068	**VTC (3708)**	15
VMEbus, Interrupt Controller			
	SCB68155	Signetics	
VMEbus, Interrupt Generator			
	SCB68154	Signetics	
Winchester +5 Volt Only Read/Write Amplifier (for Ferrite Heads)			
	SSI32R1200	◊ **SiliconSys (3645)**	
	SSI32R1200R	◊ **SiliconSys (3645)**	
Winchester +5 Volt Only Read/Write Amplifier (for Thin Film Heads)			
	SSI32R4610	◊ **SiliconSys (3645)**	20
	SSI32R4610R	◊ **SiliconSys (3645)**	
Winchester Controller/Formatter			
	WD1010A	Western	
Winchester Differential Input High Gain Read/Write Amplifier (for Thin Film Heads)			
	SSI32R528	◊ **SiliconSys (3645)**	
	SSI32R528R	◊ **SiliconSys (3645)**	
Winchester Differential Input Read/Write Amplifier (for Thin Film Heads)			
	SSI32R527	◊ **SiliconSys (3645)**	25
	SSI32R527R	◊ **SiliconSys (3645)**	
Winchester Disk Address Mark Detector			
	HDC1100-03	SMC	
Winchester Disk Controller			
	HDC7261	SMC	
	HDC9224	◊ SMC	
	ADS1000	Western	30
	WD10C00	Western	
	WD30C30	Western	
Winchester Disk Controller Chip Set			
	WD1100	Western	
Winchester Disk Controller, Error Correction Circuit			
	WD11C00-13	Western	
Winchester Disk Controller/Formatter			
	82062	Intel	35
	WD2010-05	Western	
	WD5010	Western	
	WD5011-10	Western	
Winchester Disk Controller, PC/XT Host Interface Logic Device	WD11C00-17	Western	
Winchester Disk Controller (with on-chip EDAC)			
	82064	Intel	40
Winchester Disk CRC Checker/Generator			
	HDC1100-04	SMC	
Winchester Disk Data Separator (self-adjusting)			
	SYSC	Western	
	WD10C20	Western	
Winchester Disk Head Actuator Control Circuit			
	μA2460	National	
	μA2461	National	45
Winchester Disk Improved MFM Generator			
	HDC1100-12	SMC	
Winchester Disk Memory Read/Write Circuit			
	MB4111	Fujitsu	
	MB4112	Fujitsu	
	SSI32R104C	◊ **SiliconSys (3645)**	
	SSI32R115	**SiliconSys (3645)**	50
Winchester Disk Memory Read/Write Circuit (for ferrite heads)	**SSI32R188**	**SiliconSys (3645)**	
	SSI32R501	**SiliconSys (3645)**	
	SSI32R510A	**SiliconSys (3645)**	
	SSI32R515	**SiliconSys (3645)**	
Winchester Disk Memory Servo Preamplifier, for thin-film heads			
	VM214	**VTC (3714)**	55
Winchester Disk Memory Video Amplifier, for Magnetic Servo Head	**SSI32H101A**	**SiliconSys (3646)**	
Winchester Disk Memory Video Amplifier, for Thin Film Magnetic Heads			
	SSI32H116A	◊ **SiliconSys (3646)**	
Winchester Disk Parallel-to-Serial Converter			
	HDC1100-05	SMC	
Winchester Disk Read/Write Amplifier with Damping Resistors, 2-Channel			
	VM117R2	**VTC (3714)**	
	VM117R4	**VTC (3714)**	60
	VM117R6	**VTC (3714)**	
	VM217R6	**VTC (3714)**	
	VM217R8	**VTC (3714)**	
Winchester Disk Read/Write Amplifier, 2-Channel			
	VM1172	**VTC (3714)**	
	VM1182	**VTC (3714)**	65
Winchester Disk Read/Write Amplifier, 4-Channel			
	VM1174	**VTC (3714)**	
	VM1184	**VTC (3714)**	
	VM314	**VTC (3714)**	
Winchester Disk Read/Write Amplifier, 5-Channel			
	VM115	**VTC (3714)**	
Winchester Disk Read/Write Amplifier, 6-Channel			
	VM1176	**VTC (3714)**	70
	VM1186	**VTC (3714)**	
	VM2176	**VTC (3714)**	
	VM2186	**VTC (3714)**	
Winchester Disk Read/Write Amplifier, 8-Channel			
	VM2178	**VTC (3714)**	
	VM2188	**VTC (3714)**	75
Winchester Disk Read/Write Preamplifier			
	ML117	MicroLinear	
	VM117	**VTC (3714)**	
	VM118	**VTC (3714)**	
	VM217	**VTC (3714)**	
	VM218	**VTC (3714)**	80
Winchester Disk Serial to Parallel Converter			
	HDC1100-01	SMC	
Winchester Disk Servo Preamplifier			
	μA24H80	National	
	VM216	**VTC (3714)**	
Winchester Disk Support Device			
	ADS3570	Western	
	ADS5050	Western	85
	WD10C20B	Western	
	WD10C21A	Western	
	WD11C00-14	Western	
	WD11C00B-20	Western	
	WD11C00C-22	Western	90
	WD50C12	Western	
	WD50C20A	Western	
Winchester Enhanced Pulse Detector Circuit			
	SSI32P542	◊ **SiliconSys (3645)**	
Winchester, Error Detection (Support Logic for WD1015)			
	WD1014	Western	
Winchester, Head Positioning Set, Quad di'bit servo			
	ML401	MicroLinear	95
	ML402	MicroLinear	
	ML403	MicroLinear	
Winchester High Gain Read/Write Amplifier (for Ferrite Heads)	**SSI32R5111**	◊ **SiliconSys (3645)**	
Winchester High Performance Pulse Detector Circuit			
	SSI32P541A	◊ **SiliconSys (3645)**	
Winchester High Performance Pulse Detector w/ Filter Mux	**SSI32P547**	◊ **SiliconSys (3645)**	100
Winchester High Speed Pulse Detector Circuit			
	SSI32P541B	◊ **SiliconSys (3645)**	
Winchester Low Noise Read/Write Amplifier (for Ferrite Heads)	**SSI32R516**	◊ **SiliconSys (3645)**	
Winchester Motor Speed Control			
	SSI32M591	**SiliconSys (3646)**	
Winchester Pulse Detector and Data Synchronizer Combo	**SSI32P548**	◊ **SiliconSys (3645)**	
Winchester Pulse Detector and Embedded Servo Capture Circuit.			
	SSI32P544	◊ **SiliconSys (3645)**	105
Winchester Pulse Detector Circuit			
	ML541	MicroLinear	
Winchester Pulse Detector with Pulse Slimming Equalization Circuit.			
	SSI32P546	◊ **SiliconSys (3645)**	
Winchester Read Data Processor (time domain filter)			
	SSI32P540	◊ **SiliconSys (3645)**	
Winchester Read/Write Amplifier (for ferrite heads)			
	SSI32R511	**SiliconSys (3645)**	
	SSI32R514	**SiliconSys (3645)**	110
Winchester Read/Write Amplifier (for thin-film heads)			
	SSI32R512	**SiliconSys (3645)**	
	SSI32R5211	**SiliconSys (3645)**	

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR—System Components (Cont'd)

Peripheral Controllers (Cont'd)

Function	Device	Source	Line
Winchester Read/Write Amplifier (for thin-film heads) (Cont'd)			
	SSI32R522	**SiliconSys (3645)**	
	SSI32R524R	**SiliconSys (3645)**	
	SSI32R525	**SiliconSys (3645)**	
	SSI32R529	**SiliconSys (3645)**	
Winchester Read/Write Amplifier with Internal Damping Resistor (for Thin Film Heads)	**SSI32R526R**	**◇ SiliconSys (3645)**	5
Winchester Read/Write Circuit	CS117	Cherry Semi	
Winchester, Read/Write Circuit for thin-film heads	ML502	MicroLinear	
Winchester Read/Write Circuit, 2- 4- or 6-Channel	**SSI32R117**	**SiliconSys (3645)**	
	SSI32R117A	**SiliconSys (3645)**	
Winchester Read/Write Circuit, 8-Channel	ML501	MicroLinear	10
Winchester Spindle Motor Controller (three-phase)	**SSI32M593A**	**SiliconSys (3646)**	
Winchester, Support Logic	**SSI32B545**	**◇ SiliconSys (3646)**	
Winchester Thin-Film Head Read/Write Circuit	**SSI32R520**	**SiliconSys (3645)**	
	SSI32R521	**SiliconSys (3645)**	
X.25 Protocol Controller	MC68605	Motorola	15
Dual Asynchronous Serial/Parallel Port, IBM PC/AT Compatible	Zy16C452	ZyMOS	
Dual Channel NRZI Encoder/Decoder	USCL2002	Universal	
Dual Data Link Controller (DDLC)	MC145488	Motorola	
Dual Universal Asynchronous Receiver/Transmitter (DUART with parallel printer port)	**GM16C452**	**◇ GoldStar (3438)**	
Dual-Channel Multiprotocol Controller	8274	Intel	20
Quad UART with FIFO	**VL16C554**	**VLSI Tech (3702)**	
Four Phase Clock Generator	WD2143-03	Western	
4-Bit Microcontroller	KS51000	◇ Samsung	
	KS55000	◇ Samsung	
286 PC/AT Data Buffer (12 MHz)	**UM82C232**	**◇ UMC (3689)**	25
286 PC/AT System Controller (12 MHz)	**UM82C231**	**◇ UMC (3689)**	
386 PC/AT Chip Set: Address Buffer	**UM82C382**	**◇ UMC (3689)**	
386 PC/AT Chip Set: Data Buffer	**UM82C383**	**◇ UMC (3689)**	
386 PC/AT Chip Set: Mmeory Controller	**UM82C384**	**◇ UMC (3689)**	
386 PC/AT Chip Set: System Controller	**UM82C381**	**◇ UMC (3689)**	30
386SX/286 AT Chip Set: Data/Address Buffer	**UM82C215**	**◇ UMC (3689)**	
386SX/286 AT Chip Set: Memory Controller	**UM82C211**	**◇ UMC (3689)**	
	UM82C212	**◇ UMC (3689)**	

General Purpose

Function	Device	Source	Line
Microcomputer with Tone Generator and LCD Driver	LR4810	Sharp	
Microcomputer, 4-Bit (RAM, ROM)	LC6528	Sanyo	35
Microcomputer, 4-Bit (RAM, ROM, LCD drivers)	LC5732	Sanyo	
Microcomputer, 4-Bit (RAM, ROM, VF drivers, timer)	LC6538	Sanyo	
Microcomputer, 4-Bit (4kx16 ROM, 512x4 RAM)	**S1400**	**Seiko Instr (3585)**	
Microcomputer, 8-Bit (16K E^2 PROM, 3K ROM, 128 bytes RAM)	CAT62C580	Catalyst Semi	
Microcomputer, 8-Bit (64K E^2 PROM, 64K ROM, 192 bytes RAM)	CAT62C780	Catalyst Semi	40
Microcomputer, 8088 Instruction Set (with 16K SRAM, 16K EEPROM)	C16P88	White Tech	
Microcomputer, 8-Bit (16K ROM, 256 bits RAM)	MSM83C154	OKI	
Microcomputer, 8-Bit (256 bits RAM)	MSM80C154	OKI	
Microprocessor Compatible Real Time Clock	MM58274C	National	
Microprocessor Control Unit	**CA2855**	**Newbridge (3569)**	45
Microprocessor Macrocell, 8-Bit (80C51 instruction set)	VH20C51	Harris	
Microprocessor Monitor Circuit (CMOS)	C1232	CMD Micro	
Microprocessor Monitor (monitors voltage, system activity)	DS1232	Dallas	
Microprocessor Peripheral	M66800	Mitsubishi	
Microprocessor Programmable Timing Edge Vernier (20 to 200 ns delay)	Bt606	Brooktree	50
Microprocessor Programmable Timing Edge Vernier (4 to 40 ns delay)	Bt605	Brooktree	
Microprocessor Supervisor (including 2Kx8 fast NVRAM)	bq1001	Benchmarq	
Microprocessor Supervisor (including 2Kx8 fast NVRAM and address latch)	bq1002	Benchmarq	
Microprocessor Supervisory Circuit (adjustable low line monitor and power down reset)	MAX696	Maxim	
	MAX697	Maxim	55
Microprocessor Supervisory Circuit (voltage monitor, watchdog-timer, etc.)	MP690	Supertex	
	MP691	Supertex	
	MP692	Supertex	
	MP693	Supertex	
	MP694	Supertex	60
	MP695	Supertex	
	MP696	Supertex	
	MP697	Supertex	
Microprocessor Voltage Regulator (supervisory circuit)	MC33160	Motorola	
	MC34160	Motorola	65
Microprocessor Watchdog, Battery Switchover, Reset Generator	MAX690C	Maxim	
	MAX690M	† Maxim	
	MAX691C	Maxim	
	MAX692C	Maxim	
	MAX692M	† Maxim	70
	MAX693C	Maxim	
	MAX693M	† Maxim	
Microprocessor, 8-Bit	IL8080	Lansdale	
Microprocessor, 8-Bit (80C51 instruction set)	RS20C51	° Harris	
Microprocessor, 16/32-Bit (16 MHz HCMOS)	MC68HC000	Motorola	75
Microprocessor, 16-Bit (4x2901 bit-slice architecture)	RS59016	° Harris	
Microprocessor, 32-Bit (MIL-STD-1750A or RISC mode)	**UT1750AR**	**UTMC (3693)**	
Microprocessor, 32-Bit RISC	IDT79R2000	◇‡ IDT	
Microcontroller, -Bit (2kx8 ROM, 64x4 RAM)	**BU2424L**	**ROHM (3581)**	
Microcontroller, Military Grade	RTX2000/883	Harris	80
Microcontroller with Embedded Real-Time Clock	DS5000T	Dallas	
Microcontroller, 4-Bit (1kx8 ROM, 32x4 RAM)	**BU2430L**	**ROHM (3581)**	
	BU2431L	**ROHM (3581)**	
Microcontroller, 4-Bit (1kx8 ROM, 32x4 RAM, 4 I/O)	**BU2418L**	**ROHM (3581)**	
	BU2419L	**ROHM (3581)**	85
	BU2422L	**ROHM (3581)**	
Microcontroller, 4-Bit (1kx8 ROM, 64x4 RAM)	**BU2421**	**ROHM (3581)**	
	BU2425	ROHM	
Microcontroller, 4-Bit (4kx8 ROM, 256x4 RAM, 12 I/O ports)	**BU24410L**	**ROHM (3582)**	
Microcontroller, 4-Bit (4096x8 ROM, 128x4 RAM, 10 I/O ports)	**BU24407L**	**ROHM (3582)**	90
Microcontroller, 4-Bit (640x8 ROM, 16x4 RAM)	**BU2403L**	**ROHM (3581)**	
	BU2404L	**ROHM (3581)**	
	BU2428L	**ROHM (3581)**	
	BU2429L	**ROHM (3581)**	
Microcontroller, 4-Bit (8kx8 ROM, 256x8 RAM, 12 I/O ports)	**BU24805L**	**ROHM (3582)**	95
	BU24809L	**ROHM (3582)**	
Microcontroller, 4-Bit (8kx8 ROM, 512x8 RAM)	**BU24807**	**ROHM (3582)**	
Microcontroller, 4-Bit (8192x8 ROM)	BU24808L	ROHM	
Microcontroller, 8-Bit (four separately configurable 8-Bit I/O ports, programmable UART, and 4Kbytes of ROM)	TMS70A2400	TI	
Microcontroller, 8-Bit (I^2C serial interface, 3Kx8 ROM, 224x8 RAM)	PCD3343	Signetics	100
Microcontroller, 8-Bit (with 32K EEPROM, 8K SRAM)	C8P31	White Tech	
Microcontroller, 8-Bit (1.5Kx8 ROM, 160x8 RAM)	PCD3315	Signetics	
Microcontroller, 8-Bit (1.5Kx8 ROM, 64x8 RAM)	PCF84CF12	Signetics	
Microcontroller, 8-Bit (1.5Kx8 ROM, 64x8 RAM, DTMF/Modem tone outputs)	PCD3347	Signetics	
Microcontroller, 8-bit (16K ROM, 512 bytes RAM, 15 bytes dual port RAM)	HD6473308	Hitachi	105

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◇ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

General Purpose (Cont'd)

Function	Device	Source
Microcontroller, 8-Bit (2Kx8 ROM, 64x8 RAM)	PCF84C22	Signetics
Microcontroller, 8-Bit (2Kx8 ROM, 64x8 RAM, I²C serial interface)	PCF84C21	Signetics
Microcontroller, 8-Bit (4K ROM, 64x8 RAM)	PCF84C42	Signetics
Microcontroller, 8-Bit (4Kx8 ROM, 128x8 RAM, I²C serial interface)	PCF84C41	Signetics
Microcontroller, 8-Bit (4Kx8 ROM, 128x8 RAM, LCD driver, I²C serial interface)	PCF84C430	Signetics
Microcontroller, 8-Bit (4Kx8 ROM, 224x8 RAM, DTMF/Modem tone outputs)	PCD3349	Signetics
Microcontroller, 8-Bit (8Kx8 ROM, 256x8 RAM, I²C serial interface)	PCF84C81	Signetics
Microcontroller, 16-bit (for DP, automotive, etc.)	SAB80C166	Siemens
	SAB83C166	Siemens
Microcontroller, 16-Bit (16K ROM, 512 bytes RAM, A/D Converter)	MSM66301	OKI
Microcontroller, 68020-Based (with 32Kx32 EEPROM, 32Kx32 SRAM)	C32P020	White Tech
Microcontroller, 4-Bit (A/D converter, LCD)	TMP47C446A	Toshiba
Microcontroller, 4-Bit (D/A converter, LED)	TMP47C233A	Toshiba
	TMP47C433A	Toshiba
Microcontroller, 4-Bit (DTMF, LCD)	TMP47C456A	Toshiba
Microcontroller, 4-Bit (LCD, Timer/Counter)	**TMP47C620**	**Toshiba (3669)**
	TMP47C820	**Toshiba (3669)**
Microcontroller, 4-Bit (with VF display driver)	MSM58422	OKI
	MSM6458	OKI
Microcontroller, 80C31-Based (with 64K-flash program memory and 8K SRAM)	C8P31F-64	White Tech
Timing and keyboard/display interface (TKDI)	G65SC37	CMD Micro
Voice Packet Assembler/ Disassembler (VPAD)	G24802	CMD Micro
A/D Converter, 16-Bit Sigma-Delta Type	DSP56ADC16	Motorola
A/D Converter (8-bit with 8-channel multiplexer)	TC5093A	Toshiba
Address Decoder (68000 interface)	USC68HC138	Universal
Advanced Burst Error Processor (implements Reed-Solomon code for X3B11 and ISO Continuous Serud Standard)	AM95C94	AMD
ALU, CMOS 16-Bit Microprogrammed	CY7C9115-43C	◊ Cypress
	CY7C9115-53C	◊ Cypress
	CY7C9115-65C	◊ Cypress
	CY7C9115-65M	◊† Cypress
Analog I/O Port with 6-Channel, 8-Bit ADC and 12-Bit DAC (CMOS)	**AD7770**	**AD (3296)**
Analog I/O Port with 12-Bit ADC and 12-Bit DAC	**AD7868**	**AD (3225, 3259, 3296)**
Analog Input Data Acquisition Controller for A/D Converter	CY600	Cybernetic
Analog Input, Multiplexer, A/D (analog to pulse width output)	μA9708	National
Analog Input, Multiplexer, A/D Converter	μPD7001	NEC
	μPD7002	NEC
Analog Output, D/A Converter, Latched Input	NE5018	Signetics
ARCNET Local Area Network Controller	COM90C62	SMC
Arithmetic Logic/Multiplier, Floating Point Set	IDT721265	IDT
	IDT72264	IDT
	WTL1064	Weitek
	WTL1064A	Weitek
	WTL1065	Weitek
	WTL1065A	Weitek
	WTL1164	Weitek
	WTL1164A	Weitek
	WTL1165	Weitek
	WTL1165A	Weitek
	WTL1264	Weitek
	WTL1264A	Weitek
	WTL1265	Weitek
	WTL1265A	Weitek
Arithmetic Logic Unit, 32-Bit	AM29332	AMD
Arithmetic Processor	AM9511A	AMD
	8231A	◊ Intel
Arithmetic Processor, 2-chip set	WTL1032AC	Weitek
	WTL1032AM	† Weitek
	WTL1032C	Weitek
	WTL1032M	† Weitek
	WTL1033AC	Weitek
	WTL1033AM	† Weitek
	WTL1033C	Weitek
	WTL1033M	† Weitek
Asynchronous Bidirectional Bus Extender and Repeater	N8X41	Signetics
Asynchronous Communication Interface Adapter	HD63A50	Hitachi
	HD6350	Hitachi
	MC68A50	Motorola
	MC68B50	Motorola
	MC6850	Motorola
	EF68A50	SGS-Thomson
	EF68B50	SGS-Thomson
	EF6850	SGS-Thomson
Asynchronous Communications Adapter (bus interface to 68000)	USC68HC551	Universal
Asynchronous Communications Element	**UM82C450**	**UMC (3689)**
	UM82C50A	**UMC (3689)**
Asynchronous Communications Element (ACE)	**CA82C50A**	**Newbridge (3569)**
Asynchronous Communications Element, Enhanced	WD16C550	Western
Asynchronous Communications Element, Parallel and Dual	KS82C462	Samsung
Asynchronous Communications Element, Dual	WD16C452	Western
	WD16C552	Western
Asynchronous Communications Interface Adapter (ACIA)	CDP65C51A	Harris
	CDP68C51A	Harris
AT-to-SCSI Host Adapter (supports up to 56 logical devices)	**AIC6260A**	**Adaptec (3204)**
Backplane Transceiver Logic (BTL) Transceiver	DS3893A	National
Bar Code Processor	NCR8301	NCR
Barrel Shifter, 16-Bit	AM29130	AMD
Battery Backup Circuit	ICL7673	◊ Harris
Battery Fast Charge Controller and Discharge Monitor	bq2001	Benchmarq
BITBLT Processing Unit	DP8510	National
BITBLT Processing Unit (20 MHz)	DP8511	National
Block Transfer Buffer	**LR3205**	**LSI Logic (3535)**
Boundary Scan Interface Circuit (driver)	LT54TC32	◊°† LSTI
	LT74TC32	◊° LSTI
Boundary Scan Interface Circuit (receiver)	LT54TV32	◊°† LSTI
	LT74TV32	◊° LSTI
Bounds Checker, 16-Bit (with out-of-bounds flag)	AM29337	AMD
Burst Error Processor	AMZ8065	AMD
	AM9520	AMD
	AM9521	AMD
Bus Compatible Digital PWM for Direct Control of a Power H-Bridge (provisions for dead time, output protection)	IXDP610	IXYS
Bus Controller for Testability Driver	LT54TC16	◊°† LSTI
Bus Controller, I²C (interface between standard parallel-bus and the serial I²C bus)	**PCD8584**	**Signetics (3630)**
Bus Exchange, Multiple (4-bit by 4-port)	AM29C982	AMD
	AM29C983	AMD
Bus Interface Register, Bidirectional	**WS59820**	**◊† Waferscale (3717)**
Bus Interrupter Module	MC68153	Motorola
Bus Monitor for Testability (receiver)	LT54TV16	◊°† LSTI
Bus Transceiver, SCSI	NCR83C10	◊ NCR
	NCR83C11	◊ NCR
Bus Transceiver, SCSI (48 mA)	NCR8310	NCR
Cache Controller and Memory Management Unit (SPARC RISC family)	CY7C604	Cypress
	CY7C605	Cypress
Cache Memory Subsystem	μPD43608	NEC
Cache RAM, 256Kx8 (SPARC RISC family)	CY7C157	Cypress
Cascadable Adaptive Finite Impulse Response Filter (CAFIR)	DSP56200	Motorola
CA16C001 Development system for use in PC XT/AT Compatibles. Allows Development of CA16C001 digital audio compression applications	CDS-001D	Newbridge
CD-I ADPCM Decode Processor	YM6064	Yamaha
CD-I Data Controller	YM6063	Yamaha
Central Processing Unit (CPU)	**L64811**	**LSI Logic (3533)**
Centronics I/O Interface and RS-232C	TC8576AF	Toshiba

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MICROPROCESSOR—System Components (Cont'd)

General Purpose (Cont'd)

Function	Device	Source
Centronics I/O with RS-232-C Port	TC8576A	Toshiba
Centronics Input and RS-232C	TC8578AP	Toshiba
Centronics Output and RS-232C	TC8577AP	Toshiba
Centronics Output with RS-232 Port	TC8577A	Toshiba
Character Display, On-Screen 12 Lines by 24 Columns	μPD6145	NEC
Chip Set For PC/XT Compatible Systems	VG100A/200A	Vadem
	VG110/210	◊ Vadem
Chip Set For PS/2 Mod. 30 Or PC/XT Compatible Systems	VG501/502	Vadem
Clear/Acquisition Coder (generates the C/A codes and other timing information required in GPS receivers)	**STEL1023**	**STEL (3664)**
Clock/Calendar with Serial I/O (Inter IC interface)	PCF8573	Signetics
Clock/Calender, Real-Time	MSM68321	OKI
Clock Generator	IL8224	Lansdale
Clock Generator and Microcycle Length Controller (up to 31 MHz)	AM2925	AMD
	AM2925A	AMD
Clock Generator, Crystal	DP8514	National
Clock Generator (for medium performance graphics systems)	DP8530	National
Clock Generator, Multi-Board Video (for medium to high-performance CRT graphics systems)	DP8513	National
Clock, Real Time	MM58174	National
	MM58274	National
	MM58274A	National
Clock, Real Time, 12/24 Hour Format (Uses 8-bit bidirectional data bus)	ICM7170	Harris
Clock, Real-Time	μPD4491	NEC
CMOS Color Palette (VGA compatible, 35 MHz, 256 x 18 LVI)	AM81EC176-35	AMD
	AM81EC471-35	AMD
CMOS Color Palette (VGA compatible, 35 MHz, 256 x 24 RAM)	AM81EC478-35	AMD
CMOS Color Palette (VGA compatible, 50 MHz, 256 x 18 LVI)	AM81EC176-50	AMD
	AM81EC471-50	AMD
CMOS Color Palette (VGA compatible, 50 MHz, 256 x 24 RAM)	AM81EC478-50	AMD
CMOS Color Palette (VGA compatible, 66 MHz, 256 x 18 LVI)	AM81EC176-66	AMD
	AM81EC471-66	AMD
CMOS Color Palette (VGA compatible, 66 MHz, 256 x 24 RAM)	AM81EC478-66	AMD
CMOS Color Palette (VGA compatible, 80 MHz, 256 x 18 LVI)	AM81EC176-80	AMD
	AM81EC471-80	AMD
CMOS Color Palette (VGA compatible, 80 MHz, 256 x 24 RAM)	AM81EC478-80	AMD
Coaxial Transceiver Interface (for Ethernet/Thin Ethernet)	MBL8392A	Fujitsu
Color Lookup Table and DAC (256x12)	IM2110	Harris
Color Palette Device w/Power Down (pixel rates up to 80 MHz)	AV3677	Avasem
Color Palette for PS/2 (66 MHz pixel rate)	AT76C176A-66	ATMEL
Color Palette for PS/2 (80 MHz pixel rate)	AT76C176A-80	ATMEL
Color Palette for PS/2 (110 MHz pixel rate)	AT76C176A-110	ATMEL
Color Palette wtih Triple 6-Bit DAC	TMC0176	TRWLSI
Color Palette (Three 4-Bit Video DACs)	TMS34070-66	TI
Color Palette (35 MHz pixel rate, 256 colors)	SAB82C171-35	Siemens
Color Palette (40 MHz pixel rate, 256 colors)	SAB82C176-40	Siemens
Color Palette (50 MHz pixel rate, 256 colors)	SAB82C171-50	Siemens
	SAB82C176-50	Siemens
Communications, Biphase Processor (processes IBM 3270, 3299 and 5250 protocols)	DP8344	National
Consumer Electronics Bus Controller	SN75C080	TI
Content Addressable Memory (CAM), 256x8	AM99C10	AMD
Controller, Micro Channel™ Bus Controller and Arbiter	MCA1200	PLX Tech
Controller, Programmable Integrated Controller/Sequencer (State machine with instruction processing for decision, control or timing applications)	**LS7270**	**LSI Comp (3526)**
Controller, VMEbus Master Controller with System Arbiter	VME1200	PLX Tech
Controller, VMEbus Slave Controller	VME2000	PLX Tech
Controller, VSBbus Master Controller	VSB1200	PLX Tech
Controller, VSBbus Master Controller (chip set)	VSB1400	PLX Tech
Controller, VSBbus Slave Controller	VSB2000	PLX Tech
Coprocessor, 32-Bit RISC Floating Point Accelerator	PR3010-16XC	◊ Performance
	PR3010-16XM	◊† Performance
	PR3010-20XC	◊ Performance
	PR3010-20XM	◊† Performance
	PR3010-25XC	◊ Performance
	PR3010-25XM	◊† Performance
Crossbar Switch (30 MHz)	**L64270-30**	**LSI Logic (3536)**
CRT Color/Monochrome Video Attributes Controller	SCB2675T	◊ Signetics
CRT Controller, ACRTC	SCC63484	Signetics
CRT Display Controller	**TC8505A**	**Toshiba (3670)**
CRT Programmable video Timing Controller, Turbo	SCN26727	◊ Signetics
CRT Video Display Controller, Turbo	SCN2674T	◊ Signetics
CRT Video Driver Amplifier	LH2422	National
Data/Address Buffer	KS82C203	Samsung
Data Buffer, Dual-Port Bidirectional (32Kx8)	μPD42532	NEC
Data Ciphering Processor (encrypts and decrypts data)	AM9568	AMD
Data Ciphering Processor (for data encryption)	Z8068	Zilog
Data Compression Coprocessor	9703	◊ Stac
	9704	◊ Stac
Data Encryption Unit	8294	Intel
Data Retention Module (converts CMOS SRAM to non-volatile RAM)	DRM	Catalyst Rsch
	DRM2	Catalyst Rsch
Data Separator, Self-Adjusting (for hard disks, ST506/412 winchester types)	WD10C22B	Western
Data Synchronizer (all code)	DP8459	National
Digital Audio Companding Processor for Voice and Audio Compression/Expansion	CA16C001	Newbridge
Digital Pulse Width Modulator (programmable frequency)	CDP68HC68W1	Harris
Digital Signal Processor (Microcomputer including 16x16 Multiplier, RAM, ROM for rapid signal processing)	MB87064	Fujitsu
	MB8764	Fujitsu
Digital Signal Processor (Microcomputer including 24x24 Multiplier, RAM.ROM for rapid signal processing)	DSP56000	Motorola
Digital Signal Processor, Microcontroller (EPROM version)	TMS320E14	◊ TI
Digital Signal Processor (EPROM version of TMS320C25)	TMS320E25	◊ TI
Digital Signal Processor (2K RAM—program, 1K RAM—data)	ADSP2101	◊ AD
	ADSP2102	◊ AD
Digital Signal Processor (16/32-bit)	TMS320E15	TI
Digital Signal Processor, 16-Bit (CMOS first generation)	SMJ320C10-25	◊† TI
	SMJ320C15-25	◊† TI
Digital Signal Processor, 16-Bit (first generation)	SMJ320E15	† TI
Digital Signal Processor, 16-Bit (NMOS second generation)	SMJ32020	◊† TI
Digital Signal Processor, 16-Bit (second generation)	SMJ320C25-50	† TI
Digital Signal Processor, 16-Bit (10 MHz)	SMJ320C10	◊† TI
Digital Signal Processor, 16-Bit (15 MHz)	SMJ320C15	◊† TI
Digital Signal Processor, 16-Bit (25 MHz)	SMJ320C25	◊† TI
Digital Signal Processor, 25 MHz EPROM Version of TMS320C15	TMS320E15-25	◊ TI
Digital Signal Processor, 25 MHz Version of TMS320C15	TMS320C15-25	◊ TI
Digital Signal Processor, 32-Bit Floating Point	TMS320C30	TI
Digital Signal Processor, 50 MHz CMOS Fixed Point	TMS320C25-50	◊ TI
DMA Address Generator	MAS2940	Marconi
DMA Controller	**L64853**	**◊°‡ LSI Logic (3533)**
DRAM Controller	**LR3203**	**LSI Logic (3535)**
	L64850	**◊°‡ LSI Logic (3533)**
DRAM Data Buffer	**LR3204**	**LSI Logic (3535)**

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

General Purpose (Cont'd)

Function	Device	Source	Line
DTMF Integrated Receiver (CMOS)	G8870-1	CMD Micro	
DUART	SCC2692	Signetics	
	SCC68692	Signetics	
Dynamically Programmed Timing Edge Vernier (4 to 40 ns delay)	Bt604	Brooktree	
Electronic Configurator (NV switch comparator and RAM), for remotely configuring equipment	DS1223	Dallas	5
Electronic Key (128-bit NVRAM) with security system, user insertion	DS1204U	Dallas	
Electronic Key (1024-bit NVRAM), user insertion	DS1201	Dallas	
Embedded Processor, 32-Bit RISC Architecture	**L64901**	**LSI Logic (3533)**	
Encoder/Decoder, CRC-4	R8075	Rockwell	
ENDEC, 6-Channel 1,7 (RLL) with Write Compensation	VM5601	VTC	10
	VM5602	VTC	
Enhanced Floating Point Coprocessor (HCMOS)	MC68882	Motorola	
Enhanced Local Area Network Controller	COM90C56	SMC	
Enhanced VGA Compatible Graphics Chip	**CL-GD5320**	**Cirrus (3353)**	
Error Correcting Code Chip	NCR82C50	◊ NCR	15
Error Correction Code Processor	9707	◊ Stac	
Error Detection and Correction Circuit (16-bit)	AM29C60	AMD	
	AM29C60-1	AMD	
	AM29C60A	AMD	
Error Detection and Correction Unit, 32-Bit	IDT49C460C	IDT	20
Error Detection and Correction Unit, 32-Bit Flow-Through	IDT49C465	IDT	
Errot Detection and Correction Circuit (16-bit)	AM2960A	AMD	
Ethernet/Cheapernet Transceiver	AM7996	AMD	
Ethernet Chip Set (Ethernet data separator)	WD83C691	Western	
Ethernet Chip Set (Ethernet I/O device)	WD83B692	Western	25
Ethernet Chip Set (network interface Controller)	WD83C690	Western	
Ethernet Controller, NICE Compatible	MB86960	Fujitsu	
Ethernet Controller, Star LAN Compatible	MB86950	Fujitsu	
Ethernet Encoder/Decoder	MB502A	Fujitsu	
	MB86951	Fujitsu	30
Ethernet TRAM (transputer module)	IMS B407	SGS-Thomson	
Ethernet Transceiver	**NE8392A**	**Signetics (3591)**	
Evaluation board for G65SC150 CTU	G65DS-150	CMD Micro	
FDDI (Fiber Distributed Data Interface) Clock Recovery Device	DP83231	◊ National	
FIFO/Write Buffer for Cache Interface	**LR2020**	**◊° † LSI Logic (3534)**	35
Floating Point Accelerator for LR3000-16 CPU (16.7 MHz)	**LR3010-16**	**LSI Logic (3534)**	
Floating Point Accelerator for LR3000-33 CPU (33 MHz)	**LR3010-33**	**LSI Logic (3534)**	
Floating Point Accelerator for LR2000-12 CPU (12.5 MHz)	**LR2010-12**	**LSI Logic (3534)**	
Floating Point Accelerator for LR2000-16 CPU (16.7 MHz)	**LR2010-16**	**LSI Logic (3534)**	
Floating Point Accelerator for LR3000-20 CPU (20 MHz)	**LR3010-20**	**LSI Logic (3534)**	40
Floating Point Accelerator for LR3000-25 CPU (25 MHz)	**LR3010-25**	**LSI Logic (3534)**	
Floating Point Accelerator (for R2000A CPU)	IDT79R2010A	IDT	
Floating Point Accelerator (for R3000 CPU)	IDT79R3010	IDT	
Floating Point Accelerator (32-bit)	79R2010	◊† Intel	
	79R3010	◊† Intel	45
Floating Point Accelerator, 32-Bit RISC	IDT79R2010	◊‡ IDT	
Floating Point Controller (FPC)	L64812	LSI Logic	
Floating Point Controller (SPARC architecture)	**L64802**	**° LSI Logic (3533)**	
Floating Point Controller (20 MHz)	NS32580-20	National	
Floating Point Controller (30 MHz)	NS32580-30	National	50
Floating Point Coprocessor	**LR3020**	**◊† LSI Logic (3534)**	
Floating Point Coprocessor (HCMOS)	MC68881	Motorola	
Floating Point Processing Unit	8232	Intel	
Floating Point Processor	**LR2010**	**◊† LSI Logic (3534)**	
Floating Point Processor Chip Set	F100893/94	National	55
Floating Point Processor, 32-Bit	**L64133**	**LSI Logic (3536)**	
Floating Point Processor, 32-Bit (uses IEEE-P754 floating point standard)	AM29325	AMD	
Floating Point Unit (FPU)	**L64814**	**LSI Logic (3533)**	
Floating Point Unit (SPARC RISC family)	CY7C602	Cypress	
Floppy Disk Controller	**TC8565A**	**Toshiba (3670)**	60
Floppy Subsystem Chip (for PS/2 system)	WD57C65	Western	
Function Generator, D/A Controller	CY360	Cybernetic	
Futurebus Interface Chip, Arbiter	**CA91C896**	**Newbridge (3569)**	
Futurebus Interface Chip, Interface Unit	**CA91C897**	**Newbridge (3569)**	
Futurebus Interface Chip, MC88000 Interface	**CA91C880**	**Newbridge (3569)**	65
General Purpose Analog Neural Network Processor	MB4442	Fujitsu	
General Purpose Fixed Point Digital Signal Processor (27 MHz)	DSP56001	Motorola	
Graphics Color Palette (with 256x8 color map and video DAC)	AM8151A	AMD	
Graphics Controller Chip (hardware windowing, 3 types CRT scanning: sequential, interfaced, sync, and interlaced sync and video)	HD64400	Hitachi	
Graphics Floating Point Processor	TMS34082	TI	70
Graphics Processor (off-loads host CPU for graphics)	TMS34010	◊† TI	
	TMS34020	TI	
Graphics, Raster Graphics Procesor (20 MHz)	DP8500	National	
Graphics Signal Processor (50 MHz)	SMJ34010-50	TI	
Graphics System Processor (32-bit fully programmable)	TMS34010-40	TI	75
	TMS34010-50	TI	
Hard Disk Controller Interface	**UM83C004**	**◊° † UMC (3689)**	
I/O Expander, Parallel	M66500	Mitsubishi	
I/O, Parallel (16 eight bit ports)	GD9620	GoldStar	
I/O Port	CDP68HC68P1	Harris	80
I/O, 8-Bit Bidirectional	MAS2952	Marconi	
IEEE 488/Parallel/u Processor Interface to Serial/Pulse Position Modulation	GD5293	Greenwich	
Image and Signal Processing Subsystem (for 1-D and 2-D digital convolution and correlation)	IMSA110	SGS-Thomson	
Input/Output Port	IL8212	Lansdale	
Integrated System Controller (Memory Control, Address Decode, Reset Logic)	**L64951**	**LSI Logic (3533)**	85
IST Bus Interface Circuit	PCB2310	Signetics	
L-Bus Controller	**LR3202**	**LSI Logic (3535)**	
LAN Communications Processor (contains 16-Bit CPU, 2.75 Kbytes RAM)	TMS38010	TI	
LAN Protocol Handler (performs hardware based protocol functions for 4 Mb/s token ring)	TMS38020	TI	
LAN Ring Interface Controller	TMS38052	TI	90
LAN Ring Interface Transceiver (D and A circuitry to connect the adapter chipset to a 4 Mb/s token ring)	TMS38051	TI	
LAN (StarLAN Transceiver)	XRT82C516	Exar	
	XRT82515	Exar	
LAN System Interface Chip (provides up to 40 Mb/s data to host via DMA bus master transfer)	TMS38030	TI	
LCD/CRT Display Controller (with color palette 16/512 colors)	V6355D-H	Yamaha	95
Line Buffer, Dual-Port (5Kx8, asynchronous)	μPD42505	NEC	
Logic Sequencer, 14x48x6	TIB825167BM	TI	
Logic Sequencer, 16x48x8	TIB825105BM	TI	
Look-Ahead Carry Generator	VS29G02C	Vitesse	
	VS29G02C-1	Vitesse	100
	VS29G02M	† Vitesse	
Mailbox Memory (dual 128x8)	M66222	Mitsubishi	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

General Purpose (Cont'd)

Function	Device	Source
Mailbox Memory (256x9)	M66221	Mitsubishi
Manchester Decoder and Interface (10 Mbp/s decoding)	T7210	AT&T
Manchester Encoder/Decoder	HD15530-8	◊† Harris
	HD15530/883	◊† Harris
	HD15531-8	† Harris
	HD15531/883	† Harris
	HD15531B-Cell	° Harris
	HD15531B-8	† Harris
	HD15531B-9	Harris
	HD15531B/883	† Harris
Manchester Encoder/Decoder.	HD6409-CELL	° Harris
Manchester Encoder/Decoder	HD6409-9	◊ Harris
Manchester Encoder/Decoder.	HD6409/883	◊† Harris
Manchester Encoder/Decoder	HS15530RH	◊† Harris
	MAS15530	‡ Marconi
Master Peripheral Controller	YM7302	Yamaha
Memory Array Controller	NCR52C40	◊ NCR
	NCR52C60	◊ NCR
Memory, Converts Byte Wide JEDEC to 3-Wire Serial Port	DS1280	◊ Dallas
Memory Management and Protection Unit, MIL-STD-1750A (CMOS)	P1753-20XM	◊† Performance
	P1753-30XM	◊† Performance
	P1753-40XM	◊† Performance
Memory Management Controller	MC68461	Motorola
Memory Management Unit/Cache Controller	**L64815**	**LSI Logic (3533)**
Memory Management Unit (MMU)	**L64803**	**LSI Logic (3533)**
Memory Management Unit (16K cache)	MC88200	Motorola
Memory, Quad Port Serial RAM (64 bits per port)	DS2015	Dallas
Micro Channel Interface Unit (IBM PS/2 Micro Channel compatibility)	MB86954	Fujitsu
Micro Channel Modem Controller (for IBM PS/2 models 50, 60, 80 and compatibles)	EL2050	EdsunLabs
Microprocesor, RISC (optimized for MIL-STD-1750A, UART)	UT175AR	◊‡ UTMC
Microprogram Controller	CY2910AC	Cypress
	RS5910A	° Harris
Microprogram Controller (80 MHz)	VS29G10AC	Vitesse
	VS29G10AC-1	Vitesse
	VS29G10AM	† Vitesse
Microprogram Sequencer, 16-Bit	AM29C111	AMD
	AM29331	AMD
Microsequencer, 16-Bit	SN74ACT8818A	TI
MIL-STD-1553 Advanced Multiplexer (bus controller, remote terminal unit, and bus monitor)	BUS61553	ILC-DDC
	BUS61555	ILC-DDC
MIL-STD-1553 Bus Controller, Remote Terminal Unit, and Bus Monitor	BUS65600	ILC-DDC
	BUS65610	ILC-DDC
MIL-STD-1553 to Microprocessor Interface Unit	BUS66312	ILC-DDC
MIL-STD-1553 Dual-Port RAM Controller	MAS3692	Marconi
MIL-STD-1750A Microprocessor	MAS281	◊‡ Marconi
MIL-STD-1750A Control Unit	MAS17502	◊‡ Marconi
MIL-STD-1750A Execution Unit	MAS17501	◊‡ Marconi
MIL-STD-1750A Interrupt Unit	MAS17503	◊‡ Marconi
MIL-STD-1750A Memory Management Unit	MAS17504	◊‡ Marconi
Mini-Packet Receiver/Transmitter, CMOS (MPRT)	G24800	CMD Micro
Motherboard Frequency Generator	AV9127	Avasem
Multi-Port Pipelined Processor (byte-slice operation)	AM29501A	AMD
Multi-Port Repeater Unit Controller (for use in 10BASE5 andf 10BASE2 networks)	T7200	AT&T
Multi-Port Repeater Unit (MPR2	T7201	AT&T
Multi-Protocol Communications Controller (up to 4 Mbps)	R68560	Rockwell
Multifunction Peripheral With Real Time Clock, Asynch. Comm. Port, Parallel Port, ROM Disk IFL	VG603	Vadem
Multilevel Pipeline Registers (four 8-bit wide Registers)	AM29520A	AMD
	AM29521A	AMD
Multiple Analog I/O Port (4 input channels, 2 output channels)	AD75016	° AD
Multiplier/Divider, Quad	AD834	AD
Multiprotocol Controller, Dual Channel	SCN26542	Signetics
	SCN26562	**Signetics (3594)**
	SCN68542	Signetics
Multiprotocol Processor (supports ISDN basic rate and terminal adaptor applications)	MC68302	Motorola
Network Interface Controller	DP8390D	◊ National
	NS32490D	◊ National
Nonvolatile controller circuit	C1210	CMD Micro
Nonvolatile Controller (converts CMOS RAMs to nonvolatile storage)	DS1210	◊ Dallas
	DS1211	◊ Dallas
	DS1212	◊ Dallas
	DS1221	◊ Dallas
Nonvolatile Controller (converts CMOS static RAMs into nonvolatile memories)	DS1234	Dallas
Nonvolatile Controller (with rechargeable lithium cell input/output, converts CMOS static RAMs into nonvolatile memories)	bq2204	◊ Benchmarq
Nonvolatile Controller (with rechargebale lithium cell input/output, converts CMOS static RAMs into nonvolatile memories)	bq2201	◊ Benchmarq
Nonvolatile SRAM Plus Real Time Clock (2Kx8)	MK48T02	SGS-Thomson
	MK48T12	SGS-Thomson
Nonvolatile SRAM Plus Real Time Clock (8Kx8)	MK48T08	SGS-Thomson
	MK48T18	◊ SGS-Thomson
Nonvolatile SRAM Plus Real-Time Clock (32Kx8)	DS1244	Dallas
Nonvolatile SRAM Plus Real-Time Clock (8Kx8)	DS1243	Dallas
NRZI Encoder/Decoder, Dual Channel (with digital PLL)	USCSL2002	Universal
Object Contour Tracer (15 MHz)	**L64290-15**	**LSI Logic (3536)**
Optical Drive Encoder/Decoder	WD60C31	Western
Orthogonal Rotation Processor (performs rotation of font characters or blocks of bit-mapped data)	AM95C76	AMD
Page Printer Interface Controller (for laser printers)	WD65C10	Western
Panel Display Controller (EGA Compatible)	V6377	Yamaha
Panel Display Controller (VGA Compatible)	V6388	Yamaha
Panel Display/CRT Display Controller	V6366C-F	Yamaha
Parallel/Asynchronous Communications Element (two UART's and port)	**UM82C452**	**◊° † UMC (3689)**
Parallel/Asynchronous Communications Element (UART and port)	**UM82C451**	**◊° † UMC (3689)**
Parallel I/O Interface	KS82C411	Samsung
Parallel Interface Timer for MC68000 Systems	MC68230	Motorola
PC Address/Data Buffer Driver Circuit	SE2010X	Samsung
PC/AT Compatible CPU Core Logic Chip (80286-based)	FE3500	Western
PC/AT Data and Address Buffers	MCS2220	° Motorola
PC/AT Integrated Bus and Peripheral Controller	MCS2000	° Motorola
PC/AT Page/Page Interleaved Memory Controller (for 386 systems)	MCS2300	° Motorola
PC/AT Power Management Chip (for single-chip PC/AT)	MCS1801	Motorola
PC/AT System and Memory Controller (for 286/386SX)	MCS2121	° Motorola
PC/AT System Controller (for 386 systems)	MCS2500	Motorola
PC/AT Single Chip 286	MCS2030	° Motorola
PC Bus CPU and Peripheral Controller	FE2010A	Western
PC Bus Interface Controller	WD64C20	Western
PC Bus Interface Unit (for LAN controllers)	MB86953	Fujitsu
PC Printer Driver Circuit	SE2011X	Samsung
PCM Codec/Filter, Monolithic, Serial Interface (CMOS)	C3052	CMD Micro
	C3053	CMD Micro

(Continued)

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MICROPROCESSOR—System Components (Cont'd)

General Purpose (Cont'd)

Function	Device	Source
PCM Codec/Filter, Monolithic, Serial Interface (CMOS) (Cont'd)		
	C3054	CMD Micro
	C3057	CMD Micro
Peripheral Cache Manager	WD60C40	Western
Peripheral Clamping Array	TCF6000	Motorola
Peripheral Driver Addressable	NE590	Signetics
	NE591	Signetics
Peripheral Interface Adapter	MC68A21	Motorola
	MC68B21	Motorola
	MC6821	◊ Motorola
	EF68A21	SGS-Thomson
	EF68B21	SGS-Thomson
	EF6821	SGS-Thomson
Printer/Display Processor (10 MHz)	NS32CG16-10	National
Printer/Display Processor (15 MHz)	NS32CG16-15	National
Priority Interrupt Controller	AM2914C	AMD
	AM2914M	† AMD
	M8214	† Intel
	MC8507	Motorola
	SFC2914	SGS-Thomson
Priority Interupt	IL8214	Lansdale
Processor Interface Circuit with Built-In System Test Feature (CMOS)	P1754-20XM	◊† Performance
	P1754-30XM	◊† Performance
	P1754-40XM	◊† Performance
Programmable Clock Generator	DP8531	◊ National
	DP8532	◊ National
Programmable Data Coder (Manchester phase encoding)	DC-7	Supertex
Programmable DMA Controller	MAS8237	◊‡ Marconi
Programmable Encoder/Decoder (Manchester phase encoding)	ED-11	Supertex
	ED-15	Supertex
	ED-5	Supertex
	ED-9	Supertex
Programmable Encoder (Manchester phase encoding)	ET13	Supertex
Programmable Event Generator (12 simultaneous events)	AM2971	AMD
	AM2971A	AMD
Programmable Frequency Generator	AV9101	Avasem
	AV9104	Avasem
Programmable Logic Device for Bus Interface Applications (64 mA high drive current)	PLX464	PLX Tech
Programmable Parallel Interface	MAS8255	◊‡ Marconi
Public Key Encryption Processor	**CA34C168**	**† Newbridge (3569)**
Pulse Input Servo Controller IC	GL1200	Galil
PWM Generator (4 channel, 12-bit)	M66242	Mitsubishi
PWM Generator (4 channel, 16-bit)	M66240	Mitsubishi
RAMDAC	MS176-35	Mosel
Read/Write Buffer	**LR3220**	**◊°‡ LSI Logic (3534)**
Read/Write Preamplifier, 6-Channel (for ferrite heads)	**VM310**	**VTC (3714)**
	VM310R	**VTC (3714)**
Read-Write Buffer, Integrated, Cache-Main Memory Interface for LR3000–25 CPU (25 MHz)	**LR3220-25**	**LSI Logic (3534)**
Real Time Clock	KS68C81	◊ Samsung
Real Time Clock/Calendar Module (seconds, minutes, hours, day, date, month and year)	RTM3	Catalyst Rsch
Real Time Clock plus NVSRAM	bq3287	Benchmarq
	bq3287A	Benchmarq
Real Time Clock Plus RAM (NVRAM)	MK48T87	SGS-Thomson
Real Time Clock plus RAM (NVRAM) and RAM Clear	MK48T87A	SGS-Thomson
Real Time Clock plus RAM (replacement for IBM AT computer clock/calendar)	bq3285	◊ Benchmarq
Real Time Clock plus 4Kbx8 NVSRAM Module	bq3387	Benchmarq
Real Time Clock plus 4Kbx8 SRAM	bq3385R	◊ Benchmarq
Real Time Clock plus 8Kbx8 NVSRAM Module	bq3487	Benchmarq
Real Time Clock plus 8Kbx8 SRAM	bq3485R	◊ Benchmarq
Real-Time Clock	**TC8250A**	**Toshiba (3670)**
Real-Time Clock (full function real-time clock/calendar)	DP8572A	National
	DP8573A	National
Real-Time Clock interface (allows time of day to be retrieved over μP bus)	C3008	Greenwich
Real-Time Clock Plus RAM (CMOS)	CDP6818A	Harris
Real-Time Clock plus RAM (NVRAM)	DS1287	Dallas
Real-Time Clock Plus RAM (replacement for IBM AT computer clock/calendar)	DS1285	◊ Dallas
Real-Time Clock (with interrupt signal generator and bus interface controller)	NJU6352	◊ NJR
Real-Time Clock (with RAM and power sense/control)	CDP68HC68T1	Harris
Real-Time Clock with RAM and Serial Interface	MC68HC68T1	Motorola
Register File, Dual-Access (4-port)	AM29334	AMD
Registers with Parity (9-bit bidirectional)	USCSL6000	Universal
Reply Agent Address Error Generator for iLBX II Bus (provides complete address error signal generation including: alignment errors, width errors, etc.)	LBX2100	PLX Tech
Reply Agent Control Interface to iLBX II Bus (provides data transceiver direction and output enable control signals)	LBX2000	PLX Tech
Reply Agent Error Generator for iPSB II Bus (provides complete memory/IO error code generation)	PSB2100	PLX Tech
Reply Only Agent Control Interface for iPSB II Bus (provides data transceiver direction signals READ and WRITE)	PSB2000	PLX Tech
Reset/Interrupt Controller	**LR3201**	**LSI Logic (3535)**
RISC Microprocessor	**LR2000**	**† LSI Logic (3534)**
	LR3000	**◊† LSI Logic (3534)**
RISC Microprocessor Floating Point Accelerator (for 32-bit LR3000A)	**LR3010A**	**LSI Logic (3534)**
RISC Microprocessor, 32-Bit High Performance	**LR3000A**	**LSI Logic (3534)**
RISC Microprocessor, 32-Bit with Cache Memory	**VL86C020**	**VLSI Tech (3701)**
RISC CPU, Full 32-Bit	IDT79R2000A	IDT
	IDT79R3000	IDT
RISC CPU Processor (32-bit)	79R2000	◊† Intel
	79R3000	◊† Intel
Safety Counter, Non-Volatile	SLE4501	Siemens
Safety Critical Microprocessor	MAS1908	◊‡ Marconi
Safety Critical Microprocessor (dual operation)	MAS1909	◊‡ Marconi
SCSI Bus Controller	L53C80	◊† LogicDev
	L5380	◊† LogicDev
SCSI Bus Interface Controller, Enhanced	AM33C93A	AMD
SCSI Controller (6, 8, 10 Mb/sec)	KS53C94	◊ Samsung
	KS53C95	◊ Samsung
SCSI Interface Cicruit	L5380C	◊† LogicDev
SCSI Protocol Controller	**MB87033B**	**Fujitsu (3418)**
	MB87035	Fujitsu
	MB89352	Fujitsu
Serial Bus Interface	CDP68HC68S1	Harris
Serial Communications Controller	**CA85C30**	**Newbridge (3569)**
Serial Controller Interface	**CA82C52**	**Newbridge (3569)**
Serial Convolver	MA7178	Marconi
Serial Data Receiver	**LIU01**	**AD (3263)**
Serial I/O, A/D Converter (8-bit with single differential input)	ML2281	MicroLinear
Serial I/O, A/D Converter (8-bit with 2-input multiplexer)	ML2282	MicroLinear
Serial I/O, A/D Converter (8-bit with 4-input multiplexer)	ML2284	MicroLinear
Serial I/O, A/D Converter (8-bit with 8-input multiplexer)	ML2288	MicroLinear
Serial I/O Controller, Parallel I/O Controller, Counter/Timer	Z84C90	◊ Zilog
Serial Input/Output Controller	Z84C43	◊ Zilog
Serial Interface Adapter (compatible with Ethernet/Cheapernet)	AM7992B	AMD
Serial Interface Protocol Chip, MIL-STD–1397, Type D and E	CT2500	Marconi
Serial Interface Real Time Clock	MK41T56	SGS-Thomson

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

General Purpose (Cont'd)

Function	Device	Source	Line
Serial Memory Phantom Interface (adapts memory bus to three-wire serial port)	DS1206	◊ Dallas	
Shading Processor (for 3-D and 2-D graphics functions)	**TC8512**	**Toshiba (3670)**	
Signal Processing Interface (Microcomputer including 16x16 Multiplier, RAM, ROM for rapid signal processing)	S77C20	Gould AMI	
	μPD77P20	NEC	
	μPD7720	NEC	5
Signal Processor, Cascadable (for digital FIR filtering, adaptive filtering, correlation and convolution)	IMSA100M	† SGS-Thomson	
Small Computer System Interface (SCSI) Controller	MSD95C00	SMC	
Smart Socket (nonvolatile Ram control) with socket, battery	DS1213	Dallas	
	DS1213C	Dallas	
Smart Watch (watch or clock, nonvolatile RAM control) with socket, battery	DS1216	Dallas	10
	DS1216C	Dallas	
	DS1216E	Dallas	
SmartSocket, Contains Embedded Lithium Cell for RAM Retention	DS1213D	Dallas	
SmartWatch, Calendar/Clock with Embedded Lithium Cell	DS1216F	Dallas	
SPARC Floating Point Controller (16.7 MHz)	MB86910	Fujitsu	15
SPARC Memory Management Unit (20 MHz)	MB86920-20	Fujitsu	
SPARC Memory Management Unit (25 MHz)	MB86920-25	Fujitsu	
SPARC, 40 MHz 32-Bit SPARC Integer Unit	CY7C601-40C	Cypress	
Speech Processor, ADM (record/reproduce)	TC8830	Toshiba	
	TC8831	Toshiba	20
Speech Synthesis, ADM, 256K Bit ROM	TC8801	Toshiba	
Speech Synthesis, PARCOR, 64K Bit Mask ROM	TC8802	Toshiba	
ST-Bus Parallel Access Circuit	MT8920	◊ Mitel	
Stand Alone Microsequencer, Programmable	**SAM448-16**	**◊† Waferscale (3716)**	
	SAM448-20	**◊ Waferscale (3716)**	25
	SAM448-25	**◊ Waferscale (3716)**	
Subscriber Line Compensation Network	G24020	CMD Micro	
Super Number Cruncher	MM57409	National	
Synchronous Serial Data Adapter	MC6852	Motorola	
System Timing Controller	AM9513A	◊ AMD	30
Systems-Oriented Network Interface Controller	DP83932	◊ National	
TAXIchip (Transparent Asynchronous Xmitter-Receiver Interface)	AM7968	AMD	
	AM7969	AMD	
Testability Interface Device (real-time)	LT74TC32	◊°† LSTI	
	LT74TV32	◊°† LSTI	35
Testability Interface Device (serial)	LT74TC16	◊° LSTI	
	LT74TV16	◊° LSTI	
Testable Functional Circuit (provides circuit functions while providing the capability of a testability bus port)	LT74TC32PC	LSTI	
	LT74TV32PC	LSTI	
Time Key with Security Clock (384-bit NVRAM)	DS1207	Dallas	40
Timekeeper (watch or clock, nonvolatile RAM control)	DS1215	Dallas	
Timer Clock Peripheral (full function real-time clock/calendar)	DP8570A	National	
	DP8571A	National	
TRAnsputer Module (IMS T222 16-bit transputer)	IMS B409	SGS-Thomson	
TRAnsputer Module (IMS T800 transputer, 1 MB DRAM, 1 MB dual-port DRAM)	IMS B408	SGS-Thomson	45
UART with FIFOs (16 byte FIFO register)	**SSI73M1550**	**SiliconSys (3647)**	
	SSI73M550	**SiliconSys (3647)**	
UART with FIFOs (16 byte register)	**SSI73M2550**	**SiliconSys (3647)**	
UART, Dual with Floppy Disk Controller and Parallel Port	PC87310	◊ National	
UART (Quad Channel)	**XR82C684**	**Exar (3393)**	50
Universal Asynchronous Receiver/Transmitter (UART)	CDP6402	Harris	
	CDP6402C	Harris	
	M66230	Mitsubishi	
	NS16C451	National	
Universal Asynchronous Receiver/Transmitter with Baud Rate Generator	COM81C17	SMC	55
Universal Asynchronous Receiver/Transmitter (2-channel)	COM78C802	SMC	
Universal Asynchronous Receiver/Transmitter (4-channel)	COM78C804	SMC	
Universal Asynchronous Receiver/Transmitter (8-channel)	COM78C808	SMC	
Universal Synchronous/Asynchronous Receiver Transmitter	MAS8251A	◊‡ Marconi	
UPC/EAN Scanner	NCR8415	NCR	60
Vector Processor, 32-Bit	SN74ACT8867	TI	
VGA Graphic Chip (for IBM OS/2 and IBM PC/XT/AT/AT386 compatible systems)	POACH/VGA-50	ZyMOS	
VGA Graphics for 80386 Based Systems (compatible with EGA, CGA, MDA and Hercules)	ZyVGA-50	ZyMOS	
Video Clock Generator (for medium to high performance CRT graphics systems)	DP8512	National	
Video DAC (TV/video displays and feed-forward A/D systems)	CA3338	Harris	65
Video DAC, Triple 8-Bit Color Palette	SC11453	Sierra	
Video Data Assembly FIFO (supports smooth panning and hardware windows)	AM8172	AMD	
Video Display Processor (RGB/ Composite Video Output)	V9938C	Yamaha	
Video Display Processor (RGB Linear output)	V9958	Yamaha	
Video Frame Averager (512 x 512 x 8)	67156	OEI	70
Video Frame Buffer (512 x 512 x 8)	67145	OEI	
Video Processor (Subtraction, Overlay and Storage)	67149	OEI	
Video RAM Controller/Driver (up to 1 Mbit)	DP8521	National	
Video RAM Controller/Driver (up to 256K bits)	DP8520	National	
Video RAM Controller/Driver (up to 4 Mbit)	DP8522	National	75
Video System Controller (video dot clock rate to 80 MHz)	AM8152A	AMD	
	AM8152B	AMD	
Video-Pulse Generator	TBB278A	Siemens	
VMEbus Address Controller	VAC068	VTC	
VMEbus Interface Chip, ACC	**CA91C014**	**Newbridge (3569)**	80
VMEbus Interface Chip, DARF	**CA91C015**	**Newbridge (3569)**	
VMEbus Interface Controller	VBIC	◊ SBE	
VMEbus Interrupt Generator	VME3000	PLX Tech	
VMEbus Interrupt Handler (monitors all seven interrupt levels)	VME4000	PLX Tech	
VMEbus Master Controller (two device chipset for non-slot 1 master bus controller)	VME1220	PLX Tech	85
VMEbus Master Controllers (two device chipset for slot 1 master bus controller and single level arbiter)	VME1210	PLX Tech	
VMEbus Slave Address Manager	VSAM	◊ SBE	
Voltage Controller (converts CMOS RAMs to nonvolatile storage)	DS1215	Dallas	
Voltage Regulator Controller, watch dog timer and power-on reset	HA1835	Hitachi	
Watchdog Timekeeper (NV real-time clock, 50 bytes RAM, alarm, watchdog timer, and interval timer)	DS1286	Dallas	90
Watchdog Timekeeper (real-time clock, 50 bytes RAM, alarm, watchdog timer, and interval timer	DS1284	◊ Dallas	
Winchester Subsystem Superchip (host interface, drive controller, microcontroller interface, buffer manager, data separator)	WD42C22	Western	
	WD42C22A	Western	
Write Buffer, Cache-Main Memory Write Interface for LR2000–12 CPU (12.5 MHz)	**LR2020-12**	**LSI Logic (3534)**	
	LR2020-16	**LSI Logic (3534)**	95
	LR3020-16	**LSI Logic (3534)**	
	LR3020-20	**LSI Logic (3534)**	
	LR3020-25	**LSI Logic (3534)**	
Write Buffer (for R2000A CPU)	IDT79R2020A	IDT	
Write Buffer (for R3000 CPU)	IDT79R3020	IDT	100
Write Buffer (8-bit)	79R2020	◊† Intel	
	79R3020	◊† Intel	
Write Buffers, 32-Bit RISC	IDT79R2020	◊‡ IDT	

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MICROPROCESSOR

MICROPROCESSOR—System Components (Cont'd)

Function	Device	Source	Line
General Purpose (Cont'd)			
Single Chip Floating Point Processor (ANSI/IEEE STD754)	B2130	Bipolar	
	B3130	Bipolar	
	B4130	Bipolar	
Dual Asynchronous Communications Interface Adapter (68000 bus compatible)	**R68C552**	**Rockwell (3576)**	
Dual Bus Interface Circuit, MIL-STD-1553 Applications	R1553	Rockwell	5
Dual UART (10, 12.5, 16 MHz)	KS82C450	◊ Samsung	
	KS82C450A	◊ Samsung	
Dual USRT (10, 12.5, 16 MHz)	KS82C452	◊ Samsung	
Triple 6-Bit DAC, Video Color Palette, 40 MHz	MS176-40	Mosel	
Triple 6-Bit DAC, Video Color Palette, 50 MHz	MS176-50	Mosel	10
Quad Pixel Dataflow Manager (generates mixed text and graphics within display memory)	AM95C60	AMD	
Quad Raster Op ALU (QRO)	**VL82C164**	**VLSI Tech (3702)**	
Eight-Channel Multiplexed Sample and Hold	**SSM2300**	**AD (3262)**	
Z80 CPU, 2 Kbytes SRAM, Clock Generator Controller	Z84C50	◊ Zilog	
Z80 MPU (10 MHz), Clock Generator Controller, Counter/Timer, I/O	Z84C01	◊ Zilog	15
32 Way INMOS link crossbar switch.	IMSC004	SGS-Thomson	
32-Bit Programmable Window Filter	**CA29C632A**	**Newbridge (3569)**	
2M Band UART with RISC Interface, Direct Interface with RTX 2000/2001A Buses, CMOS	RTX2152	Harris	
8-Bit Single Chip Microcomputer LC86104A	LC86104A	Sanyo	

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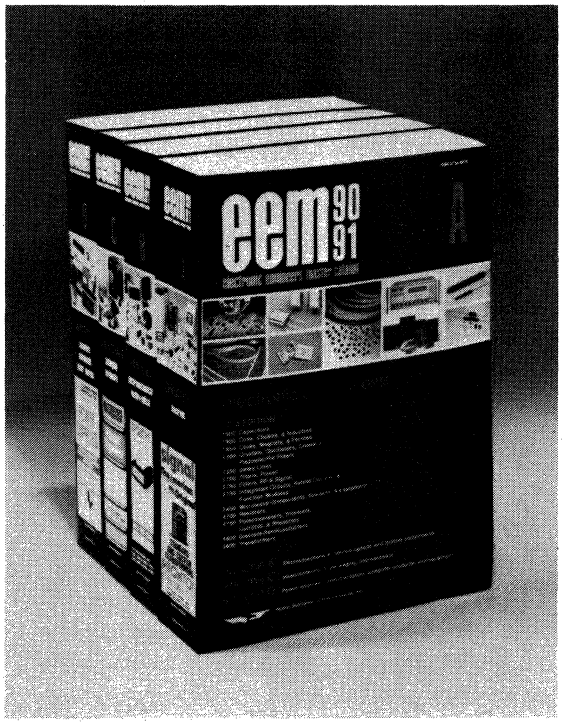

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INTRODUCTION TO MICROPROCESSOR DEVELOPMENT SYSTEMS

This section describes the tools used in developing software programs for microprocessors. Microprocessors supported range from 2-bit slice families and 4-bit processors to 32-bit machines. Development systems described in the Master Selection Guide range from simple, single-user text-editing stations to multi-user computers dedicated to software development. Also included are In-Circuit Emulators, a device which emulates functions and timing as if it were in a target system. Manufacturers are sequenced alphabetically, and each system is described by a listing of performance parameters.

MPU DEVELOPMENT SYSTEMS

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
1802/05/05AC/06, 64180R0/R1/Z, 6301V1/01X0/63701V0/63701Y, 6303R/03V1/03X/03Y/03Y0, 6309/09E, 6502/C02/03/04/05/06/07/10/12/13/14/15, 6800/02/08, 6801/01U4/68701/68701U4/03/03U4, 68HC05C4/C8/D2/P1, 6805 ASIC, 1468HC05E2/E3, 6809/B09/09E, 68HC11A0/A1/A8/E1/E2/E9, 68000/68008/68010, 8035/39/C39/40/48/8749/C49/50, 8051/51AH/C51/C51BH/C51FA (80C252), 8751/51H/51BH/C51, 8052/52AH/C52/52BH/C52T2, 87C52/52BH, 8031/31AH/C31/C31BH, 8032/32AH/C32/32BH/C32T2, 80C154/83C154/85C154, 8344/44AH, 8053AH/8753H, 80515/535, 80C152JA/C152JB/C152JC/C152JD, 80C321, 80C451, 80C552, 80C325, 80C452, 80C652, 8085/8085AH-2/80C85, 8086/80C867, 8088/80C88, 8096/97/8396/8397/8098/80C196, 8X300/305, NSC800, V20/30, Z80A/Z80B/Z80H, 80186/80C186 (16 MHz), 80188/80C188 (16 MHz), Z180	1	1	N/A	64 (1 MB for 80286)	192	as per host	as per host	as per host	as per host	x	Opt.	Opt.
ZAO3, 63O1R/X/Y/COLY/701Y, 6303 R/X/C03Y, 6309/E, 64180R0, 6502/ C02 (4MHZ), 6800/ 02/08, 6801/03/U4, 68HC05C4/C8/705C8/805C8, 68HC05DZ, 146805E2/E3, 6809/E, 68HC11AO/A1/A8, D3/E1/E2/E9/F1/, 8031/AH/C31/C31BH, 8032/AH/C32T2/BH, 8051/C51/AH/BH/FA, 80C52/AH/BH/T2, 80C154, 80C252, 80C321, 80C515, 80535, 80C552, 80C652, 8344/AH, 83C154, 85C154, 8751/H/BH/C51/, 87C52/H/BH, 8035, 8039/C39, 8040, 8048,8748, 8049,/C49, 8040, 8085/C85, Z80 (10MHZ) NSC800	1	1	N/A	64	64	As per host	As per Host	As per Host	As per Host	x	x	-
180ZBC, 1805AC, 1806, 64180R1,/Z, 68000/HC000, (16.7 MHE) 68010, 8086/C86, 8088/C88, 80186/C186, 80188/C188, 8096, 8396, 8796, 8097, 8397, 8797, 80194, 806196 KB/KC, 80198, Z180,	1	1	N/A	64	256	As per Host	As per Host	As per Host	As per Host	x	Opt.	x
86C010		-	488	-	imb	As per Host	As per Host	As per Host	As per Host	x	-	-
ADSP2100A (50 MHz)	1											
8051, 68HC11	1	1		64	64					opt.		
Z80A, Z80H, 64180	1	1		64	1 MB							
8035, 8039, 8040, 8048, 8050, 8748, 8749, 8080, 8085, Z80, MK3880/4, NSC-800	1	1		64	64							
68000, 68008, 68010, 68020, Z8001, Z8002, 8086, 8088, 80186, 80188, 80286, 80C86, 80C88, 80C186, 80C188	1	2		128	2 MB					opt.		
8031, 8032, 8051, 8052	1	1	5	16	40						x	
Z-80	1	2	0	64	64	2	3.5	790 K	Opt.		Opt.	Opt.
Z-80	1	2	1	64	64	2	3.5	790 K	Opt.		Opt.	Opt.
8088	1	2	1	640	640	2	3.5 5.25	720/360	128 MB		Opt.	Opt.

Software Support					
Standard	Optional	Comments	Model	Source	Line
Macro Cross-Assembler, Relocating Linker, Symbolic Debugger	C Cross-Compilers w/Source-Level Debugging, performance analysis hardware and software.	Over 80 microprocessors supported on the IBM PC; many are also supported on the Sun Workstation, Macintosh II and VAX systems.	EZ-Pro	Am Automation	
Macrocross assembler, Relocating Linker, Symbolic debugger.	C Cross Compliers W/Source-level debugging	Hosted on IBM AT and compatibles	EZ-PRO 1.5	Am Automation	
Macro Cross Assembler, Relocating Linker, Symbolic Debugger	C Cross Compliers W/Source-Level Debugging, Performance Analysis hardware and software	Hosted on IBM AT and compatibles.	EZ-PRO 2.1	Am Automation	
Macro Cross Assembler	C Cross Compilier w/ source-Level SDebugging, Performance Analysis hardware and software	Hosted ou IBM AT and compatibles, 40-Bit time stamp w/25ns resolution.	EZ-PRO 3.7	Am Automation	
		In-Circuit Emulator with Trace Buffer	**ADDS2100A-ICE**	**AD (3294)**	5
Menu-driven emulator control software.	Compilers, assemblers, and other utility software available for a variety of languages.	Real-time transparent emulation, advanced breakpoint system, trace memory.	EC 7000	AppMicroSys	
Menu-driven emulator control software and symbolic debugger.	Compilers, assemblers, and other utility software available for a variety of languages.	Real-time transparent emulation with up to 1 million breakpoints, advance breakpoint system, 8Kx48-bit trace memory.	EL 800	AppMicroSys	
Software for operation of the emulator is supplied.	Remote control and symbolic debug package for MS/DOS operating systems.	Stand-alone in-circuit emulator. Real-time trace:32 bits wide, 256 tracesdeep with disassembly. Diagnostic functions: standard and user-defined for debugging hardware in design, test and service.	EM Series	AppMicroSys	
Full high-level and symbolic debug packages available for various hosts (SUN, APOLLO, VAX, PC, and MicroVAX.	Compilers, assemblers, and other utility software is available for a variety of languages.	Stand-alone or hosted in-circuit emulator, real-time and transparent operation, diagnostic functions, in-line assembler, memory and trace disassembler, real-time trace (2048x72 bits).	ES Series	AppMicroSys	
Cross Assembler, Communications		Works in conjunction with IBM PC or compatibles.	PDK51	BinaryTech	10
CDI-CP/M	Basic, C Assemblers, Pascal	Uses CPU–2, the optional 3.5 inch hard disk drive can be mounted on the Winchester controller board.	CDI300	CompDyn	
CDI-CP/M	Basic, C Assemblers, Pascal	Uses CPU–2, the optional 3.5 inch hard disk drive can be mounted on the Winchester controller board.	CDI400	CompDyn	
	MS-DOS, 'C', assemblers and debuggers.	PC/XT compatible, 23 STDbus expansion slots, CGA video.	STD-XT BusMaster/88	CompDyn	

Bold face indicates additional data is provided on the page noted.

MPU DEVELOPMENT SYSTEMS (Cont'd)

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
80286	32	2	1	1 MB	1 MB	2	3.5 5.25	1.4M/ 1.5M	128 MB		Opt.	Opt.
80386	32	2	1	1 MB	16 MB	2	3.5 5.25	1.4M/ 1.5M	128 MB		Opt.	Opt.
8051, 8031, 8751, 8052, 8032, 8752	1	1	0	48		As Per Host	As Per Host	As Per Host	As Per Host		Opt.	
8051, 8031, 8751, 80C51, 80C31, 87C51	1	1	0	4—28		As Per Host	As Per Host	As Per Host	As Per Host		Opt.	
8051, 8031, 8751, 8731, 8052, 8044, etc.	1	0	0	48		As Per Host	As Per Host	As Per Host	As Per Host		Opt.	
Z80	1	2	1		64						Opt.	x
8085	1	2	1		64						Opt.	x
8086, 8088	1	2	1		1MB						Opt.	x
80186, 80188	1	2	1		1MB						Opt.	x
68000, 68010, 68020	16	8	1	1MB		1	5 1/4	1MB	170MB			
68000, 68010, 68020, 68030	16	8	1	5MB		1	5 1/4	1MB	170MB			
RTX2000, RTX2001A, RTX2001				192	192							
RTX2000, RTX2001A, RTX2001				64	192							
RTX2000, RTXA001A, RTX2001	1	1	1	64	1 MB							
RTX2000–8, RTX2001A–8, RTX2001	1	1	1	64	1 MB							
RTX2000, RTX2001, RTX2001A	1	1	1	64	1 MB							
RTX2000, RTX2001A, RTX2001	1	1	1	224	1 MB							
F9450, HD6301V/6303R, HD6303R/X/Y, 8048/49, 8085, 80286 hosted on the HP 64100, 80386, 6800/68A00/68B00, 6803/6808, 6801/6803, 6809/68A09/68B09, 6809E/68A09E/68B09E, 68008, 68020, 68HC11, 70116/70216, 70108/70208, TMS32010/320M10, Z8001, Z8002, Z80, PACE1750, User Definable	6/cluster 16/Host computer	4	2	4MB	6MB			Opt.	55M	See comments	Opt.	Opt.
80C521/80C321, 64180/64180X, H16; 8051/8751/8031, 8085, 8086/8087/80C86, 8088/80C88/8087, 80186, 80C186, 80188, 80C188, 80C196, 68000, 68HC000, 68010, V25, NSC32532/32GX32, TMS32020, TMS320C25, Z80	16	2								x		
All bit slices, 2901, 2903, 29203, 29501, 29116, 8X300, 8X305, 74S481, 3000, and macrologic. Also ECL10800, 10220. 1 to 4 WCS arrays.	4	3	1	512	160	2	5 1/4	2M		x	x	x
All Microcode devices (e.g., 29116, 2901, 29300, 29500, AS888, 2910, AS890, 29PC141, Weitek 1064)	1	3	2	640	640	1	5– 1/4	1.4 M	20 M	x	Opt.	Opt.
All Microcoded Devices (e.g., 29116, 2901, 29300, 29500, AS888, 2910, AS890, 29PC141, Weitek 1064), All Bit-Slice Devices	1	3	2	640	640	2	5– 1/4	740 K		x	Opt.	Opt.
All Microcoded Devices (e.g., 29116, 2910, 29300, 29500, AS888, 2910, AS890, 29PC141, Weitek 1064), All Bit-Slice Devices	1	3	2	640	640	1	5– 1/4	370 K	10 MB	x	Opt.	Opt.

Software Support					
Standard	Optional	Comments	Model	Source	Line
	MS-DOS, UNIX, QNX, 'C', assemblers, debuggers.	23 STDbus expansion slots, PC/AT compatible, EGA with keyboard.	STD BusMaster/ 286	CompDyn	
	MS-DOS, UNIX, QNX, 'C', assemblers, debuggers.	PC/AT compatible for industrial applications. EGA with keyboard, 23 STDbus slots and power supply.	STD BusMaster/ 386	CompDyn	
Debugger	Cross Assembler	Emulation not real-time, In-Circuit hardware emulation.	dICE-51	Cybernetic	
Debugger	Cross Assembler	Real-Time Emulation in-circuit, CMOS option.	d2 ICE-51	Cybernetic	
Debugger	Cross Assembler	Software simulation only, no hardware emulation.	Sim 8051	Cybernetic	5
Downloads code from PC to STD, debugger.		Target STD system acts as emulator.	DSZ80	Devtek	
Downloads code from PC to STD, debugger.		Target STD system acts as emulator	DS8085	Devtek	
Downloads code from PC to STD, Debugger.		Target STD system acts as emulator.	DS8088	Devtek	
Downloads code from PC to STD, debugger.		Target STD system acts as emulator.	80188	Devtek	
PDOS, Assembler C.	Pascal, Fortran 77, Basic.	High-performance target development, to 25 MHz CPU.	FOCUS30/ 37U	Force	10
UNIX, Assembler, C Debug.	Fortran 77, Pascal, Basic.	High-performance UNIX box to 20 MHz CPU includes 125 MB Streamer tape.	FOCUS32/ 32U	Force	
		Memory expansion for RTX DS and RTX DB.	RTX-MX192	Harris	
		Memory expansion for RTX DS and RTX DB.	RTX-MX64	Harris	
RTX Development Board Monitor.	C-Cross Compiler, RTX FORTH, RTX DS	IBM XT or AT Based Development System.	RTXDB-10	Harris	
RTX Development Board Monitor.	C-Cross Compiler, RTX FORTH, RTX DS	IBM XT or AT Based Development System.	RTXDB-8	Harris	15
RTX DS Software: LMI FORTH, FORTH Cross Compiler, editor, dissassembler, emulator.	C-Cross Compiler, RTX FORTH, RTX DS	IBM XT or AT Based Development System.	RTXDS-10	Harris	
RTX DS Software: LMT FORTH, FORTH Cross Complier, editor, disassembler, emulator.	C-Cross Compiler, RTX FORTH.	IBM XT or at Board Development System.	RTXDS-10MX	Harris	
Operating software supplied with each subsystem.	C, Assemblers, Linkers	Logic Development System: 200/400 MHz Timing/125 MHz state 8 to 32 channels. 20 to 120 channels of state analysis. Real-time high-level analysis. Software performance analysis. Structured Analysis/Design; Basis Branch Analysis; ADA supported	HP64000-UX	HP	
Operating software supplied with each subsystem.	C, Assemblers, Linkers	Logic development system; 100 MHz; Timing/25 MHz state, 16 channels, coverage analysis, emulation bus analysis; coverage analysis.	HP64700	HP	
MENU Prompts: Editing, Target Control, Remote operation, display formatter, diagnostics, download models, TRACE dump, multiple arrays.	Universal meta-assembler up to 80 bits, MACRO's FORTRAN IV compatible or CP/M version.	Performance analysis measures target activity in 16 user categories. TRACE has 16-level Trigger logic.	DS370	HiLevel	20
PC utilities, EPL programming language, patchwork-source code editor, META disassembler, PCTERM-VT00 terminal emulator	HALE-relocatable Linkable MACRO META assembler, EPL-VMS & EPL-UNIX programming language for VAX, DU-VMS, UNIX upload/ download for vax.	Also available are in-circuit emulators for 29116, 2910, AS888 and AS890.	DS3700/ CSIBM-AT	HiLevel	
PC Utilities, EPL-Programming Language, Patchwork-Source Code Editor, META Disassembler, PC TERM-V100 Terminal Emulator	HALE-Relocatable, Linkable, MACRO META Assembler, EPL-VMS & EPL-UNIX Programming Language for VAX, DU-VMS, UNIX Upload/ Download for Vax.	Also available are in-circuit emulators for 29116, 2910, AS888, and AS890	DS3700/ CSIBM-PC	HiLevel	
PC Utilities, EPL-Programming Language, Patchwork-Source Code Editor, META Disassembler, PC TERM-V100 Terminal Emulator	HALE-Relocatable, Linkable, MACRO META Assembler, EPL-VMS & EPL-UNIX Programming Language for VAX, DU-VMS, UNIX Upload/ Download for Vax.	Also available are in-circuit emulators for 29116, 2910, AS888, and AS890	DS3700/ CSIBM-XT	HiLevel	

Bold face indicates additional data is provided on the page noted.

MPU DEVELOPMENT SYSTEMS (Cont'd)

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
All Microcoded Devices (e.g., 29116, 2901, 29300, 29500, AS888, 2910, AS890, 29PC141, Weitek 1064)	1	3	2	640	640	2	5-1/4	740 K		x	Opt.	Opt.
Any	1	3	1			2	5-1/4	360	20 MB	x		
EC-1000	1	1								x		opt.
EM29PL141	1	3	2	640	640	1	5-1/4	1.4M	20M	x	opt.	opt.
MIPS R2000, IDT79R2000	32	32		16 MB	80 MB				689 MB			
MCS-86, MCS-85, MCS-80 and MCS-48 families	1				64			250			Opt.	Opt.
8080A, 8085A, 8086 (iAPX86), 8088 (iAPX88), 8089, 8021, 8022, 8041A, 8741A, 8035, 8048, 8748, 8039, 8049, 8051	1	2	4			1		250			Opt.	Opt.
8080A, 8085A, 8086 (iAPX86), 8088 (iAPX88), 8089, 8021, 8022, 8041A, 8741A, 8035, 8048, 8748, 8039, 8049, 8051	1	2	4		64			250	7.3M		Opt.	
8080A, 8085A, 8086 (iAPX86), 8088 (iAPX88), 8089, 8021, 8022, 8041A, 8741A, 8035, 8048, 8748, 8039, 8049, 8051	8	2	4								Opt.	Opt.
Work station dependent	8	1	2	256		2						Opt.
ClipperC200/C300	3	3	1	8 MB	16 MB	1	5.25	1.2 MB	156 MB		x	x
80286, 80186	11	3	1	1MB	16MB							
80286, 80186	2+	6+	2+	2 MB	17 MB							
80286, 80186	1	3	1	1 MB	16 MB							
80286, 80186	11	3	1	1MB	16MB	1/2	5 1/4	1.2M/ 640K	20 MB+			
80286, 80186, 80188	2+	10+	2+	2.5 MB	17.5 MB							
80286, 80186	11	3	1	1MB	16MB				20MB+			
LR3000 MIPS Architecture	4	4		16 MB	48 MB	1	1/4 Tape	120 MB	325 MB			Opt.
L64801, L64811, SPARC Architecture	1	2		8 MB	16 MB	1	1/4" Tape	150 MB	208 MB			Opt.
HD64180/Z180-8 MPU	1	1		64	64							
Z80-8 CPU	1	1		64	64							
TMS320C15-25 DSP	1	1		8	8							
TMS320C25-50 DSP	1	1		32	12							

Software Support					
Standard	Optional	Comments	Model	Source	Line
PC Utilities, EPL-programming language, patchwork -source code editor, META disassembler, PC TERM-VT100 terminal emulator	HALE-Relocatable Linkable MACRO META Assembler, EPL-VMS & EPL-UNIX Programming Language for VAX, DU-VMS, UNIX-Upload/ Download for VAX	Also Available are in-circuit emulators for 29116, 2910, AS888 and AS890.	DS3700/ CSTI-PC	HiLevel	
Menu-driven operating system		Logic State Analyzer, 256 Channels x 4K	DT3700	HiLevel	
Menu Prompts: Editing target control, remote operation, display formatter, diagnostics, download models, TRACE dump, multiple arrays	HALE-relocatable Linkable MACRO META assembler, EPL-VMS & EPL-UNIX programming language for VAX, DU-VMS, UNIX upload/ download for VAX		EC1000	HiLevel	
PC utilities, EPL programming language, patchwork-source code editor, META disassembler PCTERM-VTOO terminal emulator	HALE-relocatable Linkable MACRO META assembler, EPL-VMS & EPL-UNIX programming language for VAX, DU-VMS, UNIX upload/ download for VAX		EM29PL141	HiLevel	
UMIPS Operating System (Unix system V and BSD 4.3), Includes Utilities, C,Pascal	Fortran/V or BSD System Programmers Package, NFS/V or BSD, Fortran Compilers/V or /BSD	Tape Drive (9 track) cartridge at 6250/1600 bpi, 180 MB	M/1000	IDT	5
ISIS–11 disk operating system with relocating macroassembler, linker, locater, and CRT-based CREDIT editor.	iPDS-FTRANS option enables file transfer between iPDS and any Intellec Development System. PL/M, Fortran, Basic, Pascal and Cobol software packages available.	Self-test diagnostic capability, built-in interfaces for high-speed paper tape reader/punch, printer and universal PROM programmer. iMDX557, iAPX resident processor card package is available to upgrade existing iMDX225 series II Development System to Series III. This package supports development of iAPX86/88 processors.	iMDX225	Intel	
ISIS operating system, credit full screen copier, macroassembler for 8086/88 and 8080/85, linker and loader, debug–86 debugger.	Pascal, Fortran, PL/M, Cobol, Basic, assemblers for 8089, 8048, 8051 families, utility packages for 8080/85/86/87/88/89 support mainframe link software.		IntellecIII	Intel	
ISIS 11 disk operating system; ASM–80 macroassembler for 8080, 8085; credit editor; link and locate utilities.	PL/M–80, Fortran, Pascal, Basic, Cobol, Utilities FSP arithmetic package for 8080 and 8085; AMS–86 macroassembler, PL/M–86, link and locate utilities for 8086; assemblers for 8048 and 8089.	In-circuit emulators for all CPUs.	INTELLEC11-MODEL245	Intel	
ISIS operating system at workstations, MDS-I operating system at network manager.		Network manager provides shared hard disk and printer spooling for use by up to 8 stations.	NDS-I	Intel	
High level language debugging network, management tools, export/import software, Ethernet Protocol.		Network resource manager provides shared Winchester hard disk, Model 740 cartridge disks and spooled line printer interface for work stations. All existing Intel development systems can be upgraded to be NDS-II work stations. Work stations communicate with the network resource manager via 10M bit Ethernet or local net interconnected with coax.	NDS-II	Intel	10
C Compiler	PASCAL Compiler, FORTRAN 77 Compiler		C158	Intergraph	
	UNIX, XENIX, iRMX286, C, ASM, PASCAL, FORTRAN, COBOL, PLM, ADA.	Ethernet node for local diskless multi-user workstation, gateway, development system.	DN16	LitMach	
IP Communications.	Custom Solutions	Dual rail gateway system supporting multiple local Ethernets.	IP/DRGS	LitMach	
IP Communications	Custom Solutions	Ethernet Gateway supports TCP/IP communications between remote Ethernets.	IPG	LitMach	
	UNIX, XENIX, iRMX286, C, ASM, PASCAL, COBOL, FORTRAN, PLM, ADA	Same as WN16 series with extensive expansion capability	SA16	LitMach	15
IP Communications.	Custom Solutions	Dual rail gateway system supporting multiple local Ethernets.	SCIP/GBS	LitMach	
	UNIX, XENIX, iRMX286, C, ASM, PASCAL, FORTRAN, COBOL, PLM, ADA	Same as DN16 plus 20Mbyte 3 1/2 inch Winchester Hard Disk Drive	WN16	LitMach	
RISC/OS, C	PASCAL, FORTRAN, ADA, COBOL, PL/1		M/120	LSI Logic	
SUN/OS, C	PASCAL, COBOL, FORTRAN, C, ADA		SPARCstation1	LSI Logic	
Assembly C		Software included.	MRZ180-8	Macrochip	20
Assembly C		Software included.	MRZ80-8	Macrochip	
Assembly		Software included.	MR320C10-25	Macrochip	
Assembly C		MS/DOS Software included.	MR320C25-50	Macrochip	

Bold face indicates additional data is provided on the page noted.

MPU DEVELOPMENT SYSTEMS (Cont'd)

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
TMS370C26 DSP	1	1		32	128							
TMS320E14 DSC	1	1		8	8							
TMS370CXXX MCU	1	1		16	16							
HD64180-10 NPU	1	1		64	64							
WDC65C02-10 CPU	1	1		64	64							
HD647180X-8 MCU	1	1		64	64							
68000, 68008	15	2	2	256	14 MB	1	3 1/2, 5 1/4	820K	20 MB			
68010	15	4		512	16 MB	1	3 1/2, 5 1/4	820K	20 MB			
Z80	1	2		64		2	8	1M	5MB		x	
Z80	1	2	2	64			5 1/4				x	
Z80	1	1		64							x	
64180, 68HC11	1	1		64							x	
MCS-51 Family	1	1		64							x	
68000, 68008, 68010	1	1		128	1.5 MB							
iAPX-86 (86/88, 186/188, 286)	1	1		32	1 MB							
MKS1750/S	1	2		1 MB	1 MB			As Per Host	As Per Host			
BX1750A (MKS2750)	1			64 KB	64 KB			As Per Host	As Per Host			
MIL-STD-1750A	1	1	1	32Kx16	1 MB							
BX1750A (MKS1750)	1	2		64	8 MB			As Per Host	As Per Host			
Z80, 68000	1	1	1	256	768	1	5 1/4	800	10MB			
Z80, Z80B, 80186	1	2	1	512	1Mb	2	3.5	814K				
DSP56000, DSP56001	1	1		8				As per Host	As per Host			
M6805, M146805, M6804	1	1	1	8								
MC68HC11, MC6809, MC6801, MC6803, MC68010	1	2	2	32	256	1	5 1/4	655		1		opt.
MC68000	1	1	1	32	256							
MPU6805 Core		1		As Per Host	As Per Host			As Per Host	As Per Host			
MC68HC05B4/B6, MC68HC05C2/C3/C4/C8, MC68HC06L6, MC68HC705C8, MC68HC805C4, MC68HCL05C4/C8	1	1		As Per Host	As Per Host			As Per Host	As Per Host			
MC68000, 68010, 6800, 6809, 6802, 6805, 146805, 6801, 68120	2	2		256						Opt.	Opt.	Opt.
68020, 68010, 68008, 68000, 6801, 6809, 68HC11	8	6		2 MB		1	5 1/4	655K	70 MB			
MC68HC11, MC6809, MC6801, MC6803, MC68000, MC68008, MC68010, MC68020, MC6804, MC6805, MC68120	3	opt.	opt.	384	16	1	5 1/4	655	40 MB	opt.	opt.	opt.

Software Support					
Standard	Optional	Comments	Model	Source	Line
Assembly C		Software included.	MR320C26-40	Macrochip	
Assembly		Software included.	MR320E14-20	Macrochip	
Assembly		Software included.	MR370-20	Macrochip	
Assembly C		Software included.	MR64180	Macrochip	
Assembly C		Software included.	MR65C02-10	Macrochip	5
Assembly C		Software included.	MR7180-8	Macrochip	
PDOS Operating System, Monitor EPROM	PDOS Basic, C, Pascal, Fortran, RUNGEN	STD bus, Desktop, rackmount, industrial grade, nine user slots.	STD1000	MICRO-LINK	
PDOS Operating System, Monitor EPROM	PDOS Basic, C, Pascal, Fortran, RUNGEN	VMEbus, Desktop, rackmount, industrial grade.	VME1000	MICRO-LINK	
CP/M, Assembler, Debugger	BASIC, FORTRAN, C		DS22/S	MicroSys	
CP/M, Assembler, Debugger	BASIC, FORTRAN, C		SB8952-4	MicroSys	10
Interface Software	ASM, Link/Locate, Source Debugger	Uses Host system for applications	Ash-Z80	Microcosm	
Interface Software	ASM, Link/Locate, Source Debugger	Uses Host system for applications	Ash-64180	Microcosm	
Interface Software	ASM, Link/Locate, Source Debugger	Uses Host system for applications	ASH8051	Microcosm	
Interface Software	Source Debugger	Uses Host system for applications	Hyper/ICE-68000	Microcosm	
Interface Software	Link/Locate	Uses Host system for applications	MDE Series	Microcosm	15
Assembler, Linker, Debugger.		Multibus MIL-STD–1750A development system.	MKS1750/AT	Mikros	
Assembler, Linker, Debugger.		Two MIPS DAIS mix MIL-STD–1750A development system.	MKS2750/EBX	Mikros	
Mikros Force Debugger		High Performance Low Power Digital Signal Processing Board	MKS2750/TF	Mikros	
Assembler, Linker, Debugger.		Two MIPS DAIS mix VMEbus 1750A development system.	MKS2750/VM	Mikros	
Assembler, Debugger, C-Compiler			MTI1000	Miller	20
CP/M80, Concurrent CP/M86-iRMX86 Operating System		Six-slot portable Multibus	MSC8807	MonSys	
MS-DOS, Assembler		Digital Signal Processor Development System	DSP56000ADS	Motorola	
In host.		Operates as a remote hardware/software development station to a host such as EXORmacs, VME/10.	HDS200	Motorola	
In host.		Operates as a hardware/software development station.	HDS300	Motorola	
In host.		Operates as a remote hardware/software development station to a host such as EXORmacs, VME/10.	HDS400	Motorola	25
Monitor, Debugger		Evaluation board for the MPU6805 microprocessor core. Provides design development tools for downloading programs from the host computer to user RAM.	MPU6805EVB	Motorola	
Monitor, Debugger, Assembler, Dissassembler			M68HC05EVM	Motorola	
VERSAdos multiasking, real-time, multiuser, logical I/O file management; Pascal compiler; macro and linking assembler; page, screen and file-oriented editor, symbolic debugger.	Fortran IV.	Optional real-time trace; ROM, RAM and disk autotest at power-on; board-level fault isolation.	M68000 (EXORmacs)	Motorola	
UNIX System V, C, Pascal	MC68020 Source Level Debugger for C Compiler		SYS1131DVLP	Motorola	
VERSAdos real-time operating system.	UNIX System V/68 operating system, Pascal, Fortran, "C"		VME/10	Motorola	30

Bold face indicates additional data is provided on the page noted.

MPU DEVELOPMENT SYSTEMS (Cont'd)

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
NS32008, NS32016, NS32032	2	2	1	128	128							
NS32008, NS32016	2	2	1	128	512							
NS32008, NS32016, NS32032, NS32132, NS32232	4	4	1	4 M	8				40 MB			x
COP400 Series, NS455	1	3										Opt.
μPD70108, μPD70116 (V20/V30)		2	1	320	610	1	8	1M				
μPD70108, μPD70116 (V20/V30)		2	1	320	610	1	8	1M				
μPD70108, μPD70116 (V20/V30)	5	10	2	512	1MB	2	8	1M	32M			
CDS–001D is a PCXT/AT card to evaluate and develop CA16c001 aPPLICATIONS	1	2 audio ports		2MB	16MB	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12.5 MHZ 68000, 10 MHz 68000, 8 MHz 68000, 10 MHz 68010, 12.5 MHz 68010	32	8	2	512	2 MB	1	8	1.6 MB	500 MB			
63PO1M1, 6301V1, 6301X1, 6301Y0, 6303R, 6303X, 6303Y, 6305X2, 6305Y2, 6309, 6309E, 64180, 68PO1, 6805U1, 6805V1, 68P05V07; 8031, 80C31, 8032, 80C32, 8035,8039, 8040, 8044, 8048, 80C48, 8049, 8050, 8051, 80C51, 8052, 80C52, 8080, 8085, 80C85, 8086MAX, 8086MIN, 80C86MAX, 80C86MIN, 8088MAX, 8088MIN; 80C88MAX, 80C88MIN, 8096, 8096BH, 8097, 8097BH, 80C152JA, 80C152JB, 80186, 80C186, 80188, 80C188, 80C196, 80286, 80C321, 80C451, 80C452, 80C521, 80C535, 80C552, 8744, 8748, 8749, 87C51, 8752; NSC800, 87P50; V20MAX, V20MIN, V30MAX, V30MIN, V40, V40, V50, 78310; 80C51VS, 85C154VS; 6800, 6801, 6802, 6803, 68HC05C4, 68HC05C8, 6803U4, 6805E2, 6805E3, 6809, 6809E, 68HC11, 68HCC11F1, 68701, 68705R3, 68705U3, 68701U4, 68000, 68HC000, 68008; 1802, 1804, 1805, 1806; 6500/1, 6500/1EB, 6500/11, 6500/41, 6501Q, 6502, 65C02, 6510, 65/11EB, 6511Q, 6512, 65/41EB, 6541Q,; Z180, Z80, Z80C, Z8601, Z8603, Z8611, Z86C11, Z8612, Z8613, Z8681, Z86C81, Z8682, Z8691, Z86C91, Z8800, Z8801, Z8820, Z8822, Z8001, Z8002, Z8003, Z8004;			1	32K	128K						x	
68000, 68010, 68020, 68030	16	3/16	1	512/8 MB	32 MB	3	3 1/2, 5 1/4	1 MB	170 MB			
68000, 68010, 68020, 68030	16	3/16	1	512/8 MB	24 MB	2	3 1/2	1 MB	85 MB			
68020	1	2		512	4 MB	2	3 1/2	1 MB	85 MB			
6500 family.	1	2		16		2					Opt.	x
68000, 68010		2	1	128	1024	1	5 1/4	320	280MB			
68000, 68010		2	1	128	1024	1	5 1/4	320	140MB			
68000, 68010		2	0	512	8192	1	5 1/4	320	280MB			
68000, 68010		2	0	512	8192	1	5 1/4	320	140MB			
IMST414												
Z8001, Z8002	1	2	1	512	8 MB	1	5 1/4	360K	20 MB			

Software Support					
Standard	Optional	Comments	Model	Source	Line
TDS Firmware	EXEC	Development board for NS32008, NS32016, NS32032	DB32000	National	
TDS Firmware	MON16, EXEC, UNIX System V	Development board for NS32008, NS32016	DB32016	National	
UNIX System V	EXEC	Integrated Computer Module	ICM3216	National	
In host CPU		Microcontroller On Line Emulator; consists of a host CPU, a MOLE Brain Board, and a MOLE Personality board.	MOLE	National	
	Assembler, C	In-Circuit emulator operational on DEC VAX, Intel Series III and IBM PC.	IE70108-5	NEC	5
	Assembler, C	In-Circuit emulator operational on DEC VAX, Intel Series III and IBM PC.	IE70116-5	NEC	
MP/M-86	Assembler, C		MD086FD-10	NEC	
Interface driver hicom S/W & FFT S/W		Digital audio board to evaluate and develop audio compression capabilities using the CA16C001 digital audio comanding processor	CDS-001D	Newbridge	
Idris 2.3—a Unix-like O/S with real-time enhancements, poly-FORTH 32, real-time, multiuser, compact O/S.	Absoft's Fortran 77, JMI's C-Exec, and a 68000 assembler from OASYS all run under Idris.	Intelligent Diagnost Front Panel monitors current, voltage, temp., 100MB streaming tape.	OB68K/SYSII	Omnibyte	
MS-DOS based PopUp menu interface with symbolic debug and high-level language support standard.		Integrated analyzer-emulator provides full-speed, real-time analysis. Includes 2.7 trace buffer, built-in EPROM Programmer extensive macro capabilities and Program Performance Analysis.	**UniLab 8620**	**Orion (3572)**	10
PDOS, OS-9, UNIX, VERSAdos	High Level Languages	High-Performance 10-slot chassis assembly.	CS/10	RadstoneTech	
PDOS, OS-9, VERSAbus	High Level Languages	Low Cost 5-slot chassis assembly	CS/5	RadstoneTech	
PLUM		For use with Plessey Microsystems' Military/ Ruggedized CPU.	PMV-CS/5	RadstoneTech	
Text editor, two-pass assembler, debugger/ monitor in ROM.	PL/65 compiler.	Single step, real-time TRACE; software breakpoints; operational in-circuit emulator.	6500	Rockwell	
REGULUS	VRTX, polyFORTH, CP/M-68K	Multiple storage media.	SBE200	SBE	15
REGULUS	VRTX, polyFORTH, CP/M-68K	Multiple storage media.	SBE250	SBE	
REGULUS or UNIX V.2		High-performance, no-wait state MMU.	SBE300	SBE	
REGULUS or UNIX V.2		High-performance, no-wait state MMU.	SBE350	SBE	
VAX-VMS		Cross-Software Package	IMSD600	SGS-Thomson	
CP/M-8000, C, Assembler, DDT Debugger	Pascal, Fortran 77, Basic	Economical Z8000 software development system, Multibus optional.	SBS8000	SingleBoard	20

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MPU DEVELOPMENT SYSTEMS (Cont'd)

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
Z80H, Z80C, Super-8, Z8, 8085/80C85, 8048/49/50/C48, 8052/C51/C154, 6800, 6801/03, 6809, 6809E, 6309E, 68HC11, 68HC05, 6301V/03R, 6301X/03X, 6301Y/03Y, 6305U/V, 6305X/Y, 6305Z, 7810/11H, 78C10/11/14, 7807/09, 78310/312, M50734SP, M50745, M50747, M37450, 6502/65C02, MB89700, 64180Z/R, 647180, Z180, 8086/88, 80C86/C88, 80186/188, V20/V30, V40/V50, 68000/10/12, 68020, 80C186/188, 80286, 80386, 80386SX, 80376, V25, V33, V60, H8/532, H16	1		1	64 320 128	8 MB							
68000, 68008, 68010, 6809, 6809E, 6801; 8086/87, 8088/87, 80186, 80188, 8085A; Z80, Z80CMOS, Z8001/2; 1750A, F9450, NSC800	1	2		64–128	768					opt.	opt.	opt.
8086, 8085A, 8080A, 8048, 8049, 8035, 8039, 8021, 8041A, 8022, 6800, 68000, 6802, 6808, Z8000, Z80A	1	2		128						Opt.	Opt.	Opt.
8086, 8085A, 8080A, 8048, 8049, 8035, 8039, 8021, 8041A, 8022, 6800, 68000, 6802, 6808, F8, 3870, 3872, 3874, 3876, Z8001, Z8002, Z80A, TMS9900, SBP9900, 1802, 6500/1	1	2		128		2				Opt.	Opt.	Opt.
68000, 68008, 68010, 6809, 6809E, 6801; 8086/87, 8088/87, 80186, 80188, 8085A, 8051, 8048, 8021, 8041A, 8022; Z80, Z80CMOS, Z8001/2; 1750A, F9450, 9900/9989, 70108/V20, 70116/V30, 7809/08/07, 7810/11/16, 78C05/06	8	8		64–128	768	1	8	8	80MB	opt.	opt.	opt.
TMS7xxx, TMS7xCxx		2									y	
TMS32010, TMS32010–14, TMS32010–25, TMS32011, TMS320C10, TMS320C10–25, TMS320C15, TMS320E15, TMS320C17, TMS320E17	1	3		8	8					x		
TMS32020, TMS320C25	1	3		136	144					x		
TMS34010	1	3		256	256					x		x
TMS370	1	2			640	2	5 1/4	360K	20M		x	x
TMS320C30				532	1 MB							
TMS320, TMS7000					64K							
TMS320, TMS7000					64K							
TMS320C30												
TLCS–42	1	2	1	384		1	5–1/4		10MB		x	x
TMP47C434N, TMP47C634N	2											
TLCS–47	1	2	1	384		1	5–1/4		10MB		x	x
TLCS–48	1	2	1	384		1	5–1/4		10MB		x	x
TLCS-Z80	1	2	1	384		1	5–1/4		10MB		x	x
TMPZ84C00, Z80	1	2	1	64	64	2	8	1M			x	x
TMP84C011AF	1											
TMP84C013AF, TMP84C015AF	1											

Software Support					
Standard	Optional	Comments	Model	Source	Line
Symbolic Debugger	Assembler, Microscope (Source Debugger)	Universal 8-bit to 32-bit in-circuit emulator.	SA98	Sophia	
OS/40 ROM based operating system. Simulated I/O support.	Assemblers, C compilers, Pascal compilers, structured analysis tools, language directed editors (C, Pascal), C/Pascal HLL debug, integration control system.	Complete host based development system. VAX/ULTRIX & VAX/VMS support.	V-Systems	Tektronix	
OS/40 ROM-based operating system; communications firmware; simulated I/O support.	Assemblies/compiles performed on host.	Optional emulator processors and prototype control probes; system designed as a peripheral for a host system.	8540	Tektronix	
DOS/SO disk based operating system; line-oriented editor; macro assembler with English language diagnostics; linker supervision; communications S/W; simulated I/O support.	Optional emulator processors and prototype control probes; ROM-based powerup systems test; real-time trace.		8550	Tektronix	
TNIX (UNIX based) operating system, communication F/W, simulated I/O support.	Assemblers, C compilers, Pascal compilers, structured analysis tools, language directed editors (C, Pascal), C/Pascal HLL debug, integration control system.	Complete stand-along 11/23 or 11/73 UNIX-based development system	856140 Systems	Tektronix	5
Stand-alone device			EVM7000	TI	
On-board assembler/RASSM	X-ASSM/Linker	Hardware breakpoint and trace, real-time in-circuit emulation. TMS320 first-generation XDS.	TMDS3262211	TI	
On-board assembler/RASSM	X-ASSM/Linker	Hardware breakpoint and trace, real-time in-circuit emulation. TMS32 second-generation XDS.	TMDS3262221	TI	
User Interface (debugger)	Assembler, C Compiler	Use with TI, IBM or IBM-compatible PCs. May also be used stand-alone with a dumb terminal.	TMDS34699-10000	TI	
Assembler/Linker		IBM-PC Based	TMDS3762210	TI	10
TMS320C30 Assembler/Linker, C Compiler User Interface S/W, SPOX DSP Operating System			XDS1000	TI	
Assembler, simulator, debug monitor, logic tracing with extended data/address probes.		Host independent. Utilizes host computer, requires external 5V supply.	XDS11	TI	
Assembler, simulator, debug monitor, logic tracing with extended data/address probes.		Host independent. Utilizes host computer.	XDS22	TI	
TMS320C30 Assembler/Linker, User Interface S/W			XDS500	TI	
CP/M or MS-DOS	Debugger, Assembler	RTE 42 system evaluates TLCS42 MCU	BM4212A	Toshiba	15
			BM47C834	Toshiba	
CP/M or MS-DOS	Debugger, Assembler, or Compiler	RTE 47 system evaluates TLCS–47 MCU	BM4721	Toshiba	
CP/M or MS-DOS	Debugger, Macro-Assembler	RTE 48 system evaluates TLCS–48 MCU	BM4821	Toshiba	
CP/M or MS-DOS	Debugger, Macro-Assembler	RTE 80 system evaluates TLCS-Z80 MPU	BM8021	Toshiba	
CP/M compatible operating system	Macroassembler, RTE software	RTE80 real-time emulator. BM1020 is real-time controller	BM8022	Toshiba	20
			BM8026/24	Toshiba	
			BM8027/25	Toshiba	

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MPU DEVELOPMENT SYSTEMS (Cont'd)

Supported CPUs	Maximum No. of Users Stations	Communication Ports		User RAM		Floppy Disk			Hard Disk	Logic Analyzer	PROM Programmer	Printer
		Serial	Parallel	Supplied (Kbytes)	Maximum Capacity (Kbytes)	No.	Size (in.)	Capacity (Kbytes)	Capacity (Kbytes)			
TLCS-85	1	2	1	384		1	5-1/4		10MB		x	x
TMP90C840N, TMP90C841N	2											
W65C02, W65C802	1	1	x	16	64	2	3 1/2	800	Opt.		Opt.	Opt.
W65C124	1	1	x	18	18	2	3 1/2	800	Opt.		Opt.	Opt.
W65C134	1	1	x	0	0	2	3 1/2	800	Opt.		Opt.	Opt.
W65C816	1	1	x	256	256	2	3 1/2	800K	40 MB	x	x	x
80186, 80187, 80188, 80286,80287, 80386, 80387, V40, V50, 68000, 68010, 68020, 68881, 68030, 68882, Z80, Z80H, 6301 X/Y/V, 6303 X/Y/V, 64280, 6801/3	1	2	1	64/256	2 MB					opt.		opt.
8086, 8087, 80186, 80187, 80188, 80286, 80287, 80386, 80387, V40, V50, 68000, 68010, 68020, 68881, 68030, 68882, Z80, Z80H, Z180, 6301V, 6301X/Y, 6303V, 6303X/Y, 6801, 6803, 64180R, 64180Z		2	1	64/256	2 MB		5.27/ 3.5	1.44 MB	40 MB	opt.		opt.
8048, 8085, 8086, 8087, 8088, 80186, 80188, V20, V30, V40, V50, 6809, 6809E, 68000, 68008, 68010, Z80, Z80B, Z80H	1	2		64/128	16 MB					opt.	x	opt.
8048, 8085, 8086, 8087, 8088, 80186, 80188, V20, V30, V40, V50, 6809, 6809E, 68000, 68008, 68010, Z80, Z80B, Z80H	1	2		64/128	16 MB					opt.	x	opt.
80186	4	4	1	512	1 MB	1	5.25	360	20 MB		Opt.	
80186	2	2	1	512	1 MB	1	5.25	360	10 MB		Opt.	
80186, 80286	4	4	1	1 MB	1 MB	1	5.25	360	40 MB		Opt.	
8088, V20, V50	1	1	2	Varies	1000	3	5 1/4 3 1/2	2100	60 MB	Opt.	Opt.	
8088 (5 or 8 MHz), V20, V50	1	1	2	Varies	1 MB	3	5 1/4 3 1/2	2.1 MB	60 MB		Opt.	
8088/80188, V20, V50	1	Varies	Varies	128	1000	PC	PC	PC	PC	Opt.	Opt.	
8088 (5 or 8 MHz), V20, V50	1	1	2	Varies	1000	3	5 1/4 3 1/2	2100	30 MB		opt.	

Software Support					
Standard	Optional	Comments	Model	Source	Line
CP/M or MS-DOS	Debugger, Macro-Assembler	RTE 85 system evaluates TLCS–85 MCU	BM8521	Toshiba	
			BM9021	Toshiba	
Toolbox In-Circuit Emulation Software	Assemblers, C Compilers	W65C02, W65C802 In-Circuit Emulators.	ICE MPUS	WDC	
Toolbox In-Circuit Emulation Software	Assemblers, C Compilers	W65C124 In-Circuit Emulators	ICE 124	WDC	
Toolbox In-Circuit Emulation Software	Assemblers, C Compilers	W54C134 In-Circuit Emulator	ICE 134	WDC	5
Toolbox In-Circuit Emulation Software	Macro-Assembler, C Compiler, Pascal Compiler, BASIC, FORTH, FORTRAN	Apple IIgs Host with RS–232 interface for any application software development host.	Toolbox	WDC	
MS-DOS standard operating system interface, standard High-level debug and symbolic debug	C, Pascal and Ada Compilers, source-level Debuggers, assemblers, linkers available	Computer (AT-class) controlled emulator with up to one-million breakpoints and performance analysis.	ERX-Series	ZAX	
MS-DOS or UNIX, standard operating system interface with high level debug and symbolic debug	Compilers, Source-level Debuggers, Assemblers, and other utility software available for a variety of languages	Computer (AT) plug-in, sun workstation ethernet or stand alone emulation chassis, controlled emulator with up to one-million breakpoints, performance analysis and multi-triggered real-time trace buffer	ERX-Series ZAX	ZAX	
MS-DOS, VMS, Ultrix, Unix, standard operating system interface	C, Pascal, and Ada Compilers, source-level Debuggers, Assemblers, Linkers, Symbolic Debug available	CRT or Host Computer controlled emulator with 4 hardware and 8 software breakpoints, 8048 built-in standard Prom programmer.	ICD-Series	ZAX	
MS-DOS, UNIX, standard operating system interface with symbolic debugger	Compilers, source-level Debuggers, Assemblers, and other utility software available for a variety of languages	CRT or Host Computer controlled emulator with hardware and software breakpoints, triggered real-time trace buffer, 8048 built-in standard Prom programmer	ICD-Series ZAX	ZAX	10
Concurrent DOS	Drivers available	Sockets for up to 256 KB EPROM, SCSI, clock/calendar, OMTI controller six open Multibus slots, removable front panel, and 300 W switching power supply. Monitor and keyboard included.	ZX96/C-DOS	Zendex	
CP/M	Drivers Available	Sockets for up to 256 KB EPROM, SCSI, clock/calendar, OMTI controller, sixopen Multibus slots, removable front panel, 300 W switching power supply.Monitor and keyboard included.	ZX96/CPM	Zendex	
RMX, System Debug Monitor	PLM, C, Drivers available	Sockets for up to 256 KB EPROM, SCSI, OMTI controller, six open Multibus slots, removable front panel, and 300 W switching power supply. Monitor and keyboard included.	ZX96/RMX	Zendex	
PC DOC 3.3, Ziatech Bios, Host development software		STD DOS is an innovative STD Bus adaptation of IBM PC DOS 3.3 which functions both in development and target environments.	STD DOS	Ziatech	
PC-Dos, Ziatech Multi-Dos BIOS, VRTX, Tracer, Board Support Package (BSP)		Combines the strengths of PC-DOS and VRTX. Provides effective operating support services such as file management and peripheral equipment control.	STD Multi-Dos	Ziatech	15
PC Std, LOCATE, DBUG 88		STD PDS provides multi-level on-line help screens and user-definable soft keys for development convenience.	STD PDS	Ziatech	
PC STD, LOCATE, DBUG 88, VRTX, ZT 8806 Board Support Pack. (BSP)		Popular, multitasking real-time operating system. Task scheduling via priorities, time sicing, intertask communication, and semiphores.	STD VRTX	Ziatech	

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INTRODUCTION TO INTERFACE

In the Interface Section the selection parameters differ for each category; therefore each has its own format. Some of the products in this section, primarily analog to digital and digital to analog converters, may be hybrids; the hybrids listed are only those packaged to be compatible with ICs.

In addition to these circuits are devices used to interface to peripherals such as: display drivers, keyboard encoder-decoders, line circuits, and transmitter-receiver circuits.

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INTERFACE—Analog Switches

Switches with Drivers

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
4xSPST	GaAs	4	2	−5.2	SW-400	◊‡ AD	
SPST	CMOS	25	±15	±15	DG400A	† Siliconix	
					DG417	Siliconix	
					DG418	Siliconix	
		30	±14	±15,5	DG5140A	† Siliconix	5
		50	±11	±15,5	IH5140M	† Harris	
			±15	±15	IH5040M	◊† Maxim	
					IH5041M	◊† Maxim	
					IH5140M	◊† Maxim	
					IH5141M	◊† Maxim	10
				±15,5	DG5040A	† Siliconix	
		75	±10	±15,5	IH5140C	Harris	
			±11	±15,5	HI5040-2	† Harris	
					HI5040-5	Harris	
			±15	±15,5	IH5140C	◊ Maxim	15
			±60	±60	MAX340C	Maxim	
					MAX340E	Maxim	
					MAX340M	† Maxim	
		80	±15	±15	IH5040C	◊ Maxim	
	GaAs	—	20 dBm	±5	TQ9151	TriQuint	20
	JFET	6	−5 to 10	±15	CAG6	† TeledyneS	
			−5 to 4	±15,5	CAG10A	† TeledyneS	
		10	−5 to 10	±15	CAG610	† TeledyneS	
			−5 to 4	±15,5	CAG10C	† TeledyneS	
		15	−10 to 5	±15,5	CAG10D	† TeledyneS	25
		30	±5	±5,5	CAG10	† TeledyneS	
		50	−10 to 4	±15,5	CAG10B	† TeledyneS	
			−10 to 5	−15,5	CAG14	† TeledyneS	
			±10	±15	2110BE	† TeledyneS	
		60	±10	−18,15	CS4R101A	† TeledyneS	30
				±18,5	CAG30	† TeledyneS	
		100	±5	±15	2107BE	† TeledyneS	
	PMOS	80–300	±10	−20,10	TL610I	TI	
		100–400	±10	−20,10	TL610C	TI	
2xSPST	CMOS	5	±15	±15	DG300A	† Harris	35
		25	±15	±15	IH401/A	Harris	
					DG401A	† Siliconix	
					DG5048A	† Siliconix	
			±60	±60	MAX348C	Maxim	
					MAX348E	Maxim	40
		30	±14	±15,5	DG5141A	† Siliconix	
		35	±15	±15	IH5048C	Maxim	
					IH5048M	† Maxim	
		50	±11	±15,5	IH5141M	† Harris	
			±15	±15	HI300	Harris	45
					HI304	Harris	
					HI381	Harris	
					DG300AA	† Maxim	
					DG300AB	Maxim	
					DG300AC	Maxim	50
					DG304AA	† Maxim	
					DG304AB	Maxim	
					DG304AC	Maxim	
					DG381AA	† Maxim	
					DG381AB	Maxim	55
					DG381AC	Maxim	
					DG300AA	† Siliconix	
					DG304AA	† Siliconix	
					DG381AA	† Siliconix	
				±15,5	HI5048-2	† Harris	60
					HI5048-5	Harris	
					DG5041A	† Siliconix	
			±15	±15	DG301A	† Harris	
					DG302A	† Harris	
					DG303A	† Harris	65
		70	±15	±15	HI200-2	† Harris	
					DG200AA	† Siliconix	

(Continued)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
2xSPST	CMOS					(Cont'd)	
		75	−5/8	15,−3	DG542A	◊† Siliconix	
					DG542D	◊ Siliconix	
			±10	±15,5	IH5141C	Harris	70
			±11	±15,5	DG200	◊ Harris	
			±15	±15	IH5341	Harris	
					IH5041C	◊ Maxim	
					IH5141C	◊ Maxim	
					IH5341	◊ Maxim	75
				±15,5	HI5041-2	† Harris	
					HI5041-5	Harris	
			±60	±60	MAX341C	Maxim	
					MAX341E	Maxim	
					MAX341M	† Maxim	80
		80	±14	±15	DG200C	◊ Harris	
			±15	±15	ADG200B	AD	
					HI200-5	Harris	
		90	±15	±15	**AD7592DIB**	**AD (3236)**	
					AD7592DIK	**AD (3236)**	85
	JFET	6	−6 to 10	−18,15	CAG27	† TeledyneS	
		10	−6 to 10	−18,15	CAG27-10	† TeledyneS	
			−7.5 to 15	±15,5	DG180B	◊ Harris	
					DG180A	† Siliconix	
			±10	−18,12	DG141A	† Siliconix	90
				−20,10,5	DG180A	◊† Harris	
					DG180A	† Siliconix	
		30	−6 to 10	−18,15	CAG24	† TeledyneS	
			−7.5 to 15	±15,5	DG181A	◊† Harris	
					DG181A	† Siliconix	95
			−12.5 to 10				
				−20,10,5	DG181A	† Siliconix	
			±10	−18,12	DG133A	† Siliconix	
				−20	CDA23	† TeledyneS	
		50	−7.5 to 15	±15,5	DG181B	◊ Harris	
			±10	−18,15	CAG13	† TeledyneS	100
					CAG42	† TeledyneS	
					CAG45A	† TeledyneS	
		75	−10 to 15	±15,5	DG182A	◊† Harris	
					DG182A	† Siliconix	
			−15 to 10	−20,10,5	DG182A	† Siliconix	105
		80	±10	−18,12	DG134A	† Siliconix	
		100	−10 to 15	±15,5	DG182B	◊ Harris	
			±10	±15,5	TL182C	TI	
					TL182I	TI	
4xSPST					DG202	◊ Maxim	110
	CMOS	25	±15	±15	DG411A	† Siliconix	
					DG412A	† Siliconix	
					DG413A	† Siliconix	
			0 to 10	−0.5 to 10.5	CD54HCT4066	† Harris	
					CD54HC4066	† Harris	115
					CD74HCT4066	Harris	
		30	0 to 12	2 to 12	TLC4016	TI	
					TLC4066	TI	
		50	±15	±15	HI201HS-2	◊† Harris	
					HI201HS-5	◊ Harris	120
					DG271B	Siliconix	
		60	±15	±15	ADG221A	AD	
					ADG222A	**AD (3236)**	
		70	−5/8	15,−3	DG540A	◊† Siliconix	
					DG540D	◊ Siliconix	125
					DG541A	◊† Siliconix	
					DG541D	◊ Siliconix	
		75	±11	±15,5	IH5052M	† Harris	
					IH5053M	† Harris	
			±15	±15	IH5352	Maxim	130
		80	±10	±15,5	IH5052C	Harris	
					IH5053C	Harris	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog Switches (Cont'd)

Switches with Drivers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
						(Cont'd)	
4xSPST	CMOS	80					
			±15	±15	**ADG201A**	**† AD (3236)**	
					HI201-2	◊† Harris	
		85	±15	±15	DG441A	◊† Siliconix	
					DG441D	◊ Siliconix	
					DG442A	◊† Siliconix	5
					DG442D	◊ Siliconix	
					DG444D	◊ Siliconix	
					DG445D	◊ Siliconix	
		90	±15	±15	**AD7590DIB**	**AD (3236)**	
					AD7590DIK	**AD (3236)**	10
					AD7591DIB	**AD (3236)**	
					AD7591DIK	**AD (3236)**	
					DG221A	† Siliconix	
		100	±14	±15	DG201C	Harris	
			±15	±15	**ADG201B**	**AD (3236)**	15
					ADG201C	**AD (3236)**	
					AD7510DIJ	**AD (3236)**	
					AD7510DIK	**AD (3236)**	
					AD7510DIS	**† AD (3236)**	
					AD7511DIJ	**AD (3236)**	20
					AD7511DIK	**AD (3236)**	
					AD7511DIS	**† AD (3236)**	
					AD7511DIT	**† AD (3236)**	
					DG308A	† Harris	
					DG309	† Harris	25
					HI201-5	◊ Harris	
					DG308AA	† Siliconix	
					DG309A	† Siliconix	
					DG309C	Siliconix	
			±22	±22	**NJU201A**	**◊ NJR (3571)**	30
			0 to 15	−0.5 to 15	SN54HC4016	◊† TI	
					SN54HC4066	◊† TI	
		175	±15	±15	**ADG202A**	**† AD (3236)**	
					DG202	† Harris	
					DG211	Harris	35
					DG212	Harris	
					DG201C	Maxim	
					DG201M	† Maxim	
					DG211C	◊ Maxim	
					MAX331	† Maxim	40
					MAX332	† Maxim	
					DG201AA	† Siliconix	
					DG202A	† Siliconix	
					DG211C	Siliconix	
					DG212C	Siliconix	45
			±20	±20	**NJU211**	**◊ NJR (3570)**	
			±22	±22	DGP201AA	† Siliconix	
		200	±22	±22	**NJU7301**	**◊ NJR (3570)**	
			±15	±15	DG201A	† Harris	
		280	±7.5	±7.5	**GD4066B**	**‡ GoldStar (3431)**	50
					CD4066B	‡ Harris	
					CD4066BE	Harris	
					CD74HC4066	Harris	
					CD4066A	‡ Micrel	
					CD4066B	‡ Micrel	55
					MC14066BA	† Motorola	
					MC14066BC	Motorola	
					MC54HC4066	† Motorola	
					MC74HC4066	Motorola	
					CD4066BC	National	60
					CD4066BM	† National	
					MM54HC4066	† National	
					MM74HC4066	National	
					MN4066B	◊† Panasonic	
					MN74HC4066	◊ Panasonic	65
						(Continued)	

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
						(Cont'd)	
4xSPST	CMOS	280	±7.5	±7.5	BU4066B	ROHM	
					HCC4066B	† SGS-Thomson	
					HCF4066B	◊ SGS-Thomson	
					M74HC4066	SGS-Thomson	
					HEF4066B	Signetics	70
					HEF4066BD	† Signetics	
					74HCT4066	Signetics	
					74HC4066	Signetics	
					TC4066B	Toshiba	
					TC74HC4066A	**Toshiba (3674)**	75
		400	±7.5	±7.5	MC14016BA	† Motorola	
					MC14016BC	Motorola	
					BU4016B	ROHM	
					TC4016B	Toshiba	
		850	±7.5	±7.5	**GD4016B**	**† GoldStar (3431)**	80
					CD4016B	† Harris	
					CD4016BE	Harris	
					CD4016A	‡ Micrel	
					CD4016B	‡ Micrel	
					MC54HC4016	† Motorola	85
					MC54HC4316	† Motorola	
					MC74HC4016	Motorola	
					MC74HC4316	Motorola	
					CD4016BC	National	
					CD4016BM	† National	90
					MM54HC4016	† National	
					MM54HC4316	† National	
					MM74HC4016	National	
					MM74HC4316	National	
					MN4016B	◊† Panasonic	95
					HCC4016B	† SGS-Thomson	
					HCF4016B	◊ SGS-Thomson	
					M74HC4316	SGS-Thomson	
					HEF4016	† Signetics	
					HEF4016B	† Signetics	100
					74HCT4316	Signetics	
					74HC4016	Signetics	
					74HC4316	Signetics	
	CMOS/DMOS						
		160	±10	±15	CDG308DY	◊ TeledyneS	
	FET	80	±10	±15	**SW201B**	**‡ AD (3236)**	105
		150	±10	±15	**SW201G**	**◊ AD (3236)**	
	J-FET	50	±10	±10	SD5000	Siliconix	
					SD5001	Siliconix	
					SD5002	Siliconix	
					SD5400	Siliconix	110
					SD5401	Siliconix	
					SD5402	Siliconix	
		150	10	15	**SW202G**	**AD (3236)**	
	JFET	50	−10 to 5	−15,5	CAG49	† TeledyneS	
			±10	±18,−7	CAG50	† TeledyneS	115
		60	±10	−18,5	CAG49	† TeledyneS	
		75	±10	±15	**SW7510A**	**† AD (3236)**	
					SW7510B	**◊† AD (3236)**	
					SW7510E	**AD (3236)**	
					SW7510F	**AD (3236)**	120
					SW7511A	**† AD (3236)**	
					SW7511B	**† AD (3236)**	
					SW7511E	**AD (3236)**	
					SW7511F	**AD (3236)**	
	MOS	95	16	3 to 16	TSC4201C	TeledyneS	125
					TSC4201M	† TeledyneS	
					TSC4202C	TeledyneS	
					TSC4202M	† TeledyneS	
					TSC4203C	TeledyneS	
					TSC4203M	† TeledyneS	130
					TSC441C	TeledyneS	
					TSC441M	† TeledyneS	
					TSC442C	TeledyneS	
						(Continued)	

DT[1] means four terminals with a pair of normally open and normally closed contacts.

INTERFACE

INTERFACE—Analog Switches (Cont'd)

Switches with Drivers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
4xSPST	MOS	95	16	3 to 16		(Cont'd)	
					TSC442M	† TeledyneS	
					TSC443C	TeledyneS	
					TSC443M	† TeledyneS	
					TSC445C	TeledyneS	
					TSC445M	† TeledyneS	5
					TSC446C	TeledyneS	
					TSC446M	† TeledyneS	
					TSC447C	TeledyneS	
					TSC447M	† TeledyneS	
4xSPST, Break-Before-Make							
		50	± 15	± 15	MAX334C	◊ Maxim	10
					MAX334E	◊ Maxim	
					MAX334M	† Maxim	
4xSPST Common Output							
	PMOS	150–450	± 10	–20,10,5	DG172A	† Siliconix	
		200–600	± 10	–20,10,5	DG172C	Siliconix	
4xSPST Var. Comb. of Normally On/Off, with Disable							
	FET	80	± 10	± 15	**SW06B**	**◊‡ AD (3236)**	15
		100	± 10	± 15	**SW06F**	**AD (3236)**	
		150	± 10	± 15	**SW06G**	**AD (3236)**	
4xSPST Various Combinations of Normally On/Off							
	FET	80 *	± 10	± 15	**SW201B**	**‡ AD (3236)**	
		85	± 10	± 15	**SW01B**	**‡ AD (3236)**	
					SW01F	**AD (3236)**	20
					SW02F	**AD (3236)**	
	JFET	200	± 10	± 15,0	LF11201	† National	
					LF11202	† National	
					LF11331	† National	
					LF11332	† National	25
					LF11333	† National	
		250	± 10	± 15,0	LF13201	National	
					LF13202	National	
					LF13331	National	
					LF13332	National	30
					LF13333	National	
	PMOS	200–600	± 10	–20,10,5	AH0015C	National	
5xSPST Common Output							
	PMOS	100–450	± 10	–20,10	DG123A	† Siliconix	
				–20,10,5	DG125A	† Siliconix	
SPDT	CMOS	25	± 15	± 15	DG402A	† Siliconix	35
					DG419D	Siliconix	
					DG5050A	† Siliconix	
		35	± 15	± 15	IH5050C	Maxim	
					IH5050M	† Maxim	
		75	± 60	± 60	MAX342C	Maxim	40
					MAX342E	Maxim	
					MAX342M	† Maxim	
	JFET	50	–10 to 5	–15,5	CDA18	† TeledyneS	
	PMOS	100–400	± 10	–20,10	TL601I	TI	
					TL607I	TI	45
		200–600	± 10	–20,10	TL601C	TI	
					TL607C	TI	
SPDT for D/A NPN-PNP							
		10	± 10	–15,5	CDA23	† TeledyneS	
				± 15	CDA6	† TeledyneS	
			0 to –10	–15	CDA13	† TeledyneS	50
			10	10	CDA4A	† TeledyneS	
SPDT [1]	CMOS	30	± 14	± 15,5	DG5142A	† Siliconix	
		50	± 15	± 15	HI387	Harris	
					DG301AA	† Maxim	
					DG301AB	Maxim	55
					DG301AC	Maxim	
					DG305AA	† Maxim	
					DG305AB	Maxim	
					DG305AC	Maxim	
					DG387AA	† Maxim	60
					DG387AB	Maxim	
						(Continued)	

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
SPDT [1]	CMOS	50	± 15	± 15		(Cont'd)	
					DG387AC	Maxim	
					DG301AA	† Siliconix	
					DG305AA	† Siliconix	
					DG387AA	† Siliconix	65
				± 15,5	DG5042A	† Siliconix	
	JFET	10	–7.5 to 15	± 15,5	DG186A	† Siliconix	
			–12.5 to 10				
				–20,10,5	DG186A	† Siliconix	
			± 10	± 18,12	DG146A	Siliconix	
		30	–7.5 to 15	± 15,5	DG187A	† Siliconix	70
			–12.5 to 10				
				–20,10,5	DG187A	† Siliconix	
			± 10	± 18,12	DG144A	† Siliconix	
		75	–10 to 15	± 15,5	DG188A	† Siliconix	
			–15 to 10	–20,10,5	DG188A	† Siliconix	
		80	± 10	–18,12	DG143A	† Siliconix	75
		100	± 10	± 15,5	TL188C	TI	
					TL188I	TI	
	PMOS	100–400	± 10	–20,10	TL604I	TI	
		200–600	± 10	–20,10	TL604C	TI	
SPDT Video							
	CMOS	20	9	4–7	TK15065Z	Toko	80
					TK15066Z	Toko	
					TK15067Z	Toko	
SPDT [1]	CMOS	50	± 11	± 15,5	IH5142M	† Harris	
			± 15	± 15	HI305	Harris	
					IH5142M	◊† Maxim	85
				± 15,5	HI5050-2	† Harris	
					HI5050-5	Harris	
		75	± 10	± 15,5	IH5142C	Harris	
			± 15	± 15	IH5042M	◊† Maxim	
					IH5142C	◊ Maxim	90
				± 15,5	HI5042-2	† Harris	
					HI5042-5	Harris	
		80	± 15	± 15	IH5042C	◊ Maxim	
	JFET	10	–7.5 to 15	± 15,5	DG186A	◊† Harris	
					DG186B	◊ Harris	95
		30	–7.5 to 15	± 15,5	DG187A	◊† Harris	
		50	–7.5 to 15	± 15,5	DG187B	◊ Harris	
			± 8	± 15	2126BG	† TeledyneS	
		75	–10 to 15	± 15,5	DG188A	◊† Harris	
		100	–10 to 15	± 15,5	DG188B	◊ Harris	100
2xSPDT	CMOS	25	± 14	± 15	IH5151	Harris	
			± 15	± 15	DG403A	† Siliconix	
					DG5051A	† Siliconix	
		35	± 15	± 15	IH5051C	Maxim	
					IH5051M	† Maxim	105
					DG421A	† Siliconix	
					DG423A	† Siliconix	
					DG425A	† Siliconix	
		40	± 15	± 15	IH5352	Harris	
		50	± 22	± 22	DGP303A	† Siliconix	110
					DGP303D	Siliconix	
		75	± 15	± 15	HS303RH	‡ Harris	
					HS307RH	‡ Harris	
					HS390RH	‡ Harris	
			± 60	± 60	MAX343C	Maxim	115
					MAX343E	Maxim	
					MAX343M	† Maxim	
2xSPDT Audio							
	CMOS	20	9	4.5–10	TK15120M	Toko	
			12	1.8–15	TK15022Z	Toko	
				3–20	TK15021Z	Toko	120
2xSPDT [1]							
	CMOS	50	± 15	± 15	DG303AA	† Maxim	
					DG303AB	Maxim	
					DG303AC	Maxim	
					DG307AA	† Maxim	
						(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog Switches (Cont'd)

Switches with Drivers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
2xSPDT [1]						(Cont'd)	
	CMOS	50	±15	±15	DG307AB	Maxim	
					DG307AC	Maxim	
					DG390AA	† Maxim	
					DG390AB	Maxim	
					DG390AC	Maxim	5
					DG303AA	† Siliconix	
					DG307AA	† Siliconix	
					DG390AA	† Siliconix	
				±15,5	DG243A	† Siliconix	
					DG5043A	† Siliconix	10
		60	±14	±15,5	DG5143A	† Siliconix	
	JFET	10	−7.5 to 15	±15,5	DG189A	† Siliconix	
			−12.5 to 15				
				−20,15,5	DG189A	† Siliconix	
		30	−7.5 to 15	±15,5	DG190A	† Siliconix	
			−12 to 15	−20,15,5	DG190A	† Siliconix	15
		75	−10 to 15	±15,5	DG191A	† Siliconix	
			−15 to 10	−20,10,5	DG191A	† Siliconix	
		150	±10	±15,5	TL191C	TI	
					TL191I	TI	
2xSPDT Video							
	CMOS	20	9	5–10	TK15064Z	Toko	20
2xSPDT [1]							
	CMOS	50	±11	±15,5	IH5143M	† Harris	
			±15	±15	HI307	Harris	
					IH5143M	◊† Maxim	
				±15,5	HI5051-2	† Harris	
					HI5051-5	Harris	25
		75	±10	±15,5	IH5143C	Harris	
			±11	±15,5	IH5043M	† Harris	
			±15	±15	IH5043M	◊† Maxim	
					IH5143C	◊ Maxim	
				±15,5	HI5043-2	◊† Harris	30
					HI5043-5	◊ Harris	
		80	±10	±15,5	IH5043C	Harris	
			±15	±15	IH5043C	◊ Maxim	
		100	±15	±15	**AD7512DIJ**	**AD (3236)**	
					AD7512DIK	**AD (3236)**	35
					AD7512DIS	**† AD (3236)**	
					AD7512DIT	**† AD (3236)**	
	JFET	10	−7.5 to 15	±15,5	DG189A	◊† Harris	
					DG189B	◊ Harris	
		30	−7.5 to 15	±15,5	DG190A	◊† Harris	40
					DG190B	◊ Harris	
		75	−10 to 15	±15,5	DG191A	◊† Harris	
		100	−10 to 15	±15,5	DG191B	◊ Harris	
3xSPDT	CMOS	280	±7.5	±7.5	**GD4053B**	**† GoldStar (3431)**	
					CD4053B	† Harris	45
					CD4053BE	Harris	
					CD54HCT4053	† Harris	
					CD54HC4053	† Harris	
					CD74HCT4053	Harris	
					CD74HC4053	Harris	50
					CD4053A	‡ Micrel	
					CD4053B	‡ Micrel	
					MC14053BA	† Motorola	
					MC14053BC	Motorola	
					MC54HC4053	† Motorola	55
					MC54HC4353	† Motorola	
					MC74HC4053	Motorola	
					MC74HC4353	Motorola	
					CD4053BC	National	
					CD4053BM	† National	60
					MN4053B	◊† Panasonic	
						(Continued)	

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
3xSPDT	CMOS	280	±7.5	±7.5		(Cont'd)	
					MN74HC4053	Panasonic	
					HCC4053B	† SGS-Thomson	
					HCF4053B	◊ SGS-Thomson	
					M74HC4053	SGS-Thomson	65
					M74HC4353	SGS-Thomson	
					HEF4053B	Signetics	
					HEF4053BD	† Signetics	
					74HCT4353	Signetics	
					74HC4353	Signetics	70
					TC4053B	Toshiba	
4xSPDT	CMOS	—	—	8	MC14551BA	† Motorola	
					MC14551BC	Motorola	
		175	±15	±15	MAX333C	◊ Maxim	
					MAX333E	◊ Maxim	75
					MAX333M	† Maxim	
	PNP	7	0 to −10	−15	CDA11-S12	TeledyneS	
		10	0 to −10	−15	CDA11	TeledyneS	
4xSPDT [1]							
	PNP	10	±10	±15	CDA29A	† TeledyneS	
DPST	CMOS	25	±15	±15	DG404	Siliconix	80
		30	±14	±15,5	DG5144A	† Siliconix	
		50	±15	±15	DG384AA	† Siliconix	
		75	±11	±15,5	IH5144C	Harris	
					IH5144M	† Harris	
					DG5044A	† Siliconix	85
			±15	±15	IH5044M	◊† Maxim	
					IH5144C	◊ Maxim	
					IH5144M	◊† Maxim	
				±15,5	HI5044-2	† Harris	
					HI5044-5	Harris	90
			±60	±60	MAX344C	Maxim	
					MAX344E	Maxim	
					MAX344M	† Maxim	
		80	±15	±15	IH5044C	◊ Maxim	
	JFET	6	−5 to 10	±15	CAG7	† TeledyneS	95
		10	−5 to 10	±15	CAG710	† TeledyneS	
2xDPST	CMOS	25	±15	±15	DG405A	† Siliconix	
					DG5049A	† Siliconix	
		30	±14	±15,5	DG5145A	† Siliconix	
		35	±15	±15	IH5049C	Maxim	100
					IH5049M	† Maxim	
		50	±11	±15,5	IH5145M	† Harris	
			±15	±15	HI306	Harris	
					HI384	Harris	
					DG302AA	† Maxim	105
					DG302AB	Maxim	
					DG302AC	Maxim	
					DG306AA	† Maxim	
					DG306AB	Maxim	
					DG306AC	Maxim	110
					DG384AA	† Maxim	
					DG384AB	Maxim	
					DG384AC	Maxim	
					IH5145M	◊† Maxim	
					DG302AA	† Siliconix	115
					DG306AA	† Siliconix	
				±15,5	HI5049-2	† Harris	
					HI5049-5	Harris	
					DG5045A	† Siliconix	
		75	±10	±15,5	IH5145C	Harris	120
			±15	±15	IH5045M	◊† Maxim	
					IH5145C	◊ Maxim	
				±15,5	HI5045-2	◊† Harris	
					HI5045-5	◊ Harris	
			±60	±60	MAX345C	Maxim	125
					MAX345E	Maxim	
					MAX345M	† Maxim	
		80	±15	±15	IH5045C	◊ Maxim	
						(Continued)	

DT[1] means four terminals with a pair of normally open and normally closed contacts.

INTERFACE

INTERFACE—Analog Switches (Cont'd)

Switches with Drivers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source
2xDPST						(Cont'd)
	CMOS-RH					
		75	±15	±15	HS302RH	‡ Harris
					HS306RH	‡ Harris
					HS384RH	‡ Harris
	JFET	10	−7.5 to 15	±15,5	DG183A	◊† Harris
					DG183B	◊ Harris
					DG183A	† Siliconix
			−12.5 to 10			
				−20,10,5	DG183A	† Siliconix
			±10	−18,12	DG140A	† Siliconix
		30	−7.5 to 15	±15,5	DG184A	◊† Harris
					DG184A	† Siliconix
			−12.5 to 10			
				−20,10,5	DG184A	† Siliconix
			±10	−18,12	DG129A	† Siliconix
		50	−7.5 to 15	±15,5	DG184B	◊ Harris
		75	−10 to 15	±15,5	DG185A	◊† Harris
					DG185A	† Siliconix
			−15 to 10	−20,10,5	DG185A	† Siliconix
		80	±10	−18,12	DG126A	† Siliconix
		100	−10 to 15	±15,5	DG185B	◊ Harris
			±10	−18,15	CAG48A	† TeledyneS
		150	±10	±15,5	TL185C	TI
					TL185I	TI
2xDPST Common Output						
	PMOS	200–600	±10	−20,10,5	AH0019C	National
DPDT	PMOS	200–600	±10	−20,10,5	AH0014C	National
DPDT [1]	JFET	10	±10	−18,12	DG145A	† Siliconix
		30	±10	−18,12	DG139A	† Siliconix
		80	±10	−18,12	DG142A	† Siliconix
DPDT [1]	CMOS	50	±15	±15,5	HI5046A-2	† Harris
					HI5046A-5	Harris
		75	±15	±15,5	HI5046-2	† Harris
					HI5046-5	Harris
8-Channel						
	DMOS	30	−110 to 90	±110	**USH5008**	**Universal (3692)**
2xSP3T Audio						
	CMOS	20	12	1.8–16	TK15023Z	Toko
2x4PDT Audio						
	CMOS	20	9	1.8–16	TK15080D	Toko
2x4PST Audio						
	CMOS	20	9	1.8–16	TK1508D	Toko
4PDT for D/A						
	PNP	10	±10	±15,5	CDA28A	† TeledyneS
4PST	CMOS	50	±15	±15,5	HI5047A-2	† Harris
					HI5047A-5	Harris
		75	±15	±15,5	HI5047-2	† Harris
					HI5047-5	Harris
8xSPST	CMOS	100	−60 to 50	±60	DG566A	† Siliconix

Switches without Drivers

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source
4xSPST	BiFET	110	24	±15	MB47201	◊ Fujitsu
SPST	JFET	100	±0.2		IH5021C	† Harris
					IH5021M	† Harris
		150	±0.2		IH5022C	Harris
					IH5022M	† Harris
					IH5024C	Harris
					IH5024M	† Harris
2xSPST	CMOS	55	±50	±20	HV348	Supertex
		100	±50	±20	HV341	Supertex
	JFET	100	±0.2		IH5017C	Harris
					IH5017M	† Harris
						(Continued)
2xSPST	JFET					(Cont'd)
		150	−15 to 30 ±0.2	30	AH5020C	National
					IH5020C	Harris
					IH5020M	† Harris
2xSPST Common Output						
	JFET	100	±0.2		IH5019C	Harris
					IH5019M	† Harris
		150	±0.2		IH5018C	Harris
					IH5018M	† Harris
3xSPST	JFET	150	±0.2		IH5016C	Harris
					IH5016M	† Harris
3xSPST Common Output						
	JFET	150	±0.2		IH5014C	Harris
					IH5014M	† Harris
4xSPST	CMOS	30	±15	44	**ADG201HS**	**◊† AD (3236)**
		115	±15	44	**ADG211A**	**† AD (3236)**
					ADG212A	**† AD (3236)**
	JFET	100	±0.2		IH5011C	Harris
					IH5011M	† Harris
					AH5011C	National
		150	±0.2		IH5012C	Harris
					IH5012M	† Harris
					AH5012C	National
4xSPST Common Output						
	JFET	100	±0.2		IH5009C	Harris
					IH5009M	† Harris
					AH5009C	National
		150	±0.2		IH5010C	Harris
					IH5010M	† Harris
					AH5010C	National
2xSPDT	CMOS	95	±7.5	±7.5	TSC444	◊† TeledyneS
		100	±50	±20	HV343	Supertex
2xDPST	CMOS	100	±50	±20	HV345	Supertex
Dual Audio Switch						
	Fet	85	14.2	22	**SSM-2402**	**◊ AD (3236)**
					SSM-2412	**◊ AD (3236)**
Dual 4-Channel with Decode						
	HVCMOS					
		40	±15	140	HV1314	Supertex
				160	HV1316	Supertex
1-of-8 Decode 8-Channel						
	HVCMOS					
		40	±15	140	HV1514	Supertex
				160	HV1516	Supertex
4-Channel High Voltage						
	HVCMOS					
	4-Channel High-Voltage		±15	160	HV1716	Supertex
4-Channel High-Voltage						
	HVCMOS					
		25	±15	140	HV1014	Supertex
					HV1714	Supertex
				160	HV1016	Supertex
4x1 Video Crosspoint Switch						
	JFET	960k	−2 to 4	±8	**GX414A**	**◊ Gennum (3426)**
8-Channel High-Voltage						
	HVCMOS					
		22	±10	140	HV2114	Supertex
					HV2214	Supertex
				160	HV2116	Supertex
					HV2216	Supertex
		40	±15	140	HV1214	Supertex
					HV1414	Supertex
					HV1614	Supertex
					HV1814	Supertex
				160	HV1216	Supertex
					HV1416	Supertex
					HV1616	Supertex
					HV1816	Supertex

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog Switches (Cont'd)

Switches without Drivers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
8x4 Array	CMOS	75	0.5	13	MT8806A	◊ Mitel	
8x8 Array	CMOS	75	0.5	13	MT8809A	◊ Mitel	
8x16 Array	CMOS	75	0.5	13	MT8816A	◊ Mitel	
1x1 HDTV Video	Bipolar		−2.4 to 3	±5	**GX4201**	**◊ Gennum (3426)**	
1x1 Video	Bipolar	900	−1.2 TO 2	±8	**GX401**	**◊ Gennum (3426)**	5
1x1 Video Switch	Bipolar		−2 to 5.5	±7, ±12	**GX411**	**Gennum (3426)**	

Multiplexers

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
Audio Signals, Dual 2-Mode					M51551	Mitsubishi	
Audio/Video Switch					GL3812	GoldStar	
CMOS Analog Multiplexer, 4-Channel Differential	CMOS	1500	±15	±15	**HI1-0509A-2**	**† Burr-Brown (3344)**	
CMOS Analog Multiplexer, 8-Channel Differential	CMOS	1500	±15	±15	**HI1-0507A-2**	**† Burr-Brown (3344)**	10
CMOS Analog Multiplexer, 8-Channel Single-Ended	CMOS	1500	±15	±15	**HI1-0508A-2**	**† Burr-Brown (3344)**	
CMOS Analog Multiplexer, 16-Channel Differential	CMOS	1500	±15	±15	**HI1-0506A-2**	**† Burr-Brown (3344)**	
Crosspoint Switch, 4x4					GD4741B	GoldStar	
Crosspoint Switch, 8x12					**GM62093**	**GoldStar (3438)**	
Crosspoint Switches					CD22100	Harris	15
					CD22101	Harris	
					CD22102	Harris	
					CD74HCT22106E	Harris	
					CD74HC22106E	Harris	
					MC142100	Motorola	20
					MC145100	Motorola	
					RC4444	Raytheon	
					RM4444	† Raytheon	
High Current Switch (to drive power transistor switches)					**SG3629**	**◊ SiliconG (3643)**	
3xSPDT	CMOS	280	±7.5	±7.5	BU4053B	ROHM	25
Dual 4-Channel	CMOS				**TC74HC4352A**	**Toshiba (3674)**	
Dual 4-Channel Analog Multiplexer	HC				M74HC4052	SGS-Thomson	
Triple 2-Channel	CMOS				**TC74HC5353A**	**Toshiba (3674)**	
		50	±15	5	MM54HC4053	† National	
					MM74HC4053	National	30
Triple 2-Channel Analog Multiplexer	HC				M74HC4053	SGS-Thomson	
Four Channel, Single-Ended					**MX850**	**Datel (3360)**	
Eight Channel, Single-Ended					**MX826**	**Datel (3360)**	
1-of-8 Multiplexer	CMOS	1900	±18	±18	MAX328C	Maxim	
		2200	±18	±18	MAX328M	† Maxim	35
2 Channel					IH6201	Harris	
					D139A	† Siliconix	
2-Channel Differential	CMOS	90	−5 to 10	−5,15	DG534A	† Siliconix	
2-of-8 Multiplexer	CMOS	1900	±18	±18	MAX329C	Maxim	
		2200	±18	±18	MAX329M	† Maxim	40
4 Channel					D129A	† Siliconix	
					D469A	Siliconix	
					SI7250	Siliconix	
	JFET	10	±10	−18,2.8	CAM604A	† TeledyneS	
4 Channel Differential		1800	±15	±15	**HI3-0509A-5**	**Burr-Brown (3344)**	45
	CMOS	40	±15	±20	DG409	◊† Siliconix	
		250	±15	±15	**MVD409**	**Datel (3360)**	
		270	±7.5	±7.5	MC14529BA	† Motorola	
					MC14529BC	Motorola	
					CD4529BC	National	50
					CD4529BM	† National	
		280	±7.5	±7.5	**GD4052B**	**† GoldStar (3431)**	
					CD4052B	† Harris	
					CD4052BE	Harris	
					CD54HCT4052	† Harris	55
					CD54HC4052	† Harris	
					CD74HCT4052	Harris	
					CD74HC4052	Harris	
					CD4052A	‡ Micrel	
					CD4052B	‡ Micrel	60
					MC14052BA	† Motorola	
					MC14052BC	Motorola	
					MC54HC4052	† Motorola	
					MC54HC4352	† Motorola	
					MC74HC4052	Motorola	65
					MC74HC4352	Motorola	
					CD4052BC	National	
					CD4052BM	† National	
					MM54HC4052	† National	
					MM74HC4052	National	70
					MN4052B	◊† Panasonic	
					MN74HC4052	Panasonic	
					HCC4052B	† SGS-Thomson	
					HCF4052B	◊ SGS-Thomson	
					M74HC4352	SGS-Thomson	75
					74HCT4352	Signetics	
					74HC4352	Signetics	
					TC4052B	Toshiba	
		300	±15	±15	AD7502J	◊ AD	
					AD7502K	◊ AD	80
					AD7502S	◊† AD	
					HI509-2	◊† Harris	
					HI509-5	◊ Harris	
					IH6208M	† Harris	
					IH6208M	† Maxim	85
		350	±15	±15	IH6208C	Harris	
					IH6208C	Maxim	
		400	±15	±15	HI1828A-2	† Harris	
					HI1828A-5	Harris	
					DG509AA	† Maxim	90
					DG506AA	† Siliconix	
					DG509AA	† Siliconix	
		450	±15	±15	DG509AB	Maxim	
					DG509AC	Maxim	
		900	±10	±15	HI539-2	◊† Harris	95
					HI539-5	◊ Harris	
		1000	±13	±15	IH5208M	† Harris	
		1200	±13	±15	IH5208C	Harris	
		1500	±15	±15	**MXD409**	**Datel (3360)**	
					HI509A-2	◊† Harris	100
					HI509A-2	† Maxim	
					MAX359M	† Maxim	
				±20	HI549-2	† Harris	

(Continued)

DT[1] means four terminals with a pair of normally open and normally closed contacts.

INTERFACE

INTERFACE—Analog Switches (Cont'd)

Multiplexers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
4 Channel Differential						(Cont'd)	
	CMOS	1800	±15	±15	HI509A-5	◊ Harris	
					HI509A-5	Maxim	
					MAX359C	Maxim	
				±20	HI549-5	Harris	
	JFET	260	−15 to 11.5	±15	**MUX24A**	**† AD (3237)**	5
					MUX24E	**AD (3237)**	
		350 *	−15 to 12	±15	LF13509	National	
		370	−15 to 12	±15	**MUX24B**	**† AD (3237)**	
					MUX24F	**AD (3237)**	
4 Channel Differential, Latched							
	CMOS	1500	±15	±15	MAX369M	† Maxim	10
		1800	±15	±15	MAX369C	Maxim	
4 Channel Differential, Video							
	CMOS	150	±15	±15	MAX311C	Maxim	
					MAX311E	Maxim	
					MAX311M	† Maxim	
4 Channel Differential with Input Latch							
	CMOS		30 *	±50	DG569B	Siliconix	15
4 Channel (dual)							
	CMOS	300	±15	±15	**ADG509A**	**AD (3237)**	
					ADG529A	**AD (3237)**	
4 Channel Video							
	CMOS	270	±7.5	±7.5	MC14529BA	† Motorola	
					MC14529BC	Motorola	
					CD4529BC	National	20
					CD4529BM	† National	
		450	±15	±15	HI524-2	† Harris	
					HI524-5	Harris	
4 Channel with Input Latch							
	CMOS	400	±15	±15	DG529A	† Siliconix	
4-Channel Differential							
	CMOS	90	−5 to 10	−5,15	DG538A	† Siliconix	25
		280	±7.5	±7.5	BU4052B	ROHM	
4-Channel SE		120	±15	±15	**MX850MC**	**Datel (3360)**	
		140	±15	±15	**MX850MM**	**Datel (3360)**	
4-Channel Wideband							
	CMOS	1500	±10	±15	HI524-8	Harris	
6 Channel					D125A	† Siliconix	30
					D125B	Siliconix	
					CDR125A	† TeledyneS	
	JFET	60	±10	−18,2.8	CAM601A	† TeledyneS	
8 Channel		1800	±15	±15	**HI3-0508A-5**	**Burr-Brown (3344)**	
	CMOS				**TC74HC4351A**	**Toshiba (3674)**	35
		40	±15	±20	DG408	◊† Siliconix	
		250	±15	±15	**MV808**	**Datel (3360)**	
		280	±7.5	±7.5	**GD4051B**	**† GoldStar (3431)**	
					CD4051B	† Harris	
					CD4051BE	Harris	40
					CD54HCT4051	† Harris	
					CD54HC4051	† Harris	
					CD74HCT4051	Harris	
					CD74HC4051	Harris	
					CD4051A	‡ Micrel	45
					CD4051B	‡ Micrel	
					MC14051BA	† Motorola	
					MC14051BC	Motorola	
					MC54HC4051	† Motorola	
					MC54HC4351	† Motorola	50
					MC74HC4051	Motorola	
					MC74HC4351	Motorola	
					MM54HC4051	† National	
					MM74HC4051	National	
						(Continued)	

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
8 Channel						(Cont'd)	
	CMOS	280	±7.5	±7.5	MN74HC4051	Panasonic	55
					HCC4051B	† SGS-Thomson	
					HCF4051B	◊ SGS-Thomson	
					M74HC4351	SGS-Thomson	
					HEF4051B	Signetics	
					HEF4051BD	† Signetics	60
					HEF4052B	Signetics	
					HEF4052BD	† Signetics	
					74HCT4351	Signetics	
					74HC4351	Signetics	
					TC4051B	Toshiba	65
		300	±15	±15	**ADG508A**	**AD (3237)**	
					ADG528A	**AD (3237)**	
					AD7501J	**◊ AD (3237)**	
					AD7501K	**◊ AD (3237)**	
					AD7501S	**◊† AD (3237)**	70
					AD7503J	**◊ AD (3237)**	
					AD7503K	**◊ AD (3237)**	
					AD7503S	**◊† AD (3237)**	
					HI508-2	◊† Harris	
					HI508-5	◊ Harris	75
					HS508ARH	‡ Harris	
					IH6108M	† Harris	
					IH6108M	† Maxim	
		350	±15	±15	IH6108C	Harris	
					IH6108C	Maxim	80
		400	±15	±15	DG508AA	† Maxim	
					DG508AA	† Siliconix	
				±15,5	HI1818A-2	† Harris	
					HI1818A-5	Harris	
		450	±15	±15	DG508AB	Maxim	85
					DG508AC	Maxim	
		750	±15	±15	**MX818C**	**Datel (3360)**	
		1000	±13	±15	IH5108M	† Harris	
		1200	±13	±15	IH5108C	Harris	
		1500	±15	±15	**MX808**	**Datel (3360)**	90
					HI508A-2	◊† Harris	
					HI508A-2	† Maxim	
					MAX358M	† Maxim	
					MAX368M	† Maxim	
				±20	HI548-2	† Harris	95
					HI548-5	Harris	
		1800	±15	±15	HI508A-5	◊ Harris	
					HI508A-5	Maxim	
					MAX358C	Maxim	
					MAX368C	Maxim	100
		3000	±15	±15	MAX378C	◊ Maxim	
					MAX378M	◊† Maxim	
	JFET	260	−15 to 11.5	±15	**MUX08E**	**AD (3237)**	
		300	−15 to 12	±15	**MUX08A**	**† AD (3237)**	
		350 *	−15 to 12	±15	LF13508	National	105
		370	−15 to 12	±25	**MUX08F**	**◊ AD (3237)**	
					MUX88F	**AD (3237)**	
		400	−15 to 12	±15	**MUX08B**	**◊† AD (3237)**	
	PMOS	150–250	±5	−20,5	DG501A	† Siliconix	
		150–800	±10	−20,10	DG503A	† Siliconix	110
		200–600	±5	−15,5	DG501A	† Siliconix	
8 Channel Differential					**MN7208**	**MicroNet (3546)**	
		1800	±15	±15	**HI3-0507A-5**	**Burr-Brown (3344)**	
	CMOS	250	±7.5	±7.5	MC14097BA	† Motorola	
					MC14097BC	Motorola	115
		270	±15	±15	**MVD807**	**Datel (3360)**	
		280	±7.5	±7.5	CD4097B	† Harris	
					CD4097BE	Harris	
					HCC4097B	† SGS-Thomson	
					HCF4097B	SGS-Thomson	120
						(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog Switches (Cont'd)

Multiplexers (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
8 Channel Differential						(Cont'd)	
	CMOS	400	±15	±15	AD7507S	◊† AD	
					AD7507T	◊† AD	
					HI507-2	◊† Harris	
					HI507-5	◊ Harris	
					HI507-8	◊† Harris	5
					DG507AA	† Siliconix	
					DG527A	† Siliconix	
					DG528A	† Siliconix	
		450	±15	±15	AD7507J	◊ AD	
					AD7507K	◊ AD	10
		600	±10	±15	HI518-2	◊† Harris	
					HI518-5	◊ Harris	
		750	±15	±15	**MPC800K**	**Burr-Brown (3344)**	
		1300	±15	±15	**MPC8D**	**Burr-Brown (3344)**	
		1500	±15	±15	**MXD807**	**Datel (3360)**	15
					HI507A-2	◊† Harris	
				±20	HI547-2	† Harris	
		1800	±15	±15	HI507A-5	◊ Harris	
					HI507A-8	◊† Harris	
				±20	HI547-5	Harris	20
		3000	±15	±15	MAX379C	◊ Maxim	
					MAX379M	◊† Maxim	
	JFET	300	−15 to 11	±15	**MUX28E**	**AD (3237)**	
		450	−15 to 11.5				
				±15	**MUX28F**	**AD (3237)**	
		1000	±25	±15	IH5216	Harris	25
8 Channel (dual)							
	CMOS	280	±15	±15	**ADG507A**	**AD (3237)**	
					ADG527A	**AD (3237)**	
8 Channel Latched							
	CMOS	30 *	±50	±60	DG568B	Siliconix	
		1500	±15	±15	HI508L-2	† Maxim	
		1800	±15	±15	HI508L-5	Maxim	30
8 Channel Video							
	CMOS	150	±15	±15	MAX310C	Maxim	
					MAX310E	Maxim	
					MAX310M	† Maxim	
8 Channel, BCD Input, Latch							
	PMOS	—	60	0–70	**LS7110**	**LSI Comp (3527)**	
8-Bit Channel Analog Multiplexer							
	HC				M74HC4051	SGS-Thomson	35
8-Channel							
	CMOS	270	±5	5 to 15	CD4051BC	National	
					CD4501BM	† National	
		280	±7.5	±7.5	BU4051B	ROHM	
8-Channel Differential							
		400	±15	±15	MX7507S	† Maxim	
					MX7507T	† Maxim	40
		450	±15	±15	MX7507J	◊ Maxim	
					MX7507K	◊ Maxim	
	CMOS	400	±15	±15	DG507AA	† Maxim	
					IH6216M	† Maxim	
		450	±15	±15	DG507AB	Maxim	45
					DG507AC	◊ Maxim	
					IH6216C	Maxim	
8-Channel SE/4 DI							
		750	±15	±15	**MPC801K**	**Burr-Brown (3344)**	
					MPC801S	**† Burr-Brown (3344)**	
8-Channel SE/4-Channel Differential							
	CMOS	750	±14	±15	HI518-8	Harris	50
8-Channel with Enable							
	CMOS	400	±15	±15	DGP508AA	† Siliconix	
16 Channel		1800	±15	±15	**HI3-0506A-5**	**Burr-Brown (3344)**	
	CMOS	—	±15	±15	TC5023B	Toshiba	
		250	±15	±15	MC14067BA	† Motorola	
					MC14067BC	Motorola	55
		270	±15	±15	**MV1606**	**Datel (3360)**	
					MV1606M	**† Datel (3360)**	
		280	±7.5	±7.5	GD4067B	† GoldStar	
					CD4067B	† Harris	
					CD4067BE	Harris	60
					CD54HCT4067	† Harris	
					CD54HC4067	† Harris	
					CD74HCT4067	Harris	
					CD74HC4067	Harris	
					HCC4067B	† SGS-Thomson	65
					HCF4067B	SGS-Thomson	
					HEF4067B	Signetics	
					HEF4067BD	† Signetics	
					74HCT4067	Signetics	
					74HC4067	Signetics	70
			±15	±15	**ADG506A**	**AD (3237)**	
					ADG526A	**AD (3237)**	
		400	±15	±15	AD7506S	◊† AD	
					AD7506T	◊† AD	
					HI506-2	◊† Harris	75
					HI506-5	◊ Harris	
					HI506/883	◊† Harris	
					DG526A	† Siliconix	
		450	±15	±15	AD7506J	◊ AD	
					AD7506K	◊ AD	80
		600	±10	±15	HI516-2	† Harris	
					HI516-5	Harris	
		750	±15	±15	**MX1616C**	**Datel (3360)**	
		1500	±15	±15	**MX1606**	**Datel (3360)**	
					HI506A-2	◊† Harris	85
				±20	HI546-2	† Harris	
		1800	±15	±15	HI506A-5	◊ Harris	
					HI506A-8	◊† Harris	
				±20	HI546-5	Harris	
		5000	±5 to 15	±15,5	HS1840RH	‡ Harris	90
	JFET	300	−15 to 11	±15	**MUX16A**	**† AD (3237)**	
					MUX16E	**AD (3237)**	
		450	−15 to 11.5				
				±15	**MUX16B**	**† AD (3237)**	
					MUX16F	**AD (3237)**	
		1000	±25	±15	IH5116	Harris	95
16 Channel Single-Ended					**MN7216**	**MicroNet (3546)**	
16-Channel		400	±15	±15	MX7506S	† Maxim	
					MX7506T	† Maxim	
		450	±15	±15	MX7506J	◊ Maxim	
					MX7506K	◊ Maxim	100
	CMOS	400	±15	±15	DG506AA	† Maxim	
					IH6116M	† Maxim	
		450	±15	±15	DG506AB	Maxim	
					DG506AC	◊ Maxim	
					IH6116C	Maxim	105
16-Channel SE/8-Channel Differential							
	CMOS	750	±15	±15	HI516-8	Harris	
16-Channel Wideband Video							
	CMOS	90	±10	16.5	DG535A	† Siliconix	
16-Channel with Enable							
	CMOS	90	0 to 10	0 to 15	DG536	† Siliconix	
16-Channel/ Dual 8-ChannelE DLatchable Multiplexer							
	CMOS	400	±15	±15	DG527	† Harris	
16-Channel/Dual 8 Channel Analog Multiplexer							
	CMOS	400	±15	±15	DG506A	† Harris	110
					DG507A	† Harris	

DT[1] means four terminals with a pair of normally open and normally closed contacts.

INTERFACE

INTERFACE—Analog Switches (Cont'd)

Function	Switch Type	ON Resistance 25°C, Ω	Analog Signal Range V	Supply Voltage, V	Device	Source	Line
Multiplexers (Cont'd)							
16-Channel/Dual 8-Channel Latchable Multiplexer							
	CMOS	400	±15	±15	DG526	† Harris	
2-Channel, Triple							
	CMOS	200	±20	±20	NJU4053B	◊ NJR	
2x1 Fast Toggle							
	Bipolar		−2.5 to 3.5	±5	GY4102	◊ Gennum	
4-Channel							
	CMOS	220	±20	±20	NJU4052B	◊ NJR	
		300	±20	±20	NJU4066B	◊ NJR	5
4x1 HDTV Video							
	Bipolar		−2.4 to 3	±4.5	**GX4404**	◊ **Gennum** **(3426)**	
					GX4414	◊ **Gennum** **(3426)**	
				±5	**GX4304**	◊ **Gennum** **(3426)**	
					GX4314	◊ **Gennum** **(3426)**	
			−2.4 TO 3	±5	**GX4324**	◊ **Gennum** **(3426)**	10
			−2.4 to 3	±5	**GX4334**	◊ **Gennum** **(3426)**	
4x1 Video							
	Bipolar		−1.2 to 5	±7, ±12	GX214	◊ Gennum	
8 Channel, High Voltage Bi-Directional							
	CMOS/DMOS						
		25	200	220	ECI21HV	◊°† ECI Semi	
		40	400	450	ECI41HV	◊°† ECI Semi	
8-Channel							
	CMOS	200	±20	±20	NJU4051B	◊ NJR	15
					NJU7304	◊ **NJR** **(3571)**	
8-Channel/Dual 4-Channel Analog Multiplexer							
	CMOS	400	±15	±15	dg508a	† Harris	
					DG509A	† Harris	
8-Channel/Dual 4-Channel Latchable Multiplexer							
	CMOS	400	±15	±15	DG528	† Harris	
					DG529	† Harris	20

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																		
3 1/2			800											x		KS7126C	Samsung	
4	1/8	0.005	700	x										x		AD9688B	◊ AD	
				x										x		AD9688T	◊† AD	
	1/2	0.03 *	800	x		x								x		UAB1005	SGS-Thomson	
				x		x								x		UAC1005	† SGS-Thomson	5
4 (flash)	1/4		30	x												CA3304	Harris	
			35	x												CA3304A	Harris	
		25		x				x						x		TDC1044	TRWLSI	
4 (Video A/D Converter)	1/4	0.1	240	x				x						x		HA19202	Hitachi	
				x				x						x		HA19203	◊ Hitachi	10
4 1/2			30						x			x				TSC835	◊ TeledyneS	
6	—	75 MHz		x										x		**AD9000J**	**AD (3230)**	
				x										x		**AD9000S**	**† AD (3230)**	
	1/4			x										x		µPC661	◊ NEC	
		0.02	450	x	x						x			x		SDA6020	Siemens	15
		0.05	390	x										x		HA19216	◊ Hitachi	
		3.3	450	x										x		**MN5900**	**MicroNet (3547)**	
	1/2			x										x		µPD6951C/G	◊ NEC	
		0.05	60	x		x	x	x						x		CXD1172A	◊ Sony	
		0.07	700	x	x									x		ZN440CJ	Plessey	20
		0.10	55 *	x										x		CA3306C	Harris	
			700	x	x									x		ZN441CJ	Plessey	
		0.66	150	x										x		MP7682XB	MicroPwr	
				x										x		MP7682XK	MicroPwr	
				x										x		MP7682XT	† MicroPwr	25
		10	50	x	x		x	x						x		LC89066	Sanyo	
		90	120	x											x	NE5036	Signetics	
		100	15	x							x		x	x		KAD0206	◊ Samsung	
			100	x										x		NE5037	Signetics	
		300 MSPS	1700	x				x						x		SDA8200	Siemens	30
		470 MSPS		x												**AD9016**	**AD (3230)**	
	1	0.66	150	x										x		MP7682XA	MicroPwr	
				x										x		MP7682XJ	MicroPwr	
				x										x		MP7682XS	† MicroPwr	
		100	270											x		MB40576	Fujitsu	35
6 (A/D - D/A combination)	1	0.05	300	x									x	x		MB40176	◊ Fujitsu	
6 (flash)	1/2		70	x												CA3306	Harris	
		0.01	1600	x	x		x							x		TDC1029	† TRWLSI	
		100MHz	—	x	x		x							x		TDC1029	TRWLSI	
6 (video)	1/2	470 MSPS		x												**AD9006**	**AD (3230)**	40
6 (video digital converter)	1/4	0.05	1000	x	x		x							x		TDC1046	TRWLSI	
7	1/2		30	x									x	x		USC1072	◊‡ Universal	
			100	x									x	x		USC1073	◊‡ Universal	
			150	x									x	x		USC1071	‡ Universal	
		0.03	385	x												**ADC207MC**	**Datel (3358)**	45
				x												**ADC207MM**	**† Datel (3358)**	
		0.04		x			x	x				x				MC10321	Motorola	
		0.045	400	x				x			x			x		PNA7509	◊ Signetics	
		0.05	300	x				x						x		HA19213	Hitachi	

(Continued)

Bin.—Binary Compl.—Complementary CTC—Compl. 2's Compl. Mux. In—Multiplexed Inputs Par. Out—Parallel Output
Off.—Offset Magn.—Magnitude Int. Ref.—Internal Reference S&H—Sample and Hold Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
7	1/2	0.05															(Cont'd)	
			385	x										x		**ADC207/883B**	**† Datel (3358)**	
7 (flash)																		
	1/2		150	x									x	x		USC1070	◊‡ Universal	
		0.05	1000	x				x						x		TDC1047	TRWLSI	
		15 MHz		x				x								TDC1147	TRWLSI	
8																TDC1035	† TRWLSI	5
	1/4	0.0067	2200	x	x	x	x	x	x			x		x		HADC77200	† Signal Proc	
		9	125	x	x								x	x		ADC847B	Datel	
				x	x								x	x		ADC847M	† Datel	
			125 *	x	x								x	x		ZN447E	Plessey	
		15		x									x	x		**AD670B**	**AD (3227)**	10
				x									x	x		**AD670K**	**AD (3227)**	
		110	15	x										x		ADC0801	† National	
				x										x		ADC0801C	National	
		1800	35	x	x							x		x		ADCET8BM	Datel	
	1/2			x										x		µPC659	◊ NEC	15
		0.004	5000		x						x			x		4196	TeledyneS	
		0.006	1400 *	x										x		SCA5008	† STC	
			2200	x		x		x								ADC32	Datel	
				x		x		x								**ADC33**	**Datel (3358)**	
		0.0067	2200	x	x	x	x	x	x			x		x		HADC77100	† Signal Proc	20
		0.01	300	x		x							x	x		**TDA8703**	**◊ Signetics (3624)**	
				x		x							x	x		**TDA8703T**	**◊ Signetics (3624)**	
			1100	x		x		x						x		CXA1066K	Sony	
				x		x		x						x		CX20116	Sony	
			1500		x								x	x		**AD9003K**	**AD (3225, 3227)**	25
			3100	x	x	x	x							x		ADC303	Datel	
			3750	x	x	x	x	x					x	x		ADCB303E	Datel	
		0.02	490	x		x		x					x	x		CXA1056P	Sony	
			550	x	x	x	x							x		ADC302	Datel	
			690	x		x		x					x	x		CXA1056K	Sony	30
		0.03	420	x	x	x	x							x		ADC301	Datel	
		0.033 *	390	x		x		x						x		CXA1016P	Sony	
		0.033	500 *	x		x		x						x		IDT75C48	◊† IDT	
				x										x		IDT75C58	◊† IDT	
			570	x		x		x					x	x		CXA1016K	Sony	35
		0.04	1250	x												**ADC228**	**Datel (3358)**	
		0.05	90	x		x	x	x						x		CDX1175	Sony	
				x		x	x	x						x		CXD1175A	Sony	
			300	x							x			x		MP7690K	MicroPwr	
			320	x	x	x	x							x		**ADC304**	**Datel (3358)**	40
			360	x		x		x						x		CXA1096M	◊ Sony	
			400	x				x						x		HA19209	◊ Hitachi	
				x				x						x		HA19210	◊ Hitachi	
				x				x						x		HA19211	◊ Hitachi	
				x										x		HA19212	◊ Hitachi	45
			400 *		x	x	x	x	x	x	x	x	x		x	IR3K06	Sharp	
			480	x		x		x					x	x		CXA1096P	Sony	
			600	x										x		**ADC208MC**	**Datel (3358)**	
				x										x		**ADC208MM**	**† Datel (3358)**	
			700	x	x	x	x							x		ADC300	Datel	50
		0.05 *	910 *		x		x	x	x	x	x	x	x		x	IR3K03A	Sharp	
		0.05	4075	x	x	x	x	x					x	x		ADCB304E	Datel	
		0.06 *	1000 *		x		x	x	x	x	x	x	x		x	IR3K04A	Sharp	

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
8	1/2																(Cont'd)	
		0.07	300	x				x			x			x		HD49303	◊° Hitachi	
				x										x		MP7684	† MicroPwr	
		0.1	1000	x		x							x	x		SP1070	† Sipex-HSD	
			1800	x				x					x	x		HS1068	† Sipex-HSD	
		0.10	300	x										x		MP7684K	MicroPwr	5
				x										x		MP7684T	† MicroPwr	
		0.2	75	x										x		MP7683XB	MicroPwr	
				x										x		MP7683XK	MicroPwr	
				x										x		MP7683XT	MicroPwr	
			561	x				x					x	x		SP1078	† Sipex-HSD	10
		0.35	130	x			x	x		x					x	ADC0831BC	TI	
				x			x	x		x					x	ADC0832BC	TI	
		0.4	400	x										x		TDC1001	TRWLSI	
		0.6	1250	x	x			x						x	x	ADC815MC	Datel	
				x	x			x						x	x	ADC815MM	† Datel	15
						x	x	x					x	x	x	MN5815	† MicroNet	
		0.75	3275	x	x			x					x	x	x	4130	TeledyneS	
		0.9	1550	x		x	x						x	x	x	**MN5101**	**MicroNet (3547)**	
				x		x	x						x	x	x	**MN5101H**	**† MicroNet (3547)**	
		1 *	800	x				x					x		x	AM6148C	AMD	20
		1	1250	x	x			x						x	x	ADC825MC	Datel	
				x	x			x						x	x	ADC825MM	† Datel	
						x	x	x					x	x	x	**MN5825**	**† MicroNet (3547)**	
		1.2	1800			x	x						x			HAS0802	AD	
		1.3	25	x							x			x		MAX150	† Maxim	25
		1.5	75	x	x	x	x	x			x					**PM0820A**	**† AD (3227)**	
				x	x	x	x	x			x					**PM0820E**	**AD (3227)**	
				x	x	x	x	x			x					**PM0820G**	**AD (3227)**	
			1550	x		x	x						x	x	x	**MN5100**	**MicroNet (3547)**	
				x		x	x						x	x	x	**MN5100H**	**† MicroNet (3547)**	30
			4500	x			x	x								ADC881	Datel	
		1.52	875	x							x			x		KAD0820A	Samsung	
		1.6	50	x							x			x		ADC0820BCD	Maxim	
				x							x			x		ADC0820BCN	Maxim	
				x							x			x		ADC0820BD	† Maxim	35
				x							x		x	x		MAX150BE	Maxim	
				x							x		x	x		MAX150BL	Maxim	
				x							x		x	x		MAX150BM	† Maxim	
				x							x			x		MX7820C	Maxim	
				x							x			x		MX7820L	Maxim	40
				x							x			x		MX7820U	† Maxim	
			75	x							x					**AD7820L**	**AD (3225, 3227)**	
				x							x					**AD7820U**	**† AD (3225, 3227)**	
		2		x												ADCEH8B2	Datel	
		2 *	—	x				x					x			MC6108A	Motorola	45
		2	50	x						x	x		x	x		MAX154BC	Maxim	
				x						x	x		x	x		MAX154BE	Maxim	
				x						x	x		x	x		MAX154BM	† Maxim	
				x						x	x		x	x		MAX158BC	Maxim	
				x						x	x		x	x		MAX158BE	Maxim	50
				x						x	x		x	x		MAX158BM	† Maxim	
			80	x						x	x			x		MX7824C	Maxim	
				x						x	x			x		MX7824L	Maxim	

(Continued)

Bin.—Binary Off.—Offset
Compl.—Complementary Magn.—Magnitude
CTC—Compl. 2's Compl. Int. Ref.—Internal Reference
Mux. In—Multiplexed Inputs S&H—Sample and Hold
Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
8	1/2	2	80														(Cont'd)	
				x						x	x			x		MX7824U	† Maxim	
				x						x	x			x		MX7828C	Maxim	
				x						x	x			x		MX7828L	Maxim	
				x						x	x			x		MX7828U	† Maxim	
			1300	x	x								x	x	x	MN5160	MicroNet	5
				x	x								x	x	x	MN5160H	† MicroNet	
				x	x								x	x	x	MN5160H/B	† MicroNet	
		2.5	35 *	x							x			x		ADC0820B	◊ National	
			75	x						x	x			x		MAX154	† Maxim	
				x						x	x			x		MAX158	† Maxim	10
			650			x	x	x					x	x	x	ADC542B-8	† Sipex-HSD	
						x	x	x					x	x	x	ADC542C-8	Sipex-HSD	
			915			x							x	x	x	**MN5140**	**MicroNet (3547)**	
						x							x	x	x	**MN5140H**	**† MicroNet (3547)**	
					x								x	x	x	**MN5141**	**MicroNet (3547)**	15
					x								x	x	x	**MN5141H**	**† MicroNet (3547)**	
					x								x	x	x	**MN5142**	**MicroNet (3547)**	
					x								x	x	x	**MN5142H**	**† MicroNet (3547)**	
				x									x	x	x	**MN5143**	**MicroNet (3547)**	
				x									x	x	x	**MN5143H**	**† MicroNet (3547)**	20
			1000			x							x	x	x	**MN5130**	**MicroNet (3547)**	
						x							x	x	x	**MN5130H**	**† MicroNet (3547)**	
					x								x	x	x	**MN5131**	**MicroNet (3547)**	
					x								x	x	x	**MN5131H**	**† MicroNet (3547)**	
					x								x	x	x	**MN5132**	**MicroNet (3547)**	25
					x								x	x	x	**MN5132H**	**† MicroNet (3547)**	
				x									x	x	x	**MN5133**	**MicroNet (3547)**	
				x									x	x	x	**MN5133H**	**† MicroNet (3547)**	
				x	x	x							x	x	x	**MN5150**	**MicroNet (3547)**	
				x										x		HS5150B	Sipex-HSD	30
				x										x		HS5150C	Sipex-HSD	
		2.8	500	x		x	x	x			x					LTC1099AC	LinearTech	
				x		x	x	x			x					LTC1099AI	LinearTech	
				x		x	x	x			x					LTC1099AM	† LinearTech	
			650			x	x	x					x	x	x	HSADC82	Sipex-HSD	35
		4		x												ADCEH8B1	Datel	
			25	x										x		MAX160	† Maxim	
		5		x									x			**AD9058**	**AD (3283)**	
			15 *								x					**AD7575K**	**AD (3225, 3227)**	
			30	x										x		MAX160C	Maxim	40
				x										x		MAX160E	Maxim	
				x										x		MAX160M	† Maxim	
			35	x							x		x	x		MAX165A	◊† Maxim	
				x							x		x	x		MAX166A	◊† Maxim	
				x							x			x		MX7575B	Maxim	45
				x							x			x		MX7575K	◊ Maxim	
				x							x			x		MX7575T	† Maxim	
		6	1000			x							x	x	x	MN5120	MicroNet	
						x							x	x	x	MN5120H	† MicroNet	
					x								x	x	x	MN5121	MicroNet	50
					x								x	x	x	MN5121H	† MicroNet	
					x								x	x	x	MN5122	MicroNet	
					x								x	x	x	MN5122H	† MicroNet	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source
8	1/2	6	1000														(Cont'd)
				x									x	x	x	MN5123	MicroNet
				x									x	x	x	MN5123H	† MicroNet
		8	20	x		x	x	x		x	x	x	x	x	x	ADC08021B	National
				x		x	x	x		x	x	x	x	x	x	ADC08032B	National
				x		x	x	x		x	x	x	x	x	x	ADC08034B	National
				x		x	x	x		x	x	x	x	x	x	ADC08038B	National
		9	4	x						x	x				x	TLC540	TI
				x						x	x				x	TLC540M	† TI
			125 *	x	x								x	x		ZN448E	Plessey
				x	x								x	x		ZN448J	† Plessey
		10	11	x						x	x		x		x	MC145040	◊ Motorola
			35	x										x		MX7576B	Maxim
				x										x		MX7576K	◊ Maxim
				x										x		MX7576T	† Maxim
			50	x	x									x		**AD7821B**	**◊ AD (3225, 3227)**
				x	x									x		**AD7821K**	**◊ AD (3225, 3227)**
				x	x									x		**AD7821T**	**◊† AD (3225, 3227)**
			450	x										x		**MN5901**	**† MicroNet (3547)**
		15		x									x	x		**AD670A**	**AD (3227)**
				x									x	x		**AD670J**	**AD (3227)**
				x									x	x		**AD670S**	**† AD (3227)**
			6.5 *	x						x	x			x		TLC532A	TI
			15	x						x	x	x		x		SDA0808A	Siemens
				x						x	x	x		x		SDA0808B	Siemens
			30	x	x		x						x			AD7574B	◊ AD
				x	x		x						x			AD7574K	◊ AD
				x	x		x						x			AD7574T	◊† AD
				x	x		x						x	x		MX7574B	Maxim
				x	x		x						x	x		MX7574K	Maxim
				x	x		x						x	x		MX7574T	† Maxim
			125 *	x	x								x	x		ZN427E-8	Plessey
				x	x								x	x		ZN427J-8	† Plessey
			450	x	x	x	x	x						x		**PM7574A**	**† AD (3227)**
				x	x	x	x	x						x		**PM7574E**	**AD (3227)**
				x	x	x	x	x						x		**PM7574G**	**AD (3227)**
		16.25	250	x	x						x			x	x	CS7820	Crystal
		17	15	x							x				x	TLC548C	TI
				x							x				x	TLC548M	† TI
				x							x				x	TLC549C	TI
			300	x										x		NE5034	Signetics
		19	6*	x							x				x	TLC549	TI
				x							x				x	TLC549M	† TI
		20		x									x			**AD9078**	**AD (3283)**
			10	x		x	x	x		x	x				x	TLC542I	TI
			11	x						x	x		x		x	MC145041	◊ Motorola
			25	x						x				x		MAX161	† Maxim
			500	x				x						x		TDC1038	◊† TRWLSI
				x				x						x		TDC1058	◊† TRWLSI
		25	14	x						x	x			x		SI8601	Siliconix
			35	x						x				x		MAX161C	Maxim
				x						x				x		MAX161E	Maxim
				x						x				x		MAX161M	† Maxim
		30	—	x									x			**AD673J**	**AD (3227)**

(Continued)

Bin.—Binary Off.—Offset Compl.—Complementary Magn.—Magnitude CTC—Compl. 2's Compl. Int. Ref.—Internal Reference Mux. In—Multiplexed Inputs S&H—Sample and Hold Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
8	1/2	30	—														(Cont'd)	
				x									x			**AD673S**	**† AD (3227)**	
			6.5 *	x						x	x			x		TLC533A	TI	
		30 MSPS		x												ADCB301E	Datel	
		32		x						x	x				x	ADC0811	◊ National	
				x						x					x	ADC0838B	TI	5
			15 *							x	x				x	ADC0811BC	◊ National	
										x	x				x	ADC0811BJ	◊† National	
			55	x						x	x			x		MC14442	◊ Motorola	
		40	10 *	x						x				x		ADC0844B	National	
			15	x						x				x		ADC0848B	National	10
				x						x				x		ADC0848C	National	
			175 *	x	x								x	x		**AD570J**	**AD (3227)**	
				x	x								x	x		**AD570S**	**† AD (3227)**	
		50 MSPS		x												ADCB302E	Datel	
		60	15 *	x												ADC0841B	† National	15
		66.6	40	x						x				x		MX7581C	Maxim	
				x						x				x		MX7581L	Maxim	
		75 MSPS	1000	x												**AD9012**	**◊ AD (3230)**	
		80	10	x											x	GM0832	GoldStar	
				x											x	ADC0831B	National	20
				x											x	ADC0832B	National	
				x											x	ADC0833B	National	
				x											x	ADC0834B	National	
				x											x	ADC0838B	National	
			875	x						x					x	ADC0832B	TI	25
				x						x					x	ADC0834B	TI	
		100 *	15	x										x		ADC0802	† Harris	
				x										x		ADC0803	† Harris	
				x										x		ADC0802	◊† National	
				x										x		ADC0802C	◊ National	30
				x										x		ADC0803C	National	
		100	15	x						x				x		ADC0808	◊ National	
				x						x				x		ADC0816C	National	
			30	x						x				x		ADC0816	† National	
			70			x							x	x	x	ADC830C	Datel	35
							x						x	x	x	**MN5065**	**MicroNet (3547)**	
							x						x	x	x	**MN5065H**	**† MicroNet (3547)**	
						x							x	x	x	**MN5066**	**MicroNet (3547)**	
						x							x	x	x	**MN5066H**	**† MicroNet (3547)**	
			75	x						x					x	MB4052	Fujitsu	40
			875	x						x	x			x		KAD0808	Samsung	
		100 *	875	x										x		ADC0803C	Signetics	
		100	875	x										x		ADC0803C	TI	
			900					x							x	MB40547-8	Fujitsu	
		125 MSPS	1300	x				x						x		SDA8010	Siemens	45
		150 MSPS		x								x				HADC77100A	Signal Proc	
		256		x						x				x		ADC0829	National	
		300	x								x			x		MP7690T	MicroPwr	
			15 *	x						x						L530	◊ SGS-Thomson	
			500	x		x	x	x		x				x	x	ADC0830	National	50
		1250 *	20 *	x	x									x		4140	TeledyneS	
				x	x									x		4142	TeledyneS	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
8	1/2																(Cont'd)	
		1800	20	x	x							x		x		ADCEK8B	Datel	
			25	x								x		x		TSC8700	TeledyneS	
				x								x		x		TSC8703	TeledyneS	
				x	x							x		x		4143	† TeledyneS	
			50	x	x											ADC-ET8BC	Datel	5
				x										x		ADCET8BC	Datel	
		20 MHz	1200	x							x		x	x		KSV3208	Samsung	
		200 MSPS		x												**AD770**	**AD (3230)**	
	3/4	0.01	1500	x									x			AD9011J	AD	
				x									x			AD9011K	AD	10
				x									x			AD9011S	† AD	
				x									x			AD9011T	† AD	
		0.05	300	x							x			x		MP7690J	MicroPwr	
				x							x			x		MP7690S	MicroPwr	
			1000	x			x	x						x		HI3-5700A-9	Harris	15
				x			x	x						x		HI3-5700J-9	Harris	
		0.4	180	x							x			x		MP7783	◊ MicroPwr	
		6	25	x	x									x		ADC908A	† AD	
				x	x									x		ADC908E	† AD	
				x	x									x		ADC908G	AD	20
		15	30	x	x		x						x			AD7574A	◊ AD	
				x	x		x						x			AD7574J	◊ AD	
				x	x		x						x			AD7574S	◊† AD	
				x	x		x						x	x		MX7574A	Maxim	
				x	x		x						x	x		MX7574J	Maxim	25
				x	x		x						x	x		MX7574S	† Maxim	
				x	x		x						x			MP7574A	† MicroPwr	
				x	x		x						x			MP7574B	MicroPwr	
				x	x		x						x			MP7574J	MicroPwr	
				x	x		x						x			MP7574K	MicroPwr	30
					x		x						x			MP7574T	MicroPwr	
			450	x	x	x	x	x						x		**PM7574B**	**† AD (3227)**	
				x	x	x	x	x						x		**PM7574F**	**AD (3227)**	
				x	x	x	x	x						x		**PM7574H**	**AD (3227)**	
		20 MSPS	420	x		x	x	x			x					**AD9048**	**AD (3230)**	35
		66.6	—	x												**AD7581K**	**◊ AD (3227, 3231)**	
			40	x						x				x		MX7581B	Maxim	
				x						x				x		MX7581K	Maxim	
		100	875	x						x	x			x		KAD0809	Samsung	
		116	15	x		x	x	x		x				x	x	ADC0808M	† TI	40
	7/8	6	25	x	x									x		ADC908B	† AD	
				x	x									x		ADC908F	AD	
				x	x									x		ADC908H	AD	
		15	30	x	x		x						x			MP7574S	† MicroPwr	
	0.5	9.0		x												TLC545I	TI	45
		17		x												TLC546I	TI	
	0.6	0.05	715	x										x		**ADC208/883**	**† Datel (3358)**	
	0.75	25	2.5	x							x			x		Si8603	◊† Siliconix	
				x							x			x		Si8604	◊† Siliconix	
		100	1.5	x						x	x			x		TL0808	◊ TI	50
			30	x						x	x			x		ADC0808	◊† TI	
	1		1400										x	x		SP1072	† Sipex-HSD	

(Continued)

Bin.—Binary Off.—Offset Compl.—Complementary Magn.—Magnitude CTC—Compl. 2's Compl. Int. Ref.—Internal Reference Mux. In—Multiplexed Inputs S&H—Sample and Hold Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
8	1																(Cont'd)	
		0.0033	2000	x		x		x						x		**AD9028**	**◊† AD (3230)**	
				x		x		x						x		**AD9038**	**◊† AD (3230)**	
		0.0067	750	x										x		**AD9002**	**† AD (3230)**	
		0.04	480	x									x	x		MB40578	Fujitsu	
		0.056	750	x										x		Bt251	Brooktree	5
			1000	x										x		Bt253	Brooktree	
		0.067	350	x									x	x		BT208	◊ Brooktree	
		0.1	850	x	x								x	x		**MN5820**	**MicroNet (3547)**	
			850 *	x	x								x	x		**MN5820H**	**† MicroNet (3547)**	
		0.10	300	x										x		MP7684S	† MicroPwr	10
		0.15	1750			x							x	x		**AD9502**	**† AD (3230)**	
		0.2	75	x										x		MP7683XA	MicroPwr	
				x										x		MP7683XJ	MicroPwr	
				x										x		MP7683XS	MicroPwr	
		0.35	130	x			x	x		x					x	ADC0831AC	TI	15
				x			x	x		x					x	ADC0832AC	TI	
		1.2	75	x							x			x		TLC0820A	◊ TI	
		1.5	75	x	x	x	x	x			x					**PM0820B**	**† AD (3227)**	
				x	x	x	x	x			x					**PM0820F**	**AD (3227)**	
				x	x	x	x	x			x					**PM0820H**	**AD (3227)**	20
				x							x			x		ADC0820C	◊ Nationai	
		1.52	875	x							x			x		KAD0820	Samsung	
		1.6	40													**AD7824K**	**AD (3225, 3227, 3231)**	
																AD7824T	**† AD (3225, 3227, 3231)**	
																AD7828K	**AD (3225, 3227, 3231)**	25
																AD7828T	**† AD (3225, 3227, 3231)**	
			50	x							x			x		ADC0820CCD	Maxim	
				x							x			x		ADC0820CCN	Maxim	
				x							x			x		ADC0820CD	† Maxim	
				x							x		x	x		MAX150CC	Maxim	30
				x							x		x	x		MAX150CE	Maxim	
				x							x		x	x		MAX150CM	† Maxim	
				x							x			x		MX7820B	Maxim	
				x							x			x		MX7820K	Maxim	
				x							x			x		MX7820T	† Maxim	35
			75	x							x					**AD7820K**	**AD (3225, 3227)**	
				x							x					**AD7820T**	**† AD (3225, 3227)**	
			80	x	x						x			x		MP0820	MicroPwr	
		2	50	x						x	x		x	x		MAX154CC	Maxim	
				x						x	x		x	x		MAX154CE	Maxim	40
				x						x	x		x	x		MAX154CM	† Maxim	
				x						x	x		x	x		MAX158CC	Maxim	
				x						x	x		x	x		MAX158CE	Maxim	
				x						x	x		x	x		MAX158CM	† Maxim	
			60	x							x		x	x		**AD7569**	**◊† AD (3221, 3227, 3259)**	45
			80	x						x	x			x		MX7824B	Maxim	
				x						x	x			x		MX7824K	Maxim	
				x						x	x			x		MX7824T	† Maxim	
				x						x	x			x		MX7828B	Maxim	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source
Binary Output																	**(Cont'd)**
8	1	2	80														(Cont'd)
				x						x	x			x		MX7828K	Maxim
				x						x	x			x		MX7828T	† Maxim
		2.5	50 *	x			x	x					x	x		TLC0820AC	TI
			75	x	x	x	x	x	x		x	x		x	x	LTC1099C	LinearTech
			1010		x										x	HS5131B	† Sipex-HSD
					x										x	HS5131C	Sipex-HSD
		2.8	500	x		x	x	x			x					LTC1099I	LinearTech
				x		x	x	x			x					LTC1099M	LinearTech
		5	15 *								x					**AD7575J**	**AD (3225, 3227)**
			35	x							x		x	x		MAX165B	◊† Maxim
				x							x		x	x		MAX166B	◊† Maxim
				x							x			x		MX7575A	Maxim
				x							x			x		MX7575J	◊ Maxim
				x							x			x		MX7575S	† Maxim
		8	20	x		x	x	x		x	x	x	x	x	x	ADC08031C	National
				x		x	x	x		x	x	x	x	x	x	ADC08031CM	† National
				x		x	x	x		x	x	x	x	x	x	ADC08032C	National
				x		x	x	x		x	x	x	x	x	x	ADC08032CM	† National
				x		x	x	x		x	x	x	x	x	x	ADC08034C	National
				x		x	x	x		x	x	x	x	x	x	ADC08034CM	† National
				x		x	x	x		x	x	x	x	x	x	ADC08038C	National
				x		x	x	x		x	x	x	x	x	x	ADC08038CM	† National
		8.3 ms	100 *		x	x	x	x	x	x	x				x	IR3K01	Sharp
		9	125	x	x								x	x		ADC847A	Datel
				x	x								x	x		ZN449E	Plessey
				x	x								x	x		ZN449J	Plessey
		10	15 *	x										x		**AD7576B**	**AD (3227)**
				x										x		**AD7576K**	**AD (3227)**
				x										x		**AD7576S**	**† AD (3227)**
			35	x										x		MX7576A	Maxim
				x										x		MX7576J	◊ Maxim
				x										x		MX7576S	† Maxim
		18	4	x						x	x				x	TLC541	TI
		20	10	x		x	x	x		x	x				x	TLC542M	† TI
		32		x						x					x	ADC0834A	TI
				x						x					x	ADC0838A	TI
			12.5	x						x					x	ADC0831C	National
				x						x					x	ADC0832C	National
				x						x					x	ADC0833C	National
				x						x					x	ADC0834C	National
				x						x					x	ADC0838C	National
			15 *							x	x				x	ADC0811CC	◊ National
										x	x				x	ADC0811CJ	◊† National
		40	12.5	x						x				x		ADC0844B	National
		100 *	12.5	x										x		ADC0804	† Harris
				x										x		ADC0804C	◊ National
				x										x		ADC0804C	Signetics
		100	15	x						x				x		ADC0809C	◊ National
				x						x				x		ADC0817	National
				x						x				x		ADC0809M	◊† TI

(Continued)

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
CTC—Compl. 2's Compl.
Int. Ref.—Internal Reference
Mux. In—Multiplexed Inputs
S&H—Sample and Hold
Par. Out—Parallel Output
Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
8	1	100															(Cont'd)	
			160												x	MB4056	Fujitsu	
			875	x						x	x			x		KAD0817	Samsung	
				x										x		ADC0805C	TI	
			900					x							x	MB40547-7	Fujitsu	
		110 *	1.5 *	x							x			x		MSM5204	OKI	5
		110	12.5	x										x		ADC0805C	National	
				x										x		ADC0805C	Signetics	
		112 *	15	x						x					x	µPD7001	NEC	
		114	15	x			x	x						x	x	ADC0804C	TI	
		300	25												x	MB4063	Fujitsu	10
		2000	6.5 *	x									x		x	TC5091A	Toshiba	
			300	x									x		x	TC5090A	Toshiba	
	1/2	0.05	800	x										x		CX20052A	Sony	
	1 1/4	4	300	x										x		µPD7003	NEC	
		100	1.5	x						x	x			x		TL0809	◊ TI	15
			15	x						x	x			x		ADC0809	◊ TI	
	1.5	90	300					x		x	x				x	PCF8591	◊ Signetics	
	1 7/8	66.6	40	x						x				x		MX7581A	Maxim	
				x						x				x		MX7581J	Maxim	
	2	10	15 *	x										x		**AD7576A**	**AD**	**(3227)** 20
				x										x		**AD7576J**	**AD**	**(3227)**
				x										x		**AD7576S**	**† AD**	**(3227)**
		50	255	x										x		ADC0800P	† National	
				x										x		ADC0800PC	National	
8 (A/D and 10 D/A Video)																		
	1/2	38.5 MHz	1200										x	x		KSV3100A	Samsung	25
8 (A/D, D/A)																		
	1/2	0.05	1200	x							x		x	x		KSV3100AN-7	Samsung	
				x							x		x	x		KSV3110N-10	Samsung	
8 (A/D,D/A)																		
	1/2	0.05	1200	x							x		x	x		KSV3110-9	Samsung	
				x							x		x	x		KSV3110N-8	Samsung	
8 (analog to pulse width converter for microprocessor systems)																		
	1/2	—	15 *							x						MC14443	Motorola	30
		32	50 *							x						MC14447	Motorola	
			75 *							x						µA9708C	National	
										x						µA9708M	† National	
8 (D/A, A/D, with counter)																		
	1/2	500	150	x	x								x	x		ADCMC8BC	Datel	
8 (dual)																		
	1/2	0.04	2500	x												ADC222	Datel	35
8 (flash)																		
	1/2	0.05		x										x		THC1068	† TRWLSI	
			1320	x										x		TDC1048	◊† TRWLSI	
				x										x		TDC1048	◊ TRWLSI	
		50 MHz		x												TDC1025	TRWLSI	
	1		150	x												CA3318	Harris	40
				x												CA3318C	Harris	
8 (quad)																		
	1/2	2	14	x			x	x								MB8023	Fujitsu	
		5	14	x			x	x								MB8022	Fujitsu	
			38	x			x	x								MB86021	Fujitsu	
8 (video digital converter)																		
	1/2	0.05		x										x		µPD6950	NEC	45

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
8 Video Flash Converter																		
	1/2	0.05														MC10319	Motorola	
9	1	0.05	330	x									x	x		CX20220A-2	Sony	
9 (flash)																		
	1/2	0.03		x										x		THC1069	† TRWLSI	
		30 MSPS		x			x	x								TDC1049	TRWLSI	
10																TAC1020	TRWLSI	5
																TAC1025	TRWLSI	
	1/4	6000	35	x	x							x		x		ADCET10BM	Datel	
	1/2	0.05	1400	x				x			x			x		HA19214	Hitachi	
			7500	x										x		TDC1020	† TRWLSI	
		0.425	1700	x	x		x									ADC510MC	Datel	10
		0.45	1700	x	x		x									ADC510MM	† Datel	
		0.65	1700	x	x		x									ADC515MC	Datel	
		0.7	1700	x	x		x									ADC515MM	† Datel	
		0.8		x									x	x	x	ADADC816	AD	
			2900	x				x					x	x	x	ADC816/883	† Datel	15
			3600	x	x			x					x	x	x	ADC816MC	Datel	
				x	x			x					x	x	x	ADC816MM	† Datel	
		1	500 *	x	x								x	x	x	ADC856C	Datel	
				x	x								x	x	x	ADC856M	† Datel	
				x	x								x	x	x	ZN433BJ-10	Plessey	20
				x	x								x	x	x	ZN433CJ-10	Plessey	
				x	x								x	x	x	ZN433J-10	† Plessey	
			2100	x		x					x		x	x		ADS115MC	Datel	
				x		x					x		x	x		ADS115MM	† Datel	
					x		x				x		x	x		ADS116MC	Datel	25
					x		x				x		x	x		ADS116MM	† Datel	
		1.4	1800 *			x	x						x			HAS1002	AD	
			2900	x				x					x	x	x	ADC826/883	† Datel	
			3600	x	x			x					x	x	x	ADC826MC	Datel	
				x	x			x					x	x	x	ADC826MM	† Datel	30
		1.8	755 *	x	x								x	x	x	**AD579K**	**AD**	**(3227)**
				x	x								x	x	x	**AD579T**	**† AD**	**(3227)**
		2		x												ADCEH10B2	Datel	
		2.2	755 *	x	x								x	x	x	**AD579J**	**AD**	**(3227)**
		4		x												ADCEH10B1	Datel	35
		5	150	x			x	x			x		x			HI3-7152B-9	Harris	
				x			x	x			x		x			HI3-7152K-5	Harris	
				x				x						x		HI7152	Harris	
			215	x				x								MAX173C	Maxim	
				x				x								MAX173M	Maxim	40
			975	x			x	x						x		**ADC84-10**	**MicroNet**	**(3547)**
				x			x	x						x		**ADC85-10**	**MicroNet**	**(3547)**
				x			x	x						x		**ADC85C-10**	**MicroNet**	**(3547)**
			1400 *			x	x	x					x	x	x	**MN5240**	**MicroNet**	**(3547)**
		6	400 *													ADC910E	AD	45
		8	1400 *			x	x	x					x	x	x	MNADC84-10	MicroNet	
						x	x	x					x	x	x	MNADC85-10	† MicroNet	
		10	150	x				x						x		HI7151	Harris	
			1800			x	x	x					x	x	x	**ADADC85-10**	**AD**	**(3228)**
		13		x												CA3310	Harris	50
			15													CA3310A	Harris	
		14	20	x		x	x	x		x	x				x	ADC1031B	National	

(Continued)

Bin.—Binary Compl.—Complementary CTC—Compl. 2's Compl. Mux. In—Multiplexed Inputs Par. Out—Parallel Output
Off.—Offset Magn.—Magnitude Int. Ref.—Internal Reference S&H—Sample and Hold Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
10	1/2	14	20														(Cont'd)	
				x		x	x	x		x	x				x	ADC1034B	National	
				x		x	x	x		x	x				x	ADC1038B	National	
		15	—	x									x			**AD573K**	**AD (3227)**	
				x									x			**AD573S**	**† AD (3227)**	
				x		x	x	x				x		x		SDA1810D	◊ Siemens	5
			15	x						x	x	x		x		SDA0810A	Siemens	
				x						x	x	x		x		SDA0810B	Siemens	
			360	x	x								x	x		ZN501AJ	Plessey	
		20		x									x		x	**AD575K**	**AD (3227)**	
			12.5	x				x		x	x				x	LTC1090C	LinearTech	10
				x				x		x	x				x	LTC1090M	† LinearTech	
				x				x		x	x				x	LTC1091C	LinearTech	
				x				x		x	x				x	LTC1091M	† LinearTech	
				x				x			x				x	LTC1092AC	LinearTech	
				x				x			x				x	LTC1092AM	† LinearTech	15
				x				x			x				x	LTC1092C	LinearTech	
				x				x			x				x	LTC1092M	† LinearTech	
			350 *	x	x								x	x	x	ZN432BJ-10	Plessey	
				x	x								x	x	x	ZN432CJ-10	Plessey	
				x	x								x	x	x	ZN432E-10	Plessey	20
				x	x								x	x	x	ZN432J-10	† Plessey	
			380	x		x	x	x					x	x	x	ZN503AJ	† Plessey	
				x		x	x	x					x	x	x	ZN504CJ	Plessey	
				x		x	x	x					x	x	x	ZN504E	Plessey	
			770	x		x	x	x					x	x	x	TL503	† TI	25
			8000	x									x	x		THC1070	† TRWLSI	
		21	800			x	x	x					x	x	x	**ADADC80Z-10**	**† AD (3228)**	
		22	705	x			x	x						x		**ADC80-10**	**MicroNet (3547)**	
		25	400	x						x			x	x		MB4051	Fujitsu	
		50	100	x				x						x	x	ADC1025	National	30
			875	x										x		ADC1005	National	
		5000	20 *	x	x									x		4144	TeledyneS	
		6000	20	x	x							x		x		ADCEK10B	Datel	
			25	x								x		x		TSC8701	TeledyneS	
				x								x		x		TSC8704	TeledyneS	35
			50	x										x		ADCET10BC	Datel	
		40 MSPS		x									x			CAV1040	AD	
	3/4	6	400 *													ADC910A	AD	
																ADC910G	AD	
	1	0.04	7.3	x		x		x						x		CLC920	† Comlinear	40
		0.05	330	x										x		CX20220A-1	Sony	
			1400	x							x		x	x		BX1500	Sony	
		0.105	1300		x						x		x	x		4194	TeledyneS	
		1	15	x						x				x		µPD7004	NEC	
			3275	x	x			x					x	x	x	4131	TeledyneS	45
		1.8	235	x		x	x	x			x			x	x	ADC1061C	National	
				x		x	x	x			x			x	x	ADC1061CM	† National	
				x							x			x		TMC1061	◊ TRWLSI	
		2		x												**AD9060**	**AD (3282)**	
		2.5	275	x			x	x					x		x	MAX151AC	Maxim	50
		5		x												**AD9020**	**AD (3282)**	
			150	x			x	x			x		x			HI3-7152A-9	Harris	
				x			x	x			x		x			HI3-7152J-5	Harris	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
10	1																(Cont'd)	
		6	400 *													ADC910B	AD	
																ADC910F	◊ AD	
																ADC910H	AD	
			1100			x	x	x					x	x	x	**ADADC84-10**	**AD (3228)**	
		14	20	x		x	x	x		x	x				x	ADC1031C	National	5
				x		x	x	x		x	x				x	ADC1031CM	† National	
				x		x	x	x		x	x				x	ADC1034C	National	
				x		x	x	x		x	x				x	ADC1034CM	† National	
				x		x	x	x		x	x				x	ADC1038C	National	
				x		x	x	x		x	x				x	ADC1038CM	† National	10
		15	—	x									x			**AD573J**	**AD (3227)**	
			360	x	x								x	x		ZN502CJ	Plessey	
				x	x								x	x		ZN502E	Plessey	
			770	x	x								x	x		TL502	TI	
		18.5	100	X							X			X		**AD7579**	**† AD (3225, 3227)**	15
			100	X							X			X		**AD7580**	**† AD (3225, 3227)**	
		20		x									x		x	**AD575J**	**AD (3227)**	
				x									x		x	**AD575S**	**† AD (3227)**	
		21	15	x			x	x		x	x	x			x	TLC1541M	† TI	
		200	—	x										x		ADC1001C	National	20
				x										x		ADC1021C	National	
		15000	300													µPD7002C-1	NEC	
	1.5	2.5	275	x			x	x					x		x	MAX151BC	Maxim	
	1 3/4	0.05	360	x	x									x		ADC310	Datel	
		0.08	8550	x	x						x		x	x		ADCB310E	Datel	25
	2	14		x											x	CDP68HC68A2	Harris	
10 Plus Sign	1/2	80	—	x	x		x							x	x	AD7571K	AD	
				x	x		x							x	x	AD7571T	† AD	
	1	80	—	x	x		x							x	x	AD7571J	AD	
				x	x		x							x	x	AD7571S	† AD	30
11	2	1	100	x	x									x	x	MP7685K	MicroPwr	
				x	x									x	x	MP7685T	† MicroPwr	
		2	100	x	x									x	x	MP7685J	MicroPwr	
				x	x									x	x	MP7685S	† MicroPwr	
12		1/2	27.5	x				x	x		x			x		ML2233B	MicroLinear	35
		20	1400	x	x					x			x		x	DAS863	† Adv Analog	
		100		x						x				x		**AD7582B**	**AD (3229, 3231)**	
				x						x				x		**AD7582K**	**AD (3229, 3231)**	
				x						x				x		**AD7582T**	**† AD (3229, 3231)**	
	1/4	7	250	x				x								S5012-K7	Gould AMI	40
		10	745			x	x	x					x	x	x	ADC84	† Adv Analog	
						x	x	x					x	x	x	ADC85	† Adv Analog	
					x	x	x	x					x	x	x	ADC87	† Adv Analog	
		12	250	x				x								S5012-K12	Gould AMI	
		13	470			x	x						x	x	x	ADC5211	‡ Adv Analog	45
						x	x						x	x	x	ADC5212	Adv Analog	
			590			x	x						x	x	x	ADC5210	‡ Adv Analog	
						x	x						x	x	x	ADC5213	‡ Adv Analog	
						x	x						x	x	x	ADC5214	‡ Adv Analog	
						x	x						x	x	x	ADC5215	‡ Adv Analog	50
						x	x						x	x	x	ADC5216	‡ Adv Analog	
						x	x						x	x	x	ADC5217	‡ Adv Analog	
						x	x						x	x	x	ADC5610	◊‡ Adv Analog	

(Continued)

Bin.—Binary Off.—Offset Compl.—Complementary Magn.—Magnitude CTC—Compl. 2's Compl. Int. Ref.—Internal Reference Mux. In—Multiplexed Inputs S&H—Sample and Hold Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12	1/4	13	590														(Cont'd)	
						x	x						x	x	x	ADC5611	◊‡ Adv Analog	
						x	x						x	x	x	ADC5612	◊‡ Adv Analog	
						x	x						x	x	x	ADC5613	◊‡ Adv Analog	
						x	x						x	x	x	ADC5614	◊‡ Adv Analog	
						x	x						x	x	x	ADC5615	◊‡ Adv Analog	5
						x	x						x	x	x	ADC5616	◊‡ Adv Analog	
						x	x						x	x	x	ADC5617	◊‡ Adv Analog	
						x	x						x	x	x	NE5217	‡ Signetics	
						x	x						x	x	x	SA5217	‡ Signetics	
		24	250	x				x								S5012-K24	Gould AMI	10
		50	590			x	x						x	x	x	ADC5200	‡ Adv Analog	
						x	x						x	x	x	ADC5201	‡ Adv Analog	
						x	x						x	x	x	ADC5202	‡ Adv Analog	
						x	x						x	x	x	ADC5203	‡ Adv Analog	
						x	x						x	x	x	ADC5204	‡ Adv Analog	15
						x	x						x	x	x	ADC5205	‡ Adv Analog	
						x	x						x	x	x	ADC5206	‡ Adv Analog	
						x	x						x	x	x	ADC5207	‡ Adv Analog	
		50 ms	215	x					x	x		x		x		MAX133	Maxim	
		12000	25	x	x							x	x	x		ADCEK12DR	Datel	20
			35	x	x							x	x	x		ADCEK12DM	Datel	
		24000	25	x	x							x		x		ADCET12BR	Datel	
			35	x	x							x		x		ADCET12BM	Datel	
		50000 ms	215	x					x	x		x		x		MAX134	Maxim	
	1/2			x		x	x	x			x					**AD368**	**AD (3225, 3228)**	25
		—	1500									x	x			MP2316	Analogic	
					x			x	x			x	x			MP2321	Analogic	
			2735	x	x			x		x	x		x	x		DAS5712	Adv Analog	
		0.05	4000	x							x			x		SCA3012	STC	
		0.1	4300		x		x				x		x	x		**ADS130MC**	**Datel (3358)**	30
		0.2	2700	x									x	x		SP9550	† Sipex-HSD	
		0.3	2100	x	x	x	x						x	x		**ADC530MC**	**Datel (3358)**	
				x	x	x	x						x	x		**ADC530MM**	**† Datel (3358)**	
		0.5	1500	x	x								x	x		MN5247	† MicroNet	
			1800	x	x								x	x		**ADC500MC**	**Datel (3358)**	35
				x	x	x	x						x	x		**ADC500MM**	**† Datel (3358)**	
				x	x	x							x	x		4192	† TeledyneS	
			2000	x									x	x		SP9548	† Sipex-HSD	
			2600	x	x		x	x			x					ADC00305	ILC-DDC	
			3000	x	x		x	x			x					ADC00302	† ILC-DDC	40
			3200	x	x	x	x				x		x	x		**ADS132MC**	**Datel (3358)**	
				x	x	x	x				x		x	x		ADS132MM	† Datel	
		0.55	1800	x	x	x	x						x	x		**ADC505MC**	**Datel (3358)**	
				x	x								x	x		**ADC505MM**	**† Datel (3358)**	
		0.6	3000	x									x	x	x	ADC6012	† Adv Analog	45
					x								x	x	x	ADC6013	† Adv Analog	
		0.7	1800	x	x	x	x						x	x		**ADC508MC**	**Datel (3358)**	
				x	x	x	x						x	x		**ADC508MM**	**† Datel (3358)**	
		0.77	2700	x	x	x	x				x		x	x		**ADS21AC**	**Datel (3358)**	
		0.8	1900	x	x	x	x						x	x		**ADC520MC**	**Datel (3358)**	50
				x	x	x	x						x	x		**ADC520MM**	**Datel (3358)**	
				x	x	x	x						x	x		**ADC521MC**	**Datel (3358)**	
				x	x	x	x						x	x		**ADC521MM**	**† Datel (3358)**	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
																(Cont'd)		
12	1/2	0.85	2850	x			x	x								**MN5246A**	**MicroNet (3547)**	
		1		x												**MN5246**	**† MicroNet (3547)**	
			850	x							x			x		CS5412	Crystal	
			1500			x	x	x					x	x	x	**MN5245A**	**MicroNet (3547)**	
			1700		x	x							x	x	x	**ADC601K**	**Burr-Brown (3347)**	5
					x	x							x	x	x	**ADC6015**	**† Burr-Brown (3347)**	
			2200	x							x			x		**AD9003**	**† AD (3225, 3227)**	
			2700		x								x	x	x	ADC5246	‡ Adv Analog	
				x		x					x		x	x		ADS105MC	Datel	
				x		x					x		x	x		ADS105MM	† Datel	10
					x		x				x		x	x		ADS106MC	Datel	
					x		x				x		x	x		ADS106MM	† Datel	
				x	x	x	x				x		x	x		ADS22AC	Datel	
			2700	x									x	x	x	ADC5245	‡ Adv Analog	
		1 MHz											x	x		AD375	AD	15
			3000	x	x			x			x			x		HAS1201K	AD	
				x	x			x			x			x		HAS1201S	† AD	
		1.1 MSPS		x												ADCB505	Datel	
		1.25 MSPS		x												ADCB500	Datel	
		1.4	1800	x	x	x	x	x			x		x			ADS125MC	Datel	20
				x	x	x	x	x			x		x			ADS125MM	† Datel	
			2700	x	x	x	x	x			x		x	x		ADS126MC	Datel	
				x	x	x	x	x			x		x	x		ADS126MM	† Datel	
		1.5	2350 *		x	x							x	x	x	**ADC803B**	**Burr-Brown (3347)**	
					x	x							x	x	x	**ADC803S**	**Burr-Brown (3347)**	25
		1.56	1800			x	x						x			HAS1202A	AD	
		2		x												ADCEH12B3	Datel	
			1800 *	x	x			x					x	x	x	ADH8516-12	ILC-DDC	
			2200	x	x			x					x	x	x	ADC817AMC	Datel	
			2700			x	x	x						x	x	ADC810MC	Datel	30
						x	x	x						x	x	ADC810MM	† Datel	
			2850	x							x				x	HAS1204	AD	
			3050			x	x	x	x					x	x	ADC00404-102	† ILC-DDC	
		2.2	1800 *			x	x						x			HAS1202	AD	
		2.75	750	x				x								S5412-J1	Gould AMI	35
				x				x								S5412-J2	Gould AMI	
				x				x								S5412-K1	Gould AMI	
				x				x								S5412-K2	Gould AMI	
		3	100 *	x									x	x		HADC7572	† Signal Proc	
				x		x	x	x					x	x		HADC7672	† Signal Proc	40
			215	x		x	x	x			x		x			ADS7800K	Burr-Brown	
				x									x	x		MAX162AC	◊ Maxim	
				x									x	x		MAX162AI	Maxim	
				x									x	x		MAX162AM	† Maxim	
			500	x	x								x	x		ADC-922	‡ AD	45
			775 *	x	x								x	x		**AD578L**	**AD (3227)**	
				x	x								x	x	x	MX578L	Maxim	
			775	x	x								x	x	x	MX578T	† Maxim	
			2200	x	x			x					x	x	x	ADC827AMC	Datel	
				x	x			x					x	x	x	ADC827AMM	† Datel	50

(Continued)

Bin.—Binary Off.—Offset
Compl.—Complementary Magn.—Magnitude
CTC—Compl. 2's Compl. Int. Ref.—Internal Reference
Mux. In—Multiplexed Inputs S&H—Sample and Hold
Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12	1/2																(Cont'd)	
		4		x												ADCEH12B2	Datel	
			1550			x	x	x			x		x	x	x	ADC6010	† Adv Analog	
			2700			x	x	x						x	x	ADC811MC	Datel	
						x	x	x						x	x	ADC811MM	† Datel	
		4.5	755 *	x	x								x	x	x	**AD578K**	**AD (3227)**	5
			775 *	x	x								x	x	x	MX578K	Maxim	
			775	x	x								x	x	x	MX578S	† Maxim	
			875 *	x		x	x	x							x	**AD578T**	**† AD (3227)**	
		5	100 *										x			**AD7572K**	**AD (3228)**	
													x			**AD7572T**	**† AD (3228)**	10
			135 *													PM7572A05	† AD	
			215	x									x		x	MAX170A	◊† Maxim	
				x									x	x		MX7572	† Maxim	
				x									x	x		MX7572C05	Maxim	
				x									x	x		MX7572L05	◊ Maxim	15
				x									x	x		MX7572U05	† Maxim	
			1100			x	x	x					x	x	x	**AD5240K**	**AD (3228)**	
						x	x	x					x	x	x	**AD5240S**	**AD (3228)**	
						x	x	x					x	x	x	**AD5240ZK**	**AD (3228)**	
						x	x	x					x	x	x	**AD5240ZS**	**† AD (3228)**	20
			1120		x								x	x		HS9342B	† Sipex-HSD	
					x								x	x		HS9342C	Sipex-HSD	
		5.8	265	x			x	x					x		x	MAX171AC	Maxim	
		6	775 *	x	x								x	x	x	**AD578J**	**AD (3227)**	
				x	x								x	x	x	MX578J	Maxim	25
			875 *	x		x	x	x							x	**AD578S**	**† AD (3227)**	
		7											x	x		HI774K-5	Harris	
		7.2	250	x	x						x			x	x	CS5012	Crystal	
		7.7	80	x							x			x		TMC1251	TRWLSI	
				x							x			x		TMC12551	TRWLSI	30
		8		x				x								**AD7868**	**AD (3225, 3259, 3296)**	
				x				x								**AD7875**	**AD (3225, 3228, 3278)**	
				x				x								**AD7876**	**AD (3225, 3228, 3278)**	
			150	x			x	x					x			MAX174AC	Maxim	
				x			x	x					x			MAX174AM	† Maxim	35
				x			x	x					x			MAX174BC	Maxim	
				x			x	x					x			MAX174BM	† Maxim	
			450	x			x	x						x		**MN774AK**	**MicroNet (3547)**	
				x			x	x						x		**MN774AL**	**MicroNet (3547)**	
				x			x	x						x		**MN774AU**	**† MicroNet (3547)**	40
				x			x	x						x		**MN774AU/B**	**† MicroNet (3547)**	
			975	x			x	x						x		**ADC84-12**	**MicroNet (3547)**	
				x			x	x						x		**ADC85-12**	**MicroNet (3547)**	
				x			x	x						x		**ADC85C-12**	**MicroNet (3547)**	
			1100			x	x	x					x	x	x	ADCHZ12BGC	Datel	45
			1400 *			x	x	x					x	x	x	MNADC84-12	MicroNet	
						x	x	x					x	x	x	MNADC85-12	MicroNet	
						x	x	x					x	x	x	MNADC87	MicroNet	
			1425	x			x	x						x		**ADC87**	**MicroNet (3547)**	
			1500		x						x		x	x		**AD1332**	**AD (3225, 3228)**	50

(Continued)

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INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
																(Cont'd)		
12	1/2	8	1500			x	x	x					x	x	x	**ADC87/883B** †	**Burr-Brown (3346)**	
						x	x	x					x	x	x	**ADC87U**	**Burr-Brown (3346)**	
		8.5	450	x	x								x	x		**ADC774KH**	**Burr-Brown (3346)**	
				x	x								x	x		**ADC774KP**	**Burr-Brown (3346)**	
				x	x								x	x		**ADC774TH** †	**Burr-Brown (3346)**	5
		9 *	1750	x	x					x	x		x	x		**HDAS16MC**	**Datel (3359)**	
				x	x					x	x		x	x		**HDAS8MC**	**Datel (3359)**	
		10		x		x	x	x						x	x	**AD7672**	**AD (3227)**	
			215	x									x	x		MAX172A ◊†	Maxim	
			450 *			x	x	x					x	x	x	**ADC84**	**Burr-Brown (3346)**	10
						x	x	x					x	x	x	**ADC85H**	**Burr-Brown (3346)**	
						x	x	x					x	x	x	**ADC87H**	**Burr-Brown (3346)**	
			660		x						x		x	x		**ADS807K**	**Burr-Brown (3346)**	
					x						x		x	x		**ADS808K**	**Burr-Brown (3346)**	
			1100			x	x	x					x	x	x	**ADADC84-12**	**AD (3228)**	15
			1200			x	x	x					x	x	x	HSADC85B †	Sipex-HSD	
						x	x	x					x	x	x	HSADC85C	Sipex-HSD	
			1800			x	x	x					x	x	x	**ADADC85-12**	**AD (3228)**	
			2000	x	x					x	x		x	x		HS9403B †	Sipex-HSD	
				x	x					x	x		x	x		HS9403C	Sipex-HSD	20
			5000	x							x		x	x		THC1201 †	TRWLSI	
				x							x		x	x		THC1202 †	TRWLSI	
			9000	x							x		x	x		THC1200 †	TRWLSI	
		12	85	x		x	x	x								ADC912B †	AD	
				x		x	x	x								ADC912E	AD	25
			135 *													PM7572A12 †	AD	
																PM7572E12	AD	
			150	x	x								x	x		SP674 †	Sipex-HSD	
			215	x									x	x		MX7572C12	Maxim	
				x									x	x		MX7572L12 ◊	Maxim	30
				x									x	x		MX7572U12 †	Maxim	
			720	x	x								x	x	x	ADC674A †	Adv Analog	
			1450	x	x					x	x		x	x		SP9415 †	Sipex-HSD	
		13	560			x	x						x	x	x	5210 †	TeledyneS	
			745	x										x	x	**MN5213**	**MicroNet (3547)**	35
				x										x	x	**MN5213H** †	**MicroNet (3547)**	
							x							x	x	**MN5214**	**MicroNet (3547)**	
							x							x	x	**MN5214H** †	**MicroNet (3547)**	
							x							x	x	**MN5215**	**MicroNet (3547)**	
							x							x	x	**MN5215H** †	**MicroNet (3547)**	40
			913			x	x	x						x	x	MN5610 ◊†	MicroNet	
			915			x	x						x	x	x	**MN5210**	**MicroNet (3547)**	
						x	x						x	x	x	**MN5210H** †	**MicroNet (3547)**	
						x	x						x	x	x	**MN5211**	**MicroNet (3547)**	
						x	x						x	x	x	**MN5211H** †	**MicroNet (3547)**	45
						x	x						x	x	x	**MN5212**	**MicroNet (3547)**	
						x	x						x	x	x	**MN5212H** †	**MicroNet (3547)**	

(Continued)

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INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
																(Cont'd)		
12	1/2	13	915			x	x						x	x	x	**MN5216**	**MicroNet (3547)**	
						x	x						x	x	x	**MN5216H**	**† MicroNet (3547)**	
						x	x						x			TP5211	TeledyneS	
						x	x						x			TP5211-HR	† TeledyneS	
						x	x						x			TP5212	TeledyneS	5
						x	x						x			TP5212-HR	† TeledyneS	
						x	x									TP5214	TeledyneS	
						x	x									TP5214-HR	† TeledyneS	
						x	x									TP5215	TeledyneS	
						x	x									TP5215-HR	† TeledyneS	10
						x	x						x			TP5216	TeledyneS	
						x	x						x			TP5216-HR	† TeledyneS	
						x	x									TP5217	TeledyneS	
						x	x									TP5217-HR	† TeledyneS	
			1000				x						x	x	x	AD5211B	AD	15
							x						x	x	x	AD5211T	† AD	
							x						x	x	x	AD5212B	AD	
							x						x	x	x	AD5212T	† AD	
							x							x	x	AD5214B	AD	
							x							x	x	AD5214T	† AD	20
							x							x	x	AD5215B	AD	
							x							x	x	AD5215T	AD	
							x						x	x	x	NE5211	Signetics	
							x						x	x	x	NE5212	Signetics	
							x							x	x	NE5214	Signetics	25
							x						x	x	x	SA5211	Signetics	
							x						x	x	x	SA5212	Signetics	
							x							x	x	SA5214	Signetics	
		13.8	40	x							x			x		TMC1241	TRWLSI	
				x							x			x		TMC12441	TRWLSI	30
		14	40	x		x	x	x			x			x	x	ADC1241B	National	
		15		x	x		x	x					x	x	x	**AD674S**	**† AD (3228)**	
				x	x		x	x					x	x	x	**AD674T**	**† AD (3228)**	
				x	x		x	x					x	x	x	**AD674U**	**† AD (3228)**	
			150	x			x						x			MAX674AK	Maxim	35
				x			x	x					x			MAX674AL	Maxim	
				x			x	x					x			MAX674AT	† Maxim	
				x			x	x					x			MAX674AV	† Maxim	
				x	x				x		x	x	x	x		HADC674Z	† Signal Proc	
			450	x	x								x	x		**ADC674AK**	**Burr-Brown (3346)**	40
				x	x								x	x		**ADC674AT**	**† Burr-Brown (3346)**	
				x			x	x						x		**MN674AK**	**MicroNet (3547)**	
				x			x	x						x		**MN674AL**	**MicroNet (3547)**	
				x			x	x						x		**MN674AU**	**† MicroNet (3547)**	
				x			x	x						x		**MN674AU/B**	**† MicroNet (3547)**	45
			720	x	x								x	x		HI674AKD-5	Harris	
				x	x								x	x		HI674AL	Harris	
				x	x								x	x		HI674ATD-2	† Harris	
				x	x								x	x		HI674ATD/883	† Harris	
			1095	x	x						x		x	x		**MN6231K**	**MicroNet (3546)**	50
				x	x						x		x	x		**MN6231T**	**† MicroNet (3546)**	

(Continued)

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INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
																(Cont'd)		
12	1/2	15	1095		x						x		x	x		**MN6232K**	**MicroNet (3546)**	
					x						x		x	x		**MN6232T**	**† MicroNet (3546)**	
		17		x		x	x	x				x		x		SDA0812A	◊ Siemens	
			10	x				x								**ADC7802B**	**Burr-Brown (3346)**	
			450 *		x		x						x		x	ADC804	Burr-Brown	5
					x		x						x		x	ADC804S	† Burr-Brown	
		20	3/4			x	x	x					x	x	x	ADCHX12BMM	† Datel	
			20	x						x	x			x		SDA0812	Siemens	
			720	x	x								x	x		ADC574A	† Adv Analog	
			1100			x	x	x					x	x	x	ADCHX12BMC	Datel	10
		25	72	x	x								x	x		4188	† TeledyneS	
			150	x			x	x					x			MAX574AK	Maxim	
				x			x	x					x			MAX574AL	Maxim	
				x			x	x					x			MAX574AT	† Maxim	
				x			x	x					x			MAX574AU	† Maxim	15
				x	x				x		x	x	x	x		HADC574Z	† Signal Proc	
			450 *	x	x								x	x		**ADC574AK**	**Burr-Brown (3346)**	
				x	x								x	x		**ADC574AS**	**† Burr-Brown (3346)**	
			595		x	x	x	x					x	x	x	**ADC80AG**	**Burr-Brown (3346)**	
			705	x		x	x	x			x			x	x	**ADC80MAH-12**	**Burr-Brown (3346)**	20
				x			x	x						x		**ADC80-12**	**MicroNet (3547)**	
			720	x	x								x	x		ADC574ZA	Datel	
				x	x								x	x		ADC574ZB	Datel	
				x	x								x	x		HI574AKD-5	Harris	
				x	x								x	x		HI574ALD-5	Harris	25
				x	x								x	x		HI574ATD-2	† Harris	
				x	x								x	x		HI574ATD/883	† Harris	
				x	x								x	x		MP574AK	MicroPwr	
				x	x								x	x		MP574AL	MicroPwr	
				x	x								x	x		MP574AT	MicroPwr	30
				x	x								x	x		MP574AU	MicroPwr	
				x	x								x	x		TP574AK	TeledyneS	
				x	x								x	x		TP574AT	† TeledyneS	
				x	x								x	x		TP574AU	† TeledyneS	
			725	x	x								x		x	**AD574AK**	**◊ AD (3228)**	35
				x	x								x	x		**MN574A**	**† MicroNet (3547)**	
			800			x	x	x					x	x	x	**ADADC80-12**	**AD (3228)**	
						x	x	x					x	x	x	**ADADC80Z-12**	**† AD (3228)**	
			925	x	x			x					x	x	x	**AD572A**	**AD (3228)**	
				x	x			x					x	x	x	**AD572B**	**AD (3228)**	40
			950			x	x	x					x	x	x	MNADC80	MicroNet	
				x						x	x		x	x		**MN7145K**	**MicroNet (3546)**	
				x						x	x		x	x		**MN7145T**	**† MicroNet (3546)**	
				x						x	x		x	x		**MN7145T/B**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7146K**	**MicroNet (3546)**	45
					x					x	x		x	x		**MN7146T**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7146T/B**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7147K**	**MicroNet (3546)**	

(Continued)

INTERFACE

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
CTC—Compl. 2's Compl.
Int. Ref.—Internal Reference
Mux. In—Multiplexed Inputs
S&H—Sample and Hold
Par. Out—Parallel Output
Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12	1/2	25	950														(Cont'd)	
					x					x	x		x	x		**MN7147T**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7147T/B**	**† MicroNet (3546)**	
			1095	x	x						x		x	x		**MN6227K**	**MicroNet (3546)**	
				x	x						x		x	x		**MN6227T**	**† MicroNet (3546)**	
					x						x		x	x		**MN6228K**	**MicroNet (3546)**	5
					x						x		x	x		**MN6228T**	**† MicroNet (3546)**	
			1300	x	x					x	x		x	x		HS9414	† Sipex-HSD	
		27.5	300					x	x	x	x		x	x		ML2200B	MicroLinear	
								x	x		x			x		ML2230B	MicroLinear	
		30	20	x			x	x						x		ICL7112	† Harris	10
			750	x	x								x	x		HS574AK	Sipex-HSD	
				x	x								x	x		HS574AL	Sipex-HSD	
				x	x								x	x		HS574ATB	† Sipex-HSD	
				x	x								x	x		HS574AUB	† Sipex-HSD	
			780	x	x								x		x	**AD574AT**	**◊† AD (3228)**	15
				x	x								x		x	**AD574K**	**◊ AD (3228)**	
				x									x		x	**AD574L**	**◊ AD (3228)**	
				x	x								x		x	**AD574S**	**◊† AD (3228)**	
				x	x								x		x	**AD574T**	**◊† AD (3228)**	
				x									x		x	**AD574U**	**◊† AD (3228)**	20
			800	x	x						x		x	x		HS9474K	Sipex-HSD	
				x	x						x		x	x		HS9474TB	† Sipex-HSD	
			1100	x	x					x	x		x	x		HS9410K	Sipex-HSD	
				x	x					x	x		x	x		HS9410TB	† Sipex-HSD	
			1340	x	x					x	x		x	x		HS9408K	Sipex-HSD	25
				x	x					x	x		x	x		HS9408TB	† Sipex-HSD	
			1520	x	x					x	x		x	x		HS9404K	Sipex-HSD	
				x	x					x	x		x	x		HS9404TB	† Sipex-HSD	
		50	725	x									x	x	x	AD5201B	AD	
				x									x	x	x	AD5201T	† AD	30
				x									x	x	x	AD5202B	AD	
				x									x	x	x	AD5202T	† AD	
				x										x	x	AD5204T	† AD	
				x										x	x	AD5205B	AD	
				x										x	x	AD5205T	† AD	35
				x										x	x	NE5204	† Signetics	
				x										x	x	SA5204	† Signetics	
			745	x										x	x	MN5203	MicroNet	
				x										x	x	MN5203H	† MicroNet	
							x							x	x	MN5204	MicroNet	40
							x							x	x	MN5204H	† MicroNet	
							x							x	x	MN5205	MicroNet	
							x							x	x	MN5205H	† MicroNet	
			755	x	x			x					x	x	x	ADC10HT	† Burr-Brown	
			915	x									x	x	x	MN5200	MicroNet	45
				x									x	x	x	MN5200H	† MicroNet	
							x						x	x	x	MN5201	MicroNet	
							x						x	x	x	MN5201H	† MicroNet	
							x						x	x	x	MN5202	MicroNet	
							x						x	x	x	MN5202H	† MicroNet	50
						x							x	x	x	MN5206	MicroNet	
						x							x	x	x	MN5206H	† MicroNet	
		135 *														PM7572E05	AD	

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12	1/2																(Cont'd)	
		175	80	x									x	x	x	**MN5250**	**MicroNet (3547)**	
				x									x	x	x	**MN5250H**	**† MicroNet (3547)**	
							x						x	x	x	**MN5251**	**MicroNet (3547)**	
							x						x	x	x	**MN5251H**	**† MicroNet (3547)**	
							x						x	x	x	**MN5252**	**MicroNet (3547)**	5
							x						x	x	x	**MN5252H**	**† MicroNet (3547)**	
						x							x	x	x	**MN5253**	**MicroNet (3547)**	
						x							x	x	x	**MN5253H**	**† MicroNet (3547)**	
							x						x	x		HS5251C	Sipex-HSD	
		300	112	x	x			x					x	x	x	ADCHC12BMC	Datel	10
				x	x			x					x	x	x	ADCHC12BMM	† Datel	
		500	750	x									x	x		NE5074	† Signetics	
				x									x	x		SE5074	† Signetics	
		5000	15	x										x		µPD7002	NEC	
		20000	20	x	x									x		4145	TeledyneS	15
		24000	20	x	x							x		x		ADCEK12B	Datel	
			25	x								x		x		TSC8702	TeledyneS	
				x								x		x		TSC8705	TeledyneS	
		100000	20	x					x			x	x	x		ICL7109	Harris	
				x					x			x	x	x		ICL7109	◊† Maxim	20
				x								x	x	x	x	TSC7109BC	◊ TeledyneS	
				x					x			x	x	x	x	TSC7109C	◊ TeledyneS	
				x					x			x	x	x	x	TSC7109M	◊† TeledyneS	
	3/4		6100				x	x			x		x			**ADC603J**	**Burr-Brown (3347)**	
							x	x			x		x			**ADC603R**	**† Burr-Brown (3347)**	25
			7000	x				x								**ADC604J**	**Burr-Brown (3347)**	
		1	1.3			x	x									**ADS193**	**Datel (3358)**	
			1200	x	x	x	x	x					x	x		**ADC511MC**	**Datel (3358)**	
				x	x	x	x	x					x	x		**ADC511MM**	**† Datel (3358)**	
			1500	x	x	x	x				x		x	x		**ADS112MC**	**Datel (3358)**	30
				x	x	x	x				x		x	x		**ADS112MM**	**† Datel (3358)**	
		1.5	2350 *		x	x							x	x	x	**ADC803C**	**Burr-Brown (3347)**	
		2	1750	x	x	x	x	x			x		x	x		ADS111MC	Datel	
				x	x	x	x	x			x		x	x		**ADS111MM**	**† Datel (3358)**	
		8	1500			x	x	x								**ADC-HZ12B**	**Datel (3358)**	35
			2000			x	x	x					x	x	x	ADCHZ12BMC	Datel	
						x	x	x					x	x	x	ADCHZ12BMM	† Datel	
		9	2150			x	x				x		x	x	x	**ADCHS12BMC**	**Datel (3358)**	
						x	x				x		x	x	x	**ADCHS12BMM**	**† Datel (3358)**	
		20	1450	x	x					x	x		x	x		**HDAS16/883B**	**† Datel (3359)**	40
				x	x					x	x		x	x		**HDAS8/883B**	**† Datel (3359)**	
			1500			x	x	x								**ADC-HX12B**	**Datel (3358)**	
			2000			x	x	x					x	x	x	ADCHX12BGC	Datel	
		200	210	x										x	x	ADC1210	† National	
				x										x	x	ADC1210C	National	45
		350	2100	x				x								**ADC530C**	**Datel (3358)**	
				x				x								**ADC530M**	**Datel (3358)**	
	1/2	0.625	700	x						x	x			x		**CAT5412**	**Catalyst Semi (3352)**	

(Continued)

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INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12	1/2																(Cont'd)	
		1	850	x	x						x			x		S5412	◊† Gould AMI	
		7.2	250	x	x						x			x	x	S5012	◊† Gould AMI	
	0.5	17	15	x						4			x	x		**ADC7802**	**◊ Burr-Brown (3346)**	
	1	—	500						x			x		x		ADC7109	Datel	
			6100				x	x			x		x			**ADC603K**	**Burr-Brown (3347)**	5
							x	x			x		x			**ADC603S**	**† Burr-Brown (3347)**	
			7000	x				x								**ADC604K**	**Burr-Brown (3347)**	
		0.1		x									x			**AD9005**	**AD (3225, 3227)**	
			6	x				x			x		x	x		CLC925	‡ Comlinear	
				x				x			x		x	x		CLC926	‡ Comlinear	10
			3500	x							x		x	x		SP9560	† Sipex-HSD	
			5500	x	x		x	x			x					ADC00110	† ILC-DDC	
				x	x		x	x			x					ADC00111	† ILC-DDC	
			6100					x			x		x	x		**ADC603**	**Burr-Brown (3347)**	
								x			x		x	x		**ADC603SH**	**† Burr-Brown (3347)**	15
		0.2		x												CAV1205	AD	
			4.2 *	x	x	x	x				x					**ADS131MC**	**Datel (3358)**	
			6100					x			x		x	x		**ADC604**	**Burr-Brown (3347)**	
		0.4	1095	x	x						x		x	x		**MN6231S**	**† MicroNet (3546)**	
			2560 *		x						x		x	x		**MN5249**	**MicroNet (3547)**	20
					x						x		x	x		**MN5249H**	**† MicroNet (3547)**	
		0.5		x				x								**AD671**	**AD (3227, 3279)**	
				x												**AD671-500**	**AD (3227, 3279)**	
			2100	x	x								x	x		4193	† TeledyneS	
				x	x								x	x		4195	† TeledyneS	25
			3150			x	x	x			x		x	x		4199	† TeledyneS	
			3558				x	x			x		x	x		**MN6249**	**† MicroNet (3556)**	
			4300	x	x		x	x	x		x	x			x	ADC00300	† ILC-DDC	
		0.75		x												**AD671-750**	**AD (3227, 3279)**	
		0.8	3150			x	x	x			x		x	x		4198	† TeledyneS	30
		1		x												**AD7586**	**AD (3280)**	
				x												**AD7886**	**AD (3278)**	
			1700		x	x								x		**ADC601**	**Burr-Brown (3347)**	
					x	x							x	x	x	**ADC601J**	**Burr-Brown (3347)**	
		1.5	3050			x	x	x					x	x	x	ADC00403-103	† ILC-DDC	35
						x	x	x					x	x	x	ADC00403-203	ILC-DDC	
						x	x	x					x	x	x	ADC00404-103	† ILC-DDC	
						x	x	x					x	x	x	ADC00404-203	ILC-DDC	
		2	2200	x	x			x					x	x	x	ADC817AMM	† Datel	
			2700	x	x			x					x	x	x	ADH8516-11	ILC-DDC	40
		2.5	3275	x	x								x	x	x	4133	TeledyneS	
		3		x											x	**ADC7573**	**AD (3281)**	
				x				x								**AD7572A**	**AD (3227, 3279)**	
			215	x		x	x	x			x		x			ADS7800J	Burr-Brown	
				x									x	x		MAX162BC	◊ Maxim	45
				x									x	x		MAX162BI	Maxim (Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12	1	3	215														(Cont'd)	
				x									x	x		MAX162BM †	Maxim	
				x									x	x		MAX162CC ◊	Maxim	
				x									x	x		MAX162CI	Maxim	
				x									x	x		MAX162CM †	Maxim	
		3.5	3275	x	x			x					x	x	x	4132	TeledyneS	5
		4		x									x			AD1678	AD	
				x									x			**AD678**	**AD (3225, 3227)**	
		5	100 *										x			**AD7572J**	**AD (3228)**	
													x			**AD7572S †**	**AD (3228)**	
			135 *													PM7572FS05 ◊	AD	10
																PM7572F05	AD	
			215	x									x		x	MAX170B ◊†	Maxim	
				x									x	x		MX7572A05	Maxim	
				x									x	x		MX7572B05	Maxim	
				x									x	x		MX7572J05 ◊	Maxim	15
				x									x	x		MX7572K05 ◊	Maxim	
				x									x	x		MX7572S05 †	Maxim	
				x									x	x		MX7572T05 †	Maxim	
		5.68	265	x			x	x					x		x	MAX171BC	Maxim	
		7		x									x			**AD1341**	**AD (3283)**	20
													x	x		HI1-774J-5	Harris	
													x	x		HI1-774T-2	Harris	
													x	x		HI1-7745-2	Harris	
			215	x							x		x	x		MAX163B ◊†	Maxim	
				x							x		x	x		MAX164B ◊†	Maxim	25
				x							x		x	x		MAX167B ◊†	Maxim	
		7.5		x									x			AD7874	AD	
		8		x									x			**AD7870**	**AD (3225, 3228)**	
				x									x			**AD7878**	**AD (3225, 3228)**	
			150	x			x	x					x			MAX174CC	Maxim	30
				x			x	x					x			MAX174CM †	Maxim	
			450	x			x	x						x		**MN774AJ**	**MicroNet (3547)**	
				x			x	x						x		**MN774AS †**	**MicroNet (3547)**	
				x			x	x						x		**MN774AS/B †**	**MicroNet (3547)**	
				x			x	x						x		**MN774AT †**	**MicroNet (3547)**	35
				x			x	x						x		**MN774AT/B †**	**MicroNet (3547)**	
		8.33	180	x				x			x					MAX177C	Maxim	
				x				x			x					MAX177M	Maxim	
		8.5	450	x	x								x	x		**ADC774JH**	**Burr-Brown (3346)**	
													x	x		**ADC774JP**	**Burr-Brown (3346)**	40
													x	x		**ADC774SH †**	**Burr-Brown (3346)**	
		10		x									x			**ADADC85**	**AD (3228)**	
				x									x			AD1674	AD	
				x									x			**AD7772**	**AD (3228)**	
											x		x	x		MN6233 †	MicroNet	45
				x										x		**MN6774**	**MicroNet (3546)**	
			215	x									x	x		MAX172B ◊†	Maxim	
			600	x				x					x	x		AM6112	AMD	
			660		x						x		x	x		**ADS807J**	**Burr-Brown (3346)**	
					x						x		x	x		**ADS808J**	**Burr-Brown (3346)**	50

(Continued)

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INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
12	1															(Cont'd)		
		12		x												**AD7880**	**AD (3281)**	
			85	x		x	x	x								ADC912F	AD	
				x		x	x	x								ADC912H	AD	
			135 *													PM7572FS12 ◊	AD	
																PM7572F12	AD	5
			215	x									x	x		MX7572A12	Maxim	
				x									x	x		MX7572B12	Maxim	
				x									x	x		MX7572J12 ◊	Maxim	
				x									x	x		MX7572K12 ◊	Maxim	
				x									x	x		MX7572S12 †	Maxim	10
				x									x	x		MX7572T12 †	Maxim	
		13		x									x			**AD5210**	**AD (3228)**	
				x									x			NE5210	Signetics	
		14	40	x		x	x	x			x			x	x	ADC1241C	National	
				x		x	x	x			x			x	x	ADC1241CM †	National	15
		15		x									x			**AD1334**	**AD (3225, 3231)**	
				x									x			**AD674A**	**AD (3228)**	
			15	x				x						x		CA3312	Harris	
				x				x						x		CA3312A	Harris	
			150	x	x						x		x	x		ADC674ZB	Datel	20
				x	x						x		x	x		ADC674ZC	Datel	
				x			x	x					x			MAX674AJ	Maxim	
				x			x	x					x			MAX674AS †	Maxim	
			450	x	x								x	x		**ADC674AJ**	**Burr-Brown (3346)**	
				x	x								x	x		**ADC674AS †**	**Burr-Brown (3346)**	25
				x			x	x						x		**MN674AJ**	**MicroNet (3547)**	
				x			x	x						x		**MN674AS †**	**MicroNet (3547)**	
				x			x	x						x		**MN674AS/B †**	**MicroNet (3547)**	
				x			x	x						x		**MN674AT †**	**MicroNet (3547)**	
				x			x	x						x		**MN674AT/B †**	**MicroNet (3547)**	30
			720	x	x								x	x		HI674AJD-5	Harris	
				x	x								x	x		HI674ASD-2 †	Harris	
				x	x								x	x		HI674ASD/883 †	Harris	
			750	x	x					16	x		x	x		SP9472DAS †	Sipex-HSD	
				x	x					8	x		x	x		SP9473DAS †	Sipex-HSD	35
			1095	x	x						x		x	x		**MN6231J**	**MicroNet (3546)**	
					x						x		x	x		**MN6232J**	**MicroNet (3546)**	
					x						x		x	x		**MN6232S †**	**MicroNet (3546)**	
		20	66	x	x					x	x					DAS862 ◊†	Adv Analog	
		25	150	x	x						x		x	x		ADC574C	Datel	40
				x			x	x					x			MAX574AJ	Maxim	
				x			x	x					x			MAX574AS †	Maxim	
			450	x	x								x	x		**ADC574AJ**	**Burr-Brown (3346)**	
				x	x								x	x		**ADC574AT †**	**Burr-Brown (3346)**	
			720	x	x								x	x		HI574AJD-5	Harris	45
				x	x								x	x		HI574ASD-2 †	Harris	
				x	x								x	x		HI574ASD/883 †	Harris	
				x	x								x	x		MP574AJ	MicroPwr	
				x	x								x	x		MP574AS	MicroPwr (Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
12	1	25	720													(Cont'd)		
				x	x								x	x		TP574AJ	TeledyneS	
				x	x								x	x		TP574AS	† TeledyneS	
			725	x	x								x			**AD574AJ**	◇ **AD (3228)**	
				x	x								x			**AD574AS**	◇† **AD (3228)**	
			750	x	x					16	x		x	x		SP9462DAS	† Sipex-HSD	5
				x	x					8	x		x	x		SP9463DAS	† Sipex-HSD	
			950	x						x	x		x	x		**MN7145J**	**MicroNet (3546)**	
				x						x	x		x	x		**MN7145S**	**† MicroNet (3546)**	
				x						x	x		x	x		**MN7145S/B**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7146J**	**MicroNet (3546)**	10
					x					x	x		x	x		**MN7146S**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7146S/B**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7147J**	**MicroNet (3546)**	
					x					x	x		x	x		**MN7147S**	**† MicroNet (3546)**	
					x					x	x		x	x		**MN7147S/B**	**† MicroNet (3546)**	15
			1095	x	x						x		x	x		**MN6227J**	**MicroNet (3546)**	
				x	x						x		x	x		**MN6227S**	**† MicroNet (3546)**	
					x						x		x	x		**MN6228J**	**MicroNet (3546)**	
					x						x		x	x		**MN6228S**	**† MicroNet (3546)**	
		27.5	300					x	x	x	x		x	x		ML2200C	MicroLinear	20
								x	x		x			x		ML2230C	MicroLinear	
								x	x		x			x		ML2233C	MicroLinear	
		30		x									x			**ADADC80**	**AD (3228)**	
			750	x	x								x	x		HS574AJ	Sipex-HSD	
				x	x								x	x		HS574ASB	† Sipex-HSD	25
			780	x	x								x		x	**AD574J**	◇ **AD (3228)**	
			800	x	x						x		x	x		HS9474J	Sipex-HSD	
				x	x						x		x	x		HS9474S	† Sipex-HSD	
				x	x						x		x	x		HS9474SB	† Sipex-HSD	
				x	x						x		x	x		HS9474T	† Sipex-HSD	30
			1100	x	x					x	x		x	x		HS9410J	Sipex-HSD	
				x	x					x	x		x	x		HS9410SB	† Sipex-HSD	
			1340	x	x					x	x		x	x		HS9408J	Sipex-HSD	
				x	x					x	x		x	x		HS9408SB	† Sipex-HSD	
			1520	x	x					x	x		x	x		HS9404J	Sipex-HSD	35
				x	x					x	x		x	x		HS9404SB	† Sipex-HSD	
		35		x									x			**AD574A**	**AD (3228)**	
		40		x				x								**AD363R**	**AD (3226, 3231)**	
		45												x		µPD650D	NEC	
		50		x				x								**AD364R**	**AD (3226, 3231)**	40
				x									x			**AD5200**	**AD (3228)**	
			725	x										x	x	AD5204B	AD	
		100											x			**AD7578K**	**AD (3228)**	
													x			**AD7578T**	**† AD (3228)**	
		175	80				x						x	x		HS5251B	† Sipex-HSD	45
	1/2	7.2	250	x	x						x			12	x	CS5012A	† Crystal	
	1.25		400	x				x			x		x			**ADS602K**	**Burr-Brown (3347)**	
		0.1	8500				x	x			x		x	x		ADC600	Burr-Brown	
		1	2300			x	x				x		x	x		**ADS602**	**Burr-Brown (3347)**	
	1.5		400	x				x			x		x			**ADS602J**	**Burr-Brown (3347)**	50
	1 1/2	2400	50	x										x		ADCET12BC	Datel	

(Continued)

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
CTC—Compl. 2's Compl.
Int. Ref.—Internal Reference
Mux. In—Multiplexed Inputs
S&H—Sample and Hold
Par. Out—Parallel Output
Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
12																	(Cont'd)	
	2	0.1	4.3 *		x		x				x					**ADS130MM**	**† Datel (3358)**	
		0.2	4.2 *	x	x	x	x				x					**ADS131MM**	**† Datel (3358)**	
		200	210	x										x	x	ADC1211	† National	
				x										x	x	ADC1211C	National	
	4	10	450 *			x	x	x					x	x	x	**ADC84K-10**	**Burr-Brown (3346)**	5
12 Plus Sign																		
	—	160 ms	—	x												AD7552	AD	
	1/2	100 *	15 *					x						x		ADC1205BC	National	
								x						x		ADC1205BC-1	National	
								x						x		ADC1225BC	National	
								x						x		ADC1225BC-1	National	10
	1	100 *	15 *					x						x		ADC1205CC	National	
								x						x		ADC1205CC-1	National	
								x						x		ADC1225CC	National	
								x						x		ADC1225CC-1	National	
12 (2 device set)																		
	1/2	15	785	x									x	x	x	HS5210B	† Sipex-HSD	15
				x									x	x	x	HS5210C	Sipex-HSD	
				x									x	x	x	HS5211B	† Sipex-HSD	
				x									x	x	x	HS5211C	Sipex-HSD	
				x									x	x	x	HS5212B	† Sipex-HSD	
				x									x	x	x	HS5212C	Sipex-HSD	20
				x										x	x	HS5213B	† Sipex-HSD	
				x										x	x	HS5213C	Sipex-HSD	
				x										x	x	HS5214B	† Sipex-HSD	
				x										x	x	HS5214C	Sipex-HSD	
				x										x	x	HS5215B	† Sipex-HSD	25
				x										x	x	HS5215C	Sipex-HSD	
				x									x	x	x	HS5216B	† Sipex-HSD	
				x									x	x	x	HS5216C	Sipex-HSD	
		250000	360	x					x			x	x	x		ICL8052A	Harris	
12 (3-Digit BCD)																		
	1/4	1200	20									x		x		ADCEK12DC	Datel	30
	1	6000 *	50									x	x		x	AD2020	AD	
13	1/2	40000 *	64					x						x		MP7550B	MicroPwr	
			72					x				x		x	x	AD7550B	AD	
13 (D/A, A/D)																		
	1/2	30		x												MC145402	Motorola	
14			260	x									x		x	TLC32040M	◊† TI	35
				x									x		x	TLC32044M	◊† TI	
	1/2)	2	2900	x	x	x	x	x			x		x	x		**ADS928MC**	**Datel (3358)**	
	1/2	—	—	x	x								x		x	TDA1534	Signetics	
			2735	x	x			x		x	x		x	x		DAS5714	Adv Analog	
		1	2700	x	x			x					x	x		**ADC908MC**	**Datel (3358)**	40
				x	x			x					x	x		**ADC908MM**	**† Datel (3358)**	
		2	2900	x	x	x	x	x			x		x	x		**ADS928MM**	**† Datel (3358)**	
		7	2000	x				x					x	x		MP2734	Analogic	
		10	2400	x				x					x	x	x	ADC2714	Adv Analog	
			3000	x	x			x					x	x	x	MP8014	Analogic	45
		14	250	x				x								S5014-K14	Gould AMI	
		14.25	250	x	x						x		x	x		ADC3201	Analogic	
				x	x						x		x	x		ADC3202	Analogic	
				x	x						x			x	x	CS5014	Crystal	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Conversion Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
14	1/2																(Cont'd)	
		28	250	x				x								S5014-K28	Gould AMI	
		40		x										x		ICL7115	Harris	
		125 kHz									x					HAS1409	AD	
		250	300				x						x	x	x	MN5260	MicroNet	
	3/4	0.5	4.1	x	x			x			x		x	x		ADC3110	Analogic	5
	1/2	14.25	250	x	x						x			x	x	S5014	◊† Gould AMI	
	0.5	44	900	x	x			x			x		x	x		ADAM824B	Analogic	
				x	x			x			x		x	x		ADAM834B	Analogic	
	1	0.1		x									x			**AD9014**	**AD (3276)**	
		0.2	6100					x			x		x	x		**ADC614**	**Burr-Brown (3347)**	10
		2	3000	x							x		x	x		SP9478	† Sipex-HSD	
				x									x	x		SP9588	† Sipex-HSD	
		2.4	925	x	x									x		**ADC914MC**	**Datel (3358)**	
				x	x									x		**ADC914MM**	**† Datel (3358)**	
			1800	x	x		x	x						x		**ADS924MC**	**Datel (3358)**	15
				x	x		x	x						x		**ADS924MM**	**† Datel (3358)**	
		10		x									x			AD1679	AD	
				x				x								AD1779	AD	
				x									x			**AD679**	**AD (3226, 3229)**	
				x				x								**AD779**	**AD (3226, 3229)**	20
				x									x			**AD7871**	**AD (3226, 3229)**	
				x				x								**AD7872**	**AD (3226, 3229)**	
		12		x									x			**ADC1131**	**AD (3229)**	
		25		x									x			**ADC1130**	**AD (3229)**	
		40		x									x			**DAS1152**	**AD (3226, 3229)**	25
		55		x									x			**DAS1157**	**AD (3226, 3229)**	
14 (2 device set)																		
	1/2	250000	40	x					x			x	x	x		ICL7104-14	Harris	
14 (3 1/2-Digit BCD)																		
	1/2	10000	20											x		4146	TeledyneS	
15	1/4	5	1675				x						x	x		MP2735A-2	Analogic	
			1975				x				x		x	x		MP2735A-1	Analogic	30
	1/2	6.8	1750				x				x		x	x		ADC2735	Adv Analog	
		15	3000	x	x			x					x	x	x	MP8015	Analogic	
		25000	20	x					x			x		x		TSC850	TeledyneS	
		33000	20	x					x	x		x	x	x		TSC804	TeledyneS	
	0.5	50	900	x	x			x			x		x	x		ADAM825B	Analogic	35
				x	x			x			x		x	x		ADAM835B	Analogic	
	1	50		x									x			**DAS1153**	**AD (3226, 3229)**	
		55		x									x			**DAS1158**	**AD (3226, 3229)**	
		400 ms	20	x			x	x								ADC800	Datel	
	2	400000	20	x					x						x	TSC800C	◊ TeledyneS	40
16	1/4	1.5	2800	x	x			x					x	x		AB3XX16	Analogic	
			3925	x	x			x			x		x	x		AB4XX16	Analogic	
		1.8	4300	x	x			x			x		x	x		AB40216	Analogic	
				x	x			x			x		x	x		AB40316	Analogic	
				x	x			x			x		x	x		ADAM-846	Analogic	45
		5	1675				x						x	x		AM30516	Analogic	
			1975				x				x		x	x		AM40516	Analogic	
	1/2		2735	x	x			x		x	x		x	x		DAS5716	Adv Analog	
		2			x		x			x	x			x		ADC-1600-2	Adv Analog	
				x	x	x										ADC1600-2	Adv Analog	50
		8.1	300	x	x			x		x	x				x	CS5126	◊† Crystal	

(Continued)

Bin.—Binary Off.—Offset Compl.—Complementary Magn.—Magnitude CTC—Compl. 2's Compl. Int. Ref.—Internal Reference Mux. In—Multiplexed Inputs S&H—Sample and Hold Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
16	1/2																(Cont'd)	
		10	1400 *	x						x				x		HS9588	Sipex-HSD	
		15	1400	x	x					x	x		x	x		SP9488	† Sipex-HSD	
			1520			x	x	x			x		x	x		HS9476	† Sipex-HSD	
		16	1500			x	x				x		x	x	x	**MN6295K**	**MicroNet (3546)**	
						x	x				x		x	x	x	**MN6295T**	**† MicroNet (3546)**	5
						x	x				x		x	x	x	**MN6295T/B**	**† MicroNet (3546)**	
							x				x		x	x	x	**MN6296K**	**MicroNet (3546)**	
							x				x		x	x	x	**MN6296T**	**† MicroNet (3546)**	
							x				x		x	x	x	**MN6296T/B**	**† MicroNet (3546)**	
			3000	x	x			x					x	x	x	A8016-16	Adv Analog	10
		16.25	250	x	x						x			x	x	CS5016	Crystal	
		17	250	x	x						x		x	x		ADC4201	Analogic	
				x	x						x		x	x		ADC4202	Analogic	
				x	x						x		x	x		ADC4203	Analogic	
		20	450					x		x	x		x		x	CS5327	Crystal	15
			3000	x	x			x					x	x	x	A8016	Adv Analog	
		32	3000	x	x			x					x	x	x	MP8016	Analogic	
		50	1000				x	x					x	x	x	**ADC71A**	**Burr-Brown (3346)**	
							x	x					x	x	x	**ADC71B**	**Burr-Brown (3346)**	
		100	1200	x	x			x						x		HS9516-4	Sipex-HSD	20
				x				x					x	x		HS9516B-6	† Sipex-HSD	
				x				x					x	x		HS9516C-6	Sipex-HSD	
	3/4	1.5	4000	x	x			x			x		x	x		AB40416	Analogic	
				x	x			x			x		x	x		AB40516	Analogic	
				x	x			x			x		x	x		AM40016	Analogic	25
				x	x			x			x		x	x		AM40116	Analogic	
		2.5	2.6	x	x			x			x		x	x		ADC4342	Analogic	
				x	x			x			x		x	x		ADC4346	Analogic	
		65	900					x			x		x	x		ADC4110	Analogic	
								x			x		x	x		ADC4111	Analogic	30
	0.5	2	2450	x	x			x			x		x	x		ADC4340	Analogic	
	0.75	1.5	2800	x	x			x					x	x		ADAM826-3	Analogic	
			3200	x	x			x					x	x		ADAM826-2	Analogic	
			3900	x	x			x			x		x	x		ADAM826-1	Analogic	
			4000		x			x			x		x	x		AM41016	Analogic	35
					x			x			x		x	x		AM41116	Analogic	
					x			x			x		x	x		AM41216	Analogic	
		3	2450	x	x			x			x		x	x		AM40316	Analogic	
	1		450					x		x	x		x		x	CS5326	Crystal	
		0.078	125	x	x								x		x	MC145071	◊ Motorola	40
		0.25	740	x			x	x			x					MN6400J	MicroNet	
				x			x	x			x					MN6400K	MicroNet	
				x			x	x			x					MN6400S	MicroNet	
				x			x	x			x					MN6400T	MicroNet	
	1*	1.5	950										x			**ADC701K**	**Burr-Brown (3347)**	45
	1	1.5	2300	x	x								x			**ADC701**	**Burr-Brown (3347)**	
		2 MSPS	200 *	x	x									x		CS5317	Crystal	
		3		x				x					x			**AD7701**	**AD (3229, 3280)**	
		5	700								x				x	ZPP1001	Burr-Brown	
		8	350		x			x		x	x				x	CS5101	◊† Crystal (Continued)	50

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Analog to Digital Converters (Cont'd)

Binary Output (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
16	1																(Cont'd)	
		10		x									x			**AD1377**	**AD (3229)**	
				x												**AD1876**	**AD (3277)**	
		16	1500			x	x				x		x	x	x	**MN6295J**	**MicroNet (3546)**	
						x	x				x		x	x	x	**MN6295S**	**† MicroNet (3546)**	
						x	x				x		x	x	x	**MN6295S/B**	**† MicroNet (3546)**	5
							x				x		x	x	x	**MN6296J**	**MicroNet (3546)**	
							x				x		x	x	x	**MN6296S**	**† MicroNet (3546)**	
							x				x		x	x	x	**MN6296S/B**	**† MicroNet (3546)**	
		16.25	250	x	x						x			x	x	S5016	◊† Gould AMI	
		17		x									x			**AD1378**	**AD (3279)**	10
	1 *	17	1550			x	x	x					x	x	x	**PCM75K**	**Burr-Brown (3347)**	
	1	20		x									x			**AD1380**	**AD (3226, 3229)**	
		35		x									x			**ADC1140**	**AD (3229)**	
		50		x									x			**ADADC71**	**AD (3229)**	
			—	x		x	x	x						x	x	**ADADC71K**	**AD (3229)**	15
				x									x			**ADADC72**	**AD (3229)**	
			—	x		x	x	x						x	x	**ADADC72K**	**AD (3229)**	
			300	x			x	x								MN5285	MicroNet	
				x			x	x								MN5286	MicroNet	
				x			x	x								MN5287	MicroNet	20
		55			x								x			**DAS1159**	**AD (3226, 3229)**	
		70		x									x			ADC1143	AD	
		80	40		x			x		x	x				x	CS5102	◊† Crystal	
		100	1200	x	x			x						x		HS9516-5	Sipex-HSD	
				x				x					x	x		HS9516B-5	† Sipex-HSD	25
				x				x					x	x		HS9516C-5	Sipex-HSD	
		250	40	x	x						x	x			x	CS5501	◊† Crystal	
	2	1.5	950										x			**ADC701J**	**Burr-Brown (3347)**	
		2		x									x			**AD1382**	**AD (3277)**	
		5	20	x		x		x							x	**PCM78P**	**Burr-Brown (3347)**	30
		9	560					x				x	x		x	CXA1144S	◊ Sony	
								x				x	x		x	CX20018	Sony	
		14	645	x	x	x	x	x					x	x	x	**AD1376**	**AD (3229)**	
		15	645 *	x			x	x					x	x	x	**ADC700**	**Burr-Brown (3346)**	
		16	250	x				x								S5016-J16	Gould AMI	35
				x				x								S5016-K16	Gould AMI	
		17	525 *			x	x						x	x	x	ADC76K	Burr-Brown	
	2 *	17	525 *			x	x	x					x	x	x	**PCM75J**	**Burr-Brown (3347)**	
	2	17	1000	x		x	x	x					x	x	x	HS9576K	Sipex-HSD	
				x		x	x	x					x	x	x	HS9576T/B	Sipex-HSD	40
			1200	x	x								x	x	x	**MN5295**	**MicroNet (3547)**	
				x	x								x	x	x	**MN5295H**	**† MicroNet (3547)**	
				x	x								x	x	x	**MN5296**	**MicroNet (3547)**	
				x	x								x	x	x	**MN5296H**	**† MicroNet (3547)**	
		32	250	x				x								S5016-J32	Gould AMI	45
				x				x								S5016-K32	Gould AMI	
		35	1600	x	x			x					x			ADC1140	Adv Analog	
		40	1000			x	x	x					x	x	x	**MN5290**	**† MicroNet (3547)**	
						x	x	x					x	x	x	**MN5291**	**† MicroNet (3547)**	

(Continued)

Bin.—Binary Off.—Offset Compl.—Complementary Magn.—Magnitude CTC—Compl. 2's Compl. Int. Ref.—Internal Reference Mux. In—Multiplexed Inputs S&H—Sample and Hold Par. Out—Parallel Output Ser. Out—Serial Output

INTERFACE—Analog to Digital Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Conversion Time ±½LSB µS	Power Dis. mW (max.)	Bin. Output	Off. Bin. Output	Compl. Bin. Output	Compl. Off. Bin. Output	CTC or 2's Compl. Output	Sign. Magn. Output	Mux. In.	S&H	Integrating	Int. Ref.	Par. Out	Ser. Out	Device	Source	Line
Binary Output																	**(Cont'd)**	
16	2	40															(Cont'd)	
			1500	x	x						x		x	x	x	**MN6290K**	**MicroNet (3546)**	
				x	x						x		x	x	x	**MN6290T**	**† MicroNet (3546)**	
					x						x		x	x	x	**MN6291K**	**MicroNet (3546)**	
					x						x		x	x	x	**MN6291T**	**† MicroNet (3546)**	
		50	—	x		x	x	x						x	x	**ADADC71J**	**AD (3229)**	5
				x		x	x	x						x	x	**ADADC72J**	**AD (3229)**	
			525 *			x	x	x					x	x	x	**ADC71K**	**Burr-Brown (3346)**	
		60	200			x	x	x					x	x	x	**MN5284**	**MicroNet (3547)**	
		100	1200	x	x			x						x		HS9516-6	Sipex-HSD	
				x				x					x	x		HS9516B-4	† Sipex-HSD	10
				x				x					x	x		HS9516C-4	Sipex-HSD	
		5000		x	x					4					x	CS5505	† Crystal	
	4	2.5	8000					x					x	x		ADC974	Datel	
		15 (14B)		x									x	x	x	AD376J	AD	
		17	525 *			x	x						x	x	x	ADC76J	Burr-Brown	15
			1000	x		x	x	x					x	x	x	HS9576J	Sipex-HSD	
				x		x	x	x					x	x	x	HS9576S/B	† Sipex-HSD	
		40	1500	x	x						x		x	x	x	**MN6290J**	**MicroNet (3546)**	
				x	x						x		x	x	x	**MN6290S**	**† MicroNet (3546)**	
					x						x		x	x	x	**MN6291J**	**MicroNet (3546)**	20
					x						x		x	x	x	**MN6291S**	**† MicroNet (3546)**	
		50	525 *			x	x	x					x	x	x	**ADC71J**	**Burr-Brown (3346)**	
			1440			x	x	x					x	x	x	**MN5282**	**MicroNet (3547)**	
		100	1440			x	x	x					x	x	x	**MN5280**	**MicroNet (3547)**	
	12	20		x							x		x	x		MB87020	◊ Fujitsu	25
16 (2 device set)																		
	1/2	250000	40	x					x			x	x	x		ICL7104-16	Harris	
17	1/16	3333	600		x			x	x			x	x	x		AH30217	Analogic	
	1/2	400	1550						x			x	x	x		MP8037	Analogic	
18	1/2	20	450					x		x	x		x		x	CS5329	Crystal	
	3/4	5	2	x	x	x	x	x			x		x	x		ADC5030	Analogic	30
		6.9	2	x	x	x	x	x			x		x	x		ADC5020	Analogic	
	1	10		x				x								AD1330	AD	
	2	20	450					x		x	x		x		x	CS5328	Crystal	
18 (dual)																		
	2	5		x				x							x	**PCM1750**	**Burr-Brown (3347)**	
20	2			X												**AD7703**	**AD (3280)**	35
	4		25		x						x				x	CS5503	◊† Crystal	
20 Floating Point																		
	512	3														**MN5420**	**MicroNet (3546)**	
22	1/2	50 ms		x								x	x	x		**AD1175**	**AD (3229)**	
	2	320	330	x	x											ADC100	Thaler	
				x	x											ADC100M	† Thaler	40
	6				x							x		x		ADC100C	Thaler	
24		250	80				x								x	CS5322	Crystal	
							x								x	CS5323	Crystal	
		1000	180				x									CS5324	Crystal	
12	1	3		x												**ADC922**	**AD (3281)**	45

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Analog to Digital Converters (Cont'd)

Decimal Output

Digits	Device	Source	Line
LCD Bargraph Output, 2.5% Resolution	TSC826	◊ TeledyneS	
Dual Slope, Integrating, Analog Subsystem	TSC500	TeledyneS	
2– 1/2 Digits, LCD Drive	TSC806	TeledyneS	
	TSC807	TeledyneS	
3 1/2 Digit LCD Display Driver	NJU9201B	NJR	5
	NJU9203B	NJR	
3 1/2 Digit LED Display Driver	NJU9202B	NJR	
	NJU9204B	NJR	
3 1/2 Digit Multimeter LSI	NJU9207	NJR	
	NJU9208	NJR	10
3 3/4 Digit Multimeter LSI	NJU9210	NJR	
3 3/4 Digits, Autoranging, LCD Drive	ICL7139	Harris	
	ICL7149	Harris	
3 Digits, Integrating	TSC827C	TeledyneS	
3 Digits, Dual Slope, 2 Device Sets	CA3161	Harris	15
	CA3162	Harris	
	CA3162A	Harris	
3 1/2	MAX140C	Maxim	
	MAX140E	Maxim	
3 1/2 Digit, Integrating	MAX130	◊ Maxim	20
	MAX131	◊ Maxim	
	MAX138	◊ Maxim	
	MAX139	◊ Maxim	
3 1/2 Digit LDC Display Drive, Autoranging	TSC815	◊ TeledyneS	
3 1/2 Digits, Auto-Ranging	TSC805	◊ TeledyneS	25
3 1/2 Digits, Drives LCD DVM Display	ZN450	Plessey	
	ZN451	Plessey	
3 1/2 Digits, Integrating	ICL7106	◊ Harris	
	ICL7107	Harris	
	ICL7116	◊ Harris	30
	ICL7117	Harris	
	ICL7126	Harris	
	ICL7136	Harris	
	ICL7137	Harris	
	ICL7106	◊ Maxim	35
	ICL7107	◊ Maxim	
	ICL7116	◊ Maxim	
	ICL7117	◊ Maxim	
	ICL7126	◊ Maxim	
	ICL7136	◊ Maxim	40
	MC14433	Motorola	
	ADC3511	National	
	ADD3501	National	
	KS7126	Samsung	
	TSC14433	◊ TeledyneS	45
	TSC14433A	◊ TeledyneS	
	TSC14433B	◊ TeledyneS	
	TSC7106	◊ TeledyneS	
	TSC7106A	◊ TeledyneS	
	TSC7107	TeledyneS	50
	TSC7107A	TeledyneS	
	TSC7116	◊ TeledyneS	
	TSC7116A	◊ TeledyneS	
	TSC7117	◊ TeledyneS	
	TSC7126	◊ TeledyneS	55
	TSC7126A	◊ TeledyneS	

(Continued)

Digits	Device	Source	Line
3 1/2 Digits, Integrating		(Cont'd)	
	TSC7136AC	TeledyneS	
	TSC7136AC/BI	TeledyneS	
	TSC7136C	TeledyneS	
	TSC810C	TeledyneS	60
	TSC810C/BI	TeledyneS	
	TSC811C	TeledyneS	
	TSC811C/BI	TeledyneS	
	TSC816C	TeledyneS	
3 1/2 Digits, Integrating, LCD Drive, Low Power, Low Noise, Data Hold	MAX136	Maxim	65
3 1/2 Digits, Integrating, LED Drive, Low Power, Low Noise	ICL7137	◊ Maxim	
3 1/2 Digits, Integrating, 2 Device Sets	ICL8052	Harris	
	ICL8068	Harris	
	LD110C	Siliconix	
	LD111AC	Siliconix	70
3 1/2 Digits, Dual Slope	TSC8750	TeledyneS	
3 3/4 Digits, Integrating	ADC3711	National	
	ADD3701	National	
	ZNA216E	Plessey	
	ZNA216J	† Plessey	75
3– 1/2 Digit LCD Display Drive, 40-Segment Bar Graph, Autoranging	TSC818	◊ TeledyneS	
3– 1/2 Digits, Integrating, LCD Drive with Frequency Counter and Logic Probe	TSC821	◊ TeledyneS	
3– 3/4 Digits, Integrating, LCD Drive with Frequency Counter and Logic Probe	TSC820	◊ TeledyneS	
4 1/2 Digits, Integrating	TSC500C	TeledyneS	
	TSC7129C	TeledyneS	80
	TSC835	TeledyneS	
4 1/2 Digits, Integrating, for microprocessor or UART systems	ICL7135	Harris	
	SI7135	Siliconix	
	TSC7135	◊ TeledyneS	
4 1/2 Digits, Integrating, LCD Drive	ICL7129A	◊ Maxim	85
	MAX7129	◊ Maxim	
4 1/2 Digits, Integrating, BCD Output	ICL7135	◊ Maxim	
4 1/2 Digits, Successive Integration	ICL7129	Harris	
4 1/2 Digits, Dual Slope, 2 Device Sets	ICL8068A	Harris	
	LD120C	Siliconix	90
	LD121AC	Siliconix	
	LD122C	Siliconix	
7	TL507	TI	
10	TL505	TI	
10–13	TL501	TI	95
13 Digits, Integrating	TSC7109AC	TeledyneS	
	TSC7109AM	TeledyneS	
	TSC7109AM/883	† TeledyneS	
14	TL500	TI	
16 Digits, Integrating	TSC500AC	TeledyneS	100
101 Segment LCD Bargraph	ICL7182	Harris	

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INTERFACE—Digital to Analog Converters

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
3	1/2		450							x			x			4026	TeledyneS	
			750							x			x			4027	TeledyneS	
4	1/8	100		x	x			x		x						416BCD	Adv Analog	
	1/4	0.3	85		x					x	x		x			ZN434E	Plessey	
	1/2	0.020	430	x						x					x	MB40874	Fujitsu	5
		20	100	x			x	x								MB86260	Fujitsu	
	1	6–9	1200	x						x	x	x		x	x	Bt455	◊ Brooktree	
4 (triple)	1/2	0.005	1500	x						x		x				AD9702	AD	
4 (triple color video RAM/DAC)	1/8	0.0012 *	500 *	x						x	x		x		x	BT103	† Brooktree	
	1/2	0.0012 *	500 *	x						x	x				x	BT102	† Brooktree	10
4 (triple video)	1/8	0.005	1500	x								x	x			TDC1334	TRWLSI	
4 (triple video DAC)	1/4	0.008				x				x			x			ZN454CJ	Plessey	
4 (triple video 16x12 RAM DAC)	1/2	0.0003 *	1000	x						x	x		x	x	x	BT454	Brooktree	
4 (triple video 256x12 RAMDAC)	1/2	0.0003 *	1500	x						x	x			x	x	BT451	Brooktree	
4 (video)	1/2	0.05	800	x	x					x					x	AH8404T	† Analogic	15
		6.4	1125	x						x			x			HDG0407	AD	
4 (video DAC)	1/2	0.004		x	x					x		x				VDAC0405H	Adv Analog	
4 (video digital converter)	1/8	125 MHz	400	x								x			x	TDC1034	TRWLSI	
	1/2	0.004 *	1040				x					x			x	HDG0405	AD	
		0.005	2200		x							x			x	VDAC444E	Adv Analog	20
4 (Triple color RAM/DAC)	1/2	125 MHz	x													MC10320	Motorola	
4 (Triple color video)	1/2	0.01		x						x	x				x	RGBDAC3404A	† Adv Analog	
				x						x	x				x	RGBDAC3408	† Adv Analog	
		0.012		x						x	x				x	RGBDAC3400S	† Adv Analog	
				x						x	x				x	RGBDAC3405S	† Adv Analog	25
				x						x	x				x	VDAC3400S	† Adv Analog	
4 1/2	1/8	100		x	x			x		x						418BCD	Adv Analog	
6	—	2	120	x							x				x	MC144111	Motorola	
			185	x							x				x	MC144110	Motorola	
	1/8	3	250			x	x			x			x			DAC01Y	† AD	30
	1/4	3	250			x	x			x			x			DAC01B	† AD	
						x	x			x			x			DAC01C	AD	
						x	x			x			x			DAC01F	† AD	
						x	x			x			x			DAC01H	AD	
						x	x									µPC603	NEC	35
	1/2		200	x						x						TL5601C	TI	
		0.013	800	x							x					Bt476	Brooktree	
		0.025		x		x	x	x			x					CXD1170	◊ Sony	
		0.03	130	x						x	x				x	HA19508	◊ Hitachi	
		0.04	110	x						x	x					µPD6901C	NEC	40

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
6	1/2																(Cont'd)	
		0.05	225	x						x	x				x	HA19503	◊ Hitachi	
				x						x	x				x	HA19507	◊ Hitachi	
		1.0	25 *	x						x						ZN436E	Plessey	
				x						x						ZN436J	† Plessey	
		3	250			x	x			x			x			DAC01D	AD	5
		10	50	x			x	x		x						LC89060	Sanyo	
6 *	1/2	150	33	x						x	x		x		x	KDA0406	◊ Samsung	
6	0.5	0.015	1500	x						x	x				x	AT76C176-66	◊ ATMEL	
		0.02	1500	x						x	x				x	AT76C171-50	◊ ATMEL	
				x						x	x				x	AT76C176-50	◊ ATMEL	10
		0.025	1500	x						x	x				x	AT76C176-40	◊† ATMEL	
		0.028	1500	x						x	x				x	AT76C171-35	◊† ATMEL	
	1	-	800	x						x	x				x	BT471	Brooktree	
		0.05	300	x						x					x	MB40176	◊ Fujitsu	
		30 MSPS	220							x						MB40776	Fujitsu	15
	2		60	x						x	x			x	x	TDA8444	Signetics	
	3			x						x	x				x	TDA8442	Signetics	
6 (triple color video RAM DAC)																		
	1/2	35 MHz		x						x					x	IMSG170-35	SGS-Thomson	
		50 MHz		x						x					x	IMSG170-50	SGS-Thomson	
		80 MHz	800	x						x						AV3676	Avasem	20
6 (triple RAMDAC)																		
	1/2	13	1000	x							x					**ADV471**	◊ **AD**	**(3222)**
6 (triple video)																		
	1/2	0.02	1000	x			x	x		x	x					DAC0630	National	
				x			x	x		x	x					DAC0631	National	
	1	0.004	500	x							x		x			USC1863	◊‡ Universal	
6 (triple video RAMDAC)																		
	1	6	1.1	x							x				x	**ADV476K50**	**AD**	**(3222)** 25
				x							x				x	**ADV476K66**	**AD**	**(3222)**
		8	1.1	x							x				x	**ADV476K35**	**AD**	**(3222)**
6 (video)																		
	1/2	0.015		x				x								**ADV476-66**	**AD**	**(3222)**
		0.02		x				x								**ADV476-50**	**AD**	**(3222)**
		0.03		x				x								**ADV476-35**	**AD**	**(3222)** 30
6 (video DAC)																		
	1/2	0.006		x	x					x		x				VDAC0605H	Adv Analog	
6 (video digital converter)																		
	1/2	0.006 *	1350			x						x			x	HDG0605	AD	
6/8	1	-	800	x						x	x				x	BT478	Brooktree	
6/12-Binary Serial																		
	1/2	—	5							x	x			x	x	µA9706C	National	
6x3	1/2	0.0125	850	x						x				x	x	TMC0176-8	TRWLSI	35
		0.015	800	x						x				x	x	TMC0176-6	TRWLSI	
		0.025	750	x						x				x	x	TMC0171-4	TRWLSI	
			800	x						x				x	x	TMC0176-4	TRWLSI	
				x						x				x	x	TMC0176-5	TRWLSI	
		0.028	750	x						x	x			x	x	TMC0171	◊ TRWLSI	40
7	4	0.05		x						x	x	x	x		x	KSV3100AN-7	Samsung	
8	—	0.005	—	x								x	x	x		**AD9768**	◊† **AD**	**(3219)**
		0.008		x								x	x		x	AD9700B	◊ AD	
				x								x	x		x	AD9700S	◊† AD	
	1/16			x							x			x		IXDP610	IXYS	45
	1/8	0.1	5	x						x	x			x	x	MX7524	† Maxim	

(Continued)

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1/8																(Cont'd)	
		0.1 *	10 *	x	x	x	x				x			x	x	MP7524L	MicroPwr	
				x	x	x	x				x			x	x	MP7524U	† MicroPwr	
		0.1	30	x						x	x				x	MX7524C	Maxim	
				x						x	x				x	MX7524L	◊ Maxim	
				x						x	x				x	MX7524U	† Maxim	5
		0.15	1.0 *	x	x	x	x				x			x		MP7523L	MicroPwr	
			1.5 *	x	x	x	x				x			x		AD7523L	◊ AD	
				x	x	x	x				x			x		AD7523L	Harris	
			1.5	x	x	x	x				x			x		MX7523L	Maxim	
				x	x	x	x				x			x		MX7523U	† Maxim	10
		0.15 *	20 *	x	x					x	x			x	x	AD7524C	◊ AD	
				x	x	x	x				x			x	x	AD7524L	◊ AD	
				x	x	x	x			x	x			x	x	AD7524U	◊† AD	
			670	x	x	x	x				x			x		AD7523J	Harris	
		0.35	450	x						x	x			x	x	**PM7524A**	**† AD (3219)**	15
				x						x	x			x	x	**PM7524E**	**AD (3219)**	
				x						x	x			x	x	**PM7524G**	**AD (3219)**	
		0.8 *	15 *	x						x	x			x	x	MP7628L	MicroPwr	
				x						x	x			x	x	MP7628U	† MicroPwr	
		1	30	x						x	x			x		DAC0830	National	20
		10 *	20	x	x	x	x				x			x	x	MP7524C	MicroPwr	
	1/4	0.01	850	x								x				HDS0810E	AD	
				x								x				HDS0810EM	† AD	
				x								x				MC10318-9	Motorola	
		0.013	900	x							x					Bt475	Brooktree	25
		0.08	15	x	x	x	x			x	x			x	x	MP7528XC	MicroPwr	
				x	x	x	x			x	x			x	x	MP7528XL	MicroPwr	
				x	x	x	x			x	x			x	x	MP7528XU	† MicroPwr	
		0.085	33	x	x	x	x			x	x	x		x		IR9K08	Sharp	
		0.1	30	x						x	x				x	MX7524B	Maxim	30
				x						x	x				x	MX7524K	◊ Maxim	
				x						x	x				x	MX7524T	† Maxim	
		0.135	174	x	x	x	x			x	x	x		x		**ADDAC08A**	**† AD (3219)**	
					x	x	x			x	x	x		x		**ADDAC08H**	**AD (3219)**	
				x	x	x	x			x	x	x		x		DAC08A	◊‡ AD	35
				x	x	x	x			x	x	x		x		DAC08H	◊ AD	
				x	x	x	x			x	x	x		x		DAC08A	† Motorola	
				x	x	x	x			x	x	x		x		DAC08H	Motorola	
				x	x	x	x			x				x		DAC0802	† National	
				x	x	x	x			x				x		DAC0802C	National	40
				x	x	x	x			x	x	x		x		DAC08A	† Raytheon	
				x	x	x	x			x	x	x		x		DAC08H	Raytheon	
				x	x	x	x			x	x	x		x		DAC08A	◊† Signetics	
				x	x	x	x			x	x	x		x		DAC08H	◊ Signetics	
		0.15	1 *	x	x	x	x				x			x		MP7523K	MicroPwr	45
			1.5 *	x	x	x	x				x			x		AD7523K	◊ AD	
				x	x	x	x				x			x		AD7523K	Harris	
			1.5	x	x	x	x				x			x		MX7523K	Maxim	
				x	x	x	x				x			x		MX7523T	† Maxim	
			10 *	x	x	x	x				x			x	x	MP7524B	MicroPwr	50
		0.15 *	10 *	x	x	x	x				x			x	x	MP7524K	MicroPwr	
				x	x	x	x				x			x	x	MP7524T	† MicroPwr	
			20 *	x	x					x	x			x	x	AD7524B	◊ AD	
				x	x	x	x			x	x			x	x	AD7524K	◊ AD	
				x	x	x	x			x	x			x	x	AD7524T	◊† AD	55

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1/4																(Cont'd)	
		0.15	330	x	x	x	x			x	x		x		x	DAC4888	Raytheon	
				x	x	x	x			x	x		x		x	DAC4888B	† Raytheon	
		0.2 *	255 *	x						x	x	x	x	x	x	NE5119	Signetics	
				x						x	x	x	x	x	x	SE5119	† Signetics	
			1300 *			x	x				x	x		x		HDH0802	AD	5
						x	x				x	x		x		HDH0802M	† AD	
		0.25	5	x						x	x			x	x	DAC08Q	† AD	
				x		x	x			x	x			x	x	DAC08RC	◊† AD	
				x						x	x			x	x	DAC8408A	† AD	
				x						x	x			x	x	DAC8408E	◊ AD	10
				x						x	x			x	x	DAC8408G	AD	
			170	x	x					x				x	x	DAC888A	† AD	
				x	x					x				x	x	DAC888E	AD	
		0.35	50	x						x	x			x	x	**PM7524B**	**† AD**	**(3219)**
				x						x	x			x	x	**PM7524F**	**AD**	**(3219)** 15
				x						x	x			x	x	**PM7524H**	**◊ AD**	**(3219)**
		0.8 *	15 *	x						x	x			x	x	MP7628K	MicroPwr	
				x						x	x			x	x	MP7628T	† MicroPwr	
		1	30	x						x	x			x		DAC0831	National	
		1.5	375	x						x	x		x		x	**AD558K**	**AD**	**(3221)** 20
		2 *	255	x						x	x	x	x	x	x	NE5019	Signetics	
				x						x	x	x	x	x	x	SE5019	† Signetics	
		2.5	330	x	x	x	x	x	x	x	x		x	x	x	DAC4888F	Raytheon	
		20 *	735 *	x	x						x	x				HDS0820	AD	
				x	x						x	x				HDS0820M	† AD	25
	1/3	2.5	330	x	x	x	x	x	x	x	x		x	x	x	DAC4888D	Raytheon	
	3/8	1.5	375	x						x	x		x		x	**AD558T**	**† AD**	**(3221)**
	1/2			x						x	x				x	MAX500A	◊† Maxim	
			250	x						x						TL5602C	TI	
			400	x						x	x					µPD6902C	NEC	30
		0.0003 *	800 *	x						x		x		x	x	BT108	Brooktree	
		0.002	1000	x								x	x	x	x	BT107	Brooktree	
		0.003	3500	x						x		x	x		x	BT492	Brooktree	
		0.004	430	x		x						x		x	x	CX20202A-3	Sony	
			450	x								x		x	x	CX20201A-3	◊ Sony	35
		0.007	350	x						x	x					TDA8702	◊ Signetics	
			1150	x						x					x	AH50008	Analogic	
		0.0075	2250	x						x					x	DAC8308	Datel	
		0.008		x	x					x		x				VDAC0805H	Adv Analog	
			1000 *	x						x					x	IDT75C457	◊† IDT	40
			2500	x						x					x	AH8308TC	Analogic	
		0.01 *	675	x								x				MC10318	Motorola	
		0.016	200	x						x					x	CXA1106M	◊ Sony	
				x						x			x		x	CXA1106P	Sony	
			360	x						x			x		x	CXA1260Q-Z	◊ Sony	45
		0.02	174	x						x				x		DAC108B	◊‡ AD	
				x						x				x		DAC108F	◊‡ AD	
			225	x						x	x		x		x	HA19510	◊ Hitachi	
		0.020	550	x							x					Bt102/883	† Brooktree	
		0.025		X		X	X	X			X					CXD1171	◊ Sony	50
			250 *		x	x	x	x	x			x				IR3K07	Sharp	
			600	x		x				x					x	IR3K02	Sharp	
			630	x	x					x			x			**DACHF8BMC**	**Datel**	**(3359)**
				x	x					x			x			**DACHF8BMM**	**† Datel**	**(3359)**

(Continued)

Bin.—Binary
Off.—Offset
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Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1/2																(Cont'd)	
		0.05	200	x			x	x								MB40568	Fujitsu	
		0.08	15	x	x	x	x			x	x			x	x	MP7528XB	MicroPwr	
				x	x	x	x			x	x			x	x	MP7528XK	MicroPwr	
				x	x	x	x			x	x			x	x	MP7528XT	† MicroPwr	
		0.1	5	x		x	x	x		x	x			x		AD7524	TI	5
				x			x	x			x				x	TLC7524C	TI	
				x			x	x			x				x	TLC7524I	TI	
		0.1 *	10 *	x	x	x	x				x			x	x	MP7524A	MicroPwr	
				x	x	x	x				x			x	x	MP7524J	MicroPwr	
				x	x	x	x				x			x	x	MP7524S	† MicroPwr	10
		0.1	30	x						x	x				x	MX7524A	Maxim	
				x						x	x				x	MX7524J	◊ Maxim	
				x						x	x				x	MX7524S	† Maxim	
		0.135	174	x	x	x	x			x	x	x		x		**ADDAC08**	**† AD (3219)**	
				x	x	x	x			x	x	x		x		DAC08	† Motorola	15
				x	x	x				x	x	x		x		DAC08M	† National	
				x	x	x	x			x	x	x		x		DAC08	† Raytheon	
				x	x	x	x			x	x	x		x		DAC08	◊† Signetics	
		0.15	1 *	x	x	x	x				x			x		MP7523J	MicroPwr	
			1.5 *	x	x	x	x				x			x		AD7523J	◊ AD	20
				x	x	x	x				x			x		AD7523S	◊† AD	
			1.5	x	x	x	x				x			x		MX7523J	Maxim	
				x	x	x	x				x			x		MX7523S	† Maxim	
		0.15 *	20 *	x	x					x	x			x	x	AD7524A	◊ AD	
				x	x	x	x				x			x	x	AD7524J	◊ AD	25
				x	x	x	x				x			x	x	AD7524S	◊† AD	
				x	x	x	x				x			x	x	AD7524M	◊† TI	
		0.15	136	x	x					x	x	x		x		DAC08BC	Datel	
				x	x					x	x	x		x		DAC08BM	† Datel	
			174	x	x	x	x			x	x	x		x		**ADDAC08E**	**AD (3219)**	30
				x	x	x	x			x	x	x		x		DAC08E	◊ AD	
				x	x	x	x			x	x	x		x		HA17008R	Hitachi	
				x	x	x	x			x	x	x		x		DAC08E	Motorola	
				x	x	x	x			x	x	x		x		DAC08EC	National	
				x	x	x				x				x		µPC624	NEC	35
				x	x	x	x			x	x	x		x		DAC08E	Raytheon	
				x	x	x	x			x	x	x		x		DAC08E	◊ Signetics	
		0.15 *	305	x						x	x			x		DAC0808	† National	
				x						x	x			x		DAC0808C	National	
		0.15	500	x		x				x	x				x	KDA0800	Samsung	40
				x		x				x	x				x	KDA0801	Samsung	
		0.16 *	222	x	x	x	x	x		x	x			x	x	AM6080C	AMD	
				x	x	x	x	x		x	x			x	x	AM6080M	† AMD	
		0.18	15	x						x	x				x	MX7528B	Maxim	
				x						x	x				x	MX7528C	Maxim	45
				x						x	x				x	MX7528K	◊ Maxim	
				x						x	x				x	MX7528L	◊ Maxim	
				x						x	x				x	MX7528T	† Maxim	
				x						x	x				x	MX7528U	† Maxim	
		0.2	670	x	x					x	x			x		DAC7523	Datel	50
		0.25	5	x						x	x			x	x	DAC8408B	† AD	
				x						x	x			x	x	DAC8408F	AD	
				x						x	x			x	x	DAC8408H	◊ AD	
			38	x						x					x	MAX7624C	◊ Maxim	

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1/2	0.25	38														(Cont'd)	
				x						x					x	MAX7624E	Maxim	
				x						x					x	MAX7624M	† Maxim	
			170	x	x					x				x	x	DAC888B	† AD	
				x	x					x				x	x	DAC888F	AD	
		0.25 *	265	x	x					x	x			x		DAC1408A-8	◊ AD	5
				x	x					x	x			x		DAC1508A-8	† AD	
				x						x	x			x		HA17408	Hitachi	
		0.3	37.5	x	x					x	x			x	x	**PM7628A**	**† AD**	**(3224)**
				x	x					x	x			x	x	**PM7628E**	**AD**	**(3224)**
				x	x					x	x			x	x	**PM7628H**	**AD**	**(3224)** 10
		0.3 *	305	x	x					x	x			x		DACIC8BC	Datel	
				x	x					x	x			x		DACIC8BM	† Datel	
				x										x		MC1408-8	Motorola	
				x										x		MC1508-8	† Motorola	
				x						x	x			x		DAC1408	† National	15
				x						x	x			x		DAC1408AC	National	
				x						x				x		MC1408-8	National	
				x						x				x		MC1508-8	† National	
				x						x				x		MC1408-8	Signetics	
				x						x				x		MC1508-8	† Signetics	20
		0.3	450	x	x					x			x			4020	TeledyneS	
		0.35	30	x						x					x	MX7628B	Maxim	
				x						x					x	MX7628K	◊ Maxim	
				x						x					x	MX7628T	† Maxim	
		0.5	15 *	x						x	x			x	x	MP7628J	MicroPwr	25
				x						x	x			x	x	MP7628S	† MicroPwr	
		0.6 *	500	x		x				x			x		x	XR9201	Exar	
		0.8	100 *	x	x					x	x		x		x	ZN428E-8	Plessey	
				x	x					x	x		x		x	ZN428J-8	† Plessey	
			100	x						x	x		x		x	ZN558E-8	Plessey	30
				x						x	x		x		x	ZN558J-8	† Plessey	
		1												x	x	DAC608C	Datel	
			15	x										x		ADC0852	National	
				x										x		ADC0854	National	
			30	x						x	x			x		DAC0832	National	35
			45 *	x						x	x		x			ZN426E-8	Plessey	
				x						x	x		x			ZN426J-8	† Plessey	
				x						x	x					ZN429E-8	Plessey	
				x						x	x					ZN429J-8	† Plessey	
			75	x						x	x		x		x	**AD557**	**◊ AD**	**(3221)** 40
			750	x						x			x			**MN3008**	**MicroNet**	**(3549)**
				x						x			x			**MN3008H**	**† MicroNet**	**(3549)**
					x					x			x			**MN3009**	**MicroNet**	**(3549)**
					x					x			x			**MN3009H**	**† MicroNet**	**(3549)**
		1.25			x					x	x		x		x	ZN438E	Plessey	45
					x					x	x		x		x	ZN438J	† Plessey	
		1.5		x						x	x			x		**AD7548K**	**AD**	**(3220)**
				x						x	x			x		**AD7548T**	**† AD**	**(3220)**
			75 *	x						x	x		x		x	**AD558J**	**AD**	**(3221)**
			300	x	x					x	x			x		DAC331B-8	† Sipex-HSD	50
				x	x					x	x			x		DAC331C-8	Sipex-HSD	
		2 *	255	x	x					x			x			DACUP8BC	Datel	
				x	x					x			x			DACUP8BM	† Datel	
			255 *	x						x	x	x	x	x	x	NE5018	Signetics	
				x						x	x	x	x	x	x	SE5018	† Signetics	55

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1/2																(Cont'd)	
		2	1000	x				x		x	x		x			DAC0890CI	National	
				x				x		x	x		x			DAC0890CM	† National	
		2 ns	3500 *	x								x			x	TQ6112	◊ TriQuint	
		2.5	570	x	x	x				x			x			**MN3014**	**MicroNet (3549)**	
				x	x	x				x			x			**MN3014H**	**† MicroNet (3549)**	5
		3	680	x	x								x			HS3020B	† Sipex-HSD	
				x	x								x			HS3020C	Sipex-HSD	
			830	x	x	x				x			x		x	**MN3020**	**MicroNet (3549)**	
				x	x	x				x			x		x	**MN3020H**	**† MicroNet (3549)**	
		4	195	x						x					x	MX7225C	Maxim	10
				x						x					x	MX7225L	◊ Maxim	
			230	x						x					x	MX7225U	† Maxim	
			1080	x	x		x			x	x		x		x	DAC336B-8	† Sipex-HSD	
				x	x		x			x	x		x		x	DAC336C-8	Sipex-HSD	
		5		x						x	x		x			**AD7225L**	**AD (3223)**	15
			75	x						x	x			x	x	MX7224	† Maxim	
				x						x					x	MX7224C	Maxim	
				x						x					x	MX7224L	◊ Maxim	
				x						x					x	MX7224U	† Maxim	
			84	x	x	x	x			x	x				x	DAC8228F	◊ AD	20
			115	x	x	x	x			x	x			x	x	DAC8229A	† AD	
				x	x	x	x			x	x			x	x	DAC8229E	AD	
				x	x	x	x			x	x			x	x	DAC8229F	◊ AD	
			310	x						x	x				x	MX7228C	Maxim	
				x						x	x				x	MX7228L	◊ Maxim	25
				x						x	x				x	MX7228U	† Maxim	
			450	x			x	x		x						PM7224A	† AD	
				x			x	x		x						PM7224E	AD	
				x			x	x		x						PM7224G	AD	
		6		x									x			AD9703	AD	30
		10		x												**ADV101**	**AD (3274)**	
		20	285	x						x	x		x			DAC336B-1	† Sipex-HSD	
				x						x	x		x			DAC337B-0	† Sipex-HSD	
				x						x	x		x			DAC337B-2	† Sipex-HSD	
				x						x	x		x			DAC337C-0	Sipex-HSD	35
				x						x	x		x			DAC337C-1	Sipex-HSD	
				x						x	x		x			DAC337C-2	Sipex-HSD	
		23 *	585			x				x	x		x			**MN3000**	**MicroNet (3549)**	
						x				x	x		x			**MN3000H**	**† MicroNet (3549)**	
					x					x	x		x			**MN3001**	**MicroNet (3549)**	40
					x					x	x		x			**MN3001H**	**† MicroNet (3549)**	
				x						x	x		x			**MN3002**	**MicroNet (3549)**	
				x						x	x		x			**MN3002H**	**† MicroNet (3549)**	
					x					x	x		x			MN3006	MicroNet	
					x					x	x		x			MN3006H	† MicroNet	45
		25	600	x	x					x			x			4021	TeledyneS	
		30	570	x	x	x				x			x			MN3013	MicroNet	
				x	x	x				x			x			MN3013H	† MicroNet	
		40	300		x					x	x		x			DAC337B-6	† Sipex-HSD	
					x					x	x		x			DAC337C-6	Sipex-HSD	50
		60	200	x			x	x								MB88346	Fujitsu	
		100	5	x							x			x	x	TLC7528C	TI	
				x							x			x	x	TLC7528I	TI	
			20	x						x	x				x	TLC7628C	TI	
																	(Continued)	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1/2																(Cont'd)	
		250	5	x						x	x					ALD1801	◊† AdvLinear	
		250 MSPS		x			x						x			**AD9701S**	**† AD (3222)**	
	3/4	1.5	375	x						x	x		x		x	**AD558S**	**† AD (3221)**	
	1			x						x	x					BT457KG100	Brooktree	
				x						x	x					BT457KG125	Brooktree	5
				x						x	x					BT457KG75	Brooktree	
				x						x	x				x	MAX500B	◊† Maxim	
			1800	x							x					Bt458/883	† Brooktree	
		.02	315	x	x	x					x				x	CA3338	† Harris	
		0.002 *	250 *	x						x					x	BT106	Brooktree	10
		0.005		x							x					Bt468	Brooktree	
		0.006	1500	x							x					Bt462	Brooktree	
		0.008	1100	x							x					Bt460	Brooktree	
			1800	x						x	x				x	BT461	Brooktree	
			2000	x							x					BT459	Brooktree	15
		0.01	200	x		x					x		x		x	SC11401	Sierra	
				x							x		x		x	SC11402	Sierra	
			250	x		x					x		x		x	SC11403	Sierra	
				x							x		x		x	SC11404	Sierra	
		0.01 *	675	x								x		x		MC10318C-7	Motorola	20
		0.012	700	x							x					Bt101/883	† Brooktree	
		0.013	900	x							x					Bt477	Brooktree	
				x							x					BT473	Brooktree	
			1000	x							x					Bt479	Brooktree	
		0.025	1000	x							x					Bt453/883	† Brooktree	25
		0.07	305	x						x	x			x		MC1408-7	Signetics	
		0.08	15	x	x	x	x			x	x			x	x	MP7528XA	MicroPwr	
				x	x	x	x			x	x			x	x	MP7528XJ	MicroPwr	
				x	x	x	x			x	x			x	x	MP7528XS	† MicroPwr	
		0.085	33							x	x	x				MB4072	Fujitsu	30
		0.15	33	x			x							x		DAC0800L	† National	
				x			x							x		DAC0800LC	National	
			174	x	x	x	x			x	x	x		x		**ADDAC08C**	**AD (3219)**	
				x	x	x	x			x	x	x		x		DAC08C	◊‡ AD	
				x	x	x	x			x	x	x		x		DAC08C	Motorola	35
				x	x	x	x			x	x	x		x		DAC08C	National	
				x	x	x				x				x		DAC0801C	National	
				x	x	x	x			x	x	x		x		DAC08C	Raytheon	
				x	x	x	x			x	x	x		x		DAC08C	◊ Signetics	
			500	x		x				x	x				x	KDA0802	Samsung	40
		0.18	15	x						x	x				x	MX7528A	Maxim	
				x						x	x				x	MX7528J	◊ Maxim	
				x						x	x				x	MX7528S	† Maxim	
		0.25 *	265	x	x					x	x			x		DAC1408A-7	AD	
				x	x					x	x			x		DAC1408BC	National	45
		0.3		x	x		x	x		x	x			x		NJU8001	◊ NJR	
		0.3 *	305	x										x		MC1408-7	Motorola	
				x						x				x		DAC0807C	National	
				x						x				x		MC1408-7	National	
		0.8	100	x	x					x	x		x		x	ZN559E	‡ Plessey	50
				x	x					x	x		x		x	ZN559J	† Plessey	
		1	60	x						x	x		x		x	**AD7569**	**◊† AD (3221, 3227, 3259)**	
		1.5								x				x		**AD7548J**	**AD (3220)**	
										x				x		**AD7548S**	**† AD (3220)**	

(Continued)

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8	1																(Cont'd)	
		3	300	x				x		x						µPD7011	NEC	
		4	36	x						x	x			x	x	DAC8800B	◊† AD	
				x						x	x			x	x	DAC8800F	◊ AD	
			195	x						x					x	MX7225B	Maxim	
				x						x					x	MX7225K	◊ Maxim	5
			230	x						x					x	MX7225T	† Maxim	
		5		x						x	x			x	x	**AD7224C**	**AD (3221)**	
				x						x	x			x	x	**AD7224L**	**AD (3221)**	
				x						x	x		x			**AD7225K**	**AD (3223)**	
			60	x						x	x		x		x	DAC8426B	◊† AD	10
				x						x	x		x		x	DAC8426F	◊ AD	
			75	x						x					x	MX7224B	Maxim	
				x						x					x	MX7224K	◊ Maxim	
				x						x					x	MX7224T	† Maxim	
			240	x						x	x			x	x	**AD7228**	**◊† AD (3223)**	15
			310	x						x	x				x	MX7228B	Maxim	
				x						x	x				x	MX7228K	◊ Maxim	
				x						x	x				x	MX7228T	† Maxim	
			450	x			x	x		x						PM7224B	† AD	
				x			x	x		x						PM7224F	AD	20
				x			x	x		x						PM7224H	◊ AD	
		6–9		x						x	x	x		x	x	Bt463	◊ Brooktree	
		12 ns	1375	x						x	x		x	x	x	Bt474	◊ Brooktree	
		12.5 ns	0.6	x						x	x		x		x	Bt121	◊ Brooktree	
		30 MSPS	250							x						MB40778	Fujitsu	25
		60		x		x	x	x								MB88341	Fujitsu	
				x		x	x	x								MB88342	Fujitsu	
	1.5	90	300	x							x					PCF8591	◊ Signetics	
	2	0.01 *	675	x								x		x		MC10318C-6	Motorola	
		0.04		x						x	x	x	x		x	KSV3110N-8	Samsung	30
			900	x		x				x	x				x	KDA3310J-8	Samsung	
		0.25 *	265	x	x					x	x			x		DAC1408A-6	AD	
				x	x					x	x			x		DAC1408CC	National	
		0.3 *	305	x										x		MC1408-6	Motorola	
				x						x				x		DAC0806C	National	35
				x						x				x		MC1408-6	National	
		5		x						x	x			x	x	**AD7224B**	**AD (3221)**	
				x						x	x			x	x	**AD7224K**	**AD (3221)**	
			200	x						x	x			x	x	MX7226B	Maxim	
				x						x	x			x	x	MX7226K	Maxim	40
				x						x	x			x	x	MX7226T	† Maxim	
8 (A/D, D/A, with counter)																		
	1/2	2	175	x						x	x		x			ZN425E-8	Plessey	
	1	2	175	x						x	x		x			ZN425J-8	† Plessey	
8 (D/A, with counter/clock)																		
	1/2	0.8	—	x						x	x		x			ZN435E	Plessey	
				x						x	x		x			ZN435J	† Plessey	45
8 (dual)																		
	1/2	0.18	5	x						x	x			x	x	MX7528	† Maxim	
		0.2 *		x						x	x			x	x	AD7528M	◊† TI	
		0.35	120	x			x	x								MX7628C	Maxim	
		1 *		x							x					**AD7669**	**AD (3223, 3225, 3259)**	
		2.5		x				x								**AD7769**	**AD (3223, 3225, 3227)**	50

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8 (dual)																	(Cont'd)	
	1	0.03	270	x			x	x								MB40968	Fujitsu	
		0.35	120	x			x	x								MX7628A	Maxim	
				x			x	x								MX7628J	Maxim	
				x			x	x								MX7628S	† Maxim	
8 (dual matched)																		
	1/2	0.35	5	x						x	x			x	x	**PM7528A**	**◇† AD (3224)**	5
				x						x	x			x	x	**PM7528B**	**† AD (3224)**	
				x						x	x			x	x	**PM7528E**	**AD (3224)**	
				x						x	x			x	x	**PM7528F**	**AD (3224)**	
				x						x	x			x	x	**PM7528G**	**AD (3224)**	
				x						x	x			x	x	**PM7528H**	**◇ AD (3224)**	10
8 (octal)																		
	1/2	5	310	x	x					x	x			x	x	PM7228A	◇† AD	
				x	x					x	x			x	x	PM7228E	AD	
		50	1000	x						x					x	BT110	Brooktree	
	1	5	310	x	x					x	x			x	x	PM7228F	◇ AD	
8 (quad)																		
	1/2	0.5		x												MB86022	Fujitsu	15
				x												MB86023	Fujitsu	
		5	144	x						x	x				x	**PM7226A**	**† AD (3223)**	
				x						x	x				x	**PM7226E**	**AD (3223)**	
				x						x	x				x	**PM7226G**	**AD (3223)**	
			195	x						x	x			x	x	MX7225	† Maxim	20
	1	3	300	x							x		x			USC1841	◇‡ Universal	
		5	144	x						x	x				x	**PM7226B**	**† AD (3223)**	
				x						x	x				x	**PM7226F**	**AD (3223)**	
			300		x					x	x			x	x	DAC8840	◇† AD	
					x					x	x			x	x	DAC8841	◇† AD	25
			500	x			x	x		x	x					**PM7226H**	**◇ AD (3223)**	
8 (triple)																		
	1/2	0.008	1000 *	x						x					x	IDT75C458	◇† IDT	
			1200 *	x								x	x	x	x	IDT75MB38	IDT	
		0.016	360	x						x			x		x	CX20206	Sony	
		0.03	200	x						x					x	HD49304	◇° Hitachi	30
		20	400	x												ADV7120	AD	
8 (triple color video RAM/DAC)																		
	1/2	0.008 *	8000	x								x			x	RGBDAC8E	Adv Analog	
	1	0.002	500 *	x						x	x				x	BT101	† Brooktree	
8 (triple RAMDAC)																		
	1/2			x							x					**ADV453**	**AD (3222)**	
		13	1000	x							x				x	**ADV478**	**◇ AD (3222)**	35
8 (triple video)																		
	1/2	0.004	2000	x								x	x	x	x	SCD6038	STC	
		0.005	2000	x								x	x			TDC1318	TRWLSI	
8 (triple video RAM/DAC)																		
	1.0	0.01		x						x	x				x	RGBDAC3800	† Adv Analog	
				x						x	x				x	RGBDAC3808	† Adv Analog	
8 (triple video 256x24 RAM/DAC)																		
	1/2	0.0012 *	1000	x						x						FVG453	National	40
	1	0.0003 *	2000	x						x						BT458	Brooktree	
		0.0012 *	1000	x						x						BT453	Brooktree	
8 (video)																		
	1/2	0.002		x		x	x	x				x				CXA1236	◇ Sony	
		0.003		x		x	x	x				x				CXA1156	◇ Sony	

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8 (video)																		
	1/2																(Cont'd)	
		0.006		x		x	x	x				x				CXA1146	◊ Sony	
		0.0125		x				x								**ADV7120-80**	**AD (3222, 3274)**	
		0.02		x				x								**ADV7120-50**	**AD (3222, 3274)**	
		0.03		x				x								**ADV7120-35**	**AD (3222, 3274)**	
		0.4	1125	x						x			x			HDG0807	AD	5
	1	0.02	100 *	x			x	x								USC1850/1852	Universal	
				x			x	x								USC1852	Universal	
8 (video DAC)																		
	1/2	0.008		x						x	x				x	VDAC1850	Adv Analog	
				x						x	x				x	VDAC1852	Adv Analog	
		0.015		x						x	x				x	VDAC1840	Adv Analog	10
				x						x	x				x	VDAC1842	Adv Analog	
	1.0	.0075		x						x	x				x	VDAC8308TH	† Adv Analog	
8 (video digital converter)																		
	1/4	0.01	1976	x								x				HDD0810	AD	
				x								x				HDD0810M	† AD	
			2028	x								x				HDD0810C	AD	15
				x								x				HDD0810CM	† AD	
	1/2	0.005	—									x		x		SP9768	Plessey	
		0.008	800	x								x			x	TDC1018	TRWLSI	
			1660			x						x				HDG0805	AD	
		0.05		x						x						µPD6900	NEC	20
		0.07	1000	x								x			x	AH8308E	Analogic	
				x						x					x	AH8308T	Analogic	
		165 MSPS		x								x			x	HDAC10180B	Signal Proc	
				x								x	x		x	HDAC10181B	Signal Proc	
		275 MSPS		x								x			x	HDAC10180A	Signal Proc	25
				x								x	x		x	HDAC10181A	Signal Proc	
		400 MSPS		x								x	x		x	HDAC51400	Signal Proc	
	200 MSPS	0.0004	2100	x								x	x		x	HDAC97000	† Signal Proc	
8 (Dual, Matched)																		
	1/2	0.2		x						x	x			x	x	**AD7528B**	◊ **AD (3224)**	
				x						x	x			x	x	**AD7528C**	◊† **AD (3224)**	30
				x						x	x			x	x	**AD7528K**	◊ **AD (3224)**	
				x						x	x			x	x	**AD7528L**	◊ **AD (3224)**	
				x						x	x			x	x	**AD7528T**	◊† **AD (3224)**	
				x						x	x			x	x	**AD7528U**	◊† **AD (3224)**	
	1	0.2		x						x	x			x	x	**AD7528A**	◊ **AD (3224)**	35
				x						x	x			x	x	**AD7528J**	◊ **AD (3224)**	
				x						x	x			x	x	**AD7528S**	◊† **AD (3224)**	
8 (Quad)																		
	2	5		x						x	x			x	x	**AD7226B**	**AD (3223)**	
				x						x	x			x	x	**AD7226K**	**AD (3223)**	
				x						x	x			x	x	**AD7226T**	**† AD (3223)**	40
8 (3 channel)																		
	1	0.015	350	x						x			x	x	x	MB40978	Fujitsu	
8 (7-Bits plus Sign) Companding																		
	—	0.5 *	192							x						AM6072C	AMD	
										x						AM6072M	† AMD	
	1/2 step																	
		0.5	207							x	x	x		x		DAC88E	AD	
			500							x	x	x		x		DAC89E	AD	45
	1 step	0.5	192							x						AM6070C	AMD	
										x						AM6070M	† AMD	
8–2 Digit BCD																		
	1/2	0.15	194							x	x	x		x		DAC20C	AD	

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INTERFACE

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
8(quad)																		
	1/2	3	210	x						x	x		x		x	DAC8426A	† AD	
				x						x	x		x		x	DAC8426E	AD	
		5	144	x						x	x				x	**PM7226AA**	**† AD (3223)**	
	1	5	144	x						x	x				x	**PM7226AF**	**◊ AD (3223)**	
8x3	1/2	0.0125	768	x						x	x	x		x	x	TMC0458	TRWLSI	5
9	1/2	0.005	390	x		x						x		x	x	CX20201A-2	◊ Sony	
			430	x		x						x		x	x	CX20202A-2	Sony	
	1	0.04		x						x	x	x	x		x	KSV3110N-9	Samsung	
			900	x						x	x				x	KDA3310J-9	Samsung	
10	4/5	0.014	550	x								x	x		x	CX20051A	Sony	10
	1/4	0.025 *	735	x	x					x	x					HDS1025	AD	
				x	x					x	x					HDS1025M	† AD	
		0.25 *	275	x	x					x	x		x			**AD561K**	**AD (3219)**	
				x	x					x	x		x			**AD561T**	**† AD (3219)**	
		0.3 *	1300			x	x			x	x		x			HDH1003	AD	15
	1/2		200	x						x						AD7533C	TI	
			290	x	x					x	x					DACIC10B	Datel	
		0.005	390	x		x						x		x	x	CX20201A-1	◊ Sony	
			430	x		x						x		x	x	CX20202A-1	Sony	
		0.01	700	x		x		x		x		x			x	TDC1016-10	TRWLSI	20
			990	x								x				HDS1015E	AD	
				x								x				HDS1015EM	† AD	
		0.012		x								x	x	x		SP9770	Plessey	
		0.02	225	x						x	x		x		x	HA19505	◊ Hitachi	
		0.025	705	x	x					x			x			**DACHF10BMC**	**Datel (3359)**	25
				x	x					x			x			**DACHF10BMM**	**† Datel (3359)**	
			883	x						x		x		x	x	TDC1014	◊‡ TRWLSI	
		0.04		x						x	x	x	x		x	KSV3110N-10	Samsung	
			900	x						x	x				x	KDA3310J-10	Samsung	
		0.135	276	x		x				x	x			x		DAC10B	Raytheon	30
				x		x				x	x			x		DAC10C	Raytheon	
		0.15	450	x	x	x	x			x	x	x		x		DAC10B	† AD	
				x	x	x	x			x	x	x		x		DAC10C	† AD	
				x	x	x	x			x	x	x		x		DAC10F	AD	
				x	x	x	x			x	x	x		x		DAC10G	AD	35
		0.25 *	275	x	x					x	x		x			**AD561J**	**AD (3219)**	
				x	x					x	x		x			**AD561S**	**AD (3219)**	
			300	x						x	x		x	x		NE5410	Signetics	
				x						x	x		x	x		SE5410	Signetics	
		0.25	380	x							x			x		MC3410	Signetics	40
				x						x	x			x		MC3510	Signetics	
			390	x	x					x	x					DACIC10BM	† Datel	
		0.3	—	x	x						x			x		AD7527C	AD	
				x	x						x			x		AD7527GC	AD	
				x	x						x			x		AD7527L	AD	45
				x	x						x			x		AD7527U	† AD	
			450	x	x					x			x			4022	TeledyneS	
		0.3 *	1300			x	x			x	x		x			HDH1003M	† AD	
		0.375	300			x	x			x			x			DAC100A	‡ AD	
		0.5												x	x	DAC610C	Datel	50
		0.5 *	20 *	x	x	x	x			x	x			x		AD7520L	◊ AD	
				x	x	x	x			x	x			x		AD7520U	◊† AD	
				x	x	x	x			x	x			x		AD7530L	◊ AD	
				x	x	x	x							x		AD7520L	Harris	

(Continued)

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
10	1/2	0.5 *	20 *														(Cont'd)	
				x	x	x	x							x		AD7520U	† Harris	
				x	x	x	x			x	x			x		AD7530L	Harris	
		0.5	20	x	x	x	x			x	x			x		MX7520U	† Maxim	
				x	x	x	x			x	x			x		MX75206	Maxim	
				x	x	x	x			x	x			x		MX7530L	Maxim	5
		0.5 *	20 *	x	x	x	x			x	x			x		MP7520L	MicroPwr	
		0.5	20	x	x	x	x			x	x			x		MP7520R	MicroPwr	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7520U	† MicroPwr	
		0.5	20	x	x	x	x			x	x			x		MP7520Y	† MicroPwr	
		0.5 *	20 *	x	x					x	x			x	x	MP7522L	MicroPwr	10
				x	x	x	x			x	x			x	x	MP7522U	† MicroPwr	
				x						x	x			x	x	DAC1000	† National	
				x						x	x			x	x	DAC1000C	National	
				x	x	x	X			x	x			x	x	DAC1006	† National	
				x	x	x	X			x	x			x	x	DAC1006C	National	15
			40	x	x	x	X			x	x			x	x	AD7522L	◊ AD	
				x	x	x	X			x	x			x	x	AD7522U	◊† AD	
		0.6	10	x	x					x	x			x		**PM7533A**	**† AD**	**(3219)**
				x	x					x	x			x		**PM7533E**	**AD**	**(3219)**
				x	x					x	x			x		**PM7533G**	**AD**	**(3219)** 20
			30	x	x	x	x			x	x			x		**AD7533C**	**◊ AD**	**(3219)**
				x	x	x	x			x	x			x		**AD7533L**	**◊ AD**	**(3219)**
				x	x	x	x			x	x			x		**AD7533U**	**◊† AD**	**(3219)**
			30	x	x	x	x			x	x			x		MX7533C	Maxim	
				x	x	x	x			x	x			x		MX7533L	Maxim	25
				x	x	x	x			x	x			x		MX7533U	† Maxim	
		0.6 *	30 *	x	x	x	x			x	x			x		MP7533L	MicroPwr	
				x	x	x	x			x	x			x		MP7533U	† MicroPwr	
		0.8 *	30 *	x	x	x	x			x	x			x		AD7533L	Harris	
		0.8	670	x	x					x	x			x		DAC7533	Datel	30
		1	450	x	x	x	x			x	x			x		MP7633C	MicroPwr	
				x	x	x	x			x	x			x		MP7633L	MicroPwr	
				x	x	x	x			x	x			x		MP7633U	† MicroPwr	
		4 *	255	x						x	x	x	x	x	x	NE5020	Signetics	
		10	715			x	x			x			x			**MN3040**	**MicroNet**	**(3549)** 35
						x	x			x			x			**MN3040H**	**† MicroNet**	**(3549)**
		20	150			x	x			x	x		x			DAC347LPB-10B	† Sipex-HSD	
						x				x	x		x			DAC347LPB-10U	† Sipex-HSD	
						x	x			x	x		x			DAC347LPC-10B	Sipex-HSD	
						x				x	x		x			DAC347LPC-10U	Sipex-HSD	40
			285		x					x	x		x			DAC337B-4	† Sipex-HSD	
				x						x	x		x			DAC337B-5	† Sipex-HSD	
					x					x	x		x			DAC337C-4	Sipex-HSD	
				x						x	x		x			DAC337C-5	Sipex-HSD	
		23 *	585			x				x			x			**MN3003**	**MicroNet**	**(3549)** 45
						x				x			x			**MN3003H**	**† MicroNet**	**(3549)**
					x					x			x			MN3004	† MicroNet	
					x					x			x			MN3004H	† MicroNet	
				x						x			x			MN3005	MicroNet	
				x						x			x			MN3005H	† MicroNet	50
					x					x			x			MN3007	MicroNet	
					x					x			x			MN3007H	† MicroNet	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
10	1/2																(Cont'd)	
		25	600	x	x					x			x			4023	TeledyneS	
		30	195									x		x	x	MDAC6003	Adv Analog	
		30 MSPS	300									x				MB40748-9	Fujitsu	
		40	300			x				x	x		x			DAC337B-3	† Sipex-HSD	
					x					x	x		x			DAC337B-7	† Sipex-HSD	5
						x				x	x		x			DAC337C-3	Sipex-HSD	
					x					x	x		x			DAC337C-7	Sipex-HSD	
		150	30	x						x						TLC7533C	TI	
		500 *	24	x						x	x			x		AD7520L	National	
				x						x	x			x		AD7520U	† National	10
				x						x	x			x		DAC1020	† National	
				x						x	x			x		DAC1020C	National	
	1	0.005		x									x			**AD9720**	**AD**	**(3271)**
				x									x			**AD9721**	**AD**	**(3271)**
		0.01	700	x		x				x					x	TDC1016-9	TRWLSI	15
		0.21	1480	x								x		x		DAC330	Datel	
		0.25	380	x						x	x			x		MC3410C	Signetics	
			390	x	x					x	x			x		DACIC10BC	Datel	
		0.3	—	x	x						x			x		AD7527B	AD	
				x	x						x			x		AD7527K	AD	20
				x	x						x			x		AD7527T	† AD	
			300			x	x			x			x			DAC100B	‡ AD	
		0.5		x												DAC86	AD	
		0.5 *	20 *	x	x	x	x			x	x			x		AD7520K	◊ AD	
				x	x	x	x			x	x			x		AD7520T	◊† AD	25
				x	x	x	x			x	x			x		AD7530K	◊ AD	
				x	x	x	x			x	x			x		AD7520K	Harris	
				x	x	x	x			x	x			x		AD7520T	† Harris	
				x	x	x	x			x	x			x		AD7530K	Harris	
		0.5	20	x	x	x	x			x	x			x		MX7520K	† Maxim	30
				x	x	x	x			x	x			x		MX7520T	† Maxim	
				x	x	x	x			x	x			x		MX7530K	Maxim	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7520K	MicroPwr	
		0.5	20	x	x	x	x			x	x			x		MP7520Q	MicroPwr	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7520T	† MicroPwr	35
		0.5	20	x	x	x	x			x	x			x		MP7520W	† MicroPwr	
		0.5 *	20 *	x	x	x	x			x	x			x	x	MP7522K	MicroPwr	
				x	x	x	x			x	x			x		MP7530K	MicroPwr	
				x	x	x	x			x	x			x	x	DAC1001	† National	
				x	x	x	x			x	x			x	x	DAC1001C	National	40
				x	x	x	x			x	x			x	x	DAC1007	† National	
				x	x	x	x			x	x			x	x	DAC1007C	National	
			40	x	x	x	x			x	x			x	x	AD7522K	◊ AD	
				x	x	x	x			x	x			x	x	AD7522T	◊† AD	
			40 *	x	x	x	x			x	x			x	x	MP7522T	† MicroPwr	45
		0.6		x	x		x	x		x	x			x		NJU8101	NJR	
			10	x	x					x	x			x		**PM7533B**	**† AD**	**(3219)**
				x	x					x	x			x		**PM7533F**	**AD**	**(3219)**
				x	x					x	x			x		**PM7533H**	**◊ AD**	**(3219)**
			30	x	x	x	x			x	x			x		**AD7533B**	**◊ AD**	**(3219)** 50
				x	x	x	x			x	x			x		**AD7533K**	**◊ AD**	**(3219)**
				x	x	x	x			x	x			x		**AD7533T**	**◊† AD**	**(3219)**
				x	x	x	x			x	x			x		MX7533B	Maxim	
				x	x	x	x			x	x			x		MX7533K	Maxim	

(Continued)

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CTC—Compl. 2's Compl.
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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
10	1	0.6	30														(Cont'd)	
				x	x	x	x			x	x			x		MX7533T	† Maxim	
		0.6 *	30 *	x	x	x	x			x	x			x		MP7533K	MicroPwr	
		0.8 *	30 *	x	x	x	x			x	x			x		AD7533K	Harris	
		1	450	x	x	x	x			x	x			x		MP7633B	MicroPwr	
				x	x	x	x			x	x			x		MP7633K	MicroPwr	5
				x	x	x	x			x	x			x		MP7633T	† MicroPwr	
		1.5 *	300		x			x		x	x		x			DAC06E	AD	
			350	x						x	x		x			DAC03AD	AD	
		5	435	x	x								x			DACUP10BC	Datel	
		30 MSPS																
			300									x				MB40748-8	Fujitsu	10
			450									x				MB40788	Fujitsu	
		500 *	24	x						x	x			x		AD7520K	National	
				x						x	x			x		AD7520T	National	
				x						x	x			x		DAC1021	† National	
				x						x	x			x		DAC1021C	National	15
	2	0.01	700	x		x		x		x		x			x	TDC1016-8	TRWLSI	
		0.225	300			x	x			x			x			DAC100C	‡ AD	
		0.5 *	20 *	x	x	x	x			x	x			x		AD7520J	◊ AD	
				x	x	x	x			x	x			x		AD7520S	◊† AD	
				x	x	x	x			x	x			x		AD7530J	◊ AD	20
				x	x	x	x			x	x			x		AD7520J	Harris	
				x	x	x	x			x	x			x		AD7520S	† Harris	
				x	x	x	x			x	x			x		AD7530J	Harris	
		0.5	20	x	x	x	x			x	x			x		MX7520J	Maxim	
				x	x	x	x			x	x			x		MX7520S	† Maxim	25
				x	x	x	x			x	x			x		MX7530J	Maxim	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7520J	MicroPwr	
				x	x	x	x			x	x			x		MP7520S	MicroPwr	
				x	x	x	x			x	x			x	x	MP7522J	MicroPwr	
				x	x	x	x			x	x			x	x	MP7522S	† MicroPwr	30
				x	x	x	x			x	x			x		MP7530J	MicroPwr	
				x	x	x	x			x	x			x		DAC1002	† National	
				x	x	x	x			x	x			x	x	DAC1002C	National	
							x			x	x					DAC1008	† National	
							x			x	x			x	x	DAC1008C	National	35
			40	x	x	x	x			x	x			x	x	AD7522J	◊ AD	
				x	x	x	x			x	x			x	x	AD7522S	◊† AD	
		0.6	30	x	x	x	x			x	x			x		**AD7533A**	**◊ AD**	**(3219)**
				x	x	x	x			x	x			x		**AD7533J**	**◊ AD**	**(3219)**
				x	x	x	x			x	x			x		**AD7533S**	**◊† AD**	**(3219)** 40
				x	x	x	x			x	x			x		MX7533A	Maxim	
				x	x	x	x			x	x			x		MX7533J	Maxim	
				x	x	x	x			x	x			x		MX7533S	† Maxim	
		0.8 *	30 *	x	x	x	x			x	x			x		AD7533J	Harris	
				x	x	x	x			x	x			x		MP7533S	† MicroPwr	45
				x	x	x	x			x	x			x		MP7533T	† MicroPwr	
		1	450	x	x	x	x			x	x			x		MP7633A	MicroPwr	
				x	x	x	x			x	x			x		MP7633J	MicroPwr	
				x	x	x	x			x	x			x		MP7633S	† MicroPwr	
		1.5 *	300		x			x		x	x		x			DAC06F	AD	50
			350	x						x	x		x			DAC03CD	AD	
		500 *	24	x						x	x			x		AD7520J	National	
				x						x	x			x		AD7520S	† National	
				x						x	x			x		DAC1022	† National	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
10	2	500 *	24														(Cont'd)	
				x						x	x			x		DAC1022C	National	
	3	0.225	300			x	x			x			x			DAC100D	‡ AD	
		1.5 *	350		x			x		x	x		x			DAC06B	AD	
	4	0.2	—		x	x				x	x		x			DAC10G	AD	
		1.5 *	350	x						x	x		x			DAC03DD	AD	5
10 Plus Sign	1/2	1.5 *	350	x					x	x	x		x			DAC05E	AD	
			500	x					x	x	x		x			DAC210E	AD	
		6	300	x												µPC610	NEC	
	1	1.5 *	300	x					x	x	x		x			DAC210G	AD	
			350	x					x	x	x		x			DAC02AC	AD	10
			500	x					x	x	x		x			DAC210F	AD	
	2	1.5 *	300	x					x	x	x		x			DAC02CC	AD	
			350	x					x	x	x		x			DAC05A	† AD	
	4	2.5 *	350	x					x	x	x		x			DAC02DD	AD	
10 (triple)	1	20	400	x												ADV7121	AD	15
				x												ADV7122	AD	
10 (video)	1/2	0.0125		x				x								**ADV7121-80**	**AD (3222, 3274)**	
		0.02		x				x								**ADV7121-50**	**AD (3222, 3274)**	
				x				x								**ADV7122-50**	**AD (3222, 3274)**	
		0.03		x				x								**ADV7121-35**	**AD (3222, 3274)**	20
				x				x								**ADV7122-35**	**AD (3222, 3274)**	
	0.0125			x				x								**ADV7122-80**	**AD (3222, 3274)**	
10 Video Digital Converter	1/2	0.015	2340	x									x			HDD1015	AD	
				x									x			HDD1015C	AD	
				x									x			HDD1015M	† AD	25
		75 MHz		x								x	x	x		SP9770	Plessey	
11 Plus Sign Dynamic Range (7-Bit plus sign format)	1/2 step	0.5	207							x	x	x		x		DAC88E	AD	
										x	x	x		x		DAC89E	AD	
12	2/3	6 *	360 *	x		x	x			x	x					HSDAC87AT	† Sipex-HSD	
	1/4	0.01								x	x				x	**AD667K**	**◊ AD (3221)**	30
		0.25	345	x	x					x	x		x			**AD565AK**	**AD (3219)**	
				x	x					x	x		x			**AD565AT**	**† AD (3219)**	
				x	x					x	x		x			MX565AK	Maxim	
				x	x					x	x		x			MX565AT	† Maxim	
				x	x					x	x		x			**MN565AK**	**MicroNet (3549)**	35
				x	x					x	x		x			**MN565AT**	**† MicroNet (3549)**	
		0.3		x												HI1-0562A-2	† Harris	
				x												HI1-0562A-5	Harris	
				x												HI1-0562A/883	† Harris	
			270	x						x	x			x		DAC1266A	National	40
				x						x	x			x		DAC1266AC	National	
			345	x						x	x		x	x		DAC1265A	National	
				x						x	x		x	x		DAC1265AC	National	
			800			x	x	x		x	x					TPDAC80I	TeledyneS	
		0.35	300	x	x					x	x			x		MX566AK	Maxim	45
				x	x					x	x			x		MX566AT	† Maxim	
		0.4	300	x	x					x	x		x	x		**AD566AK**	**AD (3219)**	
				x	x					x	x		x	x		**AD566AT**	**† AD (3219)**	
				x	x					x	x		x			**AD566K**	**AD (3219)**	

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/4	0.4	300														(Cont'd)	
				x	x					x	x		x			**AD566T**	**† AD (3219)**	
				x	x					x	x		x			MCE566AK	MCE	
				x	x					x	x		x	x		MCE566K	MCE	
			345	x	x					x	x		x			**AD565K**	**AD (3219)**	
				x	x					x	x		x			**AD565T**	**† AD (3219)**	5
				x	x					x	x		x			MCE565K	MCE	
				x	x					x	x		x			µA565TM	† National	
			780	x						x	x			x		HI562A-2	† Harris	
				x						x	x			x		HI562A/883	Harris	
		0.5	312 *	x	x	x	x	x		x	x	x		x		AM6012C	AMD	10
			375	x	x					x	x		x			HI565AKD-5	Harris	
				x	x					x	x		x			HI565ATD-5	† Harris	
			495	x	x					x	x		x		x	AD567K	AD	
		1 *	500	x	x						x					MP1210H	MicroPwr	
				x	x						x					MP1210R	† MicroPwr	15
				x	x						x					MP1210Z	MicroPwr	
		1.5 *		x	x					x	x			x		PM562A	† AD	
		1.5	465	x	x					x	x			x		**AD562S/BIN**	**AD (3220)**	
		1.5 *	465	x	x					x	x			x		DM562G	AD	
		1.5	475	x	x					x	x		x			**AD563K/BIN**	**AD (3220)**	20
				x	x					x	x		x			**AD563S/BIN**	**† AD (3220)**	
				x	x					x	x		x			**AD563T/BIN**	**† AD (3220)**	
			800			x	x	x		x	x					TPDAC80V	TeledyneS	
		4	800	x	x					x	x		x		x	**DAC811B**	**◊ Burr-Brown (3341)**	
				x	x					x	x		x		x	**DAC811K**	**◊ Burr-Brown (3341)**	25
				x	x					x	x		x		x	**DAC811S**	**◊† Burr-Brown (3341)**	
		6	450			x	x			x	x		x		x	HSDAC87AUB	† Sipex-HSD	
	1/3	6 *	360 *	x		x	x			x	x					HSDAC87AU	† Sipex-HSD	
	1/2			x	x		x			x				x		**AD664**	**AD (3223)**	
				x	x		x			x						**AD7245A**	**AD (3221, 3273)**	30
		—	35		x			x	x	x					x	**AD7545C**	**◊ AD (3220)**	
					x			x	x	x					x	**AD7545GC**	**◊ AD (3220)**	
					x			x	x	x					x	**AD7545GL**	**◊ AD (3220)**	
					x			x	x	x					x	**AD7545GU**	**◊ AD (3220)**	
					x			x	x	x					x	**AD7545L**	**◊ AD (3220)**	35
					x			x	x	x					x	**AD7545U**	**◊ AD (3220)**	
			225													DAC8565	† Raytheon	
		1/2	20	x	x	x	x			x	x			x		MP7541T	† MicroPwr	
		0.003 *		x						x			x			BT104	† Brooktree	
				x						x			x		x	BT105	† Brooktree	40
		0.01								x	x				x	**AD667J**	**◊ AD (3221)**	
										x	x				x	**AD667S**	**◊† AD (3221)**	
		0.02	1200	x						x						TDC1112	† TRWLSI	
		0.035								x	x					**AD568J**	**AD (3219)**	
										x	x					**AD568K**	**AD (3219)**	45
										x	x					**AD568S**	**† AD (3219)**	
			855	x	x					x	x					HDS1250	AD	
				x	x					x	x					HDS1250M	† AD	
		0.04	300	x						x	x		x			**CAT104**	**Catalyst Semi (3352)**	
				x						x	x		x		x	**CAT105**	**Catalyst Semi (3352)**	50
																	(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2	0.04															(Cont'd)	
			1160	x	x							x	x			DAC63BM	Burr-Brown	
				x	x							x	x			DAC63CG	Burr-Brown	
				x	x							x	x			DAC63CM	Burr-Brown	
				x	x							x	x			DAC63T	† Burr-Brown	
		0.045	1160	x	x							x	x			DAC63BG	Burr-Brown	5
		0.05		x												DACDG12B1	Datel	
				x												DACDG12B2	Datel	
			—			x	x			x		x	x			ADH030II-12	ILC-DDC	
			780	x	x					x			x			**DACHF12BMC**	**Datel (3359)**	
				x	x					x			x			**DACHF12BMM**	**† Datel (3359)**	10
			800	x	x					x	x					HS9393B	† Sipex-HSD	
				x	x					x	x					HS9393C	Sipex-HSD	
				x	x					x	x					HS9394B	† Sipex-HSD	
				x	x					x	x					HS9394C	Sipex-HSD	
		0.06	395	x	x					x			x			4065	† TeledyneS	15
				x	x					x			x			4065HR	† TeledyneS	
		0.065	1600			x	x			x			x			**DAC812C**	**Burr-Brown (3343)**	
				x	x					x			x			DAC812C	MicroNet	
				x	x					x			x			DAC812C/B	MicroNet	
		0.1	645	x	x					x						4065HR	† TeledyneS	20
		0.18	—	x	x					x	x			x		AD7544BG	AD	
				x	x					x	x			x		AD7544GK	AD	
				x	x					x	x			x		AD7544GT	† AD	
				x	x					x	x			x		AD7544T	† AD	
		0.25	2.5	x	x	x	x			x	x			x	x	DAC8043A	† AD	25
				x	x	x	x			x	x			x	x	DAC8043E	AD	
				x	x	x	x			x	x			x	x	DAC8043G	AD	
			345	x	x					x	x		x			**AD565AJ**	**AD (3219)**	
				x	x					x	x		x			**AD565AS**	**† AD (3219)**	
				x	x					x	x		x			MX565AJ	Maxim	30
				x	x					x	x		x			MX565AS	† Maxim	
				x	x					x	x		x			MCE565AJ	MCE	
				x	x					x	x		x			MCE565AS	† MCE	
				x	x					x	x		x			**MN565AJ**	**MicroNet (3549)**	
				x	x					x	x		x			**MN565AS**	**† MicroNet (3549)**	35
			900			x	x			x			x			4080	† TeledyneS	
						x	x			x			x			4080HR	† TeledyneS	
						x	x			x			x			4081	TeledyneS	
						x	x			x			x			4081HR	† TeledyneS	
						x	x			x			x			4082	TeledyneS	40
						x	x			x			x			4082HR	† TeledyneS	
		0.3 *				x	x			x			x			**DAC85H-CBI-I**	**Burr-Brown (3341)**	
						x	x			x			x			DAC87H-CBI-I	† Burr-Brown	
		0.3	270	x						x	x			x		DAC1266L	National	
				x						x	x			x		DAC1266LC	National	45
			345	x						x	x		x	x		DAC1265L	National	
				x						x	x		x	x		DAC1265LC	National	
			450	x	x					x			x			4024	TeledyneS	
			480	x			x	x					x			**DAC80-CBI-I**	**MicroNet (3549)**	
				x			x	x					x			**DAC85-CBI-V**	**MicroNet (3549)**	50
			1000			x				x			x			HI5680I	Harris	
						x				x	x		x			HI5685I	Harris	
						x	x	x			x		x			4087	TeledyneS	
			1200			x	x	x			x		x			DAC80Z-CBI-I	Burr-Brown (Continued)	

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2																(Cont'd)	
		0.3/1.5 *																
			800 *			x	x	x		x			x			DAC800-CBI-I	Burr-Brown	
						x	x	x		x			x			DAC800-CBI-V	Burr-Brown	
		0.3/3 *																
			480			x	x	x		x			x			**DAC80-CBI-I**	**Burr-Brown (3341)**	
			850			x	x	x		x			x			**ADDAC87/CBI**	**† AD (3219)**	
						x	x	x		x			x			**DAC85-CBI**	**MicroNet (3549)**	5
			925			x	x	x		x			x			**ADDAC80/CBI**	**AD (3219)**	
						x	x	x		x			x			**ADDAC85/CBI**	**† AD (3219)**	
						x	x	x		x			x			**ADDAC85C/CBI**	**AD (3219)**	
		0.35	300	x	x					x	x			x		MX566AJ	Maxim	
				x	x					x	x			x		MX566AS	† Maxim	10
		0.4	—	x	x					x	x					DAC562C	Datel	
						x	x	x		x						HIDAC80	Harris	
			300	x	x					x	x		x	x		**AD566AJ**	**AD (3219)**	
				x	x					x	x		x	x		AD566AS	† AD	
				x	x					x	x		x			**AD566J**	**AD (3219)**	15
				x	x					x	x		x			**AD566S**	**† AD (3219)**	
				x	x					x	x		x			MCE565J	MCE	
				x	x					x	x		x	x		MCE566AJ	MCE	
				x	x					x	x		x			MCE566J	MCE	
			345	x	x					x	x		x			**AD565J**	**AD (3219)**	20
				x	x					x	x		x			**AD565S**	**† AD (3219)**	
				x	x					x	x		x			µA565SM	† National	
			400	x	x	x	x			x	x	x		x		µPC6012	NEC	
				x	x	x	x			x	x	x		x		µPC648	NEC	
			465	x	x					x						4068	† TeledyneS	25
			780	x						x	x			x		HI562A-5	Harris	
		0.5								x	x			x		HDAC7541ZAC	Signal Proc	
										x	x			x		HDAC7541ZAI	Signal Proc	
										x	x			x		HDAC7541ZAM	† Signal Proc	
														x		HDAC7542AAC	Signal Proc	30
														x		HDAC7542AAI	Signal Proc	
														x		HDAC7542AAM	† Signal Proc	
														x		HDAC7543AAC	Signal Proc	
														x		HDAC7543AAI	Signal Proc	
														x		HDAC7543AAM	† Signal Proc	35
														x		HDAC7545AAC	Signal Proc	
														x		HDAC7545AAI	Signal Proc	
														x		HDAC7545AAM	† Signal Proc	
			312 *	x	x	x	x	x		x	x	x		x		AM6012M	† AMD	
				x	x	x	x	x		x	x	x		x		MCE6012C	MCE	40
				x	x	x	x	x		x	x	x		x		MCE6012M	† MCE	
			375	x	x					x	x		x			HI565AJD-5	Harris	
				x	x					x	x		x			HI565ASD-5	† Harris	
			495	x	x					x	x		x		x	AD567J	AD	
				x	x					x	x		x		x	AD567S	† AD	45
		0.5 *	1300			x	x			x	x					HDH1205	AD	
						x	x			x	x					HDH1205M	† AD	
		0.6 *		x	x	x	x	x		x	x			x		Si7541AK	◊ Siliconix	
				x	x	x	x	x		x	x			x		Si7541AT	◊† Siliconix	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2																(Cont'd)	
		0.6	1.5	x	x	x	x	x		x	x			x		**DAC7541AB**	**Burr-Brown (3341)**	
				x	x	x	x	x		x	x			x		**DAC7541AK**	**Burr-Brown (3341)**	
				x	x	x	x	x		x	x			x		**DAC7541AT**	**† Burr-Brown (3341)**	
		0.6 *	30	x	x					x	x			x		**PM7541AA**	**† AD (3219)**	
				x	x					x	x			x		**PM7541AB**	**AD (3219)**	5
				x	x					x	x			x		**PM7541AE**	**AD (3219)**	
				x	x					x	x			x		**PM7541AF**	**◇ AD (3219)**	
				x	x					x	x			x		**PM7541AG**	**AD (3219)**	
				x	x					x	x			x		**PM7541AH**	**AD (3219)**	
			900	x			x			x	x			x		Si7541T	† Siliconix	10
		0.65	1500		x					x			x			4072	TeledyneS	
		0.7	2400			x		x								DAC-DG12	Datel	
		0.75 *	555	x	x	x				x	x		x			HI5690V	Harris	
				x	x	x				x	x		x			HI5695V	Harris	
		1												x	x	DAC612C	Datel	15
			10	x	x	x	x			x	x			x		DAC8221E	AD	
				x	x	x	x			x	x			x		DAC8221G	AD	
				x						x	x			x	x	MAX543A	◇† Maxim	
		1 *	11 *	x	x	x	x			x	x			x	x	MP7622K	MicroPwr	
		1	20 *	x	x	x	x			x	x			x		**AD7541B**	**◇ AD (3219)**	20
				x	x	x	x			x	x			x		**AD7541K**	**◇ AD (3219)**	
				x	x	x	x			x	x			x		**AD7541T**	**◇† AD (3219)**	
				x	x	x	x			x	x			x		AD7541B	Harris	
				x	x	x	x			x	x			x		AD7541K	Harris	
				x	x	x	x			x	x			x		AD7541T	Harris	25
			20	x	x	x	x			x	x			x		MX7541AB	Maxim	
				x	x	x	x			x	x			x		MX7541AK	Maxim	
				x	x	x	x			x	x			x		MX7541AT	† Maxim	
				x	x	x	x			x	x			x		MX7541B	Maxim	
				x	x	x	x			x	x			x		MX7541K	Maxim	30
				x	x	x	x			x	x			x		MX7541T	† Maxim	
		1 *	20 *	x	x						x					MP1208B	MicroPwr	
				x	x						x					MP1208K	MicroPwr	
				x	x						x					MP1208T	† MicroPwr	
				x	x						x				x	MP1230B	MicroPwr	35
				x	x						x				x	MP1230K	MicroPwr	
				x	x						x				x	MP1230T	† MicroPwr	
		1	20	x	x	x	x			x	x			x		MP7541B	MicroPwr	
				x	x	x	x			x	x			x		MP7541K	MicroPwr	
		1 *	20 *	x	x						x			x		MP7542B	MicroPwr	40
				x	x						x			x		MP7542K	MicroPwr	
				x	x						x			x		MP7542T	† MicroPwr	
				x	x						x			x	x	MP7543B	MicroPwr	
				x	x						x			x	x	MP7543K	MicroPwr	
				x	x						x			x	x	MP7543T	† MicroPwr	45
		1	20 *	x	x	x	x			x	x			x		MP7621B	MicroPwr	
				x	x	x	x			x	x			x		MP7621K	MicroPwr	
				x	x	x	x			x	x			x		MP7621T	† MicroPwr	
				x	x	x	x			x	x			x		MP7623B	MicroPwr	
			30	x	x					x	x				x	**PM7541A**	**◇† AD (3219)**	50
				x	x					x	x				x	**PM7541E**	**AD (3219)**	
				x	x					x	x				x	**PM7541G**	**AD (3219)**	
				x	x					x	x			x	x	**PM7545B**	**AD (3220)**	

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2	1	30														(Cont'd)	
				x	x					x	x			x	x	**PM7545F**	◊ **AD** **(3220)**	
				x	x					x	x			x	x	**PM7545H**	**AD** **(3220)**	
				x	x					x	x			x	x	**PM7645B**	**AD** **(3220)**	
				x	x					x	x			x	x	**PM7645E**	**AD** **(3220)**	
				x	x					x	x			x	x	**PM7645F**	◊ **AD** **(3220)**	5
				x	x					x	x			x	x	**PM7645H**	**AD** **(3220)**	
				x						x	x			x	x	DAC8212A	◊ Maxim	
				x						x	x			x	x	DAC8212E	Maxim	
				x						x	x			x	x	DAC8212G	† Maxim	
				x						x	x			x	x	MAX7645AC	◊ Maxim	10
				x						x	x			x	x	MAX7645AE	Maxim	
				x						x	x			x	x	MAX7645AM	† Maxim	
				x						x	x				x	MX7545AB	Maxim	
				x						x	x				x	MX7545AC	Maxim	
				x						x	x				x	MX7545AK	◊ Maxim	15
				x						x	x				x	MX7545AL	◊ Maxim	
				x						x	x				x	MX7545AT	† Maxim	
				x						x	x				x	MX7545AU	† Maxim	
				x						x	x			x		DAC1208	National	
				x						x	x			x		DAC1218	National	20
				x						x	x			x		DAC1230	National	
		1*	40*	x	x	x	x			x	x			x	x	MP7622B	MicroPwr	
		1	45	x	x					x	x			x	x	**PM7548A**	† **AD** **(3219)**	
				x	x					x	x			x	x	**PM7548B**	† **AD** **(3219)**	
				x	x					x	x			x	x	**PM7548E**	**AD** **(3219)**	25
				x	x					x	x			x	x	**PM7548F**	**AD** **(3219)**	
				x	x					x	x			x	x	**PM7548G**	**AD** **(3219)**	
				x	x					x	x			x	x	**PM7548H**	**AD** **(3219)**	
				x						x	x			x	x	MX7548B	Maxim	
				x						x	x			x	x	MX7548K	◊ Maxim	30
				x						x	x			x	x	MX7548T	† Maxim	
			50	x	x					x	x			x		DAC8012A	† AD	
				x	x					x	x			x		DAC8012E	AD	
				x	x					x	x			x		DAC8012G	AD	
				x	x					x	x			x		DAC8212A	† AD	35
				x	x					x	x			x		DAC8212E	AD	
				x	x					x	x			x		DAC8212G	AD	
			100	x			x	x								DAC8143A	AD	
				x			x	x								DAC8143E	AD	
			450	x		x	x			x	x			x		**PM7542A**	† **AD** **(3219)**	40
				x		x	x			x	x			x		**PM7542B**	† **AD** **(3219)**	
				x		x	x			x	x			x		**PM7542E**	**AD** **(3219)**	
				x		x	x			x	x			x		**PM7542F**	**AD** **(3219)**	
				x		x	x			x	x			x		**PM7542G**	**AD** **(3219)**	
				x		x	x			x	x			x		**PM7542H**	**AD** **(3219)**	45
				x		x	x			x	x			x		PM7543A	† AD	
				x		x	x			x	x			x		**PM7543B**	† **AD** **(3219)**	
				x		x	x			x	x			x		**PM7543E**	**AD** **(3219)**	
				x		x	x			x	x			x		**PM7543F**	**AD** **(3219)**	
				x		x	x			x	x			x		**PM7543G**	**AD** **(3219)**	50
				x		x	x			x	x			x		**PM7543H**	**AD** **(3219)**	
				x	x					x	x			x		DAC7541	Datel	
				x	x	x	x			x	x			x		MP7623K	MicroPwr	
				x	x	x	x			x	x			x		MP7623T	† MicroPwr	
				x	x					x	x					TP7541B	TeledyneS (Continued)	55

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2	1	450														(Cont'd)	
				x	x					x	x			x		TP7541K	TeledyneS	
				x	x			x		x	x			x		TP7541T	† TeledyneS	
				x	x						x					4085	† TeledyneS	
		1 *	800	x	x					x	x		x		x	**DAC811A**	◇ **Burr-Brown (3341)**	
				x	x					x	x		x		x	**DAC811R**	◇† **Burr-Brown (3341)**	5
			1000	x	x	x	x			x	x			x	x	MP7622T	† MicroPwr	
		1.0	30	x	x					x	x			x	x	**PM7545A**	† **AD (3220)**	
				x	x					x	x			x	x	**PM7545E**	**AD (3220)**	
				x	x					x	x			x	x	**PM7545G**	**AD (3220)**	
				x	x					x	x			x	x	**PM7645A**	† **AD (3220)**	10
				x	x					x	x			x	x	**PM7645G**	**AD (3220)**	
		1.5								x	x					**AD7549K**	◇ **AD (3224)**	
		1.5 *		x	x					x	x			x		PM562B	† AD	
				x	x					x	x			x		PM562F	AD	
				x	x					x	x			x		PM562H	AD	15
		1.5	30	x						x	x			x	x	MX7537B	Maxim	
				x						x	x			x	x	MX7537C	Maxim	
				x						x	x			x	x	MX7537K	◇ Maxim	
				x						x	x			x	x	MX7537L	◇ Maxim	
				x						x	x			x	x	MX7537T	† Maxim	20
				x						x	x			x	x	MX7537U	† Maxim	
				x						x	x			x	x	MX7547B	Maxim	
				x						x	x			x	x	MX7547C	Maxim	
				x						x	x			x	x	MX7547K	◇ Maxim	
				x						x	x			x	x	MX7547L	◇ Maxim	25
				x						x	x			x	x	MX7547T	† Maxim	
				x						x	x			x	x	MX7547U	† Maxim	
			75	x						x	x			x	x	MX7549B	Maxim	
				x						x	x			x	x	MX7549K	◇ Maxim	
				x						x	x			x	x	MX7549T	† Maxim	30
		1.5 *	465	x	x					x	x			x		**AD562K/BIN**	**AD (3220)**	
			475	x	x					x	x		x			**AD563J/BIN**	**AD (3220)**	
		1.5	1000			x	x	x			x		x			4086	TeledyneS	
		2	1.5	x			x	x			x			x	x	**DAC7545**	**Burr-Brown (3341)**	
			30	x	x					x	x			x	x	MX7545C	Maxim	35
				x	x				x	x				x	x	MX7545GC	Maxim	
				x	x				x	x				x	x	MX7545GL	Maxim	
				x	x				x	x				x	x	MX7545GU	† Maxim	
				x	x				x	x				x	x	MX7545L	Maxim	
				x	x					x	x			x	x	MX7545U	† Maxim	40
			40	x	x					x	x			x		**AD7542B**	◇ **AD (3220)**	
				x	x					x	x			x		**AD7542K**	◇ **AD (3220)**	
				x	x					x	x			x		**AD7542T**	◇† **AD (3220)**	
				x						x				x		**AD7543B**	◇ **AD (3220)**	
				x						x				x		**AD7543K**	◇ **AD (3220)**	45
				x	x					x	x			x		MX7542B	Maxim	
				x	x					x	x			x		MX7542GB	Maxim	
				x	x					x	x			x		MX7542GK	Maxim	
				x	x					x	x			x		MX7542GT	† Maxim	
				x	x					x	x			x		MX7542K	Maxim	50
				x	x					x	x			x		MX7542T	† Maxim	
				x	x					x				x		MX7543B	Maxim	
				x	x					x				x		MX7543GB	Maxim (Continued)	

Bin.—Binary
Off.—Offset
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Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2	2	40														(Cont'd)	
				x	x					x				x		MX7543GK	Maxim	
				x	x					x				x		MX7543GT	† Maxim	
				x	x					x				x		MX7543K	Maxim	
				x	x					x				x		MX7543T	† Maxim	
			350													DAC4881	† Raytheon	5
			375 *	x	x	x				x	x			x		HS3120B-2	† Sipex-HSD	
				x	x	x				x	x			x		HS3120C-2	Sipex-HSD	
			375	x	x					x			x			4058	† TeledyneS	
			450	x	x			x	x	x				x	x	MP7545C	MicroPwr	
				x	x			x	x	x				x	x	MP7545L	MicroPwr	10
				x	x			x	x	x				x	x	MP7545U	† MicroPwr	
				x	x	x	x			x	x			x		MP7645C	MicroPwr	
				x	x	x	x			x	x			x		MP7645L	MicroPwr	
				x	x	x	x			x	x			x		MP7645U	† MicroPwr	
			630	x	x					x						DACHK-12	Adv Analog	15
			1900			x	x			x						HDD1206J	AD	
						x	x			x						HDD1206S	† AD	
		2.5	—	x	x					x	x		x			DAC338B-12-2	Sipex-HSD	
			645	x	x					x			x			4058HR	† TeledyneS	
		3		x			x	x					x			HI-DAC85V-4	Harris	20
				x			x	x					x			HI-DAC85V-5	Harris	
			30	x	x					x	x			x		DAC331B-12	† Sipex-HSD	
				x	x					x	x			x		DAC331C-12	Sipex-HSD	
			380			x		x		x			x			DAC-HZB/883B	† Datel	
						x	x	x		x			x			DAC-HZ12BMC	Datel	25
			480	x			x	x					x			**DAC80-CBI-V**	**MicroNet (3549)**	
				x			x	x					x			**DAC85-CBI-I**	**MicroNet (3549)**	
			500	x				x		x	x					DAC7134BJ	Datel	
				x				x		x	x					DAC7134UJ	Datel	
			630	x	x					x			x			DACHK12BGC	Adv Analog	30
				x	x					x			x			DACHK12BMM	† Adv Analog	
			675			x	x			x			x			DAC870U	◊ Burr-Brown	
						x	x			x			x			DAC870V	◊† Burr-Brown	
			700	x	x					x			x		x	DAC-HKB/883B	† Datel	
								x		x			x		x	DAC-HKB2/883B	† Datel	35
				x				x		x			x			**DACHK12BMC**	**Datel (3359)**	
				x				x		x			x			**DACHK12BMC-2**	**Datel (3359)**	
			850			x	x			x			x			**DAC80**	**MicroNet (3549)**	
						x	x	x		x			x			MNDAC87	† MicroNet	
			900	x	x					x			x		x	**DACHK12BGC**	**Datel (3359)**	40
								x		x			x		x	**DACHK12BGC-2**	**Datel (3359)**	
				x	x					x			x		x	**DACHK12BMM**	**† Datel (3359)**	
								x		x			x		x	**DACHK12BMM-2**	**† Datel (3359)**	
			1000			x				x			x			HI5680V	Harris	
			1050			x	x			x			x			**DACHZ12BGC**	**Datel (3359)**	45
						x	x			x			x			**DACHZ12BMM**	**† Datel (3359)**	
		3.5	465	x	x					x	x			x		**AD562A/BCD**	**AD (3220)**	
				x	x					x	x			x		**AD562A/BIN**	**AD (3220)**	
		4	300	x	x					x	x		x		x	DAC336B-12	† Sipex-HSD	
				x	x					x	x		x		x	DAC336C-12	Sipex-HSD (Continued)	50

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2	4															(Cont'd)	
			480			x	x	x			x		x			**DAC80-CBI-V**	**Burr-Brown (3341)**	
						x	x	x			x		x			DAC80Z-CBI-V	Burr-Brown	
						x	x			x			x			**DAC85H-CBI-V**	**Burr-Brown (3341)**	
						x	x			x			x			DAC87H-CBI-V	† Burr-Brown	
			975			x	x			x			x		x	**DACHK**	**† MicroNet (3549)**	5
				x			x	x					x			**DACHK-2**	**MicroNet (3549)**	
				x			x	x					x			**DACHK-2E**	**MicroNet (3549)**	
				x			x	x					x			**DACHK-2H**	**† MicroNet (3549)**	
				x			x	x					x			**DACHK-2H/B**	**† MicroNet (3549)**	
			1955	x	x					x	x			x	x	**AD392**	**AD (3223)**	10
		5	400							x	x			x	x	HS33806	† Sipex-HSD	
			450 *	x	x					x	x		x			HS9338-2	Sipex-HSD	
		5 *	525 *			x	x			x	x		x			**MN3850**	**† MicroNet (3549)**	
						x	x			x	x		x			**MN3850H**	**MicroNet (3549)**	
			675 *			x	x			x			x		x	**MN3860**	**MicroNet (3549)**	15
						x	x			x			x		x	**MN3860H**	**† MicroNet (3549)**	
		5	750	x	x					x			x			4025	TeledyneS	
			1000		x	x							x			HS3860B	† Sipex-HSD	
					x	x							x			HS3860C	Sipex-HSD	
		6	450			x	x			x	x		x		x	HSDAC87ATB	† Sipex-HSD	20
			630	x	x					x	x		x		x	DAC88	† Adv Analog	
		7	750	x		x	x									**DAC87**	**MicroNet (3549)**	
				x		x	x									**DAC87H**	**† MicroNet (3549)**	
				x		x	x									**DAC87H/B**	**† MicroNet (3549)**	
			1000			x	x			x			x		x	AD3860K	AD	25
						x	x			x			x		x	AD3860S	† AD	
		8	—	x						x	x					**AD390K**	**AD (3223)**	
			375			x	x			x			x			**MN3348**	**MicroNet (3549)**	
						x	x			x			x			**MN3348H**	**† MicroNet (3549)**	
		10	x	x	x	x	x			x	x			x		DAC8221A	† AD	30
			375			x	x			x			x			**MN3349**	**MicroNet (3549)**	
						x	x			x			x			**MN3349H**	**† MicroNet (3549)**	
			760			x	x			x			x		x	**DAC88**	**† MicroNet (3549)**	
						x	x		x				x		x	MN3660	◊† MicroNet	
			1200			x	x			x			x			**DAC71**	**MicroNet (3549)**	35
		15			x					x	x			x		**AD394**	**AD (3223)**	
					x					x	x			x		**AD394K**	**AD (3223)**	
				x						x	x			x		**AD395**	**AD (3223)**	
				x						x	x			x		**AD395K**	**AD (3223)**	
			300	x	x					x	x		x			DAC349B-12	† Sipex-HSD	40
				x	x					x	x		x			DAC349C-12	Sipex-HSD	
				x	x					x	x		x			DAC9349-12	Sipex-HSD	
		20	150			x	x			x	x		x			DAC347LPB-12U	† Sipex-HSD	
						x	x			x	x		x			DAC347LPC-12B	Sipex-HSD	
						x	x			x	x		x			DAC347LPC-12U	Sipex-HSD	45
						x	x			x	x		x			HAC347LPB-12B	† Sipex-HSD	
			355			x				x				x		MN3412	MicroNet	
		25	175 *			x				x	x		x			DAC9356	Sipex-HSD	
		35	90			x				x			x			**MN371**	**MicroNet (3549)**	
						x				x			x			**MN371H**	**† MicroNet (3549)**	50

(Continued)

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CTC—Compl. 2's Compl.
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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1/2	35															(Cont'd)	
			150				x			x	x		x			AD370J	AD	
							x			x	x		x			AD370K	AD	
							x			x	x		x			AD370S	† AD	
						x				x	x		x			AD371J	AD	
		50	265				x			x	x		x			DAC356B-12	† Sipex-HSD	5
							x			x	x		x			DAC356C-12	Sipex-HSD	
			908				x			x	x		x			DAC356LPB-12	† Sipex-HSD	
							x			x	x		x			DAC356LPC-12	Sipex-HSD	
			1653			x	x					x	x			HDS1240E	AD	
						x	x					x	x			HDS1240EM	† AD	10
		70	90				x			x	x		x			**MN370**	**MicroNet (3549)**	
							x			x	x		x			**MN370H**	**† MicroNet (3549)**	
	3/4	0.08	1600							x			x			**DAC812B**	**Burr-Brown (3343)**	
		0.080	1600	x	x					x			x			DAC812B	MicroNet	
				x	x					x			x			DAC812B/B	MicroNet	15
		2	1270	x	x	x	x	x								HI-DAC87V/883	◊† Harris	
		6	450			x	x			x	x		x		x	HSDAC87ASB	† Sipex-HSD	
		7	975	x	x					x	x		x		x	**DAC1201K-V**	**Burr-Brown (3341)**	
		8	—	x						x	x					**AD390J**	**AD (3223)**	
				x						x	x					**AD390S**	**† AD (3223)**	20
				x						x	x					**AD390T**	**† AD (3223)**	
	0.5	0.4	900			x	x									**DAC87-CBI-I/B**	**† Burr-Brown (3341)**	
		0.8	10	x						x						**DAC7802**	**◊ Burr-Brown (3341)**	
		7	900			x	x			x			x			**DAC87-CBI-V/B**	**† Burr-Brown (3341)**	
	1	—	35		x			x	x	x					x	**AD7545B**	**◊ AD (3220)**	25
					x			x	x	x					x	**AD7545K**	**◊† AD (3220)**	
					x			x	x	x					x	**AD7545T**	**◊ AD (3220)**	
		0.005	700	x								x		x	x	DAC-400	‡ AD	
		0.025	900	x						x	x				x	CLC912	† Comlinear	
		0.03		x				x								AD9712	AD	30
				x				x								AD9712A	AD	
				x				x								AD9713	AD	
				x				x								AD9713A	AD	
		0.035	300	x						x	x		x			**AD568**	**† AD (3219)**	
		0.05		x										x		**AD668**	**AD (3219)**	35
		0.085		x									x	x		HDM1210	AD	
		0.18	—	x	x					x	x			x		AD7544S	AD	
		0.25	2.5	x	x	x	x			x	x			x	x	DAC8043F	AD	
				x	x	x	x			x	x			x	x	DAC8043H	AD	
			375	x		x				x	x	x		x		DAC312E	AD	40
		0.5		x												**AD7568**	**AD (3275)**	
										x	x			x		HDAC7541ZBC	Signal Proc	
										x	x			x		HDAC7541ZBI	Signal Proc	
										x	x			x		HDAC7541ZBM	† Signal Proc	
														x		HDAC7542ABC	Signal Proc	45
														x		HDAC7542ABI	Signal Proc	
														x		HDAC7542ABM	† Signal Proc	
														x		HDAC7543ABC	Signal Proc	
														x		HDAC7543ABI	Signal Proc (Continued)	

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1	0.5															(Cont'd)	
														x		HDAC7543ABM	† Signal Proc	
														x		HDAC7545ABC	Signal Proc	
														x		HDAC7545ABI	Signal Proc	
														x		HDAC7545ABM	† Signal Proc	
		0.6 *		x	x	x	x	x		x	x			x		Si7541AJ	◊ Siliconix	5
				x	x	x	x	x		x	x			x		Si7541AS	◊† Siliconix	
		0.6	1.5	x	x	x	x	x		x	x			x		**DAC7541AA**	**Burr-Brown (3341)**	
				x	x	x	x	x		x	x			x		**DAC7541AJ**	**Burr-Brown (3341)**	
				x	x	x	x	x		x	x			x		**DAC7541AS**	**† Burr-Brown (3341)**	
		0.6 *	900	x			x			x	x			x		Si7541S	† Siliconix	10
		1	10	x	x	x	x			x	x			x	x	DAC8143F	◊ AD	
				x	x	x	x			x	x			x		DAC8221F	◊ AD	
				x	x	x	x			x	x			x		DAC8221H	AD	
				x						x	x			x	x	MAX543B	◊† Maxim	
			20 *	x	x	x	x			x	x			x		**AD7541A**	**◊ AD (3219)**	15
				x	x	x	x			x	x			x		**AD7541J**	**◊ AD (3219)**	
				x	x	x	x			x	x			x		AD7541A	Harris	
				x	x	x	x			x	x			x		AD7541J	Harris	
			20	x	x	x	x			x	x			x		MX7541A	Maxim	
				x	x	x	x			x	x			x		MX7541AA	Maxim	20
				x	x	x	x			x	x			x		MX7541AJ	Maxim	
				x	x	x	x			x	x			x		MX7541AS	† Maxim	
				x	x	x	x			x	x			x		MX7541J	Maxim	
				x	x	x	x			x	x			x		MX7541S	† Maxim	
				x	x	x	x			x	x			x		MP7541A	MicroPwr	25
				x	x	x	x			x	x			x		MP7541J	MicroPwr	
				x	x	x	x			x	x			x		MP7541S	† MicroPwr	
		1 *	20 *	x	x						x			x		MP7542A	MicroPwr	
				x	x						x			x		MP7542J	MicroPwr	
				x	x						x			x	x	MP7543A	MicroPwr	30
				x	x						x			x	x	MP7543J	MicroPwr	
				x	x						x			x	x	MP7543S	† MicroPwr	
		1	20 *	x	x	x	x			x	x			x		MP7621A	MicroPwr	
				x	x	x	x			x	x			x		MP7621J	MicroPwr	
				x	x	x	x			x	x			x		MP7621S	† MicroPwr	35
				x	x	x	x			x	x			x		MP7623A	MicroPwr	
				x	x	x	x			x	x			x		MP7623J	MicroPwr	
				x	x	x	x			x	x			x		MP7623S	† MicroPwr	
			30	x	x					x	x			x	x	DAC8012B	† AD	
				x	x					x	x			x	x	DAC8012F	AD	40
				x	x					x	x			x	x	DAC8012H	◊ AD	
				x	x					x	x			x	x	DAC8212B	† AD	
				x	x					x	x			x	x	DAC8212F	AD	
				x	x					x	x			x	x	DAC8212H	AD	
				x	x					x	x			x		**PM7541B**	**† AD (3219)**	45
				x	x					x	x			x		**PM7541F**	**AD (3219)**	
				x	x					x	x			x		**PM7541H**	**AD (3219)**	
				x						x	x			x	x	DAC8212B	◊ Maxim	
				x						x	x			x	x	DAC8212F	Maxim	
				x						x	x			x	x	DAC8212H	† Maxim	50
				x						x	x			x	x	MAX7645BC	◊ Maxim	

(Continued)

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1	1	30														(Cont'd)	
				x						x	x			x	x	MAX7645BE	Maxim	
				x						x	x			x	x	MAX7645BM	† Maxim	
				x						x	x			x		DAC1209	National	
				x						x	x			x		DAC1219	National	
				x						x	x			x		DAC1231	National	5
			40 *	x	x	x	x			x	x			x	x	MP7622A	MicroPwr	
				x	x	x	x			x	x			x	x	MP7622J	MicroPwr	
				x	x	x	x			x	x			x	x	MP7622S	† MicroPwr	
			45	x						x	x			x	x	MX7548A	Maxim	
				x						x	x			x	x	MX7548J	◊ Maxim	10
				x						x	x			x	x	MX7548S	† Maxim	
			50 *	x	x	x	x			x	x			x		**AD7541S**	**◊† AD (3219)**	
				x	x	x	x			x	x			x		AD7541L	Harris	
				x	x	x	x			x	x			x		AD7541S	† Harris	
			450	x	x					x	x					TP7541A	TeledyneS	15
				x	x					x	x			x		TP7541J	TeledyneS	
				x	x					x	x			x		TP7541S	† TeledyneS	
		1 *	500	x	x						x					MP1209A	MicroPwr	
				x	x						x					MP1209J	MicroPwr	
				x	x						x					MP1209S	† MicroPwr	20
				x	x						x				x	MP1231A	MicroPwr	
				x	x						x				x	MP1231J	MicroPwr	
				x	x						x				x	MP1231S	† MicroPwr	
				x	x						x				x	MP1232H	MicroPwr	
				x	x						x				x	MP1232R	† MicroPwr	25
				x	x						x				x	MP1232Z	MicroPwr	
		1	700					x		x					x	IR3K12	Sharp	
			900	x		x	x	x	x		x			x	x	Si7545T	† Siliconix	
		1.5								x	x					**AD7537**	**AD (3224)**	
										x	x			x		**AD7547J**	**AD (3224)**	30
										x	x			x		**AD7547K**	**AD (3224)**	
										x	x			x		**AD7547S**	**AD (3224)**	
										x	x					**AD7549J**	**◊ AD (3224)**	
			30	x						x	x			x	x	MX7537A	Maxim	
				x						x	x			x	x	MX7537J	◊ Maxim	35
				x						x	x			x	x	MX7537S	† Maxim	
				x						x	x			x	x	MX7547A	Maxim	
				x						x	x			x	x	MX7547J	◊ Maxim	
				x						x	x			x	x	MX7547S	† Maxim	
			75	x						x	x			x	x	MX7549A	Maxim	40
				x						x	x			x	x	MX7549J	◊ Maxim	
				x						x	x			x	x	MX7549S	† Maxim	
		2	2	x	x					x	x			x	x	HS7584B	◊† Sipex-HSD	
				x	x					x	x			x	x	HS7584C	◊ Sipex-HSD	
			30	x	x					x	x			x	x	MX7545B	Maxim	45
				x	x					x	x			x	x	MX7545K	Maxim	
				x	x					x	x			x	x	MX7545T	† Maxim	
			40	x	x					x	x			x		**AD7542A**	**◊ AD (3270)**	
				x	x					x	x			x		**AD7542J**	**◊ AD (3220)**	
				x	x					x	x			x		**AD7542S**	**◊† AD (3220)**	50
				x	x					x				x		**AD7543A**	**◊ AD (3220)**	
				x	x					x				x		**AD7543J**	**◊ AD (3220)**	
				x	x					x	x			x		MX7542A	Maxim	
				x	x					x	x			x		MX7542J	Maxim	
				x	x					x	x			x		MX7542S	† Maxim	55

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	1	2	40													(Cont'd)		
				x	x					x				x		MX7543A	Maxim	
				x	x					x				x		MX7543J	Maxim	
				x	x					x				x		MX7543S	† Maxim	
				x	x					x	x			x	x	MP7542S	‡ MicroPwr	
			450	x			x	x		x	x				x	AD7545B	Harris	5
				x			x	x		x	x				x	AD7545K	Harris	
				x	x			x	x	x				x	x	MP7545B	MicroPwr	
				x	x			x	x	x				x	x	MP7545K	MicroPwr	
				x	x			x	x	x				x	x	MP7545T	† MicroPwr	
				x	x	x	x			x	x			x		MP7645B	MicroPwr	10
				x	x	x	x			x	x			x		MP7645K	MicroPwr	
				x	x	x	x			x	x			x		MP7645T	† MicroPwr	
		2.5	—	x	x					x	x		x			DAC338B-12-1	Sipex-HSD	
		3		x				x								**AD662**	**AD (3221)**	
				x									x			**AD7242**	**AD (3273)**	15
		4		x							x					**AD7848**	**AD (3221)**	
			300	x	x					x	x		x	x	x	**AD767**	**† AD (3221)**	
			800	x	x								x		x	**DAC811J**	**◇ Burr-Brown (3341)**	
		5		x							x					**AD7845**	**AD (3221)**	
			450 *	x	x					x	x		x			HS9338-1	Sipex-HSD	20
		6 *	360 *	x		x	x			x	x					HSDAC87AS	† Sipex-HSD	
		10		x									x			**AD7233**	**AD (3272)**	
				x									x			AD7243	AD	
				x												**DAC8413**	**AD (3276)**	
			10	x												DAC8512	AD	25
			65	x	x				x	x	x		x	x	x	**AD7248**	**† AD (3221, 3273)**	
				x	x				x	x	x		x	x	x	**AD7248A**	**† AD (3221, 3273)**	
		15	690			x					x				x	SP9344	† Sipex-HSD	
		20 *	500	x	x					x	x		x		x	DAC9377-16-5	Sipex-HSD	
		35	150			x				x	x		x			AD371K	AD	30
						x				x	x		x			AD371S	† AD	
		550 *	30	x	x					x	x					AD7240K	AD	
				x	x					x	x					AD7240T	† AD	
	1 1/4	0.1	10000		x			x			x		x	x		ADC600K	Burr-Brown	
	1 1/2	550 *	30	x	x					x	x					AD7240J	AD	35
				x	x					x	x					AD7240S	† AD	
	2	—	35		x			x	x	x					x	**AD7545A**	**◇ AD (3220)**	
					x			x	x	x					x	**AD7545J**	**◇ AD (3220)**	
					x			x	x	x					x	**AD7545S**	**◇† AD (3220)**	
		0.05	—			x	x			x		x	x			ADH030II-10	ILC-DDC	40
		0.25	375	x		x				x	x	x		x		DAC312B	† AD	
				x		x				x	x	x		x		DAC312F	AD	
				x		x				x	x	x		x		DAC312H	AD	
		0.25 *	473	x	x	x		x		x	x			x		HA17012B	Hitachi	
		0.5	10 *	x						x	x			x		DAC1220	† National	45
				x						x	x			x		DAC1220C	National	
		0.5 *	20 *	x	x	x	x			x	x			x		AD7521L	◇ AD	
				x	x	x	x			x	x			x		AD7521U	◇† AD	
				x	x	x	x			x	x			x		AD7521L	Harris	
				x	x	x	x			x	x			x		AD7531L	Harris	50
		0.5	20	x	x	x	x			x	x			x		MX7521L	Maxim	
				x	x	x	x			x	x			x		MX7521U	† Maxim	
				x	x	x	x			x	x			x		MX7531L	Maxim	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7521L	MicroPwr (Continued)	

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	2	0.5 *	20 *														(Cont'd)	
				x	x	x	x			x	x			x		MP7521U	† MicroPwr	
				x	x	x	x			x	x			x		MP7531L	MicroPwr	
			40 *	x	x	x	x			x	x			x	x	MP7622H	MicroPwr	
				x	x	x	x			x	x			x	x	MP7622R	† MicroPwr	
				x	x	x	x			x	x			x	x	MP7622Z	MicroPwr	5
		0.5	397	x	x	x		x		x	x	x		x		AM6012	Signetics	
		1	30	x						x	x			x		DAC1210	National	
				x						x	x			x		DAC1232	National	
			900	x		x	x	x	x		x			x	x	Si7545S	† Siliconix	
		2	30	x	x					x	x			x	x	MX7545A	Maxim	10
				x	x					x	x			x	x	MX7545J	Maxim	
				x	x					x	x			x	x	MX7545S	† Maxim	
			450	x			x	x		x	x				x	AD7545A	Harris	
				x			x	x		x	x				x	AD7545J	Harris	
				x	x			x	x	x				x	x	MP7545A	MicroPwr	15
				x	x			x	x	x				x	x	MP7545J	MicroPwr	
				x	x			x	x	x				x	x	MP7545S	† MicroPwr	
				x	x	x	x			x	x			x		MP7645A	MicroPwr	
				x	x	x	x			x	x			x		MP7645J	MicroPwr	
				x	x	x	x			x	x			x		MP7645S	† MicroPwr	20
		2.5	—	x	x					x	x		x			DAC338B-12-0	Sipex-HSD	
		5	450 *	x	x					x	x		x			HS9338-0	Sipex-HSD	
		20 *	500	x	x					x	x		x		x	DAC9377-16-4	Sipex-HSD	
		500 *	24	x						x	x			x		AD7521L	National	
				x						x	x			x		AD7521U	† National	25
	4	0.25 *	473	x	x	x		x		x	x			x		HA17012C	Hitachi	
		0.5 *	20 *	x	x	x	x			x	x			x		AD7521K	◊ AD	
				x	x	x	x			x	x			x		AD7521T	◊† AD	
				x	x	x	x			x	x			x		AD7531K	◊ AD	
				x	x	x	x			x	x			x		AD7521K	Harris	30
				x	x	x	x			x	x			x		AD7531K	Harris	
		0.5	20	x	x	x	x			x	x			x		MX7521K	Maxim	
				x	x	x	x			x	x			x		MX7521T	† Maxim	
				x	x	x	x			x	x			x		MX7531K	Maxim	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7521K	MicroPwr	35
				x	x	x	x			x	x			x		MP7521T	† MicroPwr	
				x	x	x	x			x	x			x		MP7531K	MicroPwr	
		500 *	24	x						x	x			x		AD7521K	National	
				x						x	x			x		AD7521T	† National	
				x						x	x			x		DAC1221	† National	40
				x						x	x			x		DAC1221C	National	
	8	0.5 *	20 *	x	x	x	x			x	x			x		AD7521J	◊ AD	
				x	x	x	x			x	x			x		AD7521S	◊† AD	
				x	x	x	x			x	x			x		AD7531J	◊ AD	
				x	x	x	x			x	x			x		AD7521J	Harris	45
				x	x	x	x			x	x			x		AD7531J	Harris	
		0.5	20	x	x	x	x			x	x			x		MX7521J	Maxim	
				x	x	x	x			x	x			x		MX7521S	† Maxim	
				x	x	x	x			x	x			x		MX7531J	Maxim	
		0.5 *	20 *	x	x	x	x			x	x			x		MP7521J	MicroPwr	50
				x	x	x	x			x	x			x		MP7521S	† MicroPwr	
				x	x	x	x			x	x			x		MP7531J	MicroPwr	
		500 *	24	x						x	x			x		AD7521J	National	
				x						x	x			x		AD7521S	† National	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12	8	500 *	24														(Cont'd)	
				x						x	x			x		DAC1222	† National	
				x						x	x			x		DAC1222C	National	
12 (dual)																		
	1/2	1	450	x		x	x			x	x			x		DAC8222A	† AD	
				x		x	x			x	x			x		DAC8222E	AD	
				x		x	x			x	x			x		DAC8222G	AD	5
				x			x	x		x						DAC8248A	† AD	
				x			x	x		x						DAC8248E	AD	
				x			x	x		x						DAC8248G	AD	
		1.5	450	x	x					x	x					**AD7537B**	**AD (3224)**	
				x	x					x	x					**AD7537C**	**AD (3224)**	10
				x	x					x	x					**AD7537K**	**AD (3224)**	
				x	x					x	x					**AD7537L**	**AD (3224)**	
				x	x					x	x					**AD7537T**	**† AD (3224)**	
				x	x					x	x					**AD7537U**	**† AD (3224)**	
				x	x					x	x					**AD754L**	**AD (3224)**	15
				x	x					x	x					**AD7547B**	**AD (3224)**	
				x	x					x	x					**AD7547C**	**AD (3224)**	
				x	x					x	x					**AD7547T**	**† AD (3224)**	
				x	x					x	x					**AD7547U**	**† AD (3224)**	
		5		x				x								**AD7837**	**AD (3223, 3275)**	20
				x				x								**AD7847**	**AD (3223, 3275)**	
		10		x				x								**AD7237**	**AD (3223)**	
				x				x								**AD7247**	**AD (3223)**	
	1	1	450	x		x	x			x	x			x		DAC8222F	AD	
				x		x	x			x	x			x		DAC8222H	AD	25
				x			x	x		x						DAC8248F	AD	
				x			x	x		x						DAC8248H	AD	
		1.5	450	x	x					x	x					**AD7537A**	**AD (3224)**	
				x	x					x	x					**AD7537J**	**AD (3224)**	
				x	x					x	x					**AD7537S**	**† AD (3224)**	30
				x	x					x	x					**AD7547A**	**AD (3224)**	
		10	10	x												DAC8522	AD	
12 (octal)																		
	1	10		x	x	x		x								AD75018	° AD	
12 Plus Sign Dynamic Range (7-Bit plus sign format)																		
	—	0.5	192							x						AM6072C	AMD	
										x						AM6072M	† AMD	35
	1 step	0.5	192							x						AM6070C	AMD	
										x						AM6070M	† AMD	
12 (quad)																		
	1/2	5		x									x		x	AD75004	° AD	
		20	90	x						x	x				x *	DAC-8412	AD	
	2	10	500	x						x	x			x	x	DAC8412	◊† AD	40
12–3 Digit BCD																		
	1/10	1.5 *	465							x	x			x		**AD562K/BCD**	**AD (3220)**	
										x	x			x		**AD562S/BCD**	**† AD (3220)**	
			475							x	x		x			**AD563J/BCD**	**AD (3220)**	
										x	x		x			**AD563K/BCD**	**AD (3220)**	
										x	x		x			**AD563S/BCD**	**† AD (3220)**	45
										x	x		x			**AD563T/BCD**	**† AD (3220)**	
	1/4	0.3/3 *	925							x	x		x			**ADDAC80/CCD**	**AD (3221)**	
						x				x	x		x			ADDAC85/CCD	† AD	
						x				x	x		x			ADDAC85C/CCD	AD	

(Continued)

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CTC—Compl. 2's Compl.
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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
12–3 Digit BCD	1/4																(Cont'd)	
		3 *	1050							x			x			**DACHZ12DGC**	**Datel (3359)**	
										x			x			**DACHZ12DMC**	**Datel (3359)**	
										x			x			**DACHZ12DMM †**	**Datel (3359)**	
	1/2	0.3	780								x		x			DAC80Z-CCD-I	Burr-Brown	
			975								x		x			**DAC80-CCD-I**	**Burr-Brown (3341)**	5
		0.3/3 *	850 *							x			x			**DAC85-CCD †**	**MicroNet (3549)**	
		15	300	x	x					x	x		x			DAC349B-3D †	Sipex-HSD	
				x	x					x	x		x			DAC349C-3D	Sipex-HSD	
				x						x	x		x			DAC9349-3D	Sipex-HSD	
12–4 Digit BCD	1/2	20 *	500	x	x					x	x		x		x	DAC9377-4D	Sipex-HSD	10
12(dual)	1/2			x				x						x		**DAC7802L**	**Burr-Brown (3341)**	
	1			x			x							x		**DAC7802K**	**Burr-Brown (3341)**	
13	1/2	3	500	x				x		x	x					DAC7134BK	Datel	
				x				x		x	x					DAC7134UK	Datel	
	1	0.1	980				x			x			x			2615-12	ILC-DDC	15
	2	0.1	980				x			x			x			2615-11	ILC-DDC	
	4	0.1	980				x			x			x			2615-10	ILC-DDC	
13 (1 ch) and 6 (3 ch)		0.25	125	x						x					x	MB88301A	Fujitsu	
14	1/2			x	x					x	x			x		DAC9331-14	Sipex-HSD	
		0.05	2000	x	x											DAC02306 †	ILC-DDC	20
				x	x											DAC02307 †	ILC-DDC	
		2	30 *	x	x					x	x			x		HS3140B-4 †	Sipex-HSD	
				x	x					x	x			x		HS3140C-4	Sipex-HSD	
		3		x				x		x	x			x	x	ICL7134	Harris	
			30	x	x					x	x			x		DAC331B-14 †	Sipex-HSD	25
				x	x					x	x			x		DAC331C-14	Sipex-HSD	
			500	x				x		x	x					DAC7134BL	Datel	
				x				x		x	x					DAC7134UL	Datel	
		30		x	x			x		x						A867-14	Adv Analog	
		100		x	x			x		x						414BIN	Adv Analog	30
		200 kHz	600							x						HDD1409	AD	
	1	1.5		x										x	x	**AD7534B**	**AD (3220)**	
				x										x	x	**AD7534K**	**AD (3220)**	
				x										x	x	**AD7534T †**	**AD (3220)**	
				x										x	x	**AD7535B**	**AD (3220)**	35
				x										x	x	**AD7535K**	**AD (3220)**	
				x										x	x	**AD7535T †**	**AD (3220)**	
										x	x					**AD7536K**	**AD (3220)**	
										x	x					**AD7536T †**	**AD (3220)**	
			45	x						x	x			x	x	MX7534B	Maxim	40
				x						x	x			x	x	MX7534K ◊	Maxim	
				x						x	x			x	x	MX7534T †	Maxim	
			50	X						X	X			X	X	**AD7538 †**	**AD (3220)**	
			60	x						x	x			x	x	MX7535B	Maxim	
				x						x	x			x	x	MX7535K ◊	Maxim	45
				x						x	x			x	x	MX7535T †	Maxim	
					x					x	x			x	x	MX7536B	Maxim	
					x					x	x			x	x	MX7536K ◊	Maxim	
					x					x	x			x	x	MX7536T †	Maxim (Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
14	1																(Cont'd)	
		1.8	1775	x	x					x						DAC02310-103	† ILC-DDC	
				x	x					x						DAC02310-303	ILC-DDC	
		2	375 *	x	x	x				x	x			x		HS3140B-3	Sipex-HSD	
				x	x	x				x	x			x		HS3140C-3	Sipex-HSD	
		3		x									x			**AD7244**	**AD (3273)**	5
		4		x							x					**AD7840**	**AD (3221)**	
	2	1.5		x										x	x	**AD7534A**	**AD (3220)**	
				x										x	x	**AD7534J**	**AD (3220)**	
				x										x	x	**AD7534S**	**† AD (3220)**	
				x										x	x	**AD7535A**	**AD (3220)**	10
				x										x	x	**AD7535J**	**AD (3220)**	
				x										x	x	**AD7535S**	**† AD (3220)**	
										x	x					**AD7536J**	**AD (3220)**	
										x	x					**AD7536S**	**† AD (3220)**	
			45	x						x	x			x	x	MX7534A	Maxim	15
				x						x	x			x	x	MX7534J	◊ Maxim	
				x						x	x			x	x	MX7534S	† Maxim	
			60	x						x	x			x	x	MX7535A	Maxim	
				x						x	x			x	x	MX7535J	◊ Maxim	
				x						x	x			x	x	MX7535S	† Maxim	20
					x					x	x			x	x	MX7536A	Maxim	
					x					x	x			x	x	MX7536J	◊ Maxim	
					x					x	x			x	x	MX7536S	† Maxim	
		1.8	1775	x	x					x						DAC02310-102	† ILC-DDC	
				x	x					x						DAC02310-302	ILC-DDC	25
		2	40 *	x	x					x	x			x	x	MP7614K	MicroPwr	
				x	x					x	x			x	x	MP7614T	† MicroPwr	
		15	780		x					x	x					**AD396K**	**AD (3223)**	
					x					x	x					**AD396S**	**† AD (3223)**	
					x					x	x					**AD396T**	**AD (3223)**	30
		100		x	x			x		x						416BIN	Adv Analog	
	4	2	40 *	x	x					x	x			x	x	MP7614J	MicroPwr	
				x	x					x	x			x	x	MP7614S	† MicroPwr	
16				x						x	x					µPD6372CX/GS	◊ NEC	
			40					x			x					LC7881	◊ Sanyo	35
			260					x		x			x			**PCM56**	**Burr-Brown (3342)**	
		3	200							x	x			x		**AD569S**	**† AD (3221)**	
	1/8	25	1425	x				x		x			x		x	MP8116	Analogic	
	1/4	3.5	750		x			x	x	x	x		x			MP1936	Analogic	
		5	500		x			x	x	x	x		x			MP1926A	Analogic	40
		50	500		x			x	x	x	x		x			MP1926S	Analogic	
	1/2	0.075	500	x	x					x	x		x		x	HS9390	† Sipex-HSD	
		0.1		x								x				HDAC52160	Signal Proc	
		2 *	60	x	x					x	x			x		DAC370B-16	† Sipex-HSD	
				x	x					x	x			x		DAC370C-16	Sipex-HSD	45
				x	x					x	x			x		DAC9331-16-6	Sipex-HSD	
		3	60	x	x					x	x			x	x	SP9316	◊† Sipex-HSD	
			500	x	x					x	x		x		x	SP1148	† Sipex-HSD	
		5 *	50 *	x	x					x	x			x	x	AD7546B	AD	
				x	x					x	x			x	x	AD7546K	AD	50
		15	675			x	x			x			x			DAC-HPB/883B	† Datel	

(Continued)

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
16	1/2	15	675			x	x									(Cont'd) DAC-HPB1/883B	† Datel	
		20 *	500	x	x					x	x		x		x	DAC9377-16-6	Sipex-HSD	
	1		25	x												ICL7121	Harris	
		0.1	900	x	x					x	x		x		x	HS9390B	† Sipex-HSD	
				x	x					x	x			x	x	HS9390C	Sipex-HSD	5
		0.5		x												**DAC16**	**AD (3271)**	
			250		x			x		x	x		x		x	TDA1543	Signetics	
	1 *	1 *	310 *		x	x	x	x	x			x	x	x		IR3K16B	Sharp	
					x	x	x	x	x			x	x	x		IR3K16BM	Sharp	
	1	1	465	x	x			x		x	x					HIDAC16B-5	Harris	10
			790			x	x			x						**DAC700C**	◊ **Burr-Brown (3341)**	
						x	x			x						**DAC700L**	◊ **Burr-Brown (3341)**	
						x	x			x						**DAC702C**	◊† **Burr-Brown (3341)**	
						x	x			x						**DAC702L**	◊ **Burr-Brown (3341)**	
		1.5		x									x			**AD1856**	**AD (3220)**	15
		2	60								x		x			µPD6355G	◊ NEC	
		2 *	60	x	x					x	x			x		DAC9331-16-5	Sipex-HSD	
		5	45							x	x			x	x	HS9371K	Sipex-HSD	
										x	x			x	x	HS9371T	† Sipex-HSD	
		5 *	50 *	x	x					x	x			x	x	AD7546A	AD	20
				x	x					x	x			x	x	AD7546J	AD	
		5	50		x			x							x	SP9372	† Sipex-HSD	
			900							x			x			ZPP2001	Burr-Brown	
		6		x												AD1145	AD	
				x							x			x		**AD7846**	**AD (3221)**	25
		8		x												**DAC1136**	**AD (3221)**	
			790			x	x			x						**DAC701C**	◊ **Burr-Brown (3341)**	
						x	x			x						**DAC701L**	◊ **Burr-Brown (3341)**	
			940				x			x			x			**DAC703L**	◊ **Burr-Brown (3341)**	
		15	675			x	x			x			x			**DACHP16BGC**	**Datel (3359)**	30
						x	x			x			x			**DACHP16BGC-1**	**Datel (3359)**	
		20 *	500	x	x						x		x	x	x	**AD1147**	**AD (3221)**	
				x	x						x		x	x	x	**AD1148**	**AD (3222)**	
		30		x	x			x		x						A867-16	Adv Analog	
	2			x				x			x					YM3025	Yamaha	35
		0.3	365			x				x			x			**MN3290I**	**† MicroNet (3549)**	
							x			x			x			MN3291I	† MicroNet	
							x			x			x			MN3292I	† MicroNet	
			790			x				x	x		x			**DAC700B**	◊ **Burr-Brown (3341)**	
						x				x	x		x			**DAC700K**	◊ **Burr-Brown (3341)**	40
							x	x		x	x		x			**DAC702B**	◊ **Burr-Brown (3341)**	
							x	x		x	x		x			**DAC702K**	◊ **Burr-Brown (3341)**	
						x	x			x	x		x			**PCM53K-I**	**Burr-Brown (3342)**	
			800												x	DAC706	Burr-Brown	
	2 *	0.35 *	230			x	x			x	x		x			**PCM55H**	**Burr-Brown (3342)** (Continued)	45

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
16	2 *	0.35 *	230			x	x			x	x		x			(Cont'd) **PCM55J**	**Burr-Brown (3342)**	
			540			x	x			x	x		x			**PCM54H**	**Burr-Brown (3342)**	
						x	x			x	x		x			**PCM54J**	**Burr-Brown (3342)**	
						x	x			x	x		x			**PCM54K**	**Burr-Brown (3342)**	
	2	0.35*	800					x		x	x		x		x	DAC706B	Burr-Brown	5
								x		x	x		x		x	DAC706K	Burr-Brown	
								x		x	x		x		x	DAC706S	† Burr-Brown	
				x				x		x	x		x		x	**DAC708B**	**Burr-Brown (3341)**	
				x				x		x	x		x		x	**DAC708K**	**Burr-Brown (3341)**	
				x				x		x	x		x		x	**DAC708S**	**† Burr-Brown (3341)**	10
		1	465	x	x			x		x	x					HIDAC16C-5	Harris	
			700					x		x					x	IR3K16A	Sharp	
			750				x									**DAC700SH/883B**	**† Burr-Brown (3341)**	
							x									**DAC702SH/883B**	**† Burr-Brown (3341)**	
			790			x	x			x						**DAC700S**	**◇† Burr-Brown (3341)**	15
						x	x			x						**DAC702S**	**◇† Burr-Brown (3341)**	
			950				x			x			x			**DAC71-COB-I**	**Burr-Brown (3341)**	
						x				x			x			**DAC71-CSB-I**	**Burr-Brown (3341)**	
							x			x			x			DAC72BH-COB-I	Burr-Brown	
						x				x			x			DAC72BH-CSB-I	Burr-Brown	20
			1200	x			x	x					x			**DAC71-COB-I**	**MicroNet (3549)**	
				x			x	x					x			**DAC71-CSB-I**	**MicroNet (3549)**	
			1225				x			x			x			**ADDAC71-COB-I**	**AD (3220)**	
						x				x			x			**ADDAC71-CSB-I**	**AD (3220)**	
							x			x			x			**ADDAC72-COB-I**	**AD (3220)**	25
						x				x			x			**ADDAC72-CSB-I**	**AD (3220)**	
		1.5		x				x								**AD766**	**AD (3221, 3272)**	
		2	20	x	x					x	x			x	x	MP7616T	† MicroPwr	
			30	x	x					x	x			x		HS3160B-4	† Sipex-HSD	
				x	x					x	x			x		HS3160C-4	Sipex-HSD	30
		2 *	60	x	x					x	x			x		DAC9331-16-4	Sipex-HSD	
		4	530			x				x			x			**MN3290V**	**† MicroNet (3549)**	
							x			x			x			MN3291V	† MicroNet	
							x			x			x			MN3292V	† MicroNet	
			940			x				x	x		x			**DAC701B**	**◇ Burr-Brown (3341)**	35
						x				x	x		x			**DAC701K**	**◇ Burr-Brown (3341)**	
							x	x		x	x		x			**DAC703B**	**◇ Burr-Brown (3341)**	
							x	x		x	x		x			**DAC703K**	**◇ Burr-Brown (3341)**	
							x	x		x	x					**DAC703KU**	**◇ Burr-Brown (3341)**	
						x	x			x	x		x			**PCM53K-V**	**Burr-Brown (3342)**	40

(Continued)

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Off.—Offset
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Magn.—Magnitude
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CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ±LSB	Settling Time ±½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
16	2																(Cont'd)	
		5	45							x	x			x	x	HS9371J	Sipex-HSD	
										x	x			x	x	HS9371S	† Sipex-HSD	
			500					x					x		x	CX20152	Sony	
			1225				x			x			x			**ADDAC71-COB-V**	**AD (3221)**	
						x				x			x			**ADDAC71-CSB-V**	**AD (3221)**	5
							x			x			x			**ADDAC72-COB-V**	**AD (3221)**	
						x				x			x			**ADDAC72-CSB-V**	**AD (3221)**	
		8 *		x				x								**DAC1600**	**Burr-Brown (3341)**	
		8				x	x			x						**DAC701S**	**◊† Burr-Brown (3341)**	
						x	x			x						**DAC703S**	**◊† Burr-Brown (3341)**	10
			900				x									**DAC701SH/883B**	**† Burr-Brown (3341)**	
							x									**DAC703VG/883B**	**† Burr-Brown (3341)**	
							x									**DAC703VL/883B**	**◊† Burr-Brown (3341)**	
			940				x			x			x			**DAC703C**	**◊ Burr-Brown (3341)**	
			950												x	**DAC707**	**Burr-Brown (3341)**	15
								x		x	x		x		x	**DAC707B**	**Burr-Brown (3341)**	
								x		x	x		x		x	**DAC707K**	**Burr-Brown (3341)**	
								x		x	x		x		x	**DAC707S**	**† Burr-Brown (3341)**	
				x				x		x	x		x		x	**DAC709B**	**Burr-Brown (3341)**	
				x				x		x	x		x		x	**DAC709K**	**Burr-Brown (3341)**	20
				x				x		x	x		x		x	**DAC709S**	**† Burr-Brown (3341)**	
			1175					x		x			x		x	**DAC725K**	**Burr-Brown (3341)**	
		9	470					x					x		x	CX20133	◊ Sony	
		10		x									x		x	**MN3290**	**† MicroNet (3549)**	
			950			x				x			x			**DAC71-CSB-V**	**Burr-Brown (3341)**	25
							x			x			x			DAC72BH-COB-V	Burr-Brown	
						x				x			x			DAC72BH-CSB-V	Burr-Brown	
			1200	x			x	x					x			**DAC71-COB-V**	**MicroNet (3549)**	
				x			x	x					x			**DAC71-CSB-V**	**MicroNet (3549)**	
		15	950				x			x			x			**DAC70BH-COB-I**	**Burr-Brown (3341)**	30
						x				x			x			**DAC70BH-CSB-I**	**Burr-Brown (3341)**	
		16	550							x	x		x		x	HS9378C	Sipex-HSD	
										x	x		x		x	HS9378T	† Sipex-HSD	
		35	1170			x	x			x			x			**DACHP16BMC**	**Datel (3359)**	
						x	x			x			x			**DACHP16BMC-1**	**Datel (3359)**	35
						x	x			x			x			**DACHP16BMM**	**† Datel (3359)**	
						x	x			x			x			**DACHP16BMM-1**	**† Datel (3359)**	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
16																	(Cont'd)	
	3		940				x	x		x	x					**DAC703JU**	◇ **Burr-Brown (3341)**	
	4	0.3	790			x	x			x	x		x			**PCM53J-I**	**Burr-Brown (3342)**	
		1	450	x						x						MP7636C	MicroPwr	
				x						x						MP7636L	MicroPwr	
				x						x						MP7636U	† MicroPwr	5
			465	x	x			x		x	x			x		4088	TeledyneS	
			790			x	x			x						**DAC702J**	◇ **Burr-Brown (3341)**	
		2	40 *	x	x					x	x			x	x	MP7616J	MicroPwr	
				x	x					x	x			x	x	MP7616S	† MicroPwr	
	4 *	2 *	280 *	x		x	x	x	x			x	x	x		IR3K17	Sharp	10
	4	4	940			x	x			x	x		x			**PCM53J-V**	**Burr-Brown (3342)**	
		6	150							x	x				x	**AD569J**	**AD (3221)**	
										x	x				x	**AD569K**	**AD (3221)**	
		8	940			x	x			x						**DAC703J**	◇ **Burr-Brown (3341)**	
			1175					x		x			x		x	**DAC725J**	**Burr-Brown (3341)**	15
		16	550							x	x		x		x	HS9378S	† Sipex-HSD	
	8	1	450	x						x						MP7636B	MicroPwr	
				x						x						MP7636K	MicroPwr	
				x						x						MP7636T	† MicroPwr	
		2	—	x	x					x	x			x		MP7616K	MicroPwr	20
			30	x	x					x	x			x		HS3160B-3	† Sipex-HSD	
				x	x					x	x			x		HS3160C-3	Sipex-HSD	
	12	0.05		x						x			x		x	MB87020	Fujitsu	
	16	1	450	x						x						MP7636A	MicroPwr	
				x						x						MP7636J	MicroPwr	25
				x						x						MP7636S	† MicroPwr	
	42	5	20	x							x					YM3012	Yamaha	
16 (dual)			50					x			x		x			**PCM66**	◇ **Burr-Brown (3342)**	
	1	0.5 *	700	x	x			x								TDA1541A	Signetics	
16–4 Digit BCD																		
	2	10	1225							x			x			**DAC71-CCD-V**	**Burr-Brown (3341)**	30
							x			x			x			**DAC71-COB-V**	**Burr-Brown (3341)**	
16(dual)																		
	1	8	1175	x				x								**DAC725B**	**Burr-Brown (3341)**	
	2	8	1175	x				x								**DAC725A**	**Burr-Brown (3341)**	
18			410					x		x			x			**PCM58**	**Burr-Brown (3342)**	
	1/2	6	100	x	x				x		x		x	x	x	**AD1139**	**AD (3222)**	35
		10	750	x	x					x	x		x		x	SP9380	† Sipex-HSD	
	1	1.5		x									x			**AD1860**	**AD (3220, 3222)**	
		6		x										x		DAC1146	AD	
		10		x												**DAC1138**	**AD (3222)**	
		20	60	x	x					x	x		x		x	DAC370B-18	† Sipex-HSD	40
				x	x					x	x		x		x	DAC370C-18	Sipex-HSD	
			500	x	x					x	x		x			DAC377-18	Sipex-HSD	
				x	x					x	x		x		x	DAC377B-18	† Sipex-HSD	
				x	x					x	x		x		x	DAC377C-18	Sipex-HSD	
	2			x				x								YM4113B3	Yamaha (Continued)	45

Bin.—Binary
Off.—Offset
Compl.—Complementary
Magn.—Magnitude
Int Ref.—Internal Reference
CTC—Compl. 2's Compl.
Mult.—Multiplying

INTERFACE—Digital to Analog Converters (Cont'd)

Bits Res.	Linearity Error ± LSB	Settling Time ± ½LSB µS	Power Dis. mW (max.)	Bin. Input	Off. Bin. Input	Compl. Bin. Input	Compl. Off. Bin. Input	CTC or 2's Compl. Input	Sign. Magn. Input	TTL Logic	CMOS Logic	ECL Logic	Int. Ref.	Mult.	Latches	Device	Source	Line
18	2																(Cont'd)	
			260					x		x			x		x	**PCM61**	**Burr-Brown (3342)**	
		1.5		x									x			**AD1864**	**AD (3299)**	
				x									x			**AD1868**	**AD (3299)**	
		5	20	x		x	x	x					x			**PCM64**	**Burr-Brown (3342)**	
		25	1630			x	x			x			x			**DAC729K**	**Burr-Brown (3341)**	5
	4	25	1630			x	x			x			x			**DAC729J**	**Burr-Brown (3341)**	
18 (dual)	2		400					x		x			x		x	**PCM1700**	**Burr-Brown (3342)**	
20	2	0.35		x									x			**AD1862**	**AD (3299)**	
20 (dual)	1	5			x		x	x								DACD20200	Ultra Analog	
16	2			x				x			x					YM3015	Yamaha	10
				x				x			x					YM3016	Yamaha	
				x				x			x					YM3020	Yamaha	
16	2	4	20	x							x					YM3014	Yamaha	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Display Drivers

Function	Device	Source	Line
AC Plasma Axis Driver			
	SN65500E	TI	
	SN75500E	TI	
Anode Driver (high-voltage vacuum fluorescent)			
	MSC1163	OKI	
Bargraph LED	U237B	AEG Corp	
	U244	AEG Corp	5
	U247B	AEG Corp	
	U254	AEG Corp	
	U257B	AEG Corp	
	U267B	AEG Corp	
	LM3914	National	10
	LM3915	National	
	LB1409	Sanyo	
	LB1415	Sanyo	
	LB1416	Sanyo	
	LB1419	Sanyo	15
	LB1426	Sanyo	
	LB1436	Sanyo	
	UAA170	Siemens	
	UAA180	Siemens	
	TSC9403	TeledyneS	20
	TSC9404	TeledyneS	
Bargraph Vacuum Fluorescent			
	LM3916	National	
BiMOS Segment Latch Driver			
	CA3208	Harris	
BiMOS Sequencer Driver			
	CA3207	Harris	
Column Driver, –250V DC-PDP (64 drivers)			
	μPD16301	NEC	25
Column Driver, 80V AC-PDP/EL/FIP (64 drivers)			
	μPD16306	NEC	
DC Plasma and Gas Discharge Data Line Driver			
	SN751508	TI	
	SN751518	TI	
DC Plasma and Gas Discharge Scan Line Driver			
	SN751506	TI	
	SN751516	TI	30
Decoder Driver, 4-Bit Input, 16-Line Output			
	IR2C12	Sharp	
Display, Alphanumeric, LED			
	TIL305	TI	
Display Controller/Driver (bargraph and numeric)			
	MSC1951-01	OKI	
Display Driver, Alphanumeric			
	MSC1937-01	OKI	
Display Driver, Static LED (with blinking capability)			
	SDA2131	Siemens	35
Display Driver, Eight 7-Segment			
	ICM7228A	Harris	
	ICM7228B	Harris	
Display Driver, 35 High-Voltage LCD			
	HI8011	Holt	
Display Driver, 7-Segment Gas Discharge Display Cathode Driver with BCD Decoder			
	DI8884A	Dionics	
Display, Numeric, LED			
	TIL302	TI	40
	TIL302A	TI	
	TIL303	TI	
	TIL303A	TI	
	TIL304	TI	
	TIL304A	TI	45
	TIL306	TI	
	TIL306A	TI	
	TIL307	TI	
	TIL307A	TI	
	TIL308	TI	50
	TIL308A	TI	
	TIL309	TI	
	TIL309A	TI	

Function	Device	Source	Line
Display, Hexadecimal, LED			
	TIL311	TI	
	TIL311A	TI	55
Dot Matrix LCD Controller Driver (5x7, 5x10 display)			
	NJU6408	◊ **NJR**	**(3571)**
Dot Matrix LCD Serial-In 86 Row Driver			
	NJU6405	◊ **NJR**	**(3571)**
Dot Matrix LCD 40-Segment Driver			
	NJU6407	◊ **NJR**	**(3571)**
Dot Matrix LCD 64-Segment Driver			
	NJU6417	◊ **NJR**	**(3571)**
Dot Matrix LCD 80 Column Driver			
	NJU6404	◊ **NJR**	**(3571)** 60
	NJU6409	◊ NJR	
Electroluminescent Column Driver			
	SN65554	TI	
	SN65555	TI	
	SN65556	TI	
Electroluminescent Column Driver, 32 Outputs			
	SN75555	TI	65
	SN75556	TI	
Electroluminescent Even Column Driver, 32 Outputs			
	Si9554	Siliconix	
Electroluminescent Even Column Driver, 32 Outputs			
	SN55554	† TI	
	SN75554	TI	
Electroluminescent Even Row Driver, 32 Outputs			
	SN55552	† TI	70
	SN65552	TI	
	SN75552	TI	
Electroluminescent, High Voltage (octal, 450 V)			
	USH5801	**Universal (3692)**	
	USH5802	**Universal (3692)**	
Electroluminescent, High Voltage (200 V)			
	USH5800	**Universal (3692)**	75
Electroluminescent Odd Column Driver, 32 Outputs			
	Si9553	Siliconix	
Electroluminescent Odd Column Driver, 32 Outputs			
	SN55553	† TI	
	SN75553	TI	
Electroluminescent Odd Row Driver, 32 Outputs			
	SN55551	† TI	
	SN65551	TI	80
	SN75551	TI	
Electroluminescent Roe Driver, 34 Outputs			
	SN65563A	TI	
Electroluminescent Row Driver, 32 Outputs			
	SN75557	TI	
	SN75558	TI	
Electroluminescent Row Driver, 34 Outputs			
	SN65564A	TI	85
	SN75563A	TI	
	SN75564A	TI	
FIP/LED Driver			
	μPD6700	NEC	
FIP Row/Column Driver, 200V (40 drivers)			
	μPD16304	NEC	
Flasher, Pulse Generator			
	U175M	AEG Corp	90
	U176M	AEG Corp	
Fluorescent Display Driver			
	HA16617	Hitachi	
	HA16619	Hitachi	
Gas Discharge Cathode Driver (225V max.)			
	DI220	Dionics	
Graphic LCD Display Controller			
	SED1351F	S-MOS	95
Graphic Video LCD Display Controller			
	SED1345F	S-MOS	
Grid/Anode Driver (high-voltage vacuum fluorescent)			
	MSC1164	OKI	

Function	Device	Source	Line
Grid Driver	LH1001	Sharp	
Grid Driver (high-voltage vacuum fluourescent)			
	MSC1162	OKI	
Lamp Driver	CSR301	TeledyneS	100
Latched Driver, 12-Bit Serial Input			
	M54977	Mitsubishi	
LCD Alphanumeric Controller/Driver, Intelligent			
	μPD7225	◊ NEC	
LCD Bargraph Driver (with A/D converter)			
	TSC825	TeledyneS	
	TSC827	TeledyneS	
LCD Character Display Driver			
	SED1278F	S-MOS	105
LCD Clock Driver, Direct Drive			
	PCF1174	Signetics	
LCD Clock Driver, Duplex Drive			
	PCF1175	Signetics	
LCD Clock Driver, 3– 1/2 Digit.			
	MIC8027	Micrel	
LCD Common Driver			
	LC7942	◊ Sanyo	
LCD Controller	M6265	OKI	110
LCD Controller and Driver			
	LC7985	◊ Sanyo	
LCD Controller/Driver (for dot-matrix)			
	GM9120	GoldStar	
LCD Controller/Driver, 2 Row x 16 Character Dot Matrix			
	H0216	Hughes	
LCD Controller/Driver, 2 Row x 8 Character Dot Matrix			
	H0208	Hughes	
LCD Controller, Large Panel			
	SED1330F	S-MOS	115
LCD Controller with Built-In Character Generator			
	HD43160AH	Hitachi	
LCD Controller, 16-Dot Row, 40-Dot Column			
	M6222	OKI	
LCD/CRTC Controller (640x400 Dot Matrix)			
	TC7779	Toshiba	
LCD Display Driver, Multi-Digit			
	TSC828	TeledyneS	
LCD Dot Matrix Controller			
	M6240	OKI	120
	M6255	OKI	
	LC7980	◊ Sanyo	
	LC7981	◊ Sanyo	
	LR3692	Sharp	
LCD Dot Matrix Controller/Driver, Intelligent			
	μPD7227	◊ NEC	125
	μPD7228	◊ NEC	
LCD Dot Matrix Display Controller			
	HD61830	Hitachi	
LCD Dot Matrix Display Controller and Driver			
	HD44780	Hitachi	
LCD Dot Matrix Driver			
	HD44102CH	Hitachi	
	HD44103CH	Hitachi	130
	HD44105CH	Hitachi	
	HD61102	◊ Hitachi	
	HD61103A	Hitachi	
	HC0515	Hughes	
	HC0538A	Hughes	135
	HC0539A	Hughes	
	HC0540	Hughes	
	HC0550	Hughes	
	HC0551	Hughes	
	HC0607	Hughes	140
	SED1200	S-MOS	
	LH5821	Sharp	
	LH5822	Sharp	
	LH5823	Sharp	
	LH5826	Sharp	145

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INTERFACE

INTERFACE—Display Drivers (Cont'd)

Function	Device	Source
LCD Dot Matrix Driver, 40-Segment	LH5006A	Sharp
LCD Dot Matrix Driver, 80 Segment	LH5021B	Sharp
	LH5023B	Sharp
LCD Dot Matrix Driver, 80-Segment	LH5021A	Sharp
	LH5022	Sharp
LCD Dot Matrix Driver, 100 Common	LH5025	Sharp
LCD Dot Matrix Driver, 160 Segment	LH5026	Sharp
LCD Driver	LC7580	◊ Sanyo
LCD Driver, Active Matrix	M5280	OKI
	M5282	OKI
LCD Driver, Bit Serial (hex, BCD)	MAX7232	Maxim
LCD Driver, Bit Serial (upper case ASCII)	MAX7234	Maxim
LCD Driver, Dichroic	S4520	Gould AMI
LCD Driver, Frequency Display	LC7583	◊ Sanyo
LCD Driver, Large Panel	SED1180F	S-MOS
	SED1181F	S-MOS
	SED1190F	S-MOS
	SED1191F	S-MOS
	SED1600F	S-MOS
	SED1610F	S-MOS
LCD Driver with High Voltage Charge Pump, 30 Segments (external osc, 40V max)	ICS1504E1	IntCirSys
	ICS1504E2	IntCirSys
	ICS1504E3	IntCirSys
LCD Driver (with 40-Channel outputs)	GM9110	GoldStar
LCD Driver, Four Digit, Seven Segment	CD7211	Harris
LCD Driver, 5-Digit, 8-Segment	M58292	OKI
LCD Driver, 30 Segments (external oscillator, 35V max.)	HI8010-05	Holt
LCD Driver, 30 Segments (internal oscillator, 35V max.)	HI8010-07	Holt
LCD Driver, 30 Segments (selectable internal or external oscillator, 35V max.)	HI8010-06	Holt
LCD Driver, 32 Segments (external oscillator, 35V max.)	HI8020-84	Holt
LCD Driver, 32 Segments (selectable internal or external oscillator)	HI8020-85	Holt
LCD Driver, 32/64 Segment	HD61602	Hitachi
	HD61603	Hitachi
	PCF8577	Signetics
LCD Driver, 32-Dot Row	M5238	OKI
LCD Driver, 33-Segment w/Serial Interface	MC145453	◊ Motorola
LCD Driver, 34 Segments (external oscillator, 35V max.)	HI8010-65	Holt
LCD Driver, 34 Segments (internal oscillator, 35V max.)	HI8010-67	Holt
LCD Driver, 34 Segments (selectable internal or external oscillator)	HI8010-01	Holt
	HI8010-66	Holt
LCD Driver, 35V max, 38 Outputs	HI8010	Holt
LCD Driver, 38 Segments (external oscillator, 35V max.)	HI8010-04	Holt
	HI8020-63	Holt
	HI8020-81	Holt
LCD Driver, 38 Segments (internal oscillator, 35V max.)	HI8010-03	Holt
	HI8020-61	Holt
	HI8020-80	Holt
LCD Driver, 38 Segments (selectable internal or external oscillator)	HI8010-02	Holt
LCD Driver, 40/80/120/160 Segments	PCF8576	Signetics
LCD Driver, 40-Dot Column	M5259	OKI
	M5839B	OKI
LCD Driver, 48-Dot	M5219B	OKI
LCD Driver, 56-Dot	M5221	OKI
LCD Driver, 64-Dot Row	M5278	OKI
LCD Driver, 68-Dot Row	M5298	OKI
LCD Driver, 80 Output Direct Drive/ Multiplexed	H0480	Hughes
LCD Driver, 80/160-Dot	M5265	OKI
LCD Driver, 80-Dot Column	M5279	OKI
	M5299	OKI
LCD Driver, 80-Dot Row/Column	M5260	OKI
LCD Driver, 30 Segments (internal osc, 40V max)	ICS1502E1	IntCirSys
LCD Driver, 30 Segments (selectable internal or external oscillator, 40V max)	ICS1502E3	IntCirSys
LCD Driver, 32 Segments (external osc, 40V max)	ICS1505E2	IntCirSys
LCD Driver, 32 Segments (internal osc, 40V max)	ICS1505E1	IntCirSys
LCD Driver, 32 Segments (selectable internal or external oscillator, 40V max)	ICS1505E3	IntCirSys
LCD Driver, 38 Segments (external osc, 40V max)	ICS1501E1	IntCirSys
LCD Driver, 38 Segments (external osc,40V max)	ICS1501E2	IntCirSys
LCD Driver, 38 Segments (selectable internal or external oscillator, 40V max)	ICS1501E3	IntCirSys
LCD Driver, 40-Channel Output	HD44100H	Hitachi
LCD Driver, 6-bit Parallel	MAX7231	Maxim
LCD Driver, 75 Segments (external osc, 40V max)	ICS1521E4	IntCirSys
LCD Driver, 75 Segments (internal osc, 40V max)	ICS1521E2	IntCirSys
LCD Driver, 80-Channel Output	HD61100A	Hitachi
LCD Driver,30 Segments (external osc,40V max)	ICS1502E2	IntCirSys
LCD Graphics Driver	SED1500	S-MOS
LCD Segment Driver	LC7940	◊ Sanyo
LCD 5x7 Dot Driver	LH5003	Sharp
	LH5004	Sharp
LED Bar Display Driver, 10 LEDs	TA7612A	Toshiba
LED Digit Driver	MSL966	OKI
LED Display Driver, 2 Digits	MM5481	National
LED Display Driver, 5 LEDs	TA7654	Toshiba
	TA7655	Toshiba
LED Display Driver, 33 Outputs, 15 mA Sink Capability	MM5486	National
	M5486	SGS-Thomson
LED Display Driver, 34 Outputs, 15 mA Sink Capability	M5450	SGS-Thomson
LED Display Driver, 35 Outputs, 15 mA Sink Capability	M5451	SGS-Thomson
LED Display Driver, 3 1/2 Digits	MM5480	National
LED Driver, Running Indicator	IR2408	Sharp
LED Driver System, 8 Decade, 8x8 Memory, Decoder (versions either hardwire or processor controlled; with 7 segment and digit drivers for either common anode or cathode LEDs; 2–6 V supply)	ICM7218A	Harris
	ICM7218B	Harris
	ICM7218C	Harris
	ICM7218D	Harris
	ICM7218A	◊ Maxim
	ICM7218B	◊ Maxim
	ICM7218C	◊ Maxim
	ICM7218D	◊ Maxim
LED Driver, 5-Dot	IR2E01	Sharp
	IR2E13	Sharp
	IR2E25	Sharp
	IR2E31	Sharp
	IR2E32N	Sharp
LED Driver, 7-Dot	IR2E02	Sharp
	IR2E19	Sharp
	IR2E29	Sharp
LED Driver, 7-Segment	IR2C07	Sharp
LED Driver, 8 Dot LED Level Indicator	M51909	Mitsubishi
LED Driver, 8/16-Segment, serial input	CD22401	Harris
LED Driver, 8-Bit (three-state output)	M66312	Mitsubishi
LED Driver, 12-Dot	IR2E05	Sharp
	IR2E10	Sharp
	IR2E16	Sharp
	IR2E17	Sharp
	IR2E30	Sharp
	IR2E33	Sharp
	IR2E36	Sharp
	IR2E38	Sharp
	IR2E41	Sharp
	IR2406	Sharp
	IR2431	Sharp
	IR2432	Sharp
	IR2433	Sharp
LED Driver, 12-Dot x 2-Channel	IR2E42	Sharp
LED Driver, 16-Bit (anode common)	M66311	Mitsubishi
LED Driver, 16-Bit (cathode common)	M66310	Mitsubishi
LED Driver, 16-Dot	IR2E03	Sharp
	IR2E04	Sharp

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INTERFACE—Display Drivers (Cont'd)

Function	Device	Source	Line
LED Driver, 32-Bit (anode common)	M66313	Mitsubishi	
LED Driver (33-dot)	GM6486	GoldStar	
LED Driver, 4-Digit w/ I²C Bus Interface	SAA1064	Signetics	
LED Flasher (See also Flasher this section)	LM3909	National	
LED, Static	U3082	AEG Corp	5
Level Meter, 8-Dot	MSM9353	OKI	
Level Meter, 32-Dot	MSM9356	◊ OKI	
Multiplexed LCD Driver, Master and Slave	MM58201	National	
Multiplexed LCD Driver, Master and Slave with Serial Interface	MC145000	◊ Motorola	
	MC145001	◊ Motorola	10
Mux/Display Driver	MX313/323	MX-COM	
Open Collector Driver (150V max.)	DI480	Dionics	
	DI481	Dionics	
	DI482	Dionics	
Panel Display Column Driver, 16-Channel Matrix	HV01	Supertex	15
Panel Display Row Driver, 16-Channel Matrix	HV02	Supertex	
Plasma Driver, AC	SN55501E	TI	
Quartz Analog Clock Circuit, 32 kHz	CD22777	Harris	
Row Driver, 200V AC-PDP (40 drivers)	μPD16305	NEC	
Row Driver, 200V DC-PDP (41 drivers)	μPD16300	NEC	20
Row Driver, 250V Electroluminescent (40 drivers)	μPD16302	NEC	
Segment Driver for Gas Discharge Displays	DI232	Dionics	
	DI242	Dionics	
Sink Driver, Eight High Voltage Outputs (for lamps, solenoids, displays, relays, print heads, heaters, etc.)	**MIC4807**	**Micrel (3540)**	
Symmetric Row Driver, 34-Channel (for AC thin-film electroluminescent displays)	HV7022	Supertex	25
Totem-Pole Output	DI740	Dionics	
TV On-Screen Display Driver	LR67151	Sharp	
Vacuum Fluorescent Display Driver, 35V (alphanumeric or dot matrix)	MM58342	National	
Vacuum Fluorescent Driver	LI2048	Sharp	
	SN65513B	TI	30
	SN75513B	TI	
Vacuum Fluorescent, Level Shifted (50 V operation)	DI512BR	Dionics	
Vacuum Fluorescent, Level Shifted (80 V operation)	DI513BR	Dionics	
Vacuum Fluorescent, Level Shifted (110 V operation)	DI514BR	Dionics	
Vacuum Fluorescent Tube Driver	MSM5267-15	OKI	35

Function	Device	Source	Line
Vacuum Fluorescent, 8-Line	**UCN5815A**	**Allegro Micro (3206)**	
	UCS5815H	† Allegro Micro	
Vacuum Fluorescent, 10-Line	**UCN5810A**	**Allegro Micro (3206, 3209)**	
Vacuum Fluorescent, 20 Outputs	TL5812I	TI	
Vacuum Fluorescent, 32 Outputs	SN65518	TI	40
Video Display Driver	1900	TeledyneS	
	1901	TeledyneS	
	1902	TeledyneS	
Video or RGB to LCD Interface Controller	SED1341F	S-MOS	
BCD (hexadecimal) to 7-Segment Decoder/Driver with Latch Active Low, Open Collector	9370C	National	45
BCD (hexadecimal) to 7-Segment Latch/Decoder/Driver (CMOS with bipolar output)	UCN4805A	Allegro Micro	
BCD (hexadecimal) to 7-Segment LED Decoder/Driver, Constant Current, with Latch	9368C	National	
BCD Plus 1 to 7-Segment	U143M	AEG Corp	
BCD to 7-Segment Decoder/Driver	MC14547BA	◊† Motorola	
	MC14547BC	◊ Motorola	50
	MC14558	◊ Motorola	
BCD to 7-Segment Decoder/Driver, Active High, Resistive Pull-Up	GD8307	GoldStar	
	HD74LS248	Hitachi	
	HD74LS249	Hitachi	
	HD74LS48	Hitachi	55
	HD74LS49	Hitachi	
	SN74LS248	Motorola	
	SN74LS249	† Motorola	
	SN74LS48	Motorola	
	SN74LS49	Motorola	60
	54LS248	† National	
	54LS249	† National	
	54LS48	† National	
	54LS49	† National	
	74LS248	◊ National	65
	74LS249	◊ National	
	74LS48	◊ National	
	T74LS248B1	◊ SGS-Thomson	
	S8T05	† Signetics	
	SN54LS248	◊† TI	70
	SN54LS48	◊† TI	
	SN54LS49	◊† TI	
	SN5448	† TI	
BCD to 7-Segment Decoder/Driver, Active Low, Open Collector, 15 V Output	HD74LS247	Hitachi	
	HD74LS47	Hitachi	75
	MC4039	Motorola	
	SN74LS247	Motorola	
	SN74LS47	Motorola	
	DM5447A	† National	
	DM7446A	National	80
	DM7447A	National	
	54LS247	† National	
	54LS347	† National	
	54LS447	† National	
	54LS47	† National	85
	74LS247	◊ National	
	74LS347	◊ National	
	74LS447	◊ National	
	74LS47	◊ National	
	7447	National	90
	9317BC	National	

(Continued)

Function	Device	Source	Line
BCD to 7-Segment Decoder/Driver, Active Low, Open Collector (Cont'd)	S8T04	† Signetics	
	383A/C	TeledyneS	
	383B/M	† TeledyneS	
	SN54LS247	◊† TI	95
	SN54LS47	◊† TI	
	SN54246	† TI	
	SN54247	† TI	
	SN5446A	† TI	
	SN5447A	† TI	100
	SN74LS247	TI	
	SN74LS47	TI	
	SN7446A	TI	
	SN7447A	TI	
BCD to 7-Segment Decoder/Driver, for Liquid Crystal Displays	CD4055B	† Harris	105
	CD4055BE	Harris	
	TC4055B	Toshiba	
BCD to 7-Segment Decoder/Driver, 2-Digit, Direct Driver for Common Anode LED Displays	DS8669	National	
BCD to 7-Segment Latch/Decoder/Driver (CMOS with bipolar output)	CD4511B	† Harris	
	CD4511BE	Harris	110
	MC14511BA	◊† Motorola	
	MC14511BC	◊ Motorola	
	MC14513BA	◊† Motorola	
	MC14513BC	◊ Motorola	
	CD4511BC	National	115
	CD4511BM	† National	
	MN4511B	◊ Panasonic	
	HCC4511B	SGS-Thomson	
	HCF4511B	◊ SGS-Thomson	
	HEF4511B	Signetics	120
	HEF4511BD	Signetics	
	TC4511B	Toshiba	
BCD to 7-Segment Latch/Decoder/Driver, for Liquid Crystal Displays	CD4543BD	† Harris	
	CD4543BE	Harris	
BCD to 7-Segment Latch/Decoder/Driver (strobed latch), for Liquid Crystal Displays	CD4056B	† Harris	125
	CD4056BE	Harris	
	LS7100	**LSI Comp (3527)**	
	MC14543BA	◊† Motorola	
	MC14543BC	◊ Motorola	
	TC4056B	Toshiba	130
BCD to 7-Segment Latch/LCD/Decoder/Driver (ripple blanking)	MC14544BA	◊† Motorola	
	MC14544BC	◊ Motorola	
BCD to 7-Segment LED Decoder/Driver	CA3168	Harris	
BCD to 7-Segment LED Decoder/Driver, Constant Current	NE587	Signetics	
BCD to 7-Segment LED Decoder/Driver with Latch, Output 0–9,—,E,H,L,P	9374C	National	135
BCD Seven-Segment Cathode Driver (125V max.)	DI270B	Dionics	
BCD-to-Decimal Decoder/Driver (for lamps)	380A/C	TeledyneS	
	380B/M	† TeledyneS	
	381A/C	TeledyneS	
	381B/M	† TeledyneS	140
BCD-to-Decimal Decoder/Driver (nixie driver)	DM5441A	† National	
	382A/C	TeledyneS	
	382B/M	† TeledyneS	
BCD-to-Decimal Decoder/Driver with Blanking (for cold cathode indicator tubes)	MC54141	† Motorola	

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INTERFACE—Display Drivers (Cont'd)

Function	Device	Source	Line
BCD-to-Seven Segment Decoder/Driver with Active Pull-up	SN54LS247	Motorola	
	SN54LS248	Motorola	
	SN54LS249	Motorola	
	SN54LS47	Motorola	
	SN54LS48	Motorola	5
	SN54LS49	Motorola	
Hex TTL to LED Bulb Driver, with Latch	DS8859	National	
Hexadecimal to 7-Segment Latch/Decoder/Driver (CMOS with bipolar output)	MC14495	◊ Motorola	
Seven High Current NPN Transistors, Common Collector	CA3082	† Harris	
Seven NPN Transistors, Common Emitter	CA3081	† Harris	10
Seven Segment LED (serial interface)	MC14489	Motorola	
2-Digit LED Driver	M5481	SGS-Thomson	
	M5482	SGS-Thomson	
3– 1/2-Digit LED Driver	M5480	SGS-Thomson	
4/5-Digit Vacuum Fluorescent (serial data input)	MM5450	National	15
	MM5451	National	
4-Bit Multiplexed LCD Driver (4x7)	HC7211-1	Hughes	
	HC7211-2	Hughes	
4-Channel Incandescent Lamp Driver	CLD4	TeledyneS	
4-Channel Plasma	XR2284	Exar	20
4-Character, 18-segment triplexed LCD Decoder/Driver.	MIC7233	Micrel	
4-Character, 18-Segment Triplexed LCD Decoder/Driver	ICM7233	Maxim	
	MAX7233A	Maxim	
	MAX7233B	Maxim	
	MIC7233A	◊ Maxim	25
4-Digit Gas Discharge Display Anode Driver	DI500B	Dionics	
	DI502B	Dionics	
4-Digit LCD Driver	ICM7211AM	Harris	
	ICM7211M	Harris	
	ICM7211AM	◊ Maxim	30
	ICM7211M	◊ Maxim	
4-Digit LED Driver, Multiplexed BCD or Binary to 7-Segment Decoder/Driver	ICM7212	◊ Maxim	
	ICM7212A	◊ Maxim	
4-Digit LED Driver, BCD or Binary to 7-Segment Decoder/Driver, Data and Digit Select Code Latches for μP Interface	ICM7212AM	Harris	
	ICM7212AM	◊ Maxim	35
	ICM7212M	◊ Maxim	
	TSC701AM	TeledyneS	
	TSC7212A	◊ TeledyneS	
	TSC7212AM	TeledyneS	
4-Digit Liquid Crystal, Multiplexed BCD to LCD Decoder/Driver, AC Drive	ICM7211	Harris	40
	ICM7211A	Harris	
	ICM7211	◊ Maxim	
	ICM7211A	◊ Maxim	
4-Digit/Segment Vacuum Fluorescent	DI503B	Dionics	
	DI504B	Dionics	45
4-Digit Select Microprocessor Interface (4x7)	HC7211-3	Hughes	
	HC7211-4	Hughes	

Function	Device	Source	Line
4-Digit (stores segment and address data, drives 7–8 segment digits)	MM74C911	National	
4-Digit/8-Segment Vacuum Fluorescent	COP470	National	
4-Digit, 17-Segment Alpha-Numeric with Memory, Decoder and LED Drivers	MM74C956	National	50
	NSM4507	National	
4-Digit, 7-Segment LCD Decoder/Driver	TSC7211A	◊ TeledyneS	
4-Digit, 7-Segment LED Decoder/Driver	TSC700A	TeledyneS	
4-Segment Liquid Crystal	CD4054B	Harris	
	TC4054B	Toshiba	55
4-Segment MOS to LED Anode Driver	DS55493	† National	
	DS75491	National	
	DS75493	National	
5-Character, 18-Segment Triplexed LCD Decoder/Driver	ICM7234	Maxim	
	MAX7234A	Maxim	60
	MAX7234B	Maxim	
5-Line Plasma Display Axis Driver	DI5140	Dionics	
	DI5180	Dionics	
	DI5240	Dionics	
	DI5280	Dionics	65
5-Step, Linear, LED Driver	KA2286	Samsung	
	KA2287	Samsung	
5-Step, Logarithmic, LED Driver	KA2284	Samsung	
	KA2285	Samsung	
5-Step, Logarithmic, LED Driver, Dual	KA2281	Samsung	70
	KA2283	Samsung	
5-Step Logarithmic Dual LED Driver	TA7666	Toshiba	
	TA7667	Toshiba	
5x2 LED Driver	IR2E27	Sharp	
6-Digit Gas Discharge Display Anode Driver	DI505B	Dionics	75
	DI507B	Dionics	
	DI603A	Dionics	
	DI604A	Dionics	
	DI605A	Dionics	
	8891	Signetics	80
6-Digit MOS to LED Cathode Driver	DS55494	† National	
	DS75492	National	
	DS75494	National	
	DS8870	National	
6-Digit/Segment Vacuum Fluorescent	**UDN6116A**	**Allegro Micro (3206)**	85
	DI508B	Dionics	
	DI509B	Dionics	
6-Digit BCD (stores segment and address data, drives 7–8 segment digits)	MM74C912	National	
6-Digit Hex (stores segment and address data, drives 7 segments)	MM74C917	National	
6-Digit, 7-Segment LCD Driver with Decimal Points, or Three 16-Segment Characters. 48-Stage Shift Register, 48-Bit Data Latch and 48-Segment Driver	MSM5219	◊ OKI	90
7-Digit MOS to Gas Discharge	XR2272	◊ Exar	
7-Digit/Segment MOS to Vacuum Fluorescent	XR2271	◊ Exar	

Function	Device	Source	Line
7-Line Dot Matrix or Segmented	SN75581	TI	
7-Segment Decoder/Driver with Serial Interface	MC14499	◊ Motorola	
7-Segment Gas Discharge Display Cathode Driver, with BCD Decoder	DS7880	† National	95
	DS8880	National	
	DS8884A	National	
	DS8880	Signetics	
7-Segment Latch/Decoder/Electroluminescent/Display Driver, High Voltage	HV30	Supertex	
7-Segment, LCD Driver	IR2E34	Sharp	100
7-Segment to BCD Converter/Driver	MM54C915	† National	
	MM74C915	National	
7x2 LED Driver	IR2E09	Sharp	
	IR2E28	Sharp	
7x2-Segment LED Driver	IR2E35	Sharp	105
8-Channel Plasma	XR2288	Exar	
8-Character, 14/16 Segment LED Display Driver	ICM7243	Harris	
8-Digit Gas Discharge Display Anode Driver	DI510B	Dionics	
	DI512B	Dionics	
	DI803A	Dionics	110
	DI804A	Dionics	
	DI805A	Dionics	
8-Digit MOS to LED Cathode Driver	DS8863	National	
	DS8963	National	
8-Digit/Segment Vacuum Fluorescent	**UDN6118A**	**Allegro Micro (3206)**	115
	UDN6128A	Allegro Micro	
	UDN6138	Allegro Micro	
	DI513B	Dionics	
	DI514B	Dionics	
	XR6118	◊ Exar	120
	XR6128	Exar	
	NE594	Signetics	
	SA594	Signetics	
8-Digit, 7-Segment Triplexed LCD Decoder/Driver	ICM7231	Harris	
	ICM7231	Maxim	125
	MAX7231A	Maxim	
	MAX7231B	Maxim	
	MAX7231C	Maxim	
8-Output Digit-Scan Counter/Decoder for Cold-Cathode Counter Tubes	MSL9510R	OKI	
	MSL9511R	OKI	130
8-Segment Gas Discharge Display Cathode Driver	UDN7180A	Allegro Micro	
	DI210	Dionics	
	DI230A	Dionics	
	DI240A	Dionics	
	DI300	Dionics	135
	DI302	Dionics	
	DS7889	† National	
	DS8889	National	
8-Segment MOS to LED Anode Driver	MC676	Motorola	
	DS8867	National	140
9-Digit MOS to LED Cathode Driver	DS8973	National	
9-Digit MOS to LED Cathode Driver with Shift Register Decoding	DS8874	National	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE

INTERFACE—Display Drivers (Cont'd)

Function	Device	Source	Line
10-Bit Driver, Serial Input, Parallel Output			
	IR2C02	Sharp	
10-Bit Serial In/Parallel Out Fluorescent (for μP systems)	TL4810B	TI	
	UCN4810A	◊ TI	
10-Channel Serial-Input Latched Display Driver			
	HV6810	Supertex	
10-Digit, 7-Segment Triplexed LCD Decoder/Driver			
	ICM7232	Harris	5
	ICM7232	Maxim	
	MAX7232A	Maxim	
	MAX7232B	Maxim	
	MAX7232C	Maxim	
12-Line Vacuum Flourescent			
	UCN5811A	**Allegro Micro (3206, 3209)**	10
12-Line Vacuum Fluorescent			
	SN75514	TI	
12-Line Vacuum Fluorescent Display Driver			
	SN65512B	TI	
	SN75512B	TI	
12-Segment, LCD Driver			
	IR2429	Sharp	
12x2 LED Driver			
	IR2E12	Sharp	15
	IR2E20	Sharp	
13-Bit Driver, Serial Input, Parallel Output			
	IR2412A	Sharp	
16-Line Vacuum Fluorescent			
	DS8881	National	
16-Segment LED Display Drivers			
	MM5484	National	
20-Digit Alphanumeric or Dot Matrix VF Driver			
	MM58242	National	20
20-Line Vacuum Fluorescent Display Driver			
	TL5812	TI	
20-Segment Vacuum Fluorescent Display Driver			
	SED2020F	S-MOS	
24-Channel Matrix Panel Display Column Driver			
	HV08	Supertex	
32-Bit LCD Driver			
	S4521	◊ Gould AMI	
32-Channel AC Plasma Display Driver			
	HV500	Supertex	25
	HV501	Supertex	
32-Channel Liquid Crystal Display Driver, ±40V			
	HV6008	Supertex	
32-Channel Serial to Parallel Converter with P-Channel Open Drain Outputs (for AC Electroluminescent Displays)	HV4122	Supertex	
	HV4222	Supertex	
	HV4522	Supertex	30
	HV4530	Supertex	
	HV4622	Supertex	
	HV4630	Supertex	
	HV5122	Supertex	
	HV5222	Supertex	35
	HV5306	Supertex	
	HV5406	Supertex	
	HV5408	Supertex	
	HV5522	Supertex	
	HV5530	Supertex	40
	HV5622	Supertex	
	HV5630	Supertex	
	HV5708	Supertex	
	HV5808	Supertex	
32-Channel Serial to Parallel Converters with High Voltage Push-Pull Outputs (for AC Electroluminescent Displays), 80V			
	HV5308	Supertex	45
32-Digit Alphanumeric or Dot Matrix VF Driver			
	MM58241	National	
	MM58248	National	

(Continued)

Function	Device	Source	Line
32-Digit Alphanumeric or Dot Matrix VF Driver (Cont'd)			
	MM58341	National	
	MM58348	National	
32-Line AC Plasma Display Axis Driver			
	SN55500E	† TI	50
	SN65501E	TI	
	SN75501E	TI	
32-Line Electroluminescent Display Column Drivers			
	SN75567	TI	
	SN75568	TI	
32-Line Vacuum Fluorescent			
	SN75518	TI	55
32-Row LCD Dot-Matrix Driver			
	MSM5238	◊ OKI	
32-Segment LCD			
	MM5452	National	
	MM5453	National	
32-Segment LCD Controller/Driver			
	μPD7255	NEC	
32-Segment LCD Driver			
	AY0438I	Microchip	60
	MM5483	National	
	PCF2112	Signetics	
32-Segment Vacuum Fluorescent Display Driver			
	SED2032F	S-MOS	
40-Segment LCD Duplex			
	PCF2100	Signetics	
64-Channel Serial to Parallel Converter with Open Drain Outputs (for AC electroluminescent displays), 220V			
	HV0322	Supertex	65
	HV0330	Supertex	
	HV04H06	Supertex	
	HV04H08	Supertex	
	HV0406	Supertex	
	HV0408	Supertex	70
	HV0522	Supertex	
	HV0530	Supertex	
	HV06H06	Supertex	
	HV06H08	Supertex	
	HV0606	Supertex	75
	HV0608	Supertex	
64-Segment LCD Duplex			
	PCF2111	Signetics	

INTERFACE

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INTERFACE—Error Checking Circuits

Function	Max. Serial Data Rate, MHz	Supply Voltage, V	Device	Source	Line
Bus Buffer Correction (4-bit for use with EDAC unit)		5	MC74F2961A	Motorola	
			MC74F2962A	Motorola	
Clock Recovery Circuit	50	5	T7032	AT&T	
			T7033	AT&T	
Codec, Convolutional Coder/Viterbi Decoder (for forward error correction)					
	0.01	5	STI5268	STEL	5
Convolutional Encoder	1	5	STEL2012	STEL	
CRC Generator/Checker	3	5	MC8500	Motorola	
	10	5	8X01A	Signetics	
	12	5	54F401	† National	
			74F401	◊ National	10
			N9401	Signetics	
			S9401	† Signetics	
CRC Generator/Checker (expandable)	30	5	54F402	National	
			74F402	◊ National	
Decoder, Forward Error Correction (Viterbi decoding algorithm)					
	2.1	5	SCOM2001B	† Spancom	15
	2.7	5	SCOM2001C1	Spancom	
			SCOM2001P	Spancom	
	4.1	5	SCOM2001C2	Spancom	
Deskew-Queue Register	3 *	5	MC8520	Motorola	
Digital Encryption Processor	0.235	5	T7000A	AT&T	20
Error Detection and Support Logic, for Winchester Disk System					
	5	5	WD1014	Western	
Error Detection/Correction Circuit	—	5	8206	Intel	
			WD8206	◊ Western	
Error Detection/Correction Circuit (ECL)	—	−5.2	MC10163	Motorola	
			MC10563	◊† Motorola	25
			MC10593	◊ Motorola	
Error Detection/Correction Circuit (TTL)	—	5	AM2960	AMD	
			MB1412A	Fujitsu	
			MB1426	Fujitsu	
			MC74F2960	Motorola	30
			DP8402A	National	
			DP8403	National	
			DP8404	National	
			DP8405	National	
			54F420	† National	35
			74F420	National	
			2960	Signetics	
			54F630	† Signetics	
			54F631	† Signetics	
			SN54LS630	◊† TI	40
	−15		AM2960-1	AMD	
			MC74F2960-1	Motorola	
Error Detection/Correction Circuit (TTL), Serial Burst	—	5	74F430	National	
Error Detection/Correction Unit (CMOS)		5	P54PCT632	† Performance	
			P54PCT633	† Performance	45
			P54PCT634	† Performance	
			P54PCT635	† Performance	
			P74PCT632	Performance	
			P74PCT633	Performance	
			P74PCT634	Performance	50
			P74PCT635	Performance	
Error Pattern Register	3	5	MC8501	Motorola	
Expandable Error Checker and Corrector	—	5	DP8400	National	
Foward Error Correction (FEC) Encoder/Decoder (for MIL-STD-188-141A and FED STD 1045).			SRT-141A/1045	SpaceResearch	
Foward Error Correction (FEC) Encoder/Decoder (24,12 Extended Golay).			SRT24-12-03	SpaceResearch	55
LRCC Data Register	3	5	MC8502	Motorola	
Polynominal Generator	4 *	5	MC8506	Motorola	
Polynominal Generator/Checker	3.5 *	5	MC68653	Motorola	
			MC8503	Motorola	
			SCN68653	◊ Signetics	60
Random Number Generator		5	T7001	AT&T	
Universal Polynominal 4-Bit Generator	17 *	5	MC8504	Motorola	
Viterbi Decoder (for forward error correction)	256 kb/s	5	STI2010	STEL	
	1024 Kb/s	5	STEL2016	STEL	
	2048 Kb/s	5	STEL2015	STEL	65

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INTERFACE—Error Checking Circuits (Cont'd)

Function	Max. Serial Data Rate, MHz	Supply Voltage, V	Device	Source	Line
Winchester Disk CRC Checker/Generator			HDC1100-04	SMC	
Single Error Hamming Code Detector and Generator	—	5	MC4041	Motorola	
Triple Error Correction/Encoder			XRT24-12-03	SpaceResearch	
8-Tone Encoder/Decoder (for MIL-STD-188-141M and FED STD 1045).			SRT-8118	SpaceResearch	

INTERFACE

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INTERFACE—Keyboard Encoder-Decoders

No. of Keys	No. of Output Bits	Code	Max. Clock Rate, KHz	Supply Voltage, V	Comments	Device	Source	Line
Keyboard Programmable Keyless Locks						**LS7222** **LS7223**	**LSI Comp (3526)** **LSI Comp (3526)**	
Public Key Encryption Processor						**CA34C168**	**Newbridge (3569)**	
16	4	Binary	—	3–15	2 key rollover, 3 state output	MM54C922 † MM74C922	National National	5
		1 of 16	—	5	Strobe output, key rollover output, 2 of 8 keyboard to binary encoder, one of four row inputs and column inputs (telephone key pads) give binary output, strobe.	MC14419	Motorola	
20	5	Binary	—	3–15	2 key rollover, 3 state output	MM54C923 † MM74C923	National National	
85	8	ASCII/HEX	1000	4–6.5	Scans and generates code for 53 key ASCII plus 32 non-ASCII keys	CDP1871AC	Harris	
				4–10.5	Scans and generates code for 53 key ASCII plus 32 non-ASCII keys	CDP1871A	Harris	10
90	9	ASCII		4.5–7	N Key rollover, any key down output signal, ASCII or binary (PRO) versions.	KB3600	Microchip	
	10	External ROM Programmable	100	5	9x10 matrix, N key rollover, parallel output	KR9600	SMC	
					9x10 matrix, N key rollover, parallel output, caps lock, auto repeat	KR9601	SMC	
		Mask Programmable	100	5	9x10 matrix, N key rollover, serial output, caps lock, auto repeat	KR9602	SMC	
104	8	ASCII		5	8x13 matrix, parallel or serial, baud rate select, N key rollover/lockout, autorepeat, caps lock (LED indicators).	KB3661	Microchip	15
112	8	ASCII		5	8x14 matrix, serial output, baud rate select, N key rollover/lockout, autorepeat, caps lock.	KB3660S	Microchip	
128	9	Mask Programmable	100	5	16 x 8 matrix, three-state I/O, 2 or 3 key alarm	MSM3914A	OKI	

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INTERFACE—Line Circuits

No. Per Device	Output	Party Line	Supply Voltage, V	Comments	Device	Source	Line
Line Drivers—Single Ended							
1		No	+,-5	Video Line Driver, High Speed Op-Amp	CA3450	Harris	
2	-0.5 to 5.5 V	No	5	RS422A, RS423A	μA9639C	TI	
	±4 to 6 V	No	±9 to ±15	RS232, RS423, CCITT V.26, V.28	μA9636AC	National	
					μA9636AM	† National	
					μA9636AC	TI	5
	±6 V	No	±12	4 Input	N8T15	Signetics	
	±8 V	No	±12	RS232C	DS75150	National	
					SN75150	TI	
	±15 V	No	±15	RS423A, RS423C	μ9636A	TI	
	High Current	Yes	5	Coax/Twisted Pair	DS75123	National	10
					N8T23	Signetics	
					SN75123	TI	
				Emitter Follower for Coax/Twisted Pair	DS55121	† National	
					DS75121	National	
					N8T13	Signetics	15
					S8T13	Signetics	
					SN55121	† TI	
					SN75121	TI	
	TTL	No	5	Three-State, Inverting	LD6005	Adv Analog	
			7		DS55110A	† National	20
					DS75110A	National	
	0.8 to 2.0		±12	RS-423/RS-232C	MC3488A	Motorola	
	2.4		5	General Purpose Interface Bus	SN75ALS121	TI	
	12 mA	No	±7		μA55110A	† National	
					μA75110A	National	25
3	±6 V	No	±12	RS232B/C, CCITT, MIL188	μA9616HC	National	
					μA9616HEC	National	
					μA9616HM	† National	
	Open Collector	No	5	Triple Line Transmitter	HS245RH-8	‡ Harris	
4		No	5	4 RS-232 Drivers	AD234	AD	30
	-0.1 to -14.2	No	5,-5	NTDS Quad Driver, MIL-STD 1397A	GET47521268		
						◊ GET Eng	
	±3 to ±9 V	No	±4.5 to ±12	RS232C, CCITT V. 24	DS14C88	National	
	±4 to ±12 V	No	±5 to ±15	RS232/432	LT1032	LinearTech	
	±4 to 6 V	No	±5	RS423, RS422 with mode control	AM26LS30C	◊ AMD	
					DS3691	National	35
					AM26LS30	Signetics	
			±5.5	RS423, RS422 with mode control	AM26LS30M		
						◊† AMD	
					DS1691	† National	
		Yes	±5	RS423, Three-State	AM26LS29C	◊ AMD	
			±5.5	RS423, Three-State	AM26LS29M		
						◊† AMD	40
	±6 to 9 V	No	±9 to ±15	RS232C, CCITT V.24	XR1488	◊ Exar	
					MC1488	◊ Motorola	
					DS1488	National	
					MC1488	Samsung	
					MC1488	◊ SGS-Thomson	45
					MC1488	Signetics	
					SN55188	◊† TI	
					SN75188	TI	
	±30	No	±5 to ±15	RS-232/423, Three-State	LT1030C	LinearTech	
	±4 to 6 V	Yes	±5 V	RS423, Three-State	M5A26LS29	Mitsubishi	50
	TS	No	±5 to ±15	RS-232 Driver	LT1032C	LinearTech	
					LT1032M	† LinearTech	
	TTL	No	5	Meets IBM 360/370 I/O Interface Specifications	SN75ALS130	TI	
				RS-232C Compatible	M75188	Mitsubishi	
				RS-232C Line Driver	**SG1488**	**SiliconG (3643)**	55
				RS-422A Compatible	M5M3487	Mitsubishi	
			8	RS-422 Compatible	DS3587	† National	
		Yes	5	DS7831 w/o Vcc Clamp	DS7832	† National	
					DS8832	National	
				Three-State	N8T09	Signetics	60
					S8T09	† Signetics	
				2-Input NAND, 80 Ma	96101C	National	
					96101M	† National	
				4-Input AND, NAND	DS7831	† National	
					DS8831	National	65

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Output	Party Line	Supply Voltage, V	Comments	Device	Source	Line
Line Drivers—Single Ended							**(Cont'd)**
4						(Cont'd)	
	0.15 to 4 V	No	5	IBM360/370	MC3481	Motorola	
					MC3485	Motorola	
	0.8 to 2	±7	5	RS-422	DS34F87	National	
					DS35F87	National	
		TTL	5	4 RS-232 Drivers	SP234	Sipex-HSD	5
	0.8 to 2 V	No	5	IBM 360/370	SN75ALS126	TI	
	0.8 to 2.4	±9	5	RS-232 with Shutdown	MAX234C	Maxim	
					MAX234E	Maxim	
					MAX234M †	Maxim	
5		No	5	5 RS-232 Drivers	**AD230**	**AD**	**(3301)** 10
	0.8 to 2.4	±9	5	RS-232 with Shutdown	MAX235C	Maxim	
					MAX235E	Maxim	
					MAX235M †	Maxim	
		No	5	RS-232	MAX230	Maxim	
6	−0.1 to −14.2	No	5,−5	NTDS Hex Driver, MIL-STD 1397A	GET47521168		
						◊ GET Eng	15
	NTDS	No	5,−5	NTDS Hex Driver	MOF1305B †	Plessey	
			5,−15	NTDS	MOA268B †	Plessey	
8	—	Yes	—	RS-2326/RS-423A CCITT V.10/X.26	NE5170	Signetics	
	TTL		5		UC5170C	Unitrode	
		Yes	5	Three-State (also see index for 74S244, 74LS244, 67S304, 67LS304)	SN54S244 †	AMD	20
					HD74LS241	Hitachi	
					HD74LS244	Hitachi	
					MM54C941 ‡	Micrel	
					SN54LS241 †	Motorola	
					SN54LS244 †	Motorola	25
					SN74LS241	Motorola	
					SN74LS244	Motorola	
					SN74LS541	Motorola	
					DM54S241 †	National	
					DM74LS241	National	30
					DM74LS244	National	
					DM74S241	National	
					MM54C941 †	National	
					MM74C941	National	
					54LS241 †	National	35
					74LS241 ◊	National	
					74LS244 ◊	National	
					74LS241	Signetics	
					74LS244	Signetics	
					74LS541	Signetics	40
					SN54ALS244A		
						† TI	
					SN54ALS541 †	TI	
					SN54AS241 ◊†	TI	
					SN54AS244 ◊†	TI	
					SN54LS241 ◊†	TI	45
					SN54LS244 ◊†	TI	
					SN54S241 †	TI	
					SN54S244 †	TI	
					SN74ALS241A	TI	
					SN74ALS244A	TI	50
					SN74ALS541	TI	
					SN74ALS541-1	TI	
					SN74AS241	TI	
					SN74AS244	TI	
					SN74LS241	TI	55
					SN74LS244	TI	
					SN74LS541	TI	
					SN74S241	TI	
					SN74S244	TI	
				Three-State, Inverting	SN54LS240 †	Motorola	60
					SN74LS240	Motorola	
					SN74LS540	Motorola	
					DM54S240 †	National	
					DM74S240	National	
					54F240 ◊†	National	65
					54LS240 †	National	
					74F240 ◊	National	
					74LS240 ◊	National	
					74LS540 ◊	National	

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Output	Party Line	Supply Voltage, V	Comments	Device	Source	Line
Line Drivers—Single Ended							**(Cont'd)**
8	TTL	Yes	5	Three-State, Inverting		(Cont'd)	
					54LS540	† Signetics	
					74F540	Signetics	
					74LS240	Signetics	
					74LS540	Signetics	
					SN54AS240	◊† TI	5
					SN54LS240	◊† TI	
					SN54LS540	† TI	
					SN54S240	† TI	
					SN74ALS240A	TI	
					SN74ALS540	TI	10
					SN74ALS540-1	TI	
					SN74AS240	TI	
					SN74LS240	TI	
					SN74LS540	TI	
					SN74S240	TI	15
16	TTL	Yes	5	Three-State	SN54LS365A	◊† TI	
					SN54LS367A	◊† TI	
					SN74LS365A	TI	
					SN74LS367A	TI	
				Three-State, Inverting	SN54LS366A	† TI	20
					SN54LS368A	◊† TI	
					SN74LS366A	TI	
					SN74LS368A	TI	
Line Drivers—Differential							
1	0.8 to 2	TTL, CMOS	5	Differential Line Driver and Receiver Pair, Meets ST506/412 and ESDI Disk Drive Standards	DS8921A	National	
2	±3 V	Yes	±5	RS422 at Low Data Rates, RS423	AM26LS30C	◊ AMD	25
					AM26LS30	Signetics	
			±5.5	RS422 at Low Data Rates, RS423	AM26LS30M	◊† AMD	
	±5	No	5	ARINC 429 Standard	RM3182	Raytheon	
	±5V	No	±15, ±5	ARINC 429, 100K bits data rate	HS3182	† Harris	
	CMOS/TTL	No	5		DS9638	National	30
		NO	5	ARINC 429 Standard	HI-8382C	Holt	
					HI-8382CM	Holt	
					HI-8382S	Holt	
		No	5	ARINC 429 Standard	HI-8382SM	Holt	
	High Current CMOS						
		No	3–15	CMOS 50 mA, 4-Input AND, NAND	MM78C30	‡ Micrel	35
					MM78C30	† National	
					MM88C30	National	
	High Current TTL						
		No	5	40 mA, Open Collector/Active Pull-up	DS55114	† National	
					DS75114	National	
					SN55114	◊† TI	40
					SN75114	TI	
				40 mA, RS422	SN75158	TI	
				40 mA, 4-Input AND, NAND	DM74S140	National	
					DS7830	† National	
					DS8830	National	45
					54S140	† Signetics	
					74S140	Signetics	
					SN54S140	† TI	
					SN55183	◊† TI	
					SN74S140	TI	50
					SN75183	TI	
		Yes	5	Three-State	DS7831	† National	
					DS8831	National	
				DS7831 w/o Vcc Clamp	DS7832	† National	
				40 mA, Open Collector/Active Pull-Up, Three-State	DS55113	† National	55
					DS75113	National	
					SN55113	◊† TI	
					SN75113	TI	
				40 mA, RS422, Three-State	DS8832	National	
					SN75159	TI	60

(Continued)

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INTERFACE

INTERFACE—Line Circuits (Cont'd)

No. Per Device	Output	Party Line	Supply Voltage, V	Comments	Device	Source	Line
Line Drivers—Differential							**(Cont'd)**
2						(Cont'd)	
	TS	No	5		MB412	Fujitsu	
	TTL	No	5	RS–422	DS8921	National	
					DS8922	National	
					DS8923	National	
				RS–422/423	51998	† Micropac	5
			7		DS9614	National	
				RS–485/422	DS96F177C	National	
					DS96F177M	† National	
					DS96F178C	National	
					DS96F178M	† National	10
	0.8 to 2	TTL, CMOS	5	Dual Differential Line Driver and Receiver Pair	DS8922A	National	
					DS8923A	National	
	2.5 to 3.5	No	5	High Speed	μA9638C	TI	
	3.5 mA	Yes	±5	Twisted Pair	SN55109A	† TI	
					SN75109A	TI	15
	6.5 mA	Yes	±5	Twisted Pair, Level Shifting	MC75S110	Motorola	
					SN55110A	◊† TI	
					SN75110A	TI	
	18 mA	Yes	±5	Higher Current 75110	SN75112	TI	
	40 mA	No	7		μA9614	National	20
	50 mA	No	5	High Speed, EIA-RS422	μA9638C	National	
					μA9638M	† National	
3	TTL, DTL	No	5	Triple Line Transmitter	HS245RH	Harris	
4	High Current CMOS						
		No	3–15	CMOS, 25 mA	MM78C29	‡ Micrel	
					MM78C29	† National	25
					MM88C29	National	
	High Current TTL						
		No	5	50 Ohm Lines	SN74128	TI	
				75 Ohm Lines	54128	† Signetics	
					SN54128	† TI	
		Yes	5	RS–422, RS–423, Three-State	MC3487	Motorola	30
					μA3487	National	
					DS3487	National	
				RS–422, Three-State	SN55ALS194	TI	
				RS–422A, Three-State	SN75ALS194	◊ TI	
	TTL	No	7		DS8924	National	35
				RS–485/422	DS96F172C	National	
					DS96F172M	† National	
					DS96F174M	† National	
				RS485/422	DS96F174C	National	
	TTL TS	No	5	RS422A	MC3487	TI	40
	0.8 to 2	±7	5	RS–422	DS26F31C	National	
					DS26F31M	† National	
					DS34C87	National	
		±14	5	Hysteresis, High-Speed	DS26C31C	National	
	11 mA	Yes	±5	Quad 75110	MC3453A	Motorola	45
				Quad 75110	MC3453	TI	
					SN55111	† TI	
					SN75111	TI	
	20 mA	Yes	5	MIL188–114, Three-State	DS1692	† National	
					DS3692	National	50
				RS–422, Three-State	AM26LS31C	AMD	
					AM26LS31M	† AMD	
					M5A26LS31	Mitsubishi	
					AM26LS31	Motorola	
					AM26LS31C	Motorola	55
					AM26LS31M	† Motorola	
					DS26LS31C	† National	
					DS26LS31M	◊ National	
					AM26LS31	Signetics	
					AM26LS31C	TI	60
					SN55ALS192	TI	
					SN75ALS192	◊ TI	
	40 mA	No	5	4 ns propagation delay, reduced power	41LG	AT&T	
		Yes	5	RS–422, Fed. 1020, Three-State	SN75151	TI	
					SN75153	TI	65

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INTERFACE

INTERFACE—Line Circuits (Cont'd)

No. Per Device	Output	Party Line	Supply Voltage, V	Comments	Device	Source	Line
Line Drivers—Differential							**(Cont'd)**
4						(Cont'd)	
	60 mA	No	5		DS96172	National	
					DS96174	National	
		Yes	5	RS-422A, Three-State	SN75172	Motorola	
					SN75174	Motorola	
					SN75172	TI	5
					SN75174	TI	
				RS-485	μA96172	National	
					μA96174	National	
	160 mA	No	5		41LP	AT&T	
					41MG	AT&T	10
					41MP	AT&T	
4 (dual)	20 mA	Yes	5	RS-422, Three-State	DPL26LS31X	Dense-Pac	

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Receiver Input Threshold	Common Mode Voltage, V	Supply Voltage, V	Comments	Device	Source	Line
Line Receivers—Single Ended							
2			5	IBM360/370	SN75ALS123	TI	
	±0.1 V (ref)		5	Ext. Reference Adjustable from 1.5 to 3.5 V	SN75140A	TI	
					SN75141	TI	
	±2.0		5	Hysteresis, EIA/MIL	N8T16	Signetics	
					S8T16	Signetics	5
	0.4 to 2.8	±15	5		μA9622	National	
					DS9622	National	
		±25	5		μA9627	National	
					DS9627	National	
	0.8 to 2		5	Photo Coupler Receiver	M753114	Mitsubishi	10
				RS-422A/423A, Three-State	M5M3486	Mitsubishi	
3	0.45 to 2.5		5		HS246RH-8 ‡	Harris	
					HS248RH-8 ‡	Harris	
					HS249RH-8 ‡	Harris	
	0.7 to 1.7		5	Hysteresis, IBM360/370	DS75124	National	15
					N8T24	Signetics	
					SN75124	TI	
	0.8 to 2	±15	5	RS-232 compatible	SN75C1406	TI	
	0.8 to 2.0 V		5	Hysteresis, High-Speed	DS55122 †	National	
					SN55122 †	TI	20
					SN75122	TI	
4			5	RS422A, RS423A	MC3486 ◊	TI	
	±0.2	±7	±5	Three-State, RS-422/423A	M5A26LS32A	Mitsubishi	
	±3 to ±9 V	No	±4.5 to ±12	RS232C, CCITT V. 24	DS14C89A	National	
	±3/0.8 to 3		5 or 12	RS232C, Hysteresis, Fail Safe Option	DS75154	National	25
					SN75154	TI	
	0.75 to 1.5 V		5	RS232C, Programmable Threshold, Hysteresis	M75189	Mitsubishi	
					MC1489 ◊	Motorola	
					DS1489	National	
					MC1489	Samsung	30
					MC1489	SGS-Thomson	
					MC1489	Signetics	
					SN55189 †	TI	
					SN75189	TI	
	0.75 to 2.25		5	RS232C, Programmable Threshold, Wider Hysteresis than 1489	XR1489A ◊	Exar	35
					MC1489A ◊	Motorola	
					DS1489A	National	
					MC1489A	Samsung	
					MC1489A	Signetics	
					SG1489A ◊	**SiliconG (3643)**	40
					SN55189A †	TI	
					SN75189A	TI	
	0.8 t 2		5	RS-232, Three-State	M75188	Mitsubishi	
	0.8 to 2		5	RS-232, Three-State	M54655	Mitsubishi	
					M54656	Mitsubishi	45
				RS-232C, Three-State	M75189A	Mitsubishi	
				RS-485, Three-State	M75173	Mitsubishi	
					M75175	Mitsubishi	
		±15	5	RS-232 compatible	SN75C1154	TI	
		30	5	RS-232C Line Receiver	**SG1489**	**SiliconG (3643)**	50
	0.97 to 2.65		5	Hysteresis, 120 Ohm System	DS7836 †	National	
	1.05 to 2.5		5	Hysteresis, 120 Ohm System	DS8836	National	
	1.2 to 1.8		5	120 Ohm System, No Hysteresis, NOR Input	DS7640 †	National	
	1.3 to 1.7		5	120 Ohm System, No Hysteresis, NOR Input	DS8640	National	
	5 to 7.5		15	Hysteresis, Interface to CMOS	367A	TeledyneS	55
					367M †	TeledyneS	
				Hysteresis, Open Collector, Interface to CMOS	368A	TeledyneS	
	5.5 to 8		12	Hysteresis, Open Collector, Inferface to CMOS	368C	TeledyneS	
				Hystersis, Interface to CMOS	367B	TeledyneS	
					367C †	TeledyneS	60
6	−1 to 4.5/−1.5 to 13		5	NTDS	MOB272 †	Plessey	
	0.8 to 2		5	Compatible with IBM 360/370 Interface	MB438	Fujitsu	
	0.97 to 2.65		5	Hysteresis, 120 Ohm System	DS7837 †	National	
	1.05 to 2.50		5	Hysteresis, 120 Ohm System	MC3437	Motorola	
					DS8837	National	65
					N8T37	Signetics	
7			5	IBM360/370	SN75ALS125	TI	
					SN75ALS127	TI	

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Receiver Input Threshold	Common Mode Voltage, V	Supply Voltage, V	Comments	Device	Source	Line
Line Receivers—Single Ended (Cont'd)							
7						(Cont'd)	
	0.7 to 1.7		5	IBM360/370	MC75125	Motorola	
					MC75127	Motorola	
					DS75125	National	
					DS75127	National	
					SN75125	TI	5
					SN75127	TI	
8	—		5	RS-232C/RS-422A/RS-423A CCITT V.10, V.11, V.28, X.26, X.27	NE5180	Signetics	
					NE5181	Signetics	
	0.7 to 1.7		5	IBM360/370	MC75128	Motorola	
					MC75129	Motorola	10
					DS75128	National	
					DS75129	National	
					SN75128	TI	
					SN75129	TI	
Line Receivers—Differential							
2	±0.010	±3	±5	10 mV, MOS Sense, Active Pull-up	DS75208	National	15
					SN75207	TI	
				75207 with Diode Protected Input Stage	SN75207B	TI	
	±0.025	±3	±5	25 mV, Active Pull-up	MC75107	Motorola	
				25 mV, Active Pull-Up	DS55107	† National	
					DS75107	National	20
				25 mV, Active Pull-up	SN55107A	† TI	
				25 mV, Open Collector	MC75108	Motorola	
					DS55108	† National	
					DS75108	National	
					SN55108A	† TI	25
				25 mV, Three-State 55107	DS1603	† National	
					DS3603	National	
				55107A with Diode Protected Input Stage	DS55107	† National	
					DS75107	National	
					SN55107B	† TI	30
				55108A with Diode Protected Input Stage	DS55108	† National	
					DS75108	National	
					SN55108B	† TI	
	±0.2	±7	5	RS-422, RS-423	μA9639A	National	
	±0.2/0.3	±10/15	5	Twisted Pair, ±15 V CMV. Response Control	DS78LS120	† National	35
					DS88LS120	National	
		±15	5	CMOS Compatible, Response Control	DS78C120	† National	
					DS88C120	National	
	±0.2/0.5	±7/15	5	RS232, RS422/3	μA9637AC	National	
					μA9637AM	† National	40
					μA9637AC	TI	
					SN75157	TI	
	±0.4	±7	5	RS-422, RS-423/C and CCITT compatible	μA9639AC	National	
	±0.5/1	±0/15	5	±15 V CMV, Response Control	DS55115	† National	
					DS75115	National	45
					SN55115	◊† TI	
					SN75115	TI	
		±3/15	5	Twisted Pair, ±3/15 V CMV, Response Control	DS7820A	‡ National	
					DS8820A	National	
					SN55182	◊† TI	50
					SN75182	TI	
		±10/15	5	Twisted Pair, ±15 V CMV, Response Control	DS78C20	† National	
					DS7820	† National	
					DS88C20	National	
					DS8820	National	55
					L7820	† SGS-Thomson	
	±0.5/3	±25	±12	Adjusts RS232C/MIL-188, ±25 V CMV, Hysteresis	SN75152	TI	
	0.4 to 2.4	±25	7		DS9615	National	
	0.5 to 2.5		5	RS-422A, RS-423A, RS-232, V.28.	SN75146	TI	
		±15	5		DS9637A	National	60
		±25	5		DS9639A	National	
	0.8 to 2	±5	5	ARINC 429 Standard	RM3183	† Raytheon	
		±25	7		μA9615	National	
		15	5		SSM2141	AD	

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INTERFACE—Line Circuits (Cont'd)

Line Receivers—Differential (Cont'd)

No. Per Device	Receiver Input Threshold	Common Mode Voltage, V	Supply Voltage, V	Comments	Device	Source
3	TTL, DTL	No	5	Triple Line Receiver	HS246RH	Harris
					HS249RH	Harris
		Yes	5	Triple Party-Line Receiver	HS248RH	Harris
4			±15/12–24	Quad Comparator, 3mV Hysteresis	ESM1600	SGS-Thomson
					ESM1602	SGS-Thomson
			5	RS422A, RS423A	MC3486	◊ TI
	±0.025	±3	±5	Four 75107, Active Pull-up	MC3450	Motorola
					DS1650	† National
					DS3650	National
					MC3450	TI
				Four 75108, Open Collector	MC3452	Motorola
					DS1652	† National
					DS3652	National
					MC3452	TI
	±0.2	–7,12	5	Three State, RS–422/423, CCITT V.10 and V.11	AM26LS32BC	AMD
					AM26LS32BM	† AMD
					AM26LS34C	AMD
					AM26LS34M	† AMD
		±3	5	Three-State, RS422/423	MC3486	Motorola
					DS3486	National
		±7	±5	Three-State, RS–422/423	AM26LS32C	AMD
					AM26LS32M	† AMD
					AM26LS32	Motorola
					DS26LS32AM	◊‡ National
					DS26LS32C	National
					DS26LS32M	◊† National
					AM26LS32AC	TI
					AM26LS32AM	† TI
			5	Three State, RS–422/423	μA3486	National
		±12	5	RS–422/485	μA96173	National
					μA96175	National
				RS–485/422	DS96F173	National
					DS96F175	National
				Three-State, RS–422A/RS–423A	SN75173	Motorola
					SN75175	Motorola
					SN55173	† TI
					SN75173	TI
					SN75175	TI
				Three-State, RS–422A/423A/485, CCITT V.10, V.11, V.26, V.27	SN55ALS195	TI
					SN75ALS195	TI
	±0.5	±15	±5	Three-State	AM26LS33C	AMD
					AM26LS33M	† AMD
					DS26LS33C	National
					DS26LS33M	† National
					AM26LS33AC	TI
					AM26LS33AM	† TI
	±0.8	–12, ±7.5	±5,–5	NTDS	MOF1623B	† Plessey
	0.20	±4	5	4 ns propagation delay, reduced power	41LF	AT&T
	0.4 to 2	±25	7	RS–422/423	DS26LS32AC	National
					DS26LS33AC	National
	0.8 to 2		5		41LR	AT&T
					41LS	AT&T
					41LT	AT&T
					41MF	AT&T
					41MR	AT&T
					41MT	AT&T
				Three-State	MB413	Fujitsu
		±7	5	Hysteresis, High-Speed Quad Line Receivers, Three-State	DS34C86	National
					SN75ALS197	TI
					SN75ALS199	TI
				RS–422/423	DS26C32C	National
		±15	5	RS–422/423	DS34F86	National
					DS35F86	National

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INTERFACE—Line Circuits (Cont'd)

Line Receivers—Differential (Cont'd)

No. Per Device	Receiver Input Threshold	Common Mode Voltage, V	Supply Voltage, V	Comments	Device	Source	Line
4	0.8 to 2					(Cont'd)	
		±25	5		DS96173	National	
					DS96175	National	
				RS-422/423	DS26F32C	National	
					DS26F32M †	National	
			7	RS-485/422	DS96F173C	National	5
					DS96F173M †	National	
					DS96F175C	National	
					DS96F175M †	National	
	0.8 to 2.0	7,-7	5	Three-State, RS-422A, RS-423A, RS-485, CCITT V.10, V.11, X.26, and X.27	SN75ALS193	TI	
				Three-State, RS-422A, RS-485, CCITT V.10, V.11, X.26, and X.27	SN55ALS193	TI	10
4 (dual)	±0.2	±7	±5	Three-State, RS-422/423	DPL26LS32X	Dense-Pac	
8		±25	5		UC5180	Unitrode	
					UC5181	Unitrode	
	-0.2 to 0.2	±15	5	RS232C and RS423A; CCITT V.10, V.28 and V.11	ULN8510EP	Allegro Micro	
	0.8 to 2	±15	7	EIA Receiver, Low Speed	ULN8511	Allegro Micro	15

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Receiver Input Threshold, V	Output	Supply Voltage, V	Comments	Device	Source	Line
Line Transceivers—Single Ended							
1	0.8 to 2	TTL	5	RS-232-C Driver and Receiver	SN75155	TI	
				RS-232C, Three-State	M751701	Mitsubishi	
				RS-485, Three-State	M75176	Mitsubishi	
					M75177	Mitsubishi	
					M75178	Mitsubishi	5
					M75179	Mitsubishi	
2	0.8 to 1.4	TTL/CMOS	5	Three-State, Dual RS-232 Driver/Receiver	LT1080C	LinearTech	
					LT1080M	† LinearTech	
					LT1081C	LinearTech	
					LT1081M	† LinearTech	10
	0.8 to 2	TTL	5	RS-422A, Three-State	M5M34050	Mitsubishi	
					M5M34051	Mitsubishi	
3	0.8 to 2.0	TTL/CMOS	5	Three-State, Triple Driver/Receiver	LT1039C	LinearTech	
					LT1039M	† LinearTech	
4					SN75ALS053	TI	15
			5	Two Drivers/Two Receivers	SN75ALS085	TI	
			15	Two Drivers/Two Receivers	MAX232	TI	
		TTL	5	IEEE 896.1	SN75ALS057	TI	
	0.05 to 2.50	TTL	5	Open Collector, 1 V Hysteresis	DS8838	National	
					N8T38	Signetics	20
	0.4 to 2.05	TTL	5	Open Collector, Hysteresis	AM26S12AC	AMD	
					AM26S12AM	† AMD	
	0.5 to 2.0	TTL	5	Bus Transceiver, Tridirectional, Three-State	SN54LS442	† TI	
	0.6 to 2.0	TTL	5	Bus Transceiver, Tridirectional, Three-State	SN74LS442	TI	
				General Purpose Interface Bus, Open Collector, for MOS Input	MC3446A	Motorola	25
	0.7 to 2.0	TTL	5	Three-State, Bus Transceiver, Parity Generator/Checker	AM2917AM	† AMD	
	0.8 to 1.8	TTL/MOS	5	General Purpose Interface Bus, Bidirectional Bus Transceiver, Three-State	AM3448A	AMD	
					MC3448A	Motorola	
	0.8 to 2		5	Two RS-232 Drivers, Two RS-232 Receivers	AD231	AD	
					AD233	AD	30
				Two RS-232 Drviers, Two RS-232 Receivers	AD232	AD	
		TS	5		LT1180C	LinearTech	
					LT1180I	LinearTech	
					LT1180M	† LinearTech	
					LT1181C	LinearTech	35
					LT1181I	LinearTech	
					LT1181M	† LinearTech	
		TTL	5	RS-232C, 2 Drivers/2 Receivers	NJU6403	◊ NJR	
				RS-422A, Three-State	M66805	Mitsubishi	
				Two RS-232 drivers and two RS-232 receivers.	μPD4711	NEC	40
				2 RS-232 Drivers/2 Receivers	SP231	Sipex-HSD	
					SP232	Sipex-HSD	
					SP233	Sipex-HSD	
			6	Futurebus Trapezoidal Transceiver	DS3897	National	
	0.8 to 2.0	TTL	5	Bus Transceiver Three-State, Inverting	SN54LS242	† Motorola	45
					SN54LS243	† Motorola	
					SN54ALS242B	† TI	
					SN54ALS243A	† TI	
					SN54LS242	◊† TI	
					SN54LS243	◊† TI	50
				General Purpose Interface Bus, Open Collector, 100 mA Output	MC3440A	Motorola	
					MC3441A	Motorola	
					DS3662	National	
					DS7641	† National	
					DS8641	National	55
				Line Transceiver with Driver Enable.	MC34051	Motorola	
				Line Transceiver with Separate Enable for Driver and Receiver.	MC34050	Motorola	
				Three-State, Bus Transceiver	SFC2915A	SGS-Thomson	
				Three-State, Bus Transceiver, Parity Generator/Checker	AM2917AC	AMD	
					SFC2917	SGS-Thomson	60
				Three-State, Hysteresis	HD74LS242	Hitachi	
					SN74LS242	Motorola	
					SN74LS243	Motorola	
					DM74LS243	National	
					74LS242	Signetics	65
					74LS243	Signetics	

(Continued)

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INTERFACE—Line Circuits (Cont'd)

Line Transceivers—Single Ended (Cont'd)

No. Per Device	Receiver Input Threshold, V	Output	Supply Voltage, V	Comments	Device	Source	Line
4	0.8 to 2.0	TTL	5	Three-State, Hysteresis		(Cont'd)	
					SN74ALS242B	TI	
					SN74ALS243A	TI	
					SN74LS242	TI	
					SN74LS243	TI	
				Three-State (Inverting)	MC6880	Motorola	5
					MC8T26A	Motorola	
					DS8T26A	National	
					DS8T26AM	† National	
					N8T126	Signetics	
					N8T127	Signetics	10
					N8T26A	Signetics	
					S8T126	† Signetics	
					S8T127	† Signetics	
				Three-State, Inverting	SN54AS242	◊† TI	
					SN74AS242	TI	15
					SN74AS243	TI	
				Three-State (Non-Inverting)	MC6889	Motorola	
					MC8T28	Motorola	
					DS8T28	National	
					DS8T28M	† National	20
					N8T129	Signetics	
					N8T28	Signetics	
					S8T128	† Signetics	
					S8T129	† Signetics	
	0.8 to 2.4	±9	5	Optically Isolated, Dual RS–232 Driver/Receiver Chip	MAX251C	Maxim	25
					MAX251E	Maxim	
					MAX251M	† Maxim	
					MAX252C	Maxim	
					MAX252E	Maxim	
				Optically Isolated, Dual RS–232 Driver/Receiver with DC-to-DC Converter	MAX250C	Maxim	30
					MAX250E	Maxim	
					MAX250M	† Maxim	
				Two Independent RS–232 Drivers and 2 Receivers	MAX232C	Maxim	
					MAX232E	Maxim	
					MAX232M	† Maxim	35
					MAX233C	Maxim	
					MAX233E	Maxim	
				2 Independent RS–232 Drivers and 2 TS Receivers with Shutdown	MAX242C	Maxim	
					MAX242E	Maxim	
					MAX242M	† Maxim	40
					MAX243C	Maxim	
					MAX243E	Maxim	
					MAX243M	† Maxim	
			5, 12	Independent RS–232 Drivers and Receivers	MAX231C	Maxim	
					MAX231E	Maxim	45
					MAX231M	† Maxim	
	0.8 to2	TTL/CMOS	7	Bus Transceiver, Three-State	MC3446	◊ TI	
	0.97 to 2.65	TTL	5	Open Collector, 1 V Hysteresis	DS7838	† National	
	1.05 to 2.50	TTL	5	Inverting 7833/8833	DS7835	† National	
					DS8835	National	50
				Inverting 7839/8839	DS7834	† National	
					DS8834	National	
					N8T34	Signetics	
				Three-State, NOR Gate, Transmit Disable, Hysteresis	DS7839	† National	
					DS8839	National	55
				Three-State, T/R Disables, Hysteresis	DS7833	† National	
					DS8833	National	
	1.5 to 2.4	TTL	5	Open Collector, 100 mA Output, Parity Generator/Checker Q-bus Compatible 2907	AM2907M	† AMD	
					AM2908M	† AMD	
	1.5 to 3.2	TTL	5	Open Collector, 100 mA Output	SN55138	◊† TI	60
	1.6 to 1.8	TTL	5	Open Collector, Hysteresis	AM26S12C	AMD	
					AM26S12M	† AMD	
	1.6 to 2.3	TTL	5	Open Collector, 100 MA Output, Parity Generator/Checker Q-bus Compatible 2907	AM2907C	AMD	
					AM2908C	AMD	
	1.6 to 2.4	TTL	5	Open Collector, 100 mA Output	AM26S10M	† AMD	65
					AM26S11M	† AMD	
					μA9640M	† National	

(Continued)

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Receiver Input Threshold, V	Output	Supply Voltage, V	Comments	Device	Source	Line
Line Transceivers—Single Ended							**(Cont'd)**
4	1.6 to 2.4	TTL	5	Open Collector, 100 mA Output		(Cont'd)	
					DS26S10M	† National	
					DS26S11M	† National	
	1.75 to 2.25	TTL	5	Open Collector, 100 mA Output	AM26S10C	AMD	
					AM26S11C	AMD	
					MC26S10	Motorola	5
					μA9640C	National	
					DS26S10C	National	
					DS26S11C	National	
					AM26S10C	TI	
					AM26S11C	TI	10
	1.8 to 2.9	TTL	5	Open Collector, 100 mA Output	SN75138	TI	
6	0.8	TTL	±15	Three Drivers/Three Receivers	SN75C1406	TI	
	0.8 to 1.4	TTL/CMOS	5	Universal Level Translator/RS-232 Line Receiver	LTC1045C	LinearTech	
					LTC1045M	† LinearTech	
	0.8 to 2	TTL	5		MC145407	Motorola	15
				RS-232C, 3 Drivers/3 Receivers	NJU6402B	◊ NJR	
				Three RS-232 drivers and three RS-232 receivers.	μPD4713	NEC	
				Triple Line Driver/Receiver	MB468	Fujitsu	
7	0.8 to 2		5	Four RS-232 Drivers, Three RS-232 Receivers	AD236	AD	
		TTL	5	4 RS-232 Drivers/3 Receivers	SP236	Sipex-HSD	20
	0.8 to 2.4	±9	5	Four Independent RS-232 Drivers and 3 Three-State Receivers with Shutdown	MAX237C	Maxim	
					MAX237E	Maxim	
					MAX237M	† Maxim	
8				Four Drivers/Four Receivers	SN75C1154	TI	
		TTL	5	IEEE 896.1	SN75ALS056	TI	25
	—	TTL/CMOS	5	General Purpose Interface Bus	DS75160A	National	
					DS75161A	National	
					DS75162A	National	
	TTL	TTL	5	Bidirectional Bus Transceiver, Three-State	DP8304	National	
	0.5 to 2.0	TTL	5	Bidirectional Bus Transceiver, Open Collector	54LS641	† Signetics	30
					54LS642	† Signetics	
					74LS641	Signetics	
					74LS641-1	Signetics	
					74LS642	Signetics	
					74LS642-1	Signetics	35
					SN54LS641	◊† TI	
					SN54LS642	◊† TI	
					SN54LS644	◊† TI	
				Bidirectional Bus Transceiver, Three-State	DP7304B	† National	
					DP7308	† National	40
					DP8303	National	
					DP8304B	National	
					DP8307	National	
					DP8308	National	
					SN54ALS245A	† TI	45
					SN54ALS645A	† TI	
					SN54LS640	◊† TI	
					SN54LS645	◊† TI	
	0.6 to 2.0	TTL	5	Bidirectional Bus Transceiver, Open Collector	SN74LS641	TI	
					SN74LS641-1	TI	50
					SN74LS642	TI	
					SN74LS642-1	TI	
					SN74LS644	TI	
					SN74LS644-1	TI	
				Bidirectional Bus Transceiver, Three-State	74LS640	Signetics	55
					74LS640-1	Signetics	
					74LS645	Signetics	
					SN74LS245	TI	
					SN74LS623	TI	
					SN74LS640	TI	60
					SN74LS640-1	TI	
					SN74LS645	TI	
					SN74LS645-1	TI	
	0.7 to 2.0	TTL	5	Bidirectional Bus Transceiver, Open Collector	SN54LS641	† Motorola	
					SN54LS642	† Motorola	65
				Bidirectional Bus Transceiver, Three-State	SN54LS245	† Motorola	
					SN54LS640	† Motorola	

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INTERFACE—Line Circuits (Cont'd)

Line Transceivers—Single Ended (Cont'd)

No. Per Device	Receiver Input Threshold, V	Output	Supply Voltage, V	Comments	Device	Source
8	0.7 to 2.0	TTL	5	Bidirectional Bus Transceiver, Three-State		(Cont'd)
					SN54LS645	† Motorola
					54LS245	† National
	0.8 to 2		5	Five RS-232 Drivers, Three RS-232 Receivers	AD237	AD
				Four RS-232 Drivers, Four RS-232 Receivers	AD238	AD
				Three RS-232 Drivers, Five RS-232 Receivers	AD239	AD
		TS	5	3 Driver/5 Receiver, RS-232	LT1133C	LinearTech
					LT1133I	LinearTech
					LT1133M	† LinearTech
					LT1137C	LinearTech
					LT1137I	LinearTech
					LT1137M	† LinearTech
				3 Drivers/5 Receivers, RS-232	LT1141C	LinearTech
					LT1141I	LinearTech
					LT1141M	† LinearTech
				4 Driver/4 Receiver, RS-232	LT1134C	LinearTech
					LT1134I	LinearTech
					LT1134M	† LinearTech
				4 Drivers/4 Receivers, RS-232	LT1139C	LinearTech
					LT1139I	LinearTech
					LT1139M	† LinearTech
				5 Driver/3 Receiver, RS-232	LT1132C	LinearTech
					LT1132I	LinearTech
					LT1132M	† LinearTech
					LT1135C	LinearTech
					LT1135I	LinearTech
					LT1135M	† LinearTech
				5 Drivers/3 Receivers, RS-232	LT1138C	LinearTech
					LT1138I	LinearTech
					LT1138M	† LinearTech
					LT1140C	LinearTech
					LT1140I	LinearTech
					LT1140M	† LinearTech
		TTL	5	Five RS-232 drivers and three RS-232 receivers.	μPD4715	NEC
				Four RS-232 drivers and four RS-232 receivers.	μPD4712	NEC
				RS-232C, 3 Drivers, 5 Receivers	NJU6401B	◊ NJR
				RS-422A, Three-State	M66806	Mitsubishi
				Three RS-232 drivers and five RS-232 receivers.	μPD4714	NEC
				3 RS-232 Drivers/5 Receivers	SP239	Sipex-HSD
				4 RS-232 Drivers/4 Receivers	SP238	Sipex-HSD
				5 RS-232 Drivers/3 Receivers	SP237	Sipex-HSD
			6	Futurebus Trapezoidal Transceiver	DS3896	National
				Trapezoidal Bus Transceiver	DS3862	National
	0.8 to 2.0	TTL	5	Bidirectional Bus Transceiver, Open Collector	HD74LS641	Hitachi
					HD74LS642	Hitachi
					SN74LS641	Motorola
					SN74LS642	Motorola
				Bidirectional Bus Transceiver, Three-State	HD74LS243	Hitachi
					HD74LS645	Hitachi
					MC54F245	† Motorola
					MC74F245	Motorola
					SN74LS245	Motorola
					SN74LS640	Motorola
					SN74LS645	Motorola
					DM74LS245	National
					DS3667	† National
					74LS245	◊ National
					N8T125	Signetics
					S8T125	† Signetics
					74LS245	Signetics
					SN74ALS245A	TI
					SN74ALS645A	TI
					SN74AS245	TI
					SN74LS646	TI
					SN74LS648	TI
				General Purpose Interface Bus	MC3447	Motorola
					SN75ALS163	TI
					SN75160B	TI
					SN75161B	TI
					SN75162B	TI

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INTERFACE—Line Circuits (Cont'd)

No. Per Device	Receiver Input Threshold, V	Output	Supply Voltage, V	Comments	Device	Source	Line
Line Transceivers—Single Ended							**(Cont'd)**
8	0.8 to 2.0	TTL	5	General Purpose Interface Bus			(Cont'd)
					SN75163B	TI	
					SN75164B	TI	
			7	General Purpose Interface Bus.	SN75ALS160	TI	
					SN75ALS161	TI	
					SN75ALS162	TI	5
					SN75ALS164	TI	
					SN75ALS165	TI	
	0.8 to 2.4	±9	5	Four Independent Drivers and 4 Receivers	MAX238C	Maxim	
					MAX238E	Maxim	
				3 RS-232 drivers, 5 RS-232 receivers	MAX239C	Maxim	10
					MAX239M	† Maxim	
9	0.8 to 2		5	Four RS-232 Drivers, Five RS-232 Receivers	**AD241**	**AD**	**(3301)**
		TS	5	4 Driver/5 Receiver, RS-232	LT1136C	LinearTech	
					LT1136I	LinearTech	
					LT1136M	† LinearTech	15
				5 Driver/4 Receiver, RS-232 w/Shutdown	LT1131C	LinearTech	
					LT1131I	LinearTech	
					LT1131M	† LinearTech	
		TTL	5	4 RS-232 Drivers/5 Receivers	SP241	Sipex-HSD	
	0.8 to 2.4	±9	5	4 Independent RS-232 Drivers and 5 TS Receivers with Shutdown	MAX241C	Maxim	20
					MAX241E	Maxim	
10	0.8 to 2	TTL	5	5 RS-232 Drivers/5 Receivers	SP230	Sipex-HSD	
	0.8 to 2		5	Five RS-232 Drviers, Five RS-232 Receivers	AD235	AD	
		TS	5	5 Driver/5 Receiver, RS-232	LT1130C	LinearTech	
					LT1130I	LinearTech	25
					LT1130M	† LinearTech	
		TTL	5	5 RS-232 Drivers/5 Receivers	SP235	Sipex-HSD	
	0.8 to 2.4	±9	5	Five Independent RS-232 Drivers and 5 Three-State Receivers with Shutdown	MAX236C	Maxim	
					MAX236E	Maxim	
					MAX236M	† Maxim	30
				5 Independent RS-232 Drivers and 5 TS Receivers with Shutdown	MAX240C	Maxim	
					MAX240E	Maxim	
16	0.8 to 2.4	±9	5	6 RS-232 Drivers and 10 Receivers	MAX249C	Maxim	
					MAX249E	Maxim	
				8 RS-232 Drivers and 8 Receivers	MAX248C	Maxim	35
					MAX248E	Maxim	
17	0.8 to 2.4	±9	5	8 Independent RS-232 Drivers and 9 TS Receivers with Shutdown	MAX247C	Maxim	
					MAX247E	Maxim	
18	0.8 to 2.4	±9	5	8 Independent RS-232 Drivers and 10 RS-232 Receivers	MAX244C	Maxim	
					MAX244E	Maxim	40
					MAX245C	Maxim	
					MAX245E	Maxim	
					MAX246C	Maxim	
					MAX246E	Maxim	
Line Transceivers—Differential							
1		TTL	5	Designed to meet proposed EIA Standard RS485	DS3695	National	45
					DS3696	National	
					DS3697	National	
					DS3698	National	
				EIA Standard RS422-A, RS-485	SN65176B	TI	
				IEEE 802.3, 1 Base 5	SN75061	TI	50
					SN75062	TI	
	±0.2	TTL	5	Independent Driver and Receiver, RS-422A/485, CCITT V.11, X.27	SN75179B	TI	
	±0.5/±1 V	TTL	5	Independent Three-State 55113 Driver and 55115 Receiver	SN55116	† TI	
					SN75116	TI	
				Same as 55116 with Three-State Receiver	SN75118	TI	55
				Same as 55117 with Three-State Receiver	SN75119	TI	
				Three-State 8 Pin, 40 mA	SN75117	TI	
	0.8 to 2	TTL	5	Bidirectional Bus Repeater, Three-State, RS-485/422A	μA96177	National	
					μA96178	National	
				Bidirectional Bus Transceiver, Three State	μA96176	National	60
					SN75ALS176	TI	
					SN75176B	TI	

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INTERFACE—Line Circuits (Cont'd)

Line Transceivers—Differential (Cont'd)

No. Per Device	Receiver Input Threshold, V	Output	Supply Voltage, V	Comments	Device	Source	Line
						(Cont'd)	
1	0.8 to 2	TTL	5	Bus Repeater	SN75177B	TI	
					SN75178B	TI	
				Designed to meet proposed EIA Standards RS485 and RS422A	TL3695	TI	
2	0.20	TTL/ECL	5	Contains two differential ECL-to-TTL converters and two TTL-to-differential ECL converters	41LK	AT&T	
					41LL	AT&T	5
					41LM	AT&T	
	0.8 to 2	±7	5	RS–485/422	DS75176A	National	
					DS75176AT	National	
		BiCMOS	5	Two RS–232 drivers and receivers; two RS–422 drivers and receivers.	SP301	Sipex-HSD	
		TTL	5	Bus Transceiver	DS96176	National	10
					DS96177	National	
				Designed to meet EIA Standards RS422A and RS485	SN75AS030	TI	
					SN75AS031	TI	
				RS–422/485 driver/receiver with separate enables	SN75ALS180	TI	
			7	RS–485/422	DS16F95	† National	15
					DS36F95	National	
4	0.8 to 2	BiCMOS	5	Four RS–232 drivers and receivers and two RS–422 drivers and receivers.	SP302	Sipex-HSD	
		TTL	5		41MK	AT&T	
					41ML	AT&T	
					41MM	AT&T	20

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INTERFACE

INTERFACE—Memory Drivers

Function	Device	Source	Line
Asynchronous SCSI Interface (ASI)	DP5380	National	
Bank Switch	DS1222	◊ Dallas	
Bubble Memory Predriver	SI7250	Siliconix	
Buffer Manager with ECC	9802A	Stac	
Burst Mode DRAM Controller	74F1766	Signetics	5
Cache Memory and Controller (16 K memory)	**C16K32**	**Inova (3483)**	
Data Compression Coprocessor	9704	Stac	
Data Compression Coprocessor (for 1/4″ streaming tape cartridge)	9703	Stac	
Data Separator (for disk drives)	DP8465	National	
Data Synchronizer (for disk drives)	DP8455	National	10
Data Synchronizer (1,7 RLL ENDEC)	SSI32D539	SiliconSys	
Data Synchronizer/2,7 Endec	DP8469	National	
Data Synchronizer (2,7 RLL ENDEC)	SSI32D5381	SiliconSys	
Direct Memory Access Controller (8 MHz)	HD63450-8	Hitachi	
Direct Memory Access Controller (10 MHz)	HD63450-10	Hitachi	15
Direct Memory Access Controller (12.5 MHz)	HD63450-12	Hitachi	
Disk Data Separator (floppy/hard disk drives)	AM95C82	AMD	
Disk Drive Data Qualifier	**AD891**	**AD (3261)**	
Disk Drive Data Recovery Element	**AD890**	**AD (3261)**	
Disk Drive, Disk Data Controller	DP8466	National	20
Disk Drive, Disk Data Separator	SSI32D531	SiliconSys	
	SSI34D441	**SiliconSys (3646)**	
Disk Drive, Disk Pulse Detector	DP8464	National	
Disk Drive, Encoder/Decoder, 2, 7	DP8462	National	
	DP8463	National	25
Disk Drive, Flexible Disk Support Circuit (port expansion for 8048 microprocessor)	**SSI34B580**	**◊ SiliconSys (3646)**	
Disk Drive, Flexible Disk, 2-Channel	**SSI34P570**	**◊ SiliconSys (3646)**	
Disk Drive, Flexible Disk, 4-Channel	**SSI34R575**	**SiliconSys (3646)**	
Disk Drive, Hard Disk Controller	AM9580	AMD	
Disk Drive, MFM Data Separator	DP8460	National	30
Disk Drive, Preamplifier (4, 6 and 8 head)	XR511	Exar	
Disk Drive Read Channel (enhanced)	**VM443**	**VTC (3714)**	
Disk Drive Read Channel (40 mbit/s data transfer rate)	AD897	AD	

Function	Device	Source	Line
Disk Drive Servo Preamplifier (ferrite head)	**VM201**	**VTC (3714)**	
Disk Drive, Winchester Servo Preamp	CS101A	Cherry Semi	35
Disk Drive, Winchester Thin Film Head Servo Preamp	CS116	Cherry Semi	
Disk Head Amplifier Driver/Receiver	MB4316	Fujitsu	
Disk Head Peak Detector for Head Position Control	MB4319	Fujitsu	
Disk Memory Read/Write	μPC751	◊ NEC	
Disk Pulse Detector and Embedded Servo	DP8468B	National	40
DMA Controller/Buffer Manager with ECC	9820a	Stac	
DRAM Controller with Refresh Timing, 64K	TMS4500A	TI	
DRAM Controller, 1 MB and 4 MB Devices	M66200A	Mitsubishi	
Driver, 11-Bit DRAM	AM2976C	AMD	
	AM2976M	† AMD	45
Dynamic Memory Controller (for 256K DRAMs)	MC74F2968A	Motorola	
Dynamic Memory Controller (for 256K DRAMs)	AM2968A	AMD	
Dynamic Memory Controller, 1 Megabit	AM29368	AMD	
Dynamic RAM Controller	TMS34061	◊ TI	
Dynamic RAM Controller/Driver	673104A	AMD	50
Dynamic RAM Controller/Driver (for 256K RAMs)	DP8419X	National	
Dynamic RAM Controller/Driver (microCMOS programmable for up to 256K DRAMs)	DP8420A	National	
	DP8421A	National	
	DP8422A	National	
Dynamic RAM Controller/Driver, Multimode	SN74S409	AMD	55
	SN74S409-2	AMD	
Dynamic RAM Controller Interface Circuit (for the iAPX 286 microprocessor)	DP84532	National	
Dynamic RAM Controller Interface Circuit (for the NS32332 microprocessor)	DP84512	National	
Dynamic RAM Controller Interface Circuit (for the 68020 microprocessor)	DP84522	National	
Dynamic RAM Controller (up to 1 Mbit)	54F968	† National	60
	74F968	National	
Dynamic RAM Controller, 1M RAMs	MB1430	Fujitsu	
	MB1431	Fujitsu	
Dynamic RAM Controller, 256K	SN74ACT4503	TI	
	THCT4502B	TI	65
Encoder/Decoder, 2,7 RLL and VFO (hard disk drive)	HD153011	Hitachi	
Enhanced Asynchronous SCSI Interface (EASI)	DP8490	National	
Floppy Disk Drive Read Amplifier System	NJM3201	NJR	
	NJM3470	NJR	
	NJM3470A	NJR	70

Function	Device	Source	Line
Floppy Disk Read/Write Amplifier	MB4120	Fujitsu	
Floppy Disk VFO	MB4107A	Fujitsu	
	MB4108A	Fujitsu	
Floppy Disk Write Controller/Head Driver	MC3469	Motorola	
	MC3471	◊ Motorola	75
Hard Disk Controller (PC XT/AT Combo)	**SSI32C260**	**SiliconSys (3646)**	
	SSI32C261	**SiliconSys (3646)**	
	SSI32C4650	**SiliconSys (3646)**	
	SSI32C9000	**SiliconSys (3646)**	
Hard Disk Controller (up to 1.5 Mbit/s)	SSI32B45I	SiliconSys	80
Hard Disk Data Separator /Data Synchronizer (1, 7 RLL ENDEC)	**SSI32D5362A**	**SiliconSys (3645)**	
	SSI32D5372	SiliconSys	
Hard Disk Data Separator /Data Synchronizer (1,7 RLL ENDEC)	SSI32D5371	SiliconSys	
	SSI32D5373	SiliconSys	
Hard Disk Data Separator /Data Synchronizer (2,7 RLL ENDEC)	SSI32D532I	SiliconSys	85
Hard Disk Drive Bus Interface for PC	M66802	Mitsubishi	
Hard Disk MFM Data Separator	**SSI32D534A**	**SiliconSys (3645)**	
Hard Disk Servo Positioning	**SSI32H4631**	**SiliconSys (3646)**	
Hard Disk 2,7 RLL Data Separator with Write Pre-Compensation	**SSI32D5351**	**SiliconSys (3645)**	
Hard Dist 2,7 RLL Data Separator, 7.5 to 15 Mb/s	SSI32D5322	SiliconSys	90
Head Driver, 12-Bit Pre-Head Driver	M66320	Mitsubishi	
Magnetic Disk Encoder/Decoder (2–7 code)	HD153009	Hitachi	
	HD153013	Hitachi	
Magnetic Disk Head Amplifier (4-channel)	MB4114A	Fujitsu	
Magnetic Disk Head Amplifier, 4-Channel (110v/v)	MB4117-4	Fujitsu	95
	MB4118-4	Fujitsu	
Magnetic Disk Head Amplifier, 4-Channel (35v/v)	MB4111	Fujitsu	
	MB4113	Fujitsu	
Magnetic Disk Head Amplifier, 4-Channel (9v/v)	MB4112	Fujitsu	
Magnetic Disk Read/Write Amplifier for HDD (8-channel)	MB4115	Fujitsu	100
	MB4116	Fujitsu	
	MB4125	Fujitsu	
	MB4126	Fujitsu	
Memory Driver	**SG55325**	**◊† SiliconG (3643)**	
Memory Driver, FIFO RAM Controller	N8X60	Signetics	105
	S8X60	† Signetics	
Memory Driver, Dual 600 mA Sink/Source	DS55325	† National	
	DS75325	National	
	SG75325	◊ SiliconG	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Memory Drivers (Cont'd)

Function	Device	Source	Line
Memory Driver, Quad, 600 mA Sink			
	SG55326	**† SiliconG (3643)**	
	SG55327	**† SiliconG (3643)**	
	SG75326	◊ SiliconG	
	SG75327	◊ SiliconG	
Memory Timing Controller (with EDAC)			
	AM2969	AMD	5
MOS Clock Driver			
	MH0007	† National	
	MH0007C	National	
MOS Dynamic Memory Controller			
	AM2968	AMD	
	2964B	Signetics	
MOS Dynamic Memory Controller, Microprocessor to 64K RAMs	MC3480	Motorola	10
MOS Dynamic Memory, 16 K Address Multiplexer and Refresh Counter			
	MC3242A	Motorola	
MOS Dynamic RAM Controller			
	MB1422A	Fujitsu	
	8202A	Intel	
	8203	Intel	
	8205	Intel	15
MOS Dynamic RAM Controller/Driver			
	DP8408	National	
	DP8417	National	
	DP8418	National	
MOS Dynamic RAM Controller/Driver, Multimode			
	DP8408	National	
	DP8409	National	20
MOS Dynamic RAM Controller/Driver, 16-Bit			
	DP8428	National	
	NS32828	National	
MOS Dynamic RAM Controller/Driver, 32-Bit			
	DP8429	National	
	NS32829	National	
MOS Dynamic RAM Controller Interface Circuit			
	DP84322	National	25
MOS Dynamic RAM Controller, Two Port			
	74F764	Signetics	
MOS Dynamic RAM Programmable Refresh Timer			
	DP84300	National	
Paged Memory Management Unit			
	MC68851	Motorola	
Preamplifier (for hard disk servo positioning motor)			
	SSI32H6110	**SiliconSys (3646)**	
Programmable Active Filter (for hard disk)			
	SSI32F8011	SiliconSys	30
	SSI32F8020	**SiliconSys (3646)**	
Pulse Detector (MFM and RLL encoded signals)			
	SSI32P549	**SiliconSys (3645)**	
Pulse Detector (with programmable filter for HardDisk)			
	SSI32P3000	SiliconSys	
QIC Tape Formatter (MFM tape formats)			
	9820	Stac	
Read Data Processor (detects and qualifies all MFM and RLL encoded read signals)			
	CS541	Cherry Semi	35
Read Data Processor (detects and qualifies MFM and RLL signals in disk drives)			
	SG541	**SiliconG (3643)**	
Read Pulse Detector, Hard Disk Drive			
	HA166005	Hitachi	
	HA166006	Hitachi	
Read/Write Amplifier, Hard Disk Drive			
	HA166008	Hitachi	

Function	Device	Source	Line
Read/Write Amplifier, 4-Channel (for Winchester drives, includes damping resistor)			
	SG510AR4	**◊ SiliconG (3643)**	40
	SG510A4	**◊ SiliconG (3643)**	
Read/Write Bus Driver/Receiver			
	MB4313	Fujitsu	
Read/Write Device, 10-Channel (for ferrite/MIG recording heads)			
	SSI32R5161R	**SiliconSys (3645)**	
Read/Write Device, 14-Channel Thin Film			
	SSI32R5121	**SiliconSys (3645)**	
Read/Write Device, 14-Channel Thin Film (with 180 ohm damping resistor)			
	SSI32R5121R	**SiliconSys (3645)**	45
Read/Write Device (2, 4, or 6 channel)			
	CS510A	Cherry Semi	
Read/Write Device (2, 4, or 6 channel, 750 ohm damping resistor)			
	CS510AR	Cherry Semi	
Refresh Timer, Input Selectable			
	SN74ALS6300	TI	
RISC Memory Controller/Driver			
	VL86C110	**VLSI Tech (3701)**	
Servo Motor Driver (for hard disk)			
	SSI32H6240	**SiliconSys (3646)**	50
Tape Controller for QIC–1350 Tape Drives (2-chipset)			
	QICSET1350	Stac	
Tape Controller for QIC–525 Tape drives (2-chipset)			
	QICSET525	Stac	
Thin Film Read/Write Device (10-Channel)			
	SSI32R2010R	SiliconSys	
Thin Film Read/Write Device (2,4-Channel)			
	SSI32R4611	SiliconSys	
Thin Film Read/Write Device (6,7,8-Channel)			
	SSI32R502R	SiliconSys	55
Time Base Generator (for hard disk data recovery)			
	SSI32D4661	SiliconSys	
Time Base Generator (for hard disk recovery)			
	SSI32D4662	SiliconSys	
Time Base Generator For Use in Constant Density Recording	**SSI32D4660**	**SiliconSys (3646)**	
VCM Servo Controller, Hard Disk Drive			
	HA166007	Hitachi	
Video RAM Controller/Driver (up to 1 Mbit)			
	DP8521	National	60
	DP8521A	National	
Video RAM Controller/Driver (up to 256 kbits)			
	DP8520A	National	
Video RAM Controller/Driver (up to 256K bits)			
	DP8520	National	
Video RAM Controller/Driver (up to 4 Mbits)			
	DP8522	National	
	DP8522A	National	65
Winchester Disk Driver Differential Amplifier			
	SSI32H101	**SiliconSys (3646)**	
Winchester Disk Read/Write Preamplifier (2 channels)			
	DP117-2	National	
	DP117-2R	National	
Winchester Disk Read/Write Preamplifier (4 channels)			
	DP117-4	National	
	DP117-4R	National	70
Winchester Disk Read/Write Preamplifier (6 channels)			
	DP117-6	National	
	DP117-6R	National	

Function	Device	Source	Line
Winchester Disk Servo Preamplifier (provides termination, gain and impedance buffering)			
	DP2580	National	
Winchester Ferrite Head Read/Write Amplifier			
	SSI32H566R	**SiliconSys (3646)**	
Winchester Read/Write Amplifier (for thin-film heads)			
	SSI32R524	**SiliconSys (3645)**	75
Winchester Read/Write Circuit (6 channels)			
	DP5016	National	
Winchester Read/Write Circuit (6 channels, internal damping resistance)			
	DP5016R	National	
Winchester Read/Write Circuit (8 channels)			
	DP5018	National	
Winchester Read/Write Circuit (8 channels, internal damping resistance)			
	DP5018R	National	
Winchester Servo Preamp (for ferrite heads)			
	CS201A	Cherry Semi	80
Winchester Thin Film Servo Head Read/Write Amplifier			
	SSI32H523R	**SiliconSys (3646)**	
Dual AND TTL to MOS Driver (NMOS memory interface)			
	μA9643C	National	
Dual Memory Driver, 400 mA Sink (for magnetic memories)	MC4043	Motorola	
Dual MOS Clock Driver			
	DS0025	† National	
	DS0025C	National	85
	DS0026	† National	
	DS0026C	National	
	DS0056	† National	
	DS0056C	National	
Dual TTL to MOS Driver (MOS memory interface)			
	DS75361	National	90
	DS75362	National	
Quad MOS Clock Driver			
	DS3245	National	
Quad MOS Memory I/O Register			
	DS3647	National	
Quad Multiplexer/Driver, for MOS Systems			
	DS1648	† National	
	DS1678	† National	95
	DS3648	National	
	DS3678	National	
Quad NAND TTL to MOS Driver (MOS memory interface-clock driver)	DS75365	National	
	3207A	Signetics	
	3207A-1	Signetics	100
Quad NMOS Memory Driver			
	DS1674	† National	
	DS3674	National	
Quad Predriver, Open Collector, 50 mA Sink (for magnetic memories)			
	MC4042	Motorola	
Quad TTL to NMOS Memory Driver (for 2105, 2107, etc.)	μA9645C	National	
Hex Inverter/MOS Driver, Disable Causes Logic 1 State			
	DS16149	† National	105
	DS16179	† National	
	DS36149	National	
	DS36179	National	
Hex Inverter/MOS Driver, Three-State			
	DS1649	† National	
	DS1679	† National	110
	DS3649	National	
	DS3679	National	
Hex Latch/Driver, for MOS Memories			
	DS1675	† National	
	DS3645	National	
	DS3675	National	115

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INTERFACE—Memory Drivers (Cont'd)

Function	Device	Source	Line
Octal Dynamic Memory Driver, Three-State			
	AM2965C	AMD	
	AM2965M	† AMD	
	AM2966C	◊ AMD	
	AM2966M	◊† AMD	
Octal Dynamic RAM Driver, Three-State			
	SN74S734	AMD	5
Octal MOS Driver, Three-State			
	DP84240	National	
	DP84244	National	
	DS1628	† National	
	DS3628	National	
10-Bit Memory Driver			
	SN54BCT2827A	† TI	10
	SN54BCT2828A	† TI	

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INTERFACE—Peripheral Drivers

Function	Device	Source	Line
Stepper Motor Driver			
	UC1517	† Unitrode	
	UC1717	Unitrode	
Stepper Motor Driver (2 A)			
	TCA1560	Siemens	
	TCA1561	Siemens	
Stepper Motor Driver, 10 to 45 V			
	UC3717	Unitrode	5
Stepper Motor Translator/Driver			
	UCN4204B	Allegro Micro	
	UCN5804B	**Allegro Micro (3206, 3208)**	
Actuator/Driver			
	ULN2005A	TI	
Addressable Peripheral Driver (latched, 8-output driver)			
	NE590	Signetics	
	NE591	Signetics	10
BiMOS Latched Driver			
	UCN5800A	**Allegro Micro (3206)**	
	UCN5801A	**Allegro Micro (3206)**	
	UCN5810A	**Allegro Micro (3206, 3209)**	
	UCN5812A	**Allegro Micro (3206, 3209)**	
	UCN5818A	**Allegro Micro (3206, 3209)**	15
	UCS4810H	† Allegro Micro	
Buffer Driver, Septuple (with open collector)			
	M751271	Mitsubishi	
Burst Servo Controller (disk and tape drives)			
	CS4002	Cherry Semi	
CCD Driver	TSC430	TeledyneS	
CCD-MOSFET Driver, Complementary Outputs (10 MHz)			
	TSC430C	TeledyneS	20
	TSC430M	† TeledyneS	
Clock Generator/Oscillator, to 10 MHz, 8 and 1 Divider, for Microprocessors			
	ICM7209	† Harris	
Clock Generator to 175 MHz (For use with Brooktree RAMDACs), Divide by 2,3 4,5, or 8.			
	BT438	Brooktree	
Clock Generator, 150 MHz, for RAMDACsdivide by 3,4,5, or 8 (for use with RAMDACs)			
	BT439	Brooktree	
Constant-Voltage-Drive Stepper Motor Driver (120V/1.3A)	**MBH90103**	**Fujitsu (3411)**	25
Constant-Voltage-Drive Stepper Motor Driver (120V/2.5A)	**MBH90101**	**Fujitsu (3411)**	
	MBH90102	**Fujitsu (3411)**	
Constant-Voltage-Drive Stepper Motor Driver (60V/2.4A)	**MBH90105**	**Fujitsu (3411)**	
Constant-Voltage-Drive Stepper Motor Driver (60V/4.2A)	**MBH90104**	**Fujitsu (3411)**	
Controller, Dual D/A Microstepping Controller			
	PBM3960	Ericsson	30
Current Driver (drives loads up to 400 mA/28V)			
	DH0006	National	
Current Driver (drives up to 400 mA/28V)			
	DH0006C	National	
Darlington Switch, Quad (to 90 V, 1.5 A)			
	ULN7068B	Allegro Micro	
Data Acquisition Controller (intelligent) for A/D Converter	CY600	Cybernetic	
Deflection Circuit (CRT display use)			
	STK78603	Sanyo	35
	STK78617	Sanyo	
Driver, Full-Bridge, DMOS (motor)			
	L6201	SGS-Thomson	
	L6202	SGS-Thomson	
	L6203	SGS-Thomson	

Function	Device	Source	Line
Driver, Full-Bridge (2 A per channel)			
	CS298	Cherry Semi	40
Driver, H-Bridge, Dual			
	L293C	SGS-Thomson	
Driver, Half-Bridge, N- and P-Channel Enhancement Mode	SI9950	Siliconix	
Driver, High Side Driver Switch (drives loads from positive side of power supply)			
	MC3399T	Motorola	
Driver, High Speed, 1.5 A			
	UC1705	† Unitrode	
	UC3705	Unitrode	45
Driver, High-Speed Dual Pin Driver (1.5 GHz)			
	16G061	GigaBit	
Driver, Injector	L9335	SGS-Thomson	
	L9336	SGS-Thomson	
Driver, Laser Diode			
	IR3C01	Sharp	
	IR3C02A/N	Sharp	50
	IR3C05	Sharp	
Driver, Low-Noise Switchmode (for three-phase brushless dc motors)			
	UC3623	Unitrode	
Driver, MOSFET (dual, inverting)			
	IXLD426	IXYS	
Driver, MOSFET (dual, non-inverting)			
	IXLD427	IXYS	
Driver, MOSFET (dual, one inverting/one non-inverting)			
	IXLD428	IXYS	55
Driver, MOSFET (opto-isolated, 1.0μA short-circuit current)	DIG12-08-010	Dionics	
Driver, MOSFET (opto-isolated, 10.0μA short-circuit current)	DIG12-06-100	Dionics	
Driver, MOSFET (opto-isolated, 15μA short-circuit current)	DIG11-06-150	Dionics	
Driver, MOSFET (opto-isolated, 2.5μA short-circuit current)	DIG12-06-025	Dionics	
Driver, MOSFET (opto-isolated, 25.0μA short-circuit current(	DIG12-06-250	Dionics	
	DIH124	Dionics	60
Driver, MOSFET (opto-isolated, 4.5μA short-circuit current)	DIG12-08-045	Dionics	
Driver, MOSFET (opto-isolated, 5μA short-circuit current)	DIG11-08-050	Dionics	
Driver, MOSFET (single inverting)			
	IXLD429	IXYS	
Driver, Open Collector/Emitter, for 150 mA (load connected to negative supply)			
	PBD3520	Ericsson	65
Driver, Power Bridge			
	MD930	AnalogSys	
Driver, Protected High-Side (1.5A source)			
	UDN2901Z	Allegro Micro	
Driver, Push Pull with Diodes			
	L293D	SGS-Thomson	
Driver, Push-Pull Quad (600 mA per channel)			
	CS293D	Cherry Semi	
Driver/Receiver for Disk Head Amplifier			
	MB4316	Fujitsu	70
Driver, SCR (opto-isolated)			
	DIG11-04-200F	Dionics	
Driver, Solenoid (2.4 A)			
	MC3484S2	Motorola	
Driver, Solenoid (4 A)			
	MC3484S4	Motorola	
Driver, Stepper Motor			
	L6217A	SGS-Thomson	
	PBL3717A	SGS-Thomson	75
Driver/Switcher (for dc-to-dc converters)			
	2473	TeledyneS	

Function	Device	Source	Line
Driver, Switching Transistor			
	UC2950	Unitrode	
Driver, to 80 V, 0.2 A			
	DI445A	Dionics	
Driver, Universal High-Current Sink Driver			
	PBD3545	Ericsson	
Driver, Universal High-Current Source Driver			
	PBD3548	Ericsson	80
Driver, Single, 125 mA, for Relays, Motors, Lamps			
	PBD3510	Ericsson	
	PBD3511	Ericsson	
Driver, Dual H-Bridge, Dual (for motors)			
	L298N	SGS-Thomson	
Driver, Dual MOSFET, to 24 V			
	SN75372	TI	
Driver, Dual, to 18 V, 0.5 A			
	SG1644	**† SiliconG (3643)**	85
	SG2644	**SiliconG (3643)**	
	SG3644	**◇ SiliconG (3643)**	
Driver, Dual, 2-Input, Sink or Source 500 mA			
	SG1627	**◇† SiliconG (3643)**	
	SG3627	**◇ SiliconG (3643)**	
Driver, Dual 8-Bit, BiMOS Latched			
	UCN5881EP	**◇ Allegro Micro (3206)**	90
Driver, Triple Tri-State Power (25W)			
	UC3657	Unitrode	
Driver, Quad MOSFET, to 24 V			
	SN75374	TI	
Driver, Quad, Sink 2.5 A			
	SG3645	**SiliconG (3643)**	
Driver, 1 Channel (lamp relay driver)			
	TDE3207	SGS-Thomson	
Driver, 2 Channel (hammer), to 35 V, 1 A			
	SG3700	**SiliconG (3642)**	95
Driver, 3-Channel Latched (80V, 1.7A sink)			
	UCN5929B	**Allegro Micro (3206)**	
Driver, 4 Channel Latched, 50V Sink			
	UCS5800H	† Allegro Micro	
Driver, 4 Channel, Push Pull			
	L293B	SGS-Thomson	
Driver, 5 Channel, CMOS/TTL Input (lamp, relay driver, load to negative supply)			
	UDN2957A	Allegro Micro	
Driver, 5 Channel Darlington, to 400 mA			
	XR2200	◇ Exar	100
	XR2200M	◇† Exar	
	LB1287	Sanyo	
	LB1288	Sanyo	
Driver, 7 Channel, CMOS/PMOS Input (hammer, lamp, relay driver)			
	ULN2004	◇ Allegro Micro	
	ULN2014A	Allegro Micro	105
	ULN2024	◇ Allegro Micro	
	ULN7004A	**Allegro Micro (3206)**	
	ULS2004	† Allegro Micro	
	ULS2014	† Allegro Micro	
	ULS2024	† Allegro Micro	110
	XR2204	◇ Exar	
	XR2204M	◇† Exar	
	MC1416	Motorola	
	μA9668C	National	
	μA9668M	† National	115
	ULN2004A	◇ SGS-Thomson	
	SG2004	**† SiliconG (3643)**	
	SG2014	**† SiliconG (3642)**	
	SG2024	**† SiliconG (3642)**	
	ULN2004A	TI	120
Driver, 7 Channel, CMOS/TTL Input (hammer, lamp, relay driver)			
	ULN2003	◇ Allegro Micro	
	ULN2005	◇ Allegro Micro	
	ULN2013A	◇ Allegro Micro	

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INTERFACE—Peripheral Drivers (Cont'd)

Function	Device	Source	Line
Driver, 7 Channel, CMOS/TTL Input (hammer, lamp, relay driver) (Cont'd)			
	ULN2015A	◊ Allegro Micro	
	ULN2023	◊ Allegro Micro	
	ULN2025	◊ Allegro Micro	
	ULN7003A	**Allegro Micro (3206)**	
	ULS2003	† Allegro Micro	5
	ULS2005	† Allegro Micro	
	ULS2013	† Allegro Micro	
	ULS2015	† Allegro Micro	
	ULS2023	† Allegro Micro	
	ULS2025	† Allegro Micro	10
	XR2003M	† Exar	
	XR2203	◊ Exar	
	MC1413	Motorola	
	μA9667C	National	
	μA9667M	† National	15
	ULN2003A	◊ SGS-Thomson	
	SG2003	**◊† SiliconG (3643)**	
	SG2005	**† SiliconG (3643)**	
	SG2013	**† SiliconG (3642)**	
	SG2015	**† SiliconG (3642)**	20
	SG2023	**† SiliconG (3642)**	
	SG2025	**† SiliconG (3642)**	
	ULN2003A	TI	
Driver, 7 Channel, MOS/TTL Input (hammer, lamp, relay driver)	ULN2001	◊ Allegro Micro	
	ULN2011A	Allegro Micro	25
	ULN2021	◊ Allegro Micro	
	ULS2001	† Allegro Micro	
	ULS2011	† Allegro Micro	
	ULS2021	† Allegro Micro	
	XR2201	◊ Exar	30
	XR2201M	◊† Exar	
	MC1411	Motorola	
	μA9665C	National	
	ULN2001A	◊ SGS-Thomson	
	SG2001	**◊† SiliconG (3643)**	35
	SG2011	**† SiliconG (3642)**	
	SG2021	**† SiliconG (3642)**	
	ULN2001A	TI	
Driver, 7 Channel, PMOS Input (hammer, lamp, relay driver)	ULN2002	◊ Allegro Micro	
	ULN2012A	Allegro Micro	40
	ULN2022	◊ Allegro Micro	
	ULS2002	† Allegro Micro	
	ULS2012	† Allegro Micro	
	ULS2022	† Allegro Micro	
	XR2202	◊ Exar	45
	XR2202M	◊† Exar	
	MC1412	Motorola	
	μA9666C	National	
	μA9666M	† National	
	SG2002	**◊† SiliconG (3643)**	50
	SG2012	**† SiliconG (3642)**	
	SG2022	**† SiliconG (3642)**	
	ULN2002A	TI	
Driver, 8 Channel, CMOS/PMOS Input (hammer, lamp, relay driver)	ULN2804	◊ Allegro Micro	
	ULN2814A	Allegro Micro	55
	ULN2824	◊ Allegro Micro	
	ULS2804	† Allegro Micro	
	ULS2814	† Allegro Micro	
	ULS2824	† Allegro Micro	
	ULN2804	Motorola	60
	ULN2804A	SGS-Thomson	
Driver, 8 Channel, CMOS/PMOS Input (lamp, relay driver)	UDN2982A	Allegro Micro	
	UDN2984A	**Allegro Micro (3206)**	
	UDS2982	† Allegro Micro	
	UDS2984	† Allegro Micro	65
Driver, 8 Channel, CMOS/TTL Input (hammer, lamp, relay driver)	ULN2803	◊ Allegro Micro	
	ULN2805	◊ Allegro Micro	
	ULN2813A	Allegro Micro	
	ULN2815A	Allegro Micro	
		(Continued)	

Function	Device	Source	Line
Driver, 8 Channel, CMOS/TTL Input (hammer, lamp, relay driver) (Cont'd)			
	ULN2823	◊ Allegro Micro	70
	ULN2825	◊ Allegro Micro	
	ULS2803	† Allegro Micro	
	ULS2805	† Allegro Micro	
	ULS2813	† Allegro Micro	
	ULS2815	† Allegro Micro	75
	ULS2823	† Allegro Micro	
	ULS2825	† Allegro Micro	
	ULN2803	Motorola	
	ULN2803A	SGS-Thomson	
	ULN2805A	SGS-Thomson	80
	NE5090	Signetics	
Driver, 8 Channel, CMOS/TTL Input (lamps, relay driver)			
	UDN2596A	**Allegro Micro (3206)**	
	UDN2597A	Allegro Micro	
	UDN2981A	**Allegro Micro (3206)**	
	UDN2983A	Allegro Micro	85
	UDN2985A	**Allegro Micro (3206)**	
	UDS2981	† Allegro Micro	
	UDS2983	† Allegro Micro	
Driver, 8 Channel Latched, 50V Sink			
	UCS5801H	† Allegro Micro	
Driver, 8 Channel, MOS/TTL Input (hammer, lamp, relay driver)	ULN2801	◊ Allegro Micro	90
	ULN2811A	Allegro Micro	
	ULN2821	◊ Allegro Micro	
	ULS2801	† Allegro Micro	
	ULS2811	† Allegro Micro	
	ULS2821	† Allegro Micro	95
	ULN2801	Motorola	
	ULN2801A	SGS-Thomson	
Driver, 8 Channel, PMOS Input (hammer, lamp, relay driver)	ULN2802	◊ Allegro Micro	
	ULN2812A	Allegro Micro	
	ULN2822	◊ Allegro Micro	100
	ULS2802	† Allegro Micro	
	ULS2812	† Allegro Micro	
	ULS2822	† Allegro Micro	
	ULN2802	Motorola	
	ULN2802A	SGS-Thomson	105
Driver, 8-Bit, BiMOS Addressable Latched			
	UCN4807A	Allegro Micro	
	UCN4808A	Allegro Micro	
Driver, 8-Bit Serial Input, Latched 100 V Sink			
	UCN5823A	**Allegro Micro (3206)**	
Driver, 8-Bit Serial Input, Latched 50 V Sink			
	UCN5821A	**Allegro Micro (3206)**	
Driver, 8-Bit Serial Input, Latched 80 V Sink			
	UCN5822A	**Allegro Micro (3206)**	110
	UCS5822H	† Allegro Micro	
Driver, 8-Channel Current Sink Driver			
	UDN2595A	**Allegro Micro (3206)**	
	UDS2595	† Allegro Micro	
Driver, 9 Channel for Printer			
	HA13408	Hitachi	
Driver, 10-Bit Serial-Input Latched Source			
	UCN5810F	**◊ Allegro Micro (3206, 3209)**	115
	UCS4810H	† Allegro Micro	
	UCS5810H	† Allegro Micro	
Driver, 16-Bit, BiMOS Addressable Latched			
	UCN5816A	**Allegro Micro (3206)**	
Driver, 20-Bit Serial-Input Latched Source			
	UCN5812F	**◊ Allegro Micro (3206, 3209)**	

Function	Device	Source	Line
Driver, 32-Bit for Displays, Relays, Solenoids, Print Heads and Motors			
	S4521	◊ Gould AMI	120
Driver, 32-Bit Serial-Input Latched Source			
	UCN5818F	**◊ Allegro Micro (3206, 3209)**	
Driver, 7-Channel, CMOS/TTL Input (hammer, lamp, relay driver)	ULN2003AM	TI	
EGA Logic Decoder Interface			
	STK192	Sanyo	
FET Driver, High Current			
	UC3710	Unitrode	
FET Driver, Dual, High SPD			
	UC3709	Unitrode	125
Floppy/Hard Disk Data Controller			
	DP8466A	National	
Fluorescent Display Driver (eight NPN darlingtons, digit or segment driver)			
	KA2651	Samsung	
Full Bridge Driver, Dual (2A output per channel)			
	LM18298	National	
Full Bridge Power Amplifier			
	UC3176	Unitrode	
	UC3177	Unitrode	130
Full/Half Bridge Power Schottky Rectifier			
	2478	TeledyneS	
Full-Bridge Power Driver, Dual			
	L298D	Unitrode	
Half-Bridge Driver			
	SG1635A	**† SiliconG (3642)**	
	SG1650	**† SiliconG (3642)**	
	SG3635A	**SiliconG (3642)**	135
	SG3650	**SiliconG (3642)**	
Half-Bridge Driver (direct input protocol, 500V)			
	GS600	Harris	
Half-Bridge Driver (indirect input protocol, 500V)			
	GS601	Harris	
Half-Bridge Motor Control Module			
	GS105	Harris	
Hall Effect Device (senses msgnetic field)			
	UGN3503U	**Allegro Micro (3207)**	140
	UGS3503U	† Allegro Micro	
Hall Effect Switch (senses magnetic field)			
	UGN3035U	Allegro Micro	
	UGN3131U	**Allegro Micro (3207)**	
	UGS3131U	† Allegro Micro	
Hard Disk Three-Phase Motor Speed Control			
	SSI32M590	**SiliconSys (3646)**	145
	SSI32M593	**SiliconSys (3646)**	
	SSI32M594	**SiliconSys (3646)**	
	SSI32M595	**SiliconSys (3646)**	
High Current Switch Driver (to drive high power, high speed NPN switching transistors)			
	SG1629	**◊† SiliconG (3643)**	
	SG3629	**◊ SiliconG (3643)**	150
High Side Predriver, Dual (for MOSFETs)			
	MIC5012	**Micrel (3540)**	
High Side Predriver, Dual with Current Limiting (for power MOSFETs)			
	MIC5013	**Micrel (3540)**	
High Voltage Driver, Serial Input/Parallel Output (BiCMOS)	LZ1440	Sharp	
High Voltage, High Current Driver (3A max. at 45V)			
	DH0008	National	
	DH0008C	National	155

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE

INTERFACE—Peripheral Drivers (Cont'd)

Function	Device	Source	Line
High Voltage Peripheral Driver, TTL/CMOS Input, 300V/200 mA Per Channel	PWR-DRV451-4	Power Integ	
High-Voltage Analog Switch Array, 2 Channels with 8 circuits each	TC9162	Toshiba	
	TC9163	Toshiba	
	TC9164	Toshiba	
I/O Expander, I²C Serial Bus	PCF8574	Signetics	5
Ignition Pre-Driver (regulates inductive load circuits)	CS345	Cherry Semi	
Ignition Predriver (for regulating inductive load currents)	CS345A	Cherry Semi	
Inverter Driver, Septuple (with open collector)	M751270	Mitsubishi	
Isolated Universal Driver, 400V/300 mA	PWR-ISO1	Power Integ	
Lamp Dimmer, Momentary or Prolonged Touch	**LS7331**	**LSI Comp (3526)**	10
Lamp Dimmer, Ten Level Power Control	**LS7315**	**LSI Comp (3526)**	
Laser Diode Driver, N-Type (40 Mbit/sec.)	M66512	Mitsubishi	
Laser Diode Driver, R-Type (20 Mbit sec.)	M66510	Mitsubishi	
LCD Driver, Dot Matrix (I²C serial interface)	**PCF8578**	**Signetics (3631)**	
	PCF8579	**Signetics (3632)**	15
LDC (Load/Driver/Comparator)	BT698	Brooktree	
Level Translator	HT0130P	AT&T	
MOS Dynamic RAM Controller/Driver	DP8419	National	
MOS Dynamic RAM Controller Interface Circuit	DP84412	National	
MOSFET Array, Eight Channel, TTL/CMOS Input, 400V/150 mA	PWR-NCH801	Power Integ	20
MOSFET Driver, Dynamic Discharge	DIG11-8-30DD	Dionics	
	DIG12-8-30DD	Dionics	
	DIG22-8-30DD	Dionics	
MOSFET Driver, High Current Single	IXLD4420	IXYS	
	IXLD4429	IXYS	25
MOSFET Driver, Dual	TSC00C26	TeledyneS	
MOSFET Driver, Dual High Speed (inverting)	IXLD1426	IXYS	
MOSFET Driver, Dual High Speed (inverting and non-inverting)	IXLD1428	IXYS	
MOSFET Driver, Dual High Speed (non-inverting)	IXLD1427	IXYS	
MOSFET Driver, Dual High-Speed	TSC1426	TeledyneS	
	TSC1427	TeledyneS	30
	TSC1428	TeledyneS	
MOSFET Driver, Dual Power	MAX626	Maxim	
	MAX627	Maxim	
	MAX628	† Maxim	35
	TSC426	Maxim	
	TSC427	Maxim	
	TSC428	† Maxim	
Motion Controller (for dc and brushless dc motors)	LM628	National	
	LM629	National	40
Motor, AC Motor Control Circuit	HEF4752V	Signetics	
Motor, AC Motor Speed Control	TDA1285	Motorola	
Motor and Solenoid Driver	CA3169	Harris	
Motor, Bidirectional Motor Driver	GL7445	GoldStar	
Motor, Brushless DC Motor Commutator, 3 Phase	**LS7261**	**LSI Comp (3526)**	45
	LM621	National	
Motor, Brushless DC Motor Speed Controller	**LS7260**	**LSI Comp (3526)**	
Motor, Closed-Loop Brushless Speed Control Adapter	MC33039	Motorola	
Motor Controller, Brushless	UC3655	Unitrode	
Motor Controller, Brushless DC	MC33033	Motorola	50
	MC33035	Motorola	
	NE5570	Signetics	
	SA5570	Signetics	
	SE5570	Signetics	
Motor Controller, DC Brushless (Electrical Sensor Phasing of 120/240 Degrees)	MC33034-120	Motorola	55
	MC33034-60	Motorola	
Motor Controller, DC Motor Speed Control	NJM2606A	NJR	
Motor Controller/Driver, DC Servo	MC33030	Motorola	
Motor Controller (intelligent) for 4-Phase Stepper Motors	CY500	Cybernetic	
	CY512	Cybernetic	60
	CY525	Cybernetic	
Motor Controller, Three-Phase	UC3625	Unitrode	
Motor Drive, DC Motors	TLE4201	Siemens	
Motor Driver	IR2C09	Sharp	
Motor Driver, Bi-Directional	MB3854	Fujitsu	
	NJM2610	NJR	65
	IR2C10	Sharp	
Motor Driver, Bi-Directional with Brake Function	M54543	Mitsubishi	
	M54544	Mitsubishi	
Motor Driver, Bi-Directional with Brake Function and Low Power	M54545	Mitsubishi	70
Motor Driver, Bidirectional DC (with brake function)	STK6865H	Sanyo	
Motor Driver, Bidirectional DC (with brake function and overcurrent protection)	STK6884H	Sanyo	
Motor Driver, Bidirectional (forward/reverse control)	MB3763	Fujitsu	
	MB3763H	Fujitsu	
Motor Driver, Bipolar Stepper Motor Driver w/Chopper Control of Two-Phase Current	M54646A	Mitsubishi	75
Motor Driver, Brushless, DC	TDA5040	Signetics	
Motor Driver, Driver Amplifier for Servo Motor	STK6403	Sanyo	
Motor Driver, for 3-Phase brushless dc motors	HA13406W	Hitachi	
Motor Driver, Full Bridge	UDN2953B	Allegro Micro	
	UDN2954W	Allegro Micro	80
	UDS2954V	**† Allegro Micro (3206)**	
Motor Driver, Full Bridge (dual PWM)	**UDN2916**	**Allegro Micro (3206)**	
Motor Driver, Full Bridge, Dual	**UDN2993B**	**Allegro Micro (3206)**	
	UDN2998W	Allegro Micro	
	UDS2998V	**† Allegro Micro (3206)**	85
Motor Driver, Half Bridge	UDN2931	◊ Allegro Micro	
	UDN2935Z	Allegro Micro	
	UDN2950Z	Allegro Micro	
	UDN2951	Allegro Micro	
	UDN2955	Allegro Micro	90
	UDS2934H	† Allegro Micro	
	LAS8500	Lambda	
	LAS8501	Lambda	
	SG1635	**† SiliconG (3642)**	
	SG3635	**SiliconG (3642)**	95
Motor Driver, Servo Amplifier (for DC/AC motor)	STK6351	Sanyo	
Motor Driver, Stepper Motor Drive Circuit	TEA3718	SGS-Thomson	
Motor Driver, Dual Bridge	HA13421A	Hitachi	
Motor Driver, Dual (full-H)	L298	TI	
Motor Driver, Quad (half-H)	L293	TI	100
	L293D	TI	
	SN754410	TI	
	SN754411	TI	
Motor Driver, Three-Phase Brushless DC Motor Controller Driver	**UDS2936V**	**† Allegro Micro (3206)**	
Motor Driver, Three-Phase Brushless, 13 A, 400 V	CHHY008	Solitron	105
Motor Driver, Three-Phase Brushless, 13 A, 500 V	CHHY004	Solitron	
Motor Driver, Three-Phase Brushless, 15 A, 400 V	CHHY007	Solitron	
Motor Driver, Three-Phase Brushless, 15 A, 500 V	CHHY003	Solitron	
Motor Driver, Three-Phase Brushless, 30 A, 200 V	CHHY006	Solitron	
Motor Driver, Three-Phase Brushless, 30 A, 500 V	CHHY002	Solitron	110
Motor Driver, Three-Phase Brushless, 40 A, 100 V	CHHY005	Solitron	
Motor Driver, Three-Phase Brushless, 40 A, 500 V	CHHY001	Solitron	
Motor Driver, Four-Channel Push Pull	L293	Unitrode	
Motor Driver, Four-Phase Unipolar Stepping	STK6981B	Sanyo	
Motor Driver, Five-Phase Unipolar Stepping	STK6762	Sanyo	115
Motor Driver, 3-Phase Brushless DC Motor Controller Drivers	UDN2936W	Allegro Micro	
	UDN2937W	Allegro Micro	
Motor Driver, 3-Phase Brushless dc Motors	UC3622	Unitrode	
Motor Driver, 3-Phase, 30 Vdc brushless, 3A	UC3620	Unitrode	
Motor Driver, 4-Phase Stepper Motor Driver (hybrid)	STK6722H	Sanyo	120
	STK6822H	Sanyo	
	STK6981H	Sanyo	
	STK6982H	Sanyo	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE

INTERFACE—Peripheral Drivers (Cont'd)

Function	Device	Source
Motor Driver, 3-Phase Half-Bridge for Brushless DC Motors	UDN2933B	Allegro Micro
	UDN2934B	Allegro Micro
	UDS2933H	† Allegro Micro
Motor, Micro Stepper Driver	PBL3771	Ericsson
Motor, Microstepping Control of Two-Phase Stepper Motors	IXMS150	IXYS
Motor, PWM Dual Driver (load control and status monitoring)	UC3728	Unitrode
Motor Sensor/Driver, Single-Phase Brushless	UDN3625	Allegro Micro
	UDN3626	Allegro Micro
Motor, Servo Controller	**SSI32H568**	**SiliconSys (3646)**
	SSI32H6220	**SiliconSys (3646)**
Motor, Servo Demodulator	**SSI32H567**	**SiliconSys (3646)**
	SSI32H6210	**SiliconSys (3646)**
Motor, Servo Motor Driver	**SSI32H569**	**SiliconSys (3646)**
	SSI32H6230	**SiliconSys (3646)**
Motor, Smart Power Switch (for current, power, or thermal overload)	UC195	Unitrode
	UC295	Unitrode
	UC395	Unitrode
Motor Speed Controller	ZN411	Plessey
Motor Speed Controller, Universal	TDA1285A	Motorola
	ZN410D	Plessey
	ZN410E	Plessey
Motor Speed Regulator	CA3228	Harris
	TDA1085A	Motorola
	LM1014	National
	LM1014A	National
	TDA1085A	Plessey
	TDA2085A	Plessey
	TDA1151	SGS-Thomson
Motor Speed Regulator (for small dc motors). See also Linear—Consumer Circuits.	**LS7263**	**LSI Comp (3526)**
	LM1014-2	National
	SL440	Plessey
	EF4443	SGS-Thomson
	TDA1041	SGS-Thomson
	TDA1154	SGS-Thomson
	TCA955	Siemens
	SG1731	**† SiliconG (3642)**
	SG2731	**SiliconG (3642)**
	SG3731	**SiliconG (3642)**
	UC1637	† Unitrode
	UC2637	† Unitrode
	UC3637	† Unitrode
Motor Speed Regulator, PLL	TM4503	Toshiba
Motor, Stepper Motor Controller	L297/1	SGS-Thomson
Motor, Stepper Motor Driver	PBL3717/2	Ericsson
	PBL3770A	Ericsson
	HA13007A	Hitachi
Motor, Stepping Motor Controller/Driver, 24 V	SAA1042A	Motorola
Motor, Stepping Motor Controller/Driver, 6–12 V	SAA1042	Motorola
Motor, Stepping Motor Driver	PBD3517	Ericsson
	PBL3717	Ericsson
	LM18293	National
	TDA3717	Plessey
	TEA3717	SGS-Thomson
	TM4503	SGS-Thomson
	TL376C	TI
Motor, Stepping Motor Driver and Floppy Disk Logic Circuit	CS279	Cherry Semi
Motor, Dual Bidirectional Motor Driver	GL7438	GoldStar
Motor, Triple Half-Bridge (for three-phase brushless motors)	UC1657	Unitrode
Motor, Five Channel Programmable Current Switch	UC3722	Unitrode
Motor, 3-Phase Brushless Motor Driver/Speed Controller	HA13440	Hitachi
	HA13441	Hitachi
	HA13442	Hitachi
	HA13471	Hitachi
	HA13472	Hitachi
NTDS Driver/Receiver	VS610S	VTC
Opto-Isolated MOFSET Driver	DIG11-06-030	Dionics
Peripheral Driver Array (seven NPN darlington)	KA2655	Samsung
	KA2656	Samsung
	KA2657	Samsung
	KA2658	Samsung
	KA2659	Samsung
Peripheral Driver Array (with open collector)	M751272	Mitsubishi
	M751273	Mitsubishi
Peripheral Driver, Serial Output (16-bit)	TSC9405C	TeledyneS
	TSC9405M	† TeledyneS
	TSC9405M/883	† TeledyneS
Pin Driver, Monolithic (drives programmed voltages into difficult loads)	EL2021C	Elantec
Pin Driver with Inhibit Mode (for ATE, semiconductor test)	AD1321	AD
	AD1322	AD
Pin Driver with Inhibit Mode, 100 MHz (for digital test systems)	AD345	AD
Power Driver, 1.5 A Dual-Output	TSC4426	TeledyneS
	TSC4427	TeledyneS
	TSC4428	TeledyneS
Power Driver, 3 A Dual-Output	TSC4423	TeledyneS
	TSC4424	TeledyneS
	TSC4425	TeledyneS
Power Driver, 6 A Single-Output	TSC4420	TeledyneS
	TSC4429	TeledyneS
Power FET Pre-Driver	**MIC5010**	**Micrel (3540)**
	MIC5011	**Micrel (3540)**
Power Level Driver, Dual, 400V/300 mA	PWR-DRV3	Power Integ
Power MOSFET Driver, Single	TSC429C	TeledyneS
	TSC429M	† TeledyneS
Printer Controller, for 5x7 Dot Matrix Printers	CY480	Cybernetic
Printer Solenoid Driver	DS3654	National
Printing Calculator Circuits	DS8654	National
Pulse Width Modulator	2491	TeledyneS
Pulse Width Modulator (current mode)	2494	TeledyneS
Relay and Lamp Driver, to 30 V, 0.3 A	TDE1607	SGS-Thomson
Relay and Lamp Driver, to 45 V, 0.3 A	TDE1737	SGS-Thomson
Relay and Lamp Driver, to 50 V, 0.3 A	TDE1787	SGS-Thomson
Relay and Lamp Driver, to 50 V, 0.5 A	TDE1767	SGS-Thomson
Relay and Lamp Driver, to 60 V, 0.3 A	TDE1787A	SGS-Thomson
Relay and Lamp Driver, to 60 V, 0.5 A	TDE1767A	SGS-Thomson
Relay and Lamp Driver, Dual, to 32 V, 2/4 A	TDE1777	SGS-Thomson
Relay Driver, for 48 V Telephone Relays	**UDN2580A**	**Allegro Micro (3206)**
	UDN2585A	**Allegro Micro (3206)**
	UDN2588A	**Allegro Micro (3206)**
	UDN2957A	Allegro Micro
Relay Driver, to 65 V, Sinks 300 mA, OR Input for 48 V Telephone Relays	DS1687	† National
	DS3686	National
	DS3687	National
Relay Driver, to 70 V, 500 mA	CSR301	TeledyneS
Relay Driver, to 57 Volts, 500 mA	LM1921	National
Relay Driver, 7 Channel, to 100 V, 500 mA	SN75468	TI
	SN75469	TI
Relay Driver, 7 Channel, to 50 V, 500 mA	SN75465	TI
	SN75466	TI
	SN75467	TI
Sense FET Driver	TSC4460	◊† TeledyneS
	TSC4461	◊† TeledyneS
	TSC4462	◊† TeledyneS
	TSC4463	◊† TeledyneS
Servo Controller/Speed Control for DC Micro Motor	M51970	Mitsubishi
Sink Driver, 1.6 A	**UCN5829**	**Allegro Micro (3206)**
Sink Driver, 300 mA	**UDS5711**	**Allegro Micro (3206)**
	UDS5712	**Allegro Micro (3206)**
	UDS5713	**Allegro Micro (3206)**
	UDS5714	**Allegro Micro (3206)**
Sink Driver, 800 mA	**UCN5830**	**Allegro Micro (3206)**
	UCN5831	**Allegro Micro (3206)**
Sink Driver, 100 mA	**UCN5824**	**Allegro Micro (3206)**
Solenoid Driver (dual 3 A)	UDN2974W	Allegro Micro
Solenoid Driver, Injector	CS288	Cherry Semi

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Peripheral Drivers (Cont'd)

Function	Device	Source
Solenoid Driver, 4 Amp		
	MC3484S4-1	Motorola
Source Driver, Eight Channel		
	KA2580A	Samsung
	KA2588A	Samsung
Source/Sink Driver, Half-Bridge		
	UDS2935	**Allegro Micro (3206)**
	UDS2950	**Allegro Micro (3206)**
Source/Sink Driver, PWM Control		
	UDS2961	**Allegro Micro (3206)**
	UDS2962	**Allegro Micro (3206)**
	UDS2966	**Allegro Micro (3206)**
Source/Sink Driver, PWM Full Bridge		
	UDS2953	Allegro Micro
	UDS2954	**Allegro Micro (3206)**
Stepper Motor Circuit, Half-Bridge, 55V/3A		
	LMD18201	National
Stepper Motor Driver		
	MC3479	Motorola
	UC3517	Unitrode
	UC3717A	Unitrode
	UC3770A	Unitrode
	UC3770B	Unitrode
Stepper Motor Driver (drives one phase winding of a bipolar stepper motor)		
	SG3718	**◊ SiliconG (3642)**
Stepper Motor Driver, Half-Bridge (up to 45 V)		
	CS3770	Cherry Semi
Stepper Motor Translator/Driver, 1.2 A		
	UDN7068	**Allegro Micro (3206)**
Stepping Motor Controller, 4 Phase Stepping Motor		
	MB86520	Fujitsu
Stepping Motor Driver, Four-Phase		
	STK6772	Sanyo
Stepping Motor Driver, Four-Phase (constant-current)		
	STK6982B	Sanyo
Tape Drive, Read Data Path		
	SSI35P550	**SiliconSys (3646)**
Universal Power Drive, Dual, 400V/250 mA Per Channel		
	PWR-DRV2	Power Integ
Universal Power Driver, 400V/300–500 mA		
	PWR-DRV1	Power Integ
Video Shift Register, 250 MHz, Quad 10-bit or Penta 8-bit	BT424	Brooktree
Voice Coil Motor Driver for 2.5″ Disk Drive. Vs ± 5 V (Contains Park Circuit Under-Voltage Detector, Reference, Input Filter, Current Sense Amplifier)		
	EL2027	Elantec
Voice Coil Motor Driver for 3.5″ Disk Drive. Vs ± 12 V (Contains Park Circuit and Over-Current Protection)		
	EL2036	Elantec
Voice Coil Motor Driver for 5.25″ Disk Drive. Vs ± 12 V (Contains Park Circuit and Over-Current Protection)		
	EL2037	Elantec
Winchester Disk Memory Read/Write Circuit		
	SSI32R104CLN	**SiliconSys (3645)**
Single AC Switch, 130V@2A		
	GS205	Harris
Dual AND Driver, HNIL, 250 mA, Open Collector		
	391A/C	TeledyneS
Dual CMOS or TTL Driver/Translator, up to 30 V		
	IH6201C	Harris
	IH6201M	† Harris
Dual Darlington Switch, to 80 V, 1.5 A		
	ULN2061	**◊ Allegro Micro (3206)**
	ULN2062	**◊ Allegro Micro (3206)**
Dual DC Sink, 56V@2A		
	GS215	Harris
Dual DC Source, 56V@2A		
	GS210	Harris
Dual Inverting/Non-Inverting 1.5A Power Device Driver.		
	IXLD4428	IXYS
Dual Inverting/Noninverting 3A Power Device Driver.		
	IXLD4425	IXYS
Dual Inverting 1.5A Power Device Driver.		
	IXLD4426	IXYS
Dual Inverting 3A Power Device Driver.		
	IXLD4423	IXYS
Dual MOSFET Driver, Inverting		
	TSC426C	◊ TeledyneS
	TSC426M	† TeledyneS
Dual MOSFET Driver, Inverting/Non-Inverting		
	TSC428C	◊ TeledyneS
	TSC428M	◊† TeledyneS
Dual MOSFET Driver, Non-Inverting		
	TSC427C	◊ TeledyneS
	TSC427M	◊† TeledyneS
Dual NAND Driver, HNIL, 250 mA, Open Collector		
	392A/C	TeledyneS
Dual Non-Inverting 1.5A Power Device Driver.		
	IXLD4427	IXYS
Dual Noninverting 3A Power Device Driver.		
	IXLD4424	IXYS
Dual NOR Driver, HNIL, 250 mA, Open Collector		
	394A/C	TeledyneS
Dual OR Driver, HNIL, 250 mA, Open Collector		
	393A/C	TeledyneS
Dual Peripheral AND Driver		
	PBD3513	Ericsson
	DS55451	† National
	DS55461	† National
	DS75450	National
	DS75451	National
	DS75461	National
	SG55450B	**◊† SiliconG (3643)**
	SG55460	**◊† SiliconG (3643)**
	SG55461	**◊† SiliconG (3643)**
	SG75450B	◊ SiliconG
	SG75451B	◊ SiliconG
	SG75460	◊ SiliconG
	SG75461	◊ SiliconG
	SN55451B	† TI
	SN55461	† TI
	SN75450B	TI
	SN75451B	TI
	SN75461	TI
	SN75471	TI
	SN75476	TI
Dual Peripheral AND Driver, for CMOS		
	DS1631	† National
	DS3631	National
Dual Peripheral AND Driver, to 70 V, 600 mA		
	UDN5721M	Allegro Micro
	UDN5742M	**Allegro Micro (3206)**
	UDN5742M	**Allegro Micro (3206)**
	UDN5751M	Allegro Micro
Dual Peripheral AND Driver, to 70 V, 700 mA		
	UDN5741M	**Allegro Micro (3206)**
Dual Peripheral AND Driver, to 70 V 300 mA		
	SN75446	TI
Dual Peripheral AND Driver, to 80 V 600 mA		
	UDN5711M	Allegro Micro
	UDS3611H	† Allegro Micro
	DS1611	† National
Dual Peripheral Driver		
	SG55470	**† SiliconG (3643)**
Dual Peripheral NAND Driver		
	DS55452	† National
	DS55462	† National
	DS75452	National
	DS75462	National
	SG55462	**◊† SiliconG (3643)**
	SG75462	◊ SiliconG
	SN55452B	† TI
	SN55462	† TI
	SN75447	TI
	SN75452B	TI
	SN75462	TI
	SN75472	TI
Dual Peripheral NAND Driver, for CMOS		
	DS1632	† National
	DS3632	National
Dual Peripheral NAND Driver, to 70 V, 600 mA		
	UDN5722M	**Allegro Micro (3206)**
	UDN5752M	**Allegro Micro (3206)**
Dual Peripheral NAND Driver, to 70 V, 300 mA		
	MC1472	Motorola
	SN75477	TI
Dual Peripheral NAND Driver, to 80 V, 600 mA		
	UDN3612M	Allegro Micro
	UDN5712M	Allegro Micro
	UDS3612H	† Allegro Micro
Dual Peripheral NOR Driver		
	DS55454	† National
	DS55464	† National
	DS75454	National
	DS75464	National
	SG55464	**◊† SiliconG (3643)**
	SG75464	◊ SiliconG
	SN55454B	† TI
	SN55464	† TI
	SN75407	TI
	SN75449	TI
	SN75454B	TI
Dual Peripheral NOR Driver, for CMOS		
	DS1634	† National
	DS3634	National
Dual Peripheral NOR Driver, to 70 V, 600 mA		
	UDN5724M	Allegro Micro
	UDN5754M	Allegro Micro
Dual Peripheral NOR Driver, to 70 V, 700 mA		
	UDN5744M	**Allegro Micro (3206)**
Dual Peripheral NOR Driver, to 30 V, 300 mA		
	SN75479	TI
Dual Peripheral NOR Driver, to 80 V, 600 mA		
	UDN5714M	Allegro Micro
	UDS3614H	† Allegro Micro
Dual Peripheral OR Driver		
	DS55453	† National
	DS55463	† National
	DS75453	National
	DS75463	National
	SG55463	**◊† SiliconG (3643)**
	SG75463	◊ SiliconG
	SN55453B	† TI
	SN55463	† TI
	SN75408	TI
	SN75448	TI
	SN75453B	TI

(Continued)

INTERFACE

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

INTERFACE—Peripheral Drivers (Cont'd)

Function	Device	Source	Line
Dual Peripheral OR Driver (Cont'd)			
	SN75463	TI	
	SN75473	TI	
Dual Peripheral OR Driver, for CMOS			
	DS1633	† National	
	DS3633	National	
Dual Peripheral OR Driver, to 70 V, 600 mA			
	UDN5723M	Allegro Micro	5
	UDN5753M	Allegro Micro	
Dual Peripheral OR Driver, to 70 V, 700 mA			
	UDN5743M	**Allegro Micro (3206)**	
Dual Peripheral OR Driver, to 30 V, 300 mA			
	SN75478	TI	
Dual Peripheral OR Driver, to 80 V, 600 mA			
	UDN3613M	Allegro Micro	
	UDN5713M	Allegro Micro	10
	UDS3613H	† Allegro Micro	
Dual Peripheral Positive AND Driver			
	SG55471	**◊† SiliconG (3643)**	
	SG75471	◊ SiliconG	
Dual Peripheral Positive NAND Driver			
	SG55452B	**◊† SiliconG (3643)**	
	SG55472	**◊† SiliconG (3643)**	15
	SG75452B	◊ SiliconG	
	SG75472	◊ SiliconG	
Dual Peripheral Positive NOR Driver			
	SG55454B	**◊† SiliconG (3643)**	
	SG55474	**◊† SiliconG (3643)**	
	SG75454B	◊ SiliconG	20
	SG75474	◊ SiliconG	
Dual Peripheral Positive OR Driver			
	SG55453B	**◊† SiliconG (3643)**	
	SG55473	**◊† SiliconG (3643)**	
	SG75453B	◊ SiliconG	
	SG75473	◊ SiliconG	25
Dual Peripheral Positive-AND Drivers			
	SG55451B	**◊† SiliconG (3643)**	
Dual Peripheral/Power Driver			
	UDN5725M	**Allegro Micro (3206)**	
Dual Power MOS Driver			
	D169A	Siliconix	
	TSC426	TeledyneS	
	TSC427	TeledyneS	30
	TSC428	TeledyneS	
Dual Power MOSFET Driver			
	ICL7667C	Harris	
	ICL7667M	† Harris	
Dual Schottky Diode Bridge (for bipolar stepper motor drivers)	CS299D	Cherry Semi	
Dual Solenoid/Motor Driver, ±4 A			
	UDN2962	Allegro Micro	35
Dual Switchmode Solenoid Driver			
	L295	SGS-Thomson	
	L295	Unitrode	
Dual 4-Input AND Driver, HNIL 250 mA Open Collector			
	390A/C	TeledyneS	
Dual 4-Input NAND Driver, HNIL, 250 mA Open Collector	395A/C	TeledyneS	
Quad Bipolar Driver			
	L293E	SGS-Thomson	40
	L293D	Unitrode	
Quad Darlington Driver, to 100 V, 1.5 A			
	FT5753	Fujitsu	
Quad Darlington Driver, to 100 V, 3 A			
	FT5754	Fujitsu	
Quad Darlington Driver, to 100 V, 5 A			
	FT5755	Fujitsu	
Quad Darlington Power Driver (to 50 V, 1.8 A)			
	UDN2544B	**Allegro Micro (3206)**	45
Quad Darlington Switch			
	TEB1013	SGS-Thomson	
Quad Darlington Switch, to 50 V, 1.5 A			
	SN75064	TI	
	SN75066	TI	
	SN75068	TI	
Quad Darlington Switch, to 50 V, 4 A			
	UDN2878W	**Allegro Micro (3206)**	50
Quad Darlington Switch, to 80 V, 1.5 A			
	ULN2064	**◊ Allegro Micro (3206)**	
	ULN2065	**◊ Allegro Micro (3206)**	
	ULN2068	**◊ Allegro Micro (3206)**	
	ULN2069	**◊ Allegro Micro (3206)**	
	ULN2074	**◊ Allegro Micro (3206)**	55
	ULN2075	**◊ Allegro Micro (3206)**	
	ULS2064H	† Allegro Micro	
	ULS2065H	† Allegro Micro	
	ULS2066H	† Allegro Micro	
	ULS2067H	† Allegro Micro	60
	ULS2068H	† Allegro Micro	
	ULS2069H	† Allegro Micro	
	ULS2070H	† Allegro Micro	
	ULS2071H	† Allegro Micro	
	ULS2074H	† Allegro Micro	65
	ULS2075H	† Allegro Micro	
	ULS2076H	† Allegro Micro	
	ULS2077H	† Allegro Micro	
	ULN2047B	SGS-Thomson	
	ULN2064B	SGS-Thomson	70
	ULN2065B	SGS-Thomson	
	ULN2066B	SGS-Thomson	
	ULN2067B	SGS-Thomson	
	ULN2068B	SGS-Thomson	
	ULN2069B	SGS-Thomson	75
	ULN2070B	SGS-Thomson	
	ULN2071B	SGS-Thomson	
	ULN2075B	SGS-Thomson	
	ULN2076B	SGS-Thomson	
	ULN2077B	SGS-Thomson	80
	SG2064	**◊† SiliconG (3642)**	
	SG2065	**◊† SiliconG (3642)**	
	SG2066	**◊† SiliconG (3642)**	
	SG2067	**◊† SiliconG (3642)**	
	SG2068	**◊† SiliconG (3642)**	85
	SG2069	**◊† SiliconG (3642)**	
	SG2070	**◊† SiliconG (3642)**	
	SG2071	**† SiliconG (3642)**	
	SG2074	**◊† SiliconG (3642)**	
	SG2075	**◊† SiliconG (3642)**	90
	SG2076	**◊† SiliconG (3642)**	
	SG2077	**◊† SiliconG (3642)**	
	SN75065	TI	
	SN75067	TI	
	SN75069	TI	95
	ULN2064	TI	
	ULN2065	TI	
	ULN2066	TI	
	ULN2067	TI	
	ULN2068	TI	100
	ULN2069	TI	
	ULN2074	TI	
	ULN2075	TI	
Quad Darlington Switch, to 80 V, 4 A			
	UDN2879W	**Allegro Micro (3206)**	
Quad Driver for Automotive Applications			
	DS3656	National	105
Quad Driver, to 60 V, −4 A			
	UDN2944W	Allegro Micro	
Quad Fault Protected Peripheral Driver			
	DS3668	National	
Quad High Current Peripheral Driver			
	DS3658	National	
	DS3669	National	
	SN75436	TI	110
	SN75437A	TI	
	SN75438	TI	
	SN75440	TI	
Quad High-Current, High-Voltage Source Driver (to 60 V, 4 A)	UDN2944W	Allegro Micro	
Quad Latch/Driver			
	UCN5900A	Allegro Micro	115
Quad Latch/Driver, serial input			
	UCN5825B	**Allegro Micro (3206)**	
	UCN5826B	**Allegro Micro (3206)**	
Quad NAND Gate Power Driver (for incandescent or inductive loads)			
	UDN2549B	**Allegro Micro (3206)**	
Quad NAND Power Driver (to 60V, sinks 1A)			
	UDN2543B	**Allegro Micro (3209)**	
Quad Negative Voltage Relay Driver			
	DS3680	National	120
	DS3680	TI	
Quad Peripheral Driver, Open Collector, to 35 V, Sinks 600 mA	SN75435	TI	
Quad PIN Diode Driver (also see: linear-other devices)			
	UDS5791H	† Allegro Micro	
Quad PIN Diode Switch Driver			
	RC4447	Raytheon	
Quad Power Driver, Protected (600 mA, 60 V)			
	UDN2547	Allegro Micro	125
Quad Power Peripheral Driver			
	VQ1000	Siliconix	
	VQ1001	Siliconix	
	VQ1004	Siliconix	
	VQ1006	Siliconix	
	VQ2001	Siliconix	130
	VQ2004	Siliconix	
	VQ2006	Siliconix	
	VQ3001	Siliconix	
	VQ7254	Siliconix	
Quad Solenoid Driver			
	HA13415	Hitachi	135
Quad Transistor Switch (Inverting) to 50 V, 1.5 A			
	L9222	SGS-Thomson	
Quad 1.2A (peak) Power Driver			
	TSC4437	◊† TeledyneS	
	TSC4438	◊† TeledyneS	
	TSC4439	◊† TeledyneS	
	TSC4457	◊† TeledyneS	140
	TSC4458	◊† TeledyneS	
	TSC4459	◊† TeledyneS	
	TSC4465	◊† TeledyneS	
	TSC4466	◊† TeledyneS	
	TSC4467	◊† TeledyneS	145
	TSC4468	◊† TeledyneS	
	TSC4469	◊† TeledyneS	
	TSC4487	◊† TeledyneS	
	TSC4488	◊† TeledyneS	
	TSC4489	◊† TeledyneS	150
Quad 2-Input AND Driver (to 70 V, sinks 600 mA)			
	UDN5706A	Allegro Micro	
	UDS5706H	**† Allegro Micro (3206)**	
Quad 2-Input AND Power Driver, Open Collector (to 100 V, sinks 500 mA)			
	UHD-400	† Allegro Micro	
	UHD-406	† Allegro Micro	
	UHD-500	† Allegro Micro	155

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INTERFACE—Peripheral Drivers (Cont'd)

Function	Device	Source	Line
Quad 2-Input AND Power Driver, Open Collector (to 100 V, sinks 500 mA) (Cont'd)			
	UHD-506	† Allegro Micro	
	UHP400	**Allegro Micro (3206)**	
	UHP406	**Allegro Micro (3206)**	
Quad 2-Input NAND Driver (for 70 V, sinks 600 mA)			
	UDN5707A	Allegro Micro	
	UDS5707H	**† Allegro Micro (3206)**	5
Quad 2-Input NAND Power Driver, Open Collector, to 100 V, Sinks 500 mA			
	UHD-407	† Allegro Micro	
	UHD-408	† Allegro Micro	
	UHD-507	† Allegro Micro	
	UHD-508	† Allegro Micro	
	UHP407	**Allegro Micro (3206)**	10
	UHP408	**Allegro Micro (3206)**	
Quad 2-Input NOR Driver, to 70 V, Sinks 600 mA			
	UDN5733A	Allegro Micro	
	UDS5733H	† Allegro Micro	
Quad 2-Input NOR Power Driver, Open Collector, to 100 V, Sinks 500 mA			
	UHD-432	† Allegro Micro	
	UHD-433	† Allegro Micro	15
	UHD-532	† Allegro Micro	
	UHD-533	† Allegro Micro	
Quad 2-Input OR Driver, to 70 V, Sinks 600 mA			
	UDN5703A	Allegro Micro	
	UDS5703H	**† Allegro Micro (3206)**	
Quad 2-Input OR Power Driver, Open Collector, to 100 V, Sinks 500 mA			
	UHD-402	† Allegro Micro	20
	UHD-403	† Allegro Micro	
	UHD-502	Allegro Micro	
	UHD-503	Allegro Micro	
	UHP402	**Allegro Micro (3206)**	
	UHP403	**Allegro Micro (3206)**	25
Quad-Gated Inverting Power Driver			
	CA3242	**Harris (3461)**	
Quad-Gated Inverting Power Driver (switches up to 600 mA)			
	CA3242E	**Harris (3461)**	
	CA3262	**Harris (3461)**	
	CA3262A	**Harris (3461)**	
	CA327A	Harris	30
Quad-Gated Non-Inverting Power Driver (switches up to 600 mA)	**CA3252**	**Harris (3461)**	
Quad-Gated Power Driver, Inverting			
	CA3272	**Harris (3461)**	
Octal Latched Peripheral Driver			
	DP7310	National	
	DP7311	National	
	DP8310	National	35
	DP8311	National	
Octal Serial Peripheral Driver (with output status monitor)	TPIC2801	TI	
Eight Latch/Drivers			
	UCN5815A	**Allegro Micro (3206)**	
8-Bit Latch, Source Driver, Serial Input			
	UCN5890A	**Allegro Micro (3206)**	
	UCN5891A	**Allegro Micro (3206)**	40
	UCN5895A	**Allegro Micro (3206)**	
8-Bit Latch/100 V Driver, Serial Input			
	UCN5843A	**Allegro Micro (3206)**	
8-Bit Latch/50 V Driver, Serial Input			
	UCN5841A	**Allegro Micro (3206)**	
8-Bit Latch/80 V Driver, Serial Input			
	UCN5842A	**Allegro Micro (3206)**	
8-Channel Source Driver with Overcurrent Protection			
	UDN2987A	**Allegro Micro (3206)**	45
32-Bit Latch/Driver, Serial Input			
	UCN5832	**Allegro Micro (3206)**	
	UCN5833A	**Allegro Micro (3206)**	

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INTERFACE

INTERFACE—Sense Amplifiers

Function	Device	Source	Line
Adaptive Sense Amplifier (for motor control)	LM1815	National	
Alternator Control Circuit	**AD22181**	**AD (3298)**	
Automotive Battery Monitor Circuit	**AD22180**	**AD (3298)**	
Gear Tooth Sensor	UGN3056	Allegro Micro	
	UGS3056	† Allegro Micro	5
Hall Effect Latch	UGN3275	Allegro Micro	
	UGN3276	Allegro Micro	
	UGN3277	Allegro Micro	
	UGS3275	† Allegro Micro	
	UGS3276	† Allegro Micro	10
	UGS3277	† Allegro Micro	
Hall Effect Latch w/Power	UGN5275	Allegro Micro	
	UGN5276	Allegro Micro	
	UGN5277	Allegro Micro	
Hall Effect Sensor	**AD22150**	**AD (3298)**	15
Hall Effect Sensor/Driver	**UGQ5140K**	**Allegro Micro (3211)**	
Hall Effect Switch	**UGN3113**	**Allegro Micro (3207)**	
	UGN3130	**Allegro Micro (3207)**	
	UGN3201	Allegro Micro	
	UGN3220	Allegro Micro	20
	UGN3604	Allegro Micro	
	UGN3605	Allegro Micro	
	UGS3130	† Allegro Micro	
Hall Effect Vane Switch	UMN6450X	Allegro Micro	
Hall-Effect IC (analog output)	TLE4910	Siemens	25
Hall-Effect Switch, Brushless DC Motor Commutation	**UGN3235K**	**Allegro Micro (3207)**	
	UGS3235K	† Allegro Micro	
Hall-Effect Switch (for alternating magnetic fields)	TLE4902	Siemens	
Hall-Effect Switch (for unipolar magnetic fields)	TLE4903	Siemens	
Hall-Effect Switch, Multiplexed	**UGN3055U**	**Allegro Micro (3207)**	30
	UGS3055U	† Allegro Micro	
High Pressure Sensor (hydraulic servo controls, machine tools, robotics, engine diagnostics and refrigeration)	90	IC Sensors	
	93	IC Sensors	
HIT Pressure Sensor (medical instruments, air flow measurement, depth sensing, automotive, and vacuum measurement)	210	IC Sensors	
	310	IC Sensors	35
	410	IC Sensors	
Light Activated Switch	ULN3332	Allegro Micro	
	ULN3333	Allegro Micro	
	ULN3360	Allegro Micro	
	ULN3363	Allegro Micro	40
	ULN3395	Allegro Micro	
MOS Memory Sense Amplifier	SN75107A	TI	
	SN75107B	TI	
	SN75108A	TI	
	SN75108B	TI	45
MOS to TTL Level Converter, High Speed, Three-State	MC4300	† Motorola	

Function	Device	Source	Line
Pressure Sensor (for medical instruments: breathing monitors, spirometers, respirators, and ventilators)	13	IC Sensors	
	23	IC Sensors	
	33	IC Sensors	
	43	IC Sensors	50
Pressure Sensor (hydraulic servo controls, pressure transmitters, refrigeration and air conditioning)	80	IC Sensors	
Pressure Sensor (medical, process control, airspeed, flow measurement, etc)	20	IC Sensors	
	22	IC Sensors	
	30	IC Sensors	
	32	IC Sensors	55
Pressure Sensor (medical, robotics, vacuum measurement, avionics, automotive and leak detection)	10	IC Sensors	
	12	IC Sensors	
	40	IC Sensors	
	42	IC Sensors	
Pressure Sensor (100 mV output span)	103	IC Sensors	60
	113	IC Sensors	
Pressure Transducer (1 to 6 Vdc output span)	104	IC Sensors	
	114	IC Sensors	
Pressure Transmitter (4 to 20 mA output)	105	IC Sensors	
	115	IC Sensors	65
Sense Amplifier, Magnetic Tape	MC3467L	Motorola	
Sensor Interface Amplifier (for automotive applications)	LM1964	National	
Silicon Accelerometer (automotive suspension control, braking control and industrial vibration monitoring)	3021	IC Sensors	
Dual Core Memory Sense Amplifier, Separate Outputs	**SG5524**	**◊† SiliconG (3643)**	
Dual MOS to TTL Level Converter, Latch, Three-State (Sense Amp)	MC74468	Motorola	70
Dual Sense Amplifier	**SG55234**	**† SiliconG (3643)**	
	SG55234A	**† SiliconG (3643)**	
	SG75234	SiliconG	
Dual Sense Amplifier/Data Register	**SG55236A**	**† SiliconG (3643)**	
Dual Sense Amplifier/Data Registers (for coincident-current core memories)	**SG55236**	**† SiliconG (3643)**	75
	SG75236	SiliconG	
Dual Sense Amplifier (detects low-level differential input from high-speed magnetic memories)	**SG5534**	**† SiliconG (3643)**	
Dual Sense Amplifier (for MOS memory or line receiver)	DS75208	National	
	SN75207	TI	
	DS1603	† National	80
	DS3603	National	
Quad Sense Amplifer, Three-State	MC3430	Motorola	
	MC3431	Motorola	
	MC3432	Motorola	
	MC3433	Motorola	85
	DS1651	† National	
	DS3651	National	

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INTERFACE—Transmitters-Receivers

Function	Max Serial Data Rate in kHZ	Supply Voltage, V	Device	Source	Line
	240	5	μPD71051	◊ NEC	
(ACIA) Asynchronous Communications Interface Adapter (Links 8-Bit bidirectional data bus to serial asynchronous data communications, including to 6860)	50	5	MC6850	Motorola	
			EF6850	SGS-Thomson	
ARINC–429 Bus Interface Circuit (CMOS)			HS3282-8	Harris	
ARINC–429 Receiver/Transmitter	100	5	HS3182	† Harris	5
			HS3282	† Harris	
			HI6010	Holt	
ARINC–429 Receiver/Transmitter with 8-Bit Microprocessor Interface and Label Recognition	100	5	HI-6010	Holt	
ARINC–429 Transceiver	100	5	HI-8282CM-02	† Holt	
			HI-8282LM-02	† Holt	10
ASTRO (asynchronous/synchronous receiver/transmitter) to Interface Serial Communications Channel with a Parallel Digital System (i.e. microprocessors)	1000	12, ± 5	UC1671	Western	
Asynchronous Addressable Receiver/Transmitter	—	4.75–11.5	MM54240	National	
	4.8	3–18	MC14469	◊ Motorola	
Asynchronous Communications Element	—	5	82C50A	◊ Harris	
			82C50A-Cell	° Harris	15
			82C50	°† SMC	
	—	5	WD82C50	Western	
	-	5	MD82C50A	°† Harris	
	56	5	WD8250	◊ Western	
Asynchronous Communications Interface	1000	5	SCN2641	◊ Signetics	20
Asynchronous Receiver/Transmitter Interface	16	5	T7112	AT&T	
Asynchronous Serial Manchester Adapter	1000	5	HD6408-Cell	◊° Harris	
Backplane Transceiver, Quad			SN55ALS057	TI	
Baud Rate Generator	19.2	5	BRG	°† SMC	
Baud Rate Generator (programmable divider)	19.2	12, ± 5	HD4702	◊° Harris	25
			HD4702/883	°† Harris	
			MC14411	Motorola	
	1000	5	COM8046	SMC	
			COM8046T	SMC	
			COM8126	SMC	30
			COM8126T	SMC	
			COM8146	SMC	
			COM8146T	SMC	
Baud Rate Generator (programmable divider), Dual	307/19.2	5	WD1943-00	Western	
			WD1943-05	Western	35
	614/19.2	5	WD1943-06	Western	
	1000	5	AY5-8116	Microchip	
			AY5-8116T	Microchip	
			AY5-8136	Microchip	
			AY5-8136T	Microchip	40
			COM8116	SMC	
			COM8116T	SMC	
			COM8136	SMC	
			COM8136T	SMC	
			WD1945	Western	45
		12,5	COM5016T	SMC	

Function	Max Serial Data Rate in kHZ	Supply Voltage, V	Device	Source	Line
Bus Interface—Bus Controller, Remote Terminal and Monitor (MIL-STD–1553B) Interface		5	**UT1553B BCRT**	**◊‡ UTMC (3693, 3695)**	
			UT1553B BCRTM	**◊‡ UTMC (3693, 3695)**	
Bus Interface—Bus Controller, Remote Terminal-Multiprotocol (MIL-STD–1553A/B)		5	**UT1553 BCRTMP**	**UTMC (3693, 3695)**	
Bus Interface Circuit (MIL-STD1553B)	5000	5	HS3273	† Harris	50
Bus Interface—Remote Terminal (MIL-STD–1553B) Interface		5	**UT1553B RTI**	**◊‡ UTMC (3693, 3695)**	
Bus Interface—Remote Terminal (MIL-STD–1760A) Interface		5	UT1760ARTS	◊ UTMC	
Bus Interface—Remote Terminal with RAM (MIL-STD–1553B)		5	**UT1553B RTR**	**◊‡ UTMC (3693, 3695)**	
Bus Interface—Single Transceiver (MIL-STD–1553A/B)		5	**UT63M105XCVR**	**UTMC (3693)**	
			UT63M107XCVR	**UTMC (3693)**	55
			UT63M115XCVR	**UTMC (3693)**	
			UT63M117XCVR	**UTMC (3693)**	
Bus Interface—Dual Transceiver (MIL-STD–1553A/B)		5	**UT63M125XCVR**	**UTMC (3693)**	
			UT63M127XCVR	**UTMC (3693)**	
			UT63M135XCVR	**UTMC (3693)**	60
			UT63M137XCVR	**UTMC (3693)**	
Combo I/O: UART, R.T.C., KBD Cont., IDE	56	5	**VL82C106**	**◊ VLSI Tech (3702)**	
Command/Response Manchester II Converter (MIL-STD–1553B)	1000	5	BUS8937	† ILC-DDC	
Differential Bus Transceiver, Multipoint RS–485/422		5	DS75176B	National	
			DS75176BT	National	65
Differential Bus Transceiver, RS–485/422, Bidirectional		5	μA96176	National	
			DS16F95	† National	
			DS36F95	National	
			DS3695A	National	
			DS96176	National	70
DUART (Dual Universal Asynchronous Receiver and Transmitter). Two Channel UART, baud-rate generator, 16-Bit counter/timer, I/O ports.	1 MB/s	5	**XR68C681**	**Exar (3393)**	
			XR88C681	**Exar (3393)**	
	1000	5	MC2681	Motorola	
			MC68681	Motorola	
			SCN2681	◊ Signetics	75
			SCN68681	◊ Signetics	
			26810	Signetics	
			26814	Signetics	
			26818	Signetics	
DUART (Dual Universal Asynchronous Receiver-Transmitter) (complete serial to parallel and parallel to serial interface)	56	5	**VL16C452**	**VLSI Tech (3702)**	80
EPCI (Enchanced Programmable Communications Interface) Serial/Parallel receiver/transmitter-Synchronous and asynchronous with baud rate generator.	1 Kb/s	5	MC68661A	Motorola	
	1Mb/s	5	SCN2661A	◊ Signetics	
			SCN2661B	◊ Signetics	
			SCN2661C	◊ Signetics	
			COM2661	SMC	85
			COM2661-1	SMC	
			COM2661-2	SMC	
			COM2661-3	SMC	

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INTERFACE

INTERFACE—Transmitters-Receivers (Cont'd)

Function	Max Serial Data Rate in kHZ	Supply Voltage, V	Device	Source	Line
EPCI (Enchanced Programmable Communications Interface) Serial/Parallel receiver/transmitter-Synchronous and asynchronous with baud rate generator. (Cont'd)					
	15.6 Kb/s	5	MC68661C	Motorola	
	62.5 Kb/s	5	MC68661B	Motorola	
			SCN68661	◊ Signetics	
EPCI (Enhanced Programmable Communications Interface) Serial/Parallel Receiver/Transmitter, Synchronous and Asynchronous	1 Mb/s	5	26C61	°† SMC	
Facsimile/X.25 Link Controller	1000	5	WD2511F	Western	5
			WD2511G	Western	
HPPI (High Performance Parallel Interface) Destination Interface Circuit	800 Mb/s	5	S2021	AMCC	
HPPI (High Performance Parallel Interface) Source Interface Circuit	800 Mb/s	5	S2020	AMCC	
IBM 3274/3276 Compatible COAX Receiver/Transmitter	2358	5	COM9064	SMC	
Manchester Encoder-Decoder	1000	5	HD6408	◊° Harris	10
			HD6409	◊° Harris	
			HD6409/883	◊† Harris	
			HS15530RH	‡ Harris	
	1250	5	HD15530-9	◊ Harris	
			HD15531-9	Harris	15
			CT15530	Marconi	
Master Digital-Loop Transceiver	80	5	MC145418	Motorola	
			MC145422	Motorola	
	160	5	MC145421	Motorola	
MIL-STD-1553 BC/RTU/MT/Multibus Interface Unit			BUS65508	ILC-DDC	20
MIL-STD-1553 BC/RTU/MT/Unibus Interface Unit			BUS65505	ILC-DDC	
MIL-STD-1553 Bus Controller/RTU/Bus Monitor			BUS65600	ILC-DDC	
MIL-STD-1553 Data Bus Transceiver		5	BUS63100 II	ILC-DDC	
MIL-STD-1553 Data Bus Dual Transceiver		5	BUS63147	ILC-DDC	
MIL-STD-1553 Dumb Remote Terminal Unit (hybrid)			BUS65101 II †	ILC-DDC	25
MIL-STD-1553 Dumb Remote Terminla Unit (Hybrid)	1 Mb/s	5, ± 15	BUS65102 II †	ILC-DDC	
MIL-STD-1553 Manchester Encoder	2 Mb/s	5	BUS1556	ILC-DDC	
MIL-STD-1553 Manchester II Decoder	16 Mb/s	5	BUS1555	ILC-DDC	
MIL-STD-1553 Remote Terminal Interface			UT1760A	UTMC	
			UT63M1	UTMC	30
MIL-STD-1553 Terminal Bit Processor			BUS64100	ILC-DDC	
MIL-STD-1553 to Microprocessor Interface Unit		5	BUS66300 II	ILC-DDC	
MIL-STD-1553 Transceiver	1 Mb/s	5, ± 15	BUS63104 II †	ILC-DDC	
MIL-STD-1553 Dual Redundant Data Bus Transceiver	1 Mb/s	± 12/ ± 15	BUS63125 II †	ILC-DDC	
MIL-STD-1553 Dual Redundant Remote Terminal Hybrid		5	BUS65142	ILC-DDC	35
			BUS65144	ILC-DDC	
MIL-STD-1553 Dual Redundant Remote Terminal Unit			BUS65112	ILC-DDC	
MIL-STD-1553B BC/RTU/MT Q-bus Interface Unit. Supports dual-redundant message formats and mode codes.		5	BUS65512	ILC-DDC	
MIL-STD-1553B Bus Circuit			CT1775	Marconi	

Function	Max Serial Data Rate in kHZ	Supply Voltage, V	Device	Source	Line
MIL-STD-1553B Bus Controller/Remote Terminal/Monitor Transceiver Circuit			MA3690	‡ Marconi	40
			MA3691	‡ Marconi	
MIL-STD-1553B Bus Interface Circuit			CT1800	Marconi	
			CT1801	Marconi	
			CT1820	Marconi	
MIL-STD-1553B Remote Terminal	1250	5	MA805	Marconi	45
MIL-STD-1553B Subsystem Interface Support Circuit			MA8055	Marconi	
MIL-STD-1553B Dual Redundand Remote Terminal Unit (hybrid)			CT2512	Marconi	
MPCC (multi-protocol communications controller) Bit and Byte Oriented	1.25 Mb/s	5	μPD7201A	NEC	
	2 Mb/s	5	MC68652	Motorola	
			MC68652-2	Motorola	50
			SCN68652	◊ Signetics	
Parallel to Serial Interface	—	5 V	CY232	Cybernetic	
	38.4	5	CY233	Cybernetic	
Party Line Bus for Industrial and Data Communications			MC26S10	Motorola	
PCI (Programmable Communications Interface) Serial/parallel receiver/transmitter—synchronous and asynchronous with baud rate generator.	1000 b/s	5	SCN2651C	Signetics	55
			COM2651	SMC	
PCM Line Interface Circuit, with both transmit and receive circuitry.	8.448 MB/s	5	XRT5683	Exar	
PCM Remote Control Transmitter	0.5	5	MC14497	◊ Motorola	
PSART (Programmable Synchronous-Asynchronous Receiver-Transmitter) Serial to parallel and parallel to serial converter that can operate in Full Duplex Mode.	50	5	8251	Intel	
	64	5	μPD8251A	NEC	60
			μPD8251AF	NEC	
			MSM82C51A	OKI	
Receiver/Decoder (Bi-Phase)	3500	5	DP8343	National	
Receiver/Decoder (Bi-Phase, IBM 3270)	—	5	DP8341	National	
Remote Control Decoder, decodes first 5 bits as address and last 4 as data	5.0	5	MC145027	Motorola	65
Remote Control Decoder, 9-bit address	5.0	5	MC145028	◊ Motorola	
Remote Control Encoder, encodes 9 bits of information and transmits serially	5.0	5	MC145026	◊ Motorola	
Remote Terminal Interface Unit (MIL-STD-1553B compliance)			**UT1553B**	**UTMC (3693, 3695)**	
S/T Interface for ISDN	-	5	T7250A	AT&T	
Signalling System No. 7 Link Controller (Q.703)	64	5	WD2507	Western	70
Slave Digital-Loop Transceiver	80	5	MC145419	Motorola	
			MC145426	Motorola	
	160	5	MC145425	Motorola	
Synchronous Data Link Controller, HDLC/SDLC	4000	5	WD1935A	Western	
Synchronous Receiver/Transmitter (Bi-Sync/SDLC)	800	± 5,12	μPD379	NEC	75
Synchronous Serial Data Adaptor	2 Mb/s	5	MC6852	Motorola	
Transceiver, MIL-STD-1553			CT1487	† Marconi	
			CT1589	† Marconi	
			CT2077	† Marconi	
			CT3077	† Marconi	80
			CT3078	† Marconi	

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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INTERFACE—Transmitters-Receivers (Cont'd)

Function	Max Serial Data Rate in kHZ	Supply Voltage, V	Device	Source	Line
Transceiver, MIL-STD-1553				(Cont'd)	
			CT3231	† Marconi	
			CT3232	† Marconi	
Transceiver, MIL-STD-1553A/B					
	1000	± 15			
		± 12	BUS63105 II	† ILC-DDC	
		± 15,5	BUS8553	† ILC-DDC	
Transceiver, RS-232 with Power Supply Generator					
	—	5	LT1130C	LinearTech	5
Transceiver, Serial T1		5	CS2180A	Crystal	
	-	5	DS2180	Dallas	
Transmitter/Decoder (Bi-Phase, IBM 3270)					
	—	5	DP8340	National	
Transmitter/Encoder (Bi-Phase)					
	3500	5	DP8342	National	
UART & Centronics Printer Port					
	56	5	**VL16C451B**	◊ **VLSI Tech (3702)**	10
UART & Centronics Printer Port with FIFO					
	56	5	**VL16C551**	◊ **VLSI Tech (3702)**	
UART, MIL-STD-1553A	1000	5	COM1553B	◊ SMC	
UART (Universal Asynchronous Receiver-Transmitter)					
			TC8570P	Toshiba	
			TC8570F	**Toshiba (3670)**	
			TC8570P	Toshiba	15
UART (Universal Asynchronous Receiver-Transmitter), (complete serial to parallel and parallel to serial interface	625	5	NS82C50	National	
UART (Universal Asynchronous Receiver-Transmitter) (complete serial to parallel and parallel to serial interface)	30	5	AY3-1015D	Microchip	
	38.5	5	SCC2691	◊ Signetics	
	40	5	COM8017	SMC	
			COM8018	SMC	20
	56	5	INS8250	National	
			VL16C450	**VLSI Tech (3702)**	
			WD16C450	Western	
			WD2123	◊ Western	
	60	5	TR1863-00	◊ Western	25
			TR1865-00	◊ Western	
	100	5	CDP1854AC	† Harris	
			HD6406	◊† Harris	
			HD6406-Cell	◊° Harris	
			HS82C52RH	‡ Harris	30
			MD82C52	† Harris	
			82C52	◊† Harris	
			82C52-Cell	◊° Harris	
	150	5	TR1863-02	◊ Western	
			TR1865-02	◊ Western	35
	200	5	CDP6402D	† Harris	
			CDP6402E	Harris	
			HD6402/883	°† Harris	
			TR1863-04	◊ Western	
	800	5	MB8868A	Fujitsu	40
	1000	5	CDP65C51-1	† Harris	
	2000	5	CDP65C51-2	† Harris	
UART with FIFO	56	5	**VL16C550**	◊ **VLSI Tech (3702)**	
UART, Eight Channel Universal					
	50/19.2K		COM78808	◊ SMC	
UNITS (User Network Interface Termination for Switches)	0.192	5	T7252A	AT&T	45
Universal Asynchronous Receiver/Transmitter			**SSI73M450**	**SiliconSys (3647)**	
Universal Asynchronous Receiver/Transmitter (UART)					
		5	UART	°† SMC	
	500	5	HD6402B	Harris	
			HD6402R	Harris	
Universal Data Bus Dumb Remote Terminal Unit (hybrid)			BUS65201 II	† ILC-DDC	50

Function	Max Serial Data Rate in kHZ	Supply Voltage, V	Device	Source	Line
Universal Data Bus Transceiver (hybrid)			BUS63102 II	† ILC-DDC	
USYNRT (universal synchronous receiver/transmitter) Multi-Protocol, Bit and Byte Oriented	1500	5,12	COM5025	SMC	
Variable Transceiver, MIL-STD-1553A/B	1000	± 15,5	BUS8559	† ILC-DDC	
X.25 Packet Network Interface (LAPB)	1100	5, 12	WD2511A	Western	
Dual Asynchronous Receiver/Transmitter	1000	5	MC2682	Motorola	55
Dual MIL-STD-1553B Transceiver			CT2520	Marconi	
			CT2521	Marconi	
Dual MIL-STD-1553B Transceiver, Protocol, Subsystem			CT2525	Marconi	
			CT2526	Marconi	
			CT2527	Marconi	60
			CT2528	Marconi	
			CT2529	Marconi	
Dual Redundant Remote Terminal Interface Unit, MIL-STD-1553B Data Bus			MCT83100	Marconi	
Dual RS-232 Transmitter/Receiver		5	DS1228	◊ Dallas	
			DS232	◊ Dallas	65
			ICL232C	Harris	
			ICL232I	Harris	
			ICL232M	† Harris	
Dual RS-232 Transmitter/Receiver and Power Supply		5	TSC232	TeledyneS	
Dual UART & Centronics Printer Port with FIFO	56	5	**VL16C552**	◊ **VLSI Tech (3702)**	70
Dual UART & Printer Port	56	5	**VL16C452B**	◊ **VLSI Tech (3702)**	
Dual-Redundant Remote Terminal Interface Unit for MIL-STD-1553B	1000	5	MCT83000	Marconi	
Triple RS-232 Transmitter/Receiver		5	DS1229	◊ Dallas	
Octal Asynchronous Receiver/Transmitter	19.2	7	TCM78808	TI	
Octal UART	38.4	5	SCC2698B	◊ Signetics	75

INTERFACE

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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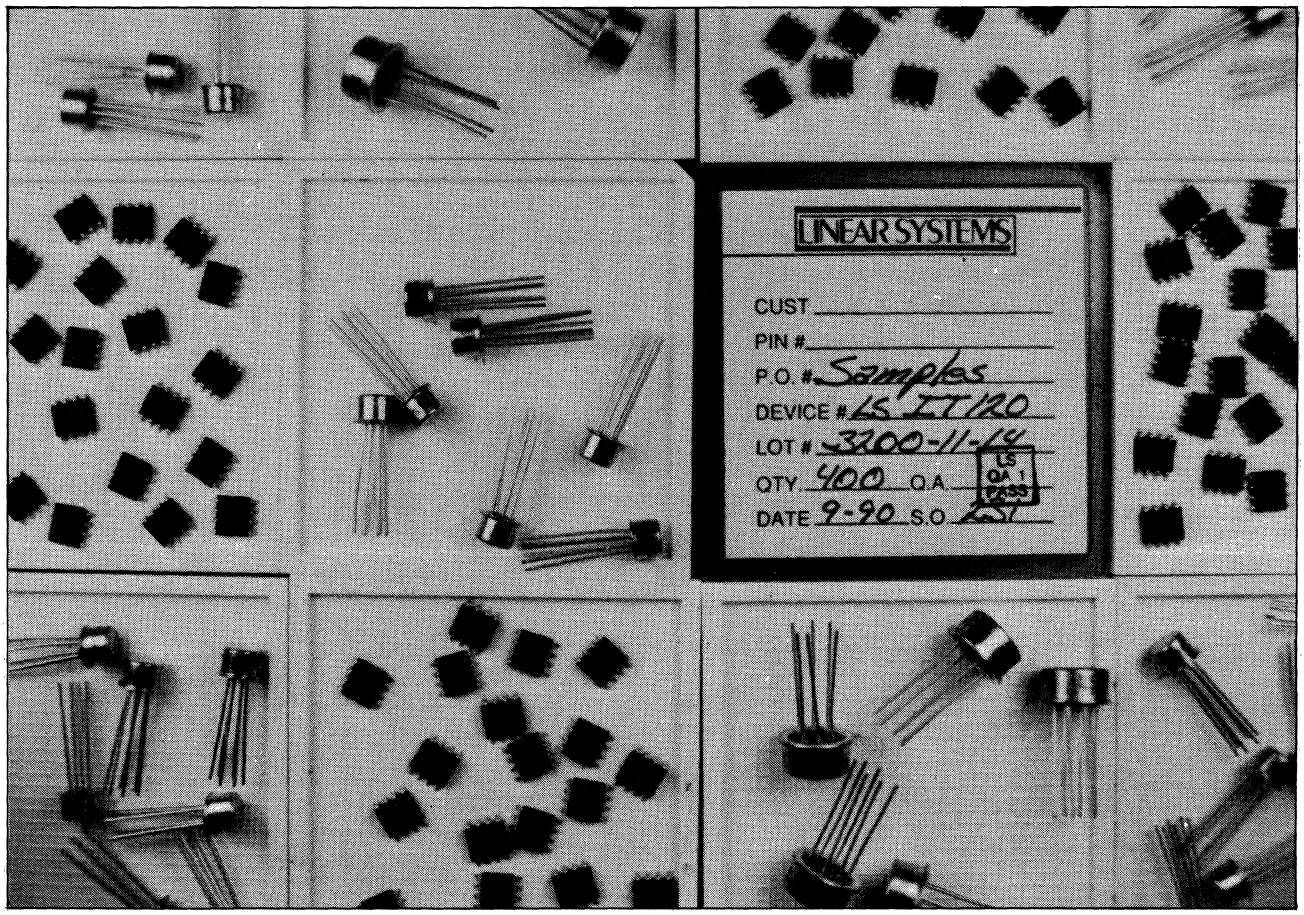

HIGH PERFORMANCE SECOND SOURCE MANUFACTURER

DI 8-Ch. MULTIPLEXER
- 70Vpp Overvoltage Protection
- Dielectric Isolation
- Replaces: Hl 508A

VOLTAGE REFERENCE
- Low Temp Drift
- 1.25 V and 2.5 V
- Replaces: ICL 8069, LT 1004

OPERATIONAL AMPLIFIERS
- Low Noise 3nV√ Hz
- Low Offset 10μV
- Replaces: OP07, 27, 37

LOW LEAKAGE DUAL JFET
- Low Leakage IG = 10 fA
- Low Noise 20 nV √ Hz
- Replaces: AD 830, U421

LOW DRIFT DUAL JFET
- Low Drift 5μV / °C
- Low Offset 5m V
- Replaces: 2N5906 & 2N3954

HI-TRANSCONDUCT JFET
- Low Offset 10m V
- High Gain through 100 M Hz
- Replaces: 2N5911, 2N5564

LOG CONFORMANCE PNP, NPN
- Monolithic Dual Transistors
- Tight VBE Tracking
- Replaces: MAT01, LM394

GENERAL PURPOSE PNP
- Monolithic Dual Transistors
- Tight Matching Characteristics
- Replaces: IT130, 2N3810

GENERAL PURPOSE NPN
- Monolithic Dual Transistors
- Tight Matching Characteristics
- Replaces: IT120, 2N4044

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INTRODUCTION TO LINEAR

The Linear Section includes parameters on over 1100 operational amplifiers. Since there are so many devices, separate lists are provided for those having special characteristics such as High Speed, High Voltage or Wide Bandwidth. If you have located an op amp in a specialized category, you can review its characteristics by finding it in the Part Number or Product Indexes and looking it up in the Operational Amplifier Characteristics Section.

After the special lists, the "Operational Amplifier Characteristics" listings categorize amplifiers by input parameters. They are arranged in order of increasing offset voltage, bias current, offset current and then voltage drift. The column labeled "Comp" indicates the number of external components normally used for compensation; for example "0" means no compensation is required.

Consumer circuits such as audio amplifiers, AM, FM, and TV circuits as well as some digital devices (watches, calculators, etc.) are covered by model number in the Consumer Circuit Section. Linear devices that do not fit in conventional categories are listed under the heading "Other Linear Devices".

Category

Amplifiers, Special Purpose 702
Arrays
  Transistors 705
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Comparators 708
Consumer Circuits 714
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 Selected Characteristics
  High Output Current 729
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LINEAR—Amplifiers, Special Purpose

Function	Device	Source	Line
AF Power Amplifier, Two Channels (10 W)	LA4280	Sanyo	
AF Power Amplifier (3.5 W)	LA4265	Sanyo	
AGC Amplifier, Low Distortion (adjustable attack, release time and threshold voltage)	LC403	Gennum	
	LD403	† Gennum	
AGC Generator, for SSB Receivers	SL621C	Plessey	5
AGC Generator (voice operated gain adjusting device)	SL620C	Plessey	
	SL6270	◊ Plessey	
Amplifier, Half-Bridge (3 A output)	UC3176	Unitrode	
Amplifier, Loudspeaker	TEA7031	SGS-Thomson	
Amplifier, Microphone	SL792	Plessey	10
	SL793	Plessey	
Amplifier, Microphone (for telephone circuits)	ZN470AE	Plessey	
	ZN472E	Plessey	
	ZN475E	Plessey	
	ZN476E	Plessey	15
	ZN477E	Plessey	
	ZN478E	Plessey	
Amplifier, Sample and Hold	**VA730J**	**VTC (3713)**	
Amplifier with Photodiode	TFA1001W	Siemens	
Amplifier, Dual Control	MB3110A	Fujitsu	20
Analog Multiplier, Two Quadrant	HA2546	Harris	
Audio Amplifier with Three NPN Transistors	LM389	National	
Audio Power Amplifier, Dual (5.8W)	MB3722	Fujitsu	
Audio Power Amplifier (6W)	MB3714A	Fujitsu	
	MB3715A	Fujitsu	25
Audio Power Amplifier (14W BTL)	MB3730A	Fujitsu	
Audio Power Amplifier (15W BTL)	MB3736	Fujitsu	
Audio Power Amplifier (18W BTL)	MB3731	Fujitsu	
Audio Power Amplifier (20W BTL)	MB3733	Fujitsu	
	MB3735	Fujitsu	30
Audio Power Amplifier (25W BTL)	MB3737	Fujitsu	
BTL Power Amplifier, Two Channels (12 W)	LA4700	Sanyo	
Buffer Amplifier	LM6121	† National	
	LM6125	† National	
	LM6221	National	35
	LM6225	National	
	LM6321	National	
	LM6325	National	
Buffer Amplifier, Closed-Loop (750 MHz)	AD9630	AD	
Buffer Amplifier, Fast FET	LH4010	† National	
	LH4010C	National	40
Buffer Amplifier, FET-Input	LH4033C	National	
	LH4063C	National	
Buffer Amplifier, Industrial Process Control (1500V Isolation)	**ISO102**	**Burr-Brown (3336)**	
Buffer Amplifier, Industrial Process Control (3500V Isolation)	**ISO106**	**Burr-Brown (3336)**	45
Buffer Amplifier, Precision RF Closed Loop	LH4003	† National	
	LH4003C	National	
	LH4006	† National	
	LH4006C	National	
Buffer Amplifier, Unity Gain, Wideband	LH4001	National	50
Buffer Amplifier, Wide Bandwidth	HOS200A	AD	
	HOS200S	† AD	
Buffer Amplifier, Wideband	LH4002	† National	
	LH4002C	National	
Buffer Amplifier, Wideband FET-Input	LH4004	† National	55
	LH4004C	National	
Buffer Amplifier, Wideband, High Slew Rate	HA5002-2	◊† Harris	
	HA5002-5	◊ Harris	
	HA5033-2	◊† Harris	
	HA5033-5	◊ Harris	60
Buffer Amplifier (500 MHz, slew rate 5000 V/μs)	EL2031	Elantec	
	EL2031C	Elantec	
Buffer Amplifier, 600 Mhz	AD9620	AD	
Class A Amplifier (with 3 independent gain blocks and schottky diodes)	LS509	Gennum	
Compression Amplifier	LD512	Gennum	65
Current Amplifier (unity gain, 100 mA output)	3329	† Burr-Brown	
	ELH0002	◊† Elantec	
	ELH0002C	◊ Elantec	
	HA5033	† Harris	
	LH0002	◊‡ National	70
	LH0002C	◊ National	
	CLH0002	† TeledyneS	
Current Amplifier (unity gain, 150 mA output)	LT1010C	LinearTech	
	LT1010M	† LinearTech	
Current Amplifier (unity gain, 200 mA output)	**3553**	**† Burr-Brown (3331, 3333)**	75
	BB3553	† Maxim	
Current Amplifier (unity gain, 500 mA output)	9911	OEI	
Current Amplifier (wideband, 100 mA output)	HOS100AH	AD	
	HOS199SH	† AD	
Current Booster, 100 mA Output (for op amp)	2035	† TeledyneS	80
Current Feedback Amplifier, 100 MHz	HA5004/883	† Harris	
DAS (programmable gain, track and hold) Data Acquisition Amplifier (prog. gain, track and hold)	**AD365**	**AD (3250)**	
Data Acquisition System, (programmable gain, track and hold)	**AD367**	**AD (3259)**	
Differential Amplifier (Gain is Fixed, A = 10)	**INA106B**	**Burr-Brown (3334)**	
	INA106K	**Burr-Brown (3334)**	85
Differential Amplifier (Instrumentation Amp. Building Block)	**INA105A**	**Burr-Brown (3334)**	
	INA105B	**Burr-Brown (3334)**	
	INA105K	**Burr-Brown (3334)**	
	INA105U	**Burr-Brown (3334)**	
Differential Amplifier, Unity Gain	**AMP03**	**AD (3250)**	90
	INA117	**Burr-Brown (3334)**	
Differential/Cascode Amplifier (dc to rf)	CA3028A	† Harris	
	CA3028B	† Harris	
	CA3053	† Harris	
Differential Input/Differential Output Amplifier (bandwidth less than 2 MHz)	MC1590	† Motorola	95
Differential/Video Amplifier	CLC103AM	† Comlinear	
	LM592	National	
Differential Video Amplifier, 120 MHz Bandwidth, Adjustable Gain	μA592C	National	
	μA592M	† National	
Fast Buffer	LH4008	National	100
	LH4008C	National	
	LH4009	National	
	LH4009C	National	
Fast Open Loop Buffer	LH4011	National	
	LH4011C	National	105
Fiber Optic Receiver Amplifier	LH0082	† National	
	LH0082C	National	
Floppy Disk Read Amplifier System	XR3470A	◊ Exar	
	XR3470B	◊ Exar	
	MC3470	◊ Motorola	110
	MC3470A	◊ Motorola	
	MC3470	TI	
Floppy Disk Read-Chain Data	TL712	◊ TI	
Floppy Disk Read-Chain Data Comparator with MECL III and MECL 1000	TL721	◊ TI	
Floppy Disk Write Amplifier	XR2247	Exar	115
GaAs FET Amplifier (500 kHz to 1 GHz)	LH4200	National	
GaAs FET RF Amplifier	LH4201	National	
Instrumentation Amplifier	**AMP02**	**AD (3250)**	
	INA102	**Burr-Brown (3334)**	
Instrumentation Amplifier (digitally controlled programmable gain)	**PGA203**	**Burr-Brown (3335)**	120
Instrumentation Amplifier (digitally-controlled programmable gain)	**PGA202**	**Burr-Brown (3335)**	
Instrumentation Amplifier (fixed gain = 10 or 100)	LT1101AC	LinearTech	
	LT1101AM	† LinearTech	
	LT1101C	LinearTech	
	LT1101M	† LinearTech	125
Instrumentation Amplifier (for microphone preamplifier)	**INA103**	**Burr-Brown (3334)**	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Amplifiers, Special Purpose (Cont'd)

Function	Device	Source	Line
Instrumentation Amplifier (low noise,low distortion)			
	INA103A	**Burr-Brown (3334)**	
	INA103B	**Burr-Brown (3334)**	
	INA103G	**Burr-Brown (3334)**	
Instrumentation Amplifier, Precision			
	INA106VG/883B	**† Burr-Brown (3334)**	
	INA120	Burr-Brown	5
Instrumentation Amplifier (programmable gain)			
	AM551MC	**Datel (3360)**	
	AM551MM	**Datel (3360)**	
Instrumentation (commutating auto zero)			
	ICL7605C	Harris	
	ICL7605M	† Harris	
	ICL7606C	Harris	10
	ICL7606M	† Harris	
Instrumentation, (different input, independent gain adjustment)	**AMP01**	**‡ AD (3250)**	
Instrumentation, (differential input, independent gain adjustment)	**AD521J**	**AD (3250)**	
	AD521K	**AD (3250)**	
	AD521L	**AD (3250)**	15
	AD521S	**† AD (3250)**	
	AD522A	**AD (3218)**	
	AD522B	**AD (3250)**	
	AD522S	**† AD (3250)**	
	AD625	**AD (3250)**	20
	AMP05	**† AD (3250)**	
	INA101	**Burr-Brown (3334)**	
	INA104	**Burr-Brown (3334)**	
	INA105	**Burr-Brown (3334)**	
	3630A	Burr-Brown	25
	3630B	Burr-Brown	
	3630C	Burr-Brown	
	3630S	Burr-Brown	
	MN2200	**MicroNet (3548)**	
	MN2200H	**† MicroNet (3548)**	30
	LH0036	† National	
	LH0036C	National	
	LH0038	† National	
	LH0038C	National	
	LM363	National	35
	LM363A	† National	
Instrumentation, Digitally Programmable Gain			
	PGA100A	**Burr-Brown (3335)**	
	PGA100B	**Burr-Brown (3335)**	
	PGA102	**Burr-Brown (3335)**	
	PGA200	**Burr-Brown (3335)**	40
	PGA201	Burr-Brown	
	LH0084	† National	
	LH0084C	National	
	LH0086	† National	
	LH0086C	National	45
Instrumentation, Fast-Settling FET-Input			
	INA110A	**Burr-Brown (3334)**	
	INA110B	**Burr-Brown (3334)**	
	INA110K	**Burr-Brown (3334)**	
	INA110S	**† Burr-Brown (3334)**	
Instrumentation, Pin Programmable Gain			
	AD624A	**AD (3250)**	50
	AD624B	**AD (3250)**	
	AD624C	**AD (3250)**	
	AD624S	**† AD (3250)**	

Function	Device	Source	Line
Instrumentation (unity gain)			
	3627	**Burr-Brown (3334)**	
IR Remote Control Amplifier for TV Receivers			
	CA3237	Harris	55
Isolation Amplifier			
	AD202	**AD (3250)**	
	AD204	**AD (3250)**	
	281	**AD (3250)**	
	290A	**AD (3250)**	
	292A	**AD (3250)**	60
	MP227	Analogic	
Isolation Amplifier (medical uses)			
	284J	**AD (3250)**	
	286J	**AD (3250)**	
Isolation Amplifier, Optically Coupled			
	ISO100AP	**Burr-Brown (3336)**	
	3650HG	**Burr-Brown (3336)**	65
	3652HG	**Burr-Brown (3336)**	
Isolation Amplifier, Transformer Coupled			
	AD295	**AD (3250)**	
	3456	Burr-Brown	
	3656AG	**Burr-Brown (3336)**	
Isolation Amplifier, Wide Bandwidth (2000V peak isolation)	**AD203**	**AD (3250)**	70
Isolation Amplifier (wideband)			
	289	**AD (3250)**	
Isolation Amplifier, Three-Port (Nonlinearity to 0.025% maximum)	**AD210A**	**AD (3250)**	
	AD210B	**AD (3250)**	
Isolation Amplifier, 12-Bit			
	ISO212J	**Burr-Brown (3336)**	
	ISO212K	**Burr-Brown (3336)**	75
Isolation Amplifier (1000 Vdc)			
	AM227	Datel	
	SCM100A	Datel	
	SCM101	Datel	
Isolation Amplifier (2500V)			
	ISO100	**Burr-Brown (3336)**	
Isolation Amplifier (3400V)			
	ISO103	**Burr-Brown (3337)**	80
	ISO108	**Burr-Brown (3338)**	
	ISO113	**Burr-Brown (3337)**	
	ISO122	**Burr-Brown (3336)**	
Isolation Amplifier (3535V)			
	ISO120	**Burr-Brown (3336)**	
Isolation Amplifier (5600V)			
	ISO107	**Burr-Brown (3337)**	85
	ISO121	**Burr-Brown (3336)**	
Isolation Amplifier (750V isolation)			
	52046	† Micropac	
Linear, AGC Amplifier			
	gc413	Gennum	
Linear, High Gain current Drive Class B Amplifier			
	GC553	Gennum	
Log Amplifier, Bipolar (module)			
	2531A	OEI	90
Log amplifier, wideband.			
	2930	OEI	

Function	Device	Source	Line
Log/Antilog Amplifier, (antilog)			
	SSM2100	**AD (3251)**	
	ICL8049C	Harris	
	2910	† OEI	
	2920	OEI	95
Log/Antilog Amplifier, (log)			
	4127	**Burr-Brown (3339)**	
	ICL8048C	Harris	
	2910	† OEI	
	2920	OEI	
Log/Antilog Amplifier, 6 Decade			
	757	**AD (3251)**	100
Log/Log Ratio Amplifier			
	LOG100	**Burr-Brown (3339)**	
Logarithmic Amplifier (dc to 120 MHz bandwidth)			
	AD640	**AD (3251)**	
Logarithmic Amplifier (4–30 dB stages)			
	TL441AM	† TI	
Logarithmic Amplifier (25 MHz sideband)			
	AD9521	**AD (3251)**	
Low Noise, Low Level, Chopper Stabilized Amplifier			
	MP221	Analogic	105
Low Voltage, Class A, <1.6V, peak clipping			
	LR505	Gennum	
	LS505	Gennum	
	LT505	Gennum	
Low Voltage, Class A, <3V			
	LC505	Gennum	
	LC506	Gennum	110
	LC507	Gennum	
	LD505	Gennum	
	LE507	Gennum	
	LV506	Gennum	
Low Voltage, Class A, <3V, compression			
	LD501	Gennum	115
	LD502	Gennum	
	LD511	Gennum	
Low Voltage, Class A, 1 to 10V			
	LC508	Gennum	
	LP508	Gennum	
Low Voltage, Class B, <3V			
	LC549	Gennum	120
	LC550	Gennum	
	LC551	Gennum	
	LC552	Gennum	
	LD549	Gennum	
	LV549	Gennum	125
Microphone Amplifier, Buffer Amplifier for Electret Microphones	ZN482Z	Plessey	
Microphone Amplifier (for microphones in telephones)			
	U446	AEG Corp	
	U646	AEG Corp	
	U647	AEG Corp	
Microphone Amplifier, Telecom Electret			
	PBL3747	Ericsson	130
Microphone/Headphone Amplifier			
	SL6310	◊ Plessey	
Microphone Preamplifier			
	SSM2015	**AD (3249)**	
	SSM2016	**AD (3249)**	
Microwave, 7 dB, 1–8 GHz			
	TQ9111	TriQuint	
Mixer (to 200 MHz)			
	S042	Siemens	135
Monolithic Microwave IC Amplifier (MMIC, 0.5 to 5 GHz)			
	HMR10502	Harris	
Monolithic Microwave IC Amplifier (MMIC, 1 to 5 GHz)			
	HMR10503	Harris	
Monolithic Microwave IC Amplifier (MMIC, 6 to 18 GHz)			
	HMM11810	Harris	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Amplifiers, Special Purpose (Cont'd)

Function	Device	Source	Line
Norton Amplifier, Dual, High-Speed, Programmable	LM359	National	
Operational Amplifier/Voltage Comparator, Dual	LM2924	National	
	LM392	National	
Operational Amplifier, Dual with Dual Voltage Comparator	MC3405	Motorola	
	MC3505	† Motorola	5
Power Amplifier, AF (28W)	μPC1318AV	NEC	
Power Amplifier, AF (45W)	μPC2500H	NEC	
Power Amplifier, Bridge (20 W)	ULN3793W	Allegro Micro	
Power Amplifier (50 watt for automotive and entertainment applications)	TDA2025	Siemens	
Preamplifier, for IR Remote Control	TDA2320	SGS-Thomson	10
Preamplifier, for Ultrasonic Remote Control	TDA3047	Signetics	
Preamplifier, Infrared (74 dB gain, 100 kHz bandwidth)	TDA4050B	Siemens	
Preamplifier, Low Noise (35 dB gain, 100 MHz bandwidth)	AH0013CA	OEI	
	AH0013CB	OEI	
	AH0013MA	† OEI	15
Preamplifier, Precision (to precede operational amplifiers)	LM121	† National	
	LM121A	† National	
	LM221	National	
	LM221A	National	
	LM321	National	20
	LM321A	National	
Preamplifier, Dual Low-Noise	MB3106	Fujitsu	
Preamplifier, Quad	MB43458	Fujitsu	
	MB43468	Fujitsu	
Programmable Channel Op Amp (one of 4 input stages can be connected to single output)	HA2400	◊† Harris	25
	HA2404	Harris	
	HA2405	Harris	
	HA2406-5	Harris	
Programmable Curve Fitting Amplifier (six programmable gain slopes)	51934	† Micropac	
Programmable Gain Amplifier, Digitally Controlled Amplifier Array	MX009	MX-COM	30
Programmable Gain Amplifier (digitally controlled gain)	**3606**	**Burr-Brown (3335)**	
	MN2020	**MicroNet (3548)**	
	HS2020	Sipex-HSD	
Programmable Gain Amplifier, 8-Channel	PGA100	Maxim	
Read Amplifier/Preamplifier (for magnetic tape memory systems)	MC3467	Motorola	35
RF Amplifier, Gated	MC1445	Motorola	
	MC1545	† Motorola	
RF Amplifier, Low Voltage, Wideband	LA910	Gennum	
RF Amplifier, Wideband	LH4118	National	
	LH4118A	National	40
	LH4118C	National	
RF Amplifiers, Hybrids for Cellular Radio	NHW720A	Motorola	

Function	Device	Source	Line
Signal Sources Switch, (buffer amplifiers with input switches)	TDA1029	Signetics	
Telephone audio	MC34119	Motorola	
Thermocouple Amplifier with Cold Junction Compensation	**AD594A**	**AD (3253)**	45
	AD594C	**AD (3253)**	
	AD595A	**AD (3253)**	
	AD595C	**AD (3253)**	
Video Amplifier, Dual (drives 75 ohm loads with 3dB bandwidth of 70 MHz)	MAX457C	Maxim	
	MAX457M	† Maxim	50
Video, Differential with AGC	MC1445	TI	
	TL026C	TI	
	TL027C	TI	
	TL027M	† TI	
Video, IF and RF Amplifiers	CLC100	Comlinear	55
	CLC102	Comlinear	
	CLC104AI	Comlinear	
	CLC104AM	† Comlinear	
	CLC200AM	† Comlinear	
	CLC220AM	† Comlinear	60
	CA3011	† Harris	
	CA3020A	Harris	
	MC1733	† Motorola	
	MC1733C	Motorola	
	NE592	Motorola	65
	μA733C	National	
	μA733M	† National	
	LM733	‡ National	
	LM733C	‡ National	
	μPC1651	NEC	70
	μPC1652	NEC	
	μPC1655	NEC	
	μPC1656	NEC	
	μPC1658	NEC	
	μPC1659	NEC	75
	SL1550	Plessey	
	SL541	Plessey	
	SL550	Plessey	
	SL560	Plessey	
	SL610C	Plessey	80
	SL611C	Plessey	
	SL612C	Plessey	
	μA733	† Signetics	
	μA733C	Signetics	
	NE5205	Signetics	85
	NE5592	Signetics	
	NE592	Signetics	
	SE592	† Signetics	
	TDA4501	Signetics	
	TDA4502	Signetics	90
	SG1401	**◊† SiliconG (3643)**	
	SG2401	◊ SiliconG	
	SG3401	◊ SiliconG	
	μA733C	TI	
	μA733M	† TI	95
	NE592	TI	
	NE592A	TI	
	TL592	◊ TI	
	TL592A	◊ TI	
	TL592B	◊ TI	100
Video Line Driver	EL2003	◊‡ Elantec	
	EL2003H	◊† Elantec	
	EL2003H-8	◊† Elantec	
Video, 2-Channel Multiplexed	TL040C	TI	
Voltage Controlled Amplifier	**SSM2013**	**AD (3262)**	105
	SSM2014	**AD (3262)**	

Function	Device	Source	Line
Wideband Amplifier, Logarithmic	SL1613	Plessey	
Wideband Amplifier, Logarithmic Limiting (4 to 500 MHz)	SL1531	Plessey	
	SL1532	Plessey	
	SL531C	◊ Plessey	110
	SL532C	◊ Plessey	
Wideband Amplifier/Multiplier (four-quadrant multipliers for use as a variable gain amplifier)	**SG1402**	**† SiliconG (3643)**	
	SG2402	SiliconG	
	SG3402	SiliconG	
Wideband Amplifier (up to 1 GHz)	SL565C	Plessey	115
Wideband Amplifier with Low Level Video Detection (7 to 200 MHz for log IF amplifiers)	SL1521	† Plessey	
	SL1522	Plessey	
	SL1523	Plessey	
	SL1524	Plessey	
	SL1525	Plessey	120
	SL521	Plessey	
	SL523	Plessey	
Wideband Amplifier, Dual Logarithmetic (30 to 1300 MHz)	SAL8002	STC	
Wideband Buffer	LH4012	National	
	LH4012C	National	125
Quad Current Controlled Amplifier	**SSM2024**	**AD (3262)**	
Octal Programmable Gain Amplifier (gains from 1 to 128)	AD75068	AD	
Two Wire Transmitter (Sends current signal over same two lines from which it is powered.)	XTR100AM	† Burr-Brown	
	XTR100AP	Burr-Brown	
	XTR100BM	† Burr-Brown	130
	XTR100BP	Burr-Brown	
	XTR101	**Burr-Brown (3335)**	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Arrays

Transistor Arrays

Function	Device	Source
Darlington Pair and Two Matched NPN Transistors	CA3018	† Harris
	CA3018A	† Harris
Darlington Transistor Array, Five-Unit	IR3403	Sharp
Darlington Transistor Array, Six-Unit (400 mA)	IR2415	Sharp
	IR2419	Sharp
Darlington Transistor Array, Seven-Unit (400 mA)	IR2422	Sharp
Darlington Transistors	IR2403	Sharp
	IR2405	Sharp
	IR2410	Sharp
	IR2411	Sharp
Differential Pair and Three NPN Transistors	ULN2046A	Allegro Micro
	ULN2086A	Allegro Micro
	CA3045	† Harris
	CA3046	† Harris
	CA3086	† Harris
	CA3146	Harris
	CA3146A	Harris
	MC3346	† Motorola
	MC3386	† Motorola
	LM3045	† National
	LM3046	National
	LM3086	National
	LM3146	National
	SL3045	† Plessey
	SL3046	Plessey
	SL3145	◊† Plessey
	CA3046	† SGS-Thomson
	LM3045	† SGS-Thomson
	LM3046	◊ SGS-Thomson
	SG3045	◊ SiliconG
	SG3046	**◊ SiliconG (3643)**
	SG3086	**◊† SiliconG (3643)**
	SG3821	**◊ SiliconG (3643)**
GaAs, Single-gate D-MESFETs, 9 single, 1 dual	16G020	GigaBit
GaAs, Dual-gate D-MESFETs, 8 single	16G021	GigaBit
NPN Quad, to 350 MHz	EN2016	◊ Elantec
PNP Matched Pair, Dual Low-Noise	**MAT03**	**AD (3239)**
PNP Quad, to 350 MHz	EP2015	◊† Elantec
Thirty-Two Circuit High-Voltage MOS, Built-In Logic, 250 V	LZ1032AM	Sharp
	LZ1134R	Sharp
	LZ1232M	Sharp
Transistor Array	IR2C17	Sharp
	IR2C19	Sharp
	IR2C30	Sharp
	IR2C32	Sharp
	IR2C33	Sharp
	IR2425	Sharp
	IR2426	Sharp
	IR2427	Sharp
	IR2428	Sharp
Transistor Array, Quad (400 mA)	IR2C26	Sharp
Transistor Array, Four-Unit 1.5 A Darlington with Clamp Diode	M54532	Mitsubishi
Transistor Array, Four-Unit 1.5A Darlington with Clamp Diode	M54567	Mitsubishi
Transistor Array, Six-Unit 320 mA with Clamp Diode and Stroke	M54533	Mitsubishi
	M54534	Mitsubishi
Transistor Array, Six-Unit 700 mA wtih Clamp Diode	M54539	Mitsubishi
Transistor Array, Seven-Unit 50 mA	M54514A	Mitsubishi
Transistor Array, Seven-Unit (60 mA)	IR2C32A	Sharp
Transistor Array, Seven-Unit (120 mA)	IR2C38	Sharp
Transistor Array, Seven-Unit (150 mA)	IR2416	Sharp
Transistor Array, Seven-Unit 150 mA Darlington	M54580	Mitsubishi
Transistor Array, Seven-Unit 300 mA Darlington	M54561	Mitsubishi
Transistor Array, Seven-Unit 350 mA	M54537	Mitsubishi
Transistor Array, Seven-Unit 350 mA and Motor Driver	M54538	Mitsubishi
Transistor Array, Seven-Unit 400 mA Darlington	M54566	Mitsubishi
Transistor Array, Seven-Unit 500 mA Darlington with Clamp Diode	M54523	Mitsubishi
	M54524	Mitsubishi
Transistor Array, Seven-Unit 150 mA with Clamp Diode and Stroke	M54536	Mitsubishi
Transistor Array, Eight-Unit 30 mA PNP	M54569	Mitsubishi
Transistor Array, Eight-Unit 50 mA	M54513	Mitsubishi
Transistor Array, Eight-Unit 400 mA Darlington with Clamp Diode	M54522	Mitsubishi
Transistor Array, Eight-Unit 500 mA Darlington with Clamp Diode	M54562	Mitsubishi
	M54563	Mitsubishi
	M54581	Mitsubishi
	M54585	Mitsubishi
	M54590	Mitsubishi
	M54598	Mitsubishi
	M54660	Mitsubishi
Dual Audio Matched NPN Transistor Pair.	**SSM2210**	**AD (3239)**
Dual Audio Matched PNP Transistor Pair.	**SSM2220**	**AD (3239)**
Dual Darlington (NPN-PNP quasi complementary)	TDA1410	AEG Corp
Dual Differential Amplifiers (NPN), to 120 MHz	CA3026	Harris
	CA3054	Harris
	CA3054	Motorola
Dual Differential Amplifiers (NPN), to 500 MHz	CA3049	† Harris
	CA3102	† Harris
Dual Transistors (f_t>5 GHz)	SL2363C	Plessey
	SL2364C	◊ Plessey
Dual Transistors, Monolithic NPN, Logarithmic Conformance	**MAT01A**	**‡ AD (3239)**
	MAT01G	**† AD (3239)**
Dual Transistors, Monolithic NPN, Tightly Matched, Low Noise	**MAT02A**	**† AD (3239)**
	MAT02B	**◊† AD (3239)**
	MAT02E	**AD (3239)**
	MAT02F	**AD (3239)**
Dual Transistors, Monolithic NPN Tightly Matched	LM194	† National
	LM394	National
	SL301L	Plessey
	SL360	Plessey
	SL362	Plessey
Quad Darlington Switch	**ULN2064**	**Allegro Micro (3206)**
	ULN2065	**Allegro Micro (3206)**
	ULN2068	**Allegro Micro (3206)**
	ULN2069	**Allegro Micro (3206)**
	ULN2074	**Allegro Micro (3206)**
	ULN2075	**Allegro Micro (3206)**
	ULN2068	Motorola
	ULN2074	Motorola
	L702	SGS-Thomson
	SG2064	**◊† SiliconG (3642)**
	SG2065	**◊† SiliconG (3642)**
	SG2066	**◊† SiliconG (3642)**
	SG2067	**◊† SiliconG (3642)**
	SG2068	**◊† SiliconG (3642)**
	SG2069	**◊† SiliconG (3642)**
	SG2070	**◊† SiliconG (3642)**
	SG2074	**◊† SiliconG (3642)**
	SG2075	**◊† SiliconG (3642)**
	SG2076	**◊† SiliconG (3642)**
	SG2077	**◊† SiliconG (3642)**
Quad Schottky Array	UC1611	Unitrode
	UC2611	Unitrode
	UC3611	Unitrode
Hex NPN Darlington	LB1274	Sanyo
Two NPN and One PNP Transistor	LM195	† Unitrode
	LM395	Unitrode
Three NPN and two PNP Transistors	CA3096	† Harris
	CA3096A	† Harris
	CA3096C	† Harris
Four General Purpose NPN	NJD6506	NJR
	NJD6507	NJR
Four High Current NPN Transistors (core driver)	TPQ3724	Allegro Micro
	TPQ3725	Allegro Micro
	TPQ3725A	Allegro Micro
Four NPN Transistors	IR2C34	Sharp
Five High Current NPN Transistors	ULN2083A	Allegro Micro
	CA3183	† Harris
	CA3183A	Harris
	SG3083	◊† SiliconG
	SG3183	**◊† SiliconG (3643)**
	SG3183A	**◊† SiliconG (3643)**
Five High Frequency NPN Transistors, (f_t>5 GHz)	CA3127	Harris
	CA3227	Harris
	CA3246	Harris
	SL3127	◊ Plessey
Five High Voltage, High Current NPN Darlington Amplifiers, Source, for Load Connected to Negative Supply	UDN2957A	Allegro Micro
	LB1287	Sanyo
	LB1288	Sanyo
Five Low-Noise NPN Transistors	LS159	SGS-Thomson
Six Inverted Darlingtons	IR2C05	Sharp
	IR2C06	Sharp
Six NPN Darlingtons	LB1272	Sanyo
	LB1273R	Sanyo

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Arrays (Cont'd)

Transistor Arrays (Cont'd)

Function	Device	Source
Six NPN Transistors		
	IR2C23	Sharp
	IR2C24	Sharp
Seven High Current, High Voltage Darlington Drivers		
	DS2001	National
	DS2002	National
	DS2002M	† National
	DS2003	National
	DS2003M	† National
	DS2004	National
	DS2004M	† National
Seven High Current, High Voltage, NPN Darlington Amplifiers, Open Collector, to 50 V, 500 mA		
	ULN2001	◊ Allegro Micro
	ULN2002	◊ Allegro Micro
	ULN2003	◊ Allegro Micro
	ULN2004	◊ Allegro Micro
	ULN2005	Allegro Micro
	ULN2011A	Allegro Micro
	ULN2012A	Allegro Micro
	ULN2013A	Allegro Micro
	ULN2014A	Allegro Micro
	ULN2015A	Allegro Micro
	ULN2021	◊ Allegro Micro
	ULN2022	◊ Allegro Micro
	ULN2023	◊ Allegro Micro
	ULN2024	◊ Allegro Micro
	ULN2025	◊ Allegro Micro
	ULN7003A	**Allegro Micro (3206)**
	ULN7004A	**Allegro Micro (3206)**
	ULS2001	† Allegro Micro
	ULS2002	† Allegro Micro
	ULS2003	† Allegro Micro
	ULS2004	† Allegro Micro
	ULS2005	† Allegro Micro
	ULS2011	† Allegro Micro
	ULS2012	† Allegro Micro
	ULS2013	† Allegro Micro
	ULS2014	† Allegro Micro
	ULS2015	† Allegro Micro
	ULS2021	† Allegro Micro
	ULS2022	† Allegro Micro
	ULS2023	† Allegro Micro
	ULS2024	† Allegro Micro
	ULS2025	† Allegro Micro
	XR2001C	Exar
	XR2002C	Exar
	XR2003C	Exar
	XR2004C	Exar
	XR2011C	Exar
	XR2012C	Exar
	XR2013C	Exar
	XR2014C	Exar
	XR2201	◊ Exar
	XR2201M	◊† Exar
	XR2202	◊ Exar
	XR2202M	◊† Exar
	XR2203	◊ Exar
	XR2203M	◊† Exar
	XR2204	◊ Exar
	XR2204M	◊† Exar
	MC1411	Motorola
	MC1412	Motorola
	MC1413	Motorola
	MC1416	Motorola
	μA9665C	National
	μA9666C	National
	μA9666M	† National
	μA9667C	National
	μA9667M	† National
	μA9668C	National
	μA9668M	† National
	SG2001	**◊† SiliconG (3643)**

(Continued)

Function	Device	Source
Seven High Current, High Voltage, NPN Darlington Amplifiers, Open Collector, to 50 V, 500 mA (Cont'd)		
	SG2002	**◊† SiliconG (3643)**
	SG2003	**◊† SiliconG (3643)**
Seven High Voltage NPN Darlington		
	NJD6511	NJR
	NJD6512	NJR
	NJD6513	NJR
	NJD6514	NJR
Seven NPN Darlingtons		
	LB1275	Sanyo
	IR2C03	Sharp
	IR2C20	Sharp
Seven NPN Transistors		
	IR2C35	Sharp
	IR2C36	Sharp
Eight High Current, High Voltage NPN Darlington Amplifiers, Current Source		
	UDN2981A	**Allegro Micro (3206)**
	UDN2982A	Allegro Micro
	UDN2983A	Allegro Micro
	UDN2984A	**Allegro Micro (3206)**
	UDS2981	† Allegro Micro
	UDS2982	† Allegro Micro
	UDS2983	† Allegro Micro
	UDS2984	† Allegro Micro
	ULN2801	◊ Allegro Micro
	ULN2802	◊ Allegro Micro
	ULN2803	◊ Allegro Micro
	ULN2804	◊ Allegro Micro
	ULN2805	◊ Allegro Micro
	ULN2811A	Allegro Micro
	ULN2812A	Allegro Micro
	ULN2813A	Allegro Micro
	ULN2814A	Allegro Micro
	ULN2815A	Allegro Micro
	ULN2821	◊ Allegro Micro
	ULN2822	◊ Allegro Micro
	ULN2823	◊ Allegro Micro
	ULN2824	◊ Allegro Micro
	ULN2825	◊ Allegro Micro
	ULS2801	† Allegro Micro
	ULS2802	† Allegro Micro
	ULS2803	† Allegro Micro
	ULS2804	† Allegro Micro
	ULS2805	† Allegro Micro
	ULS2811	† Allegro Micro
	ULS2812	† Allegro Micro
	ULS2813	† Allegro Micro
	ULS2814	† Allegro Micro
	ULS2815	† Allegro Micro
	ULS2821	† Allegro Micro
	ULS2822	† Allegro Micro
	ULS2823	† Allegro Micro
	ULS2824	† Allegro Micro
	ULS2825	† Allegro Micro
	PBD3538-11	Ericsson
	L601	SGS-Thomson
	L602	SGS-Thomson
	L603	SGS-Thomson
	L604	SGS-Thomson
Eight High Current, High Voltage NPN Darlington Transistors, 500 mA		
	M2580	Mitsubishi
Eight High Voltage, Medium Current NPN Darlington Amplifiers	**SG2801**	**◊† SiliconG (3642)**
	SG2802	**◊† SiliconG (3642)**
	SG2803	**◊† SiliconG (3642)**
	SG2804	**◊† SiliconG (3642)**
	SG2805	**◊† SiliconG (3642)**
	SG2811	**◊† SiliconG (3642)**
	SG2812	**◊† SiliconG (3642)**
	SG2813	**◊† SiliconG (3642)**
	SG2814	**◊† SiliconG (3642)**

(Continued)

Function	Device	Source
Eight High Voltage, Medium Current NPN Darlington Amplifiers (Cont'd)		
	SG2815	**◊† SiliconG (3642)**
	SG2821	**◊† SiliconG (3642)**
	SG2822	**◊† SiliconG (3642)**
	SG2823	**◊† SiliconG (3642)**
	SG2824	**◊† SiliconG (3642)**

Special Arrays

Function	Device	Source
Complementary Enhancement-Mode Vertical DMOS Power FET Quad Array		
	TC0604	Supertex
	VC0106	Supertex
	VC0206	Supertex
Diode Array, GaAs, 14 single, 1 full-wave rectifier		
	16G010	GigaBit
	16G011	GigaBit
Diode Array, Thirty-two Circuit Anode Common High Voltage	LZ1030M	Sharp
Diode Array, Dual Sixteen (common cathode/ common anode)	**SG6496**	**† SiliconG (3643)**
	SG6496A	**† SiliconG (3643)**
Diode Array, Dual Eight High-Voltage (common anode/common cathode)		
	SG5774	**† SiliconG (3643)**
	SG5774A	**† SiliconG (3643)**
Diode Array, Sixteen High-Voltage (common anode)	SG25770	† SiliconG
Diode Array, Sixteen High-Voltage (common anode/common cathode)		
	SG5772	**† SiliconG (3643)**
	SG5772A	**† SiliconG (3643)**
Diode Array, Sixteen High-Voltage (common cathode)		
	SG25768	**† SiliconG (3643)**
Diode Array, Eight High-Voltage (common-anode)		
	SG5768A	**† SiliconG (3643)**
Diode Array, Eight High-Voltage (common-cathode)		
	SG5768	**† SiliconG (3643)**
Diode Array (6-element)		
	CA3039	Harris
Diode Array (10 element)		
	CA3141	Harris
MOS Array (32 circuit high voltage)		
	LZ1032AD	Sharp
	LZ1132BD	Sharp
MOSFET Array, 2 Channel (400 V/675 mA per Channel)		
	PWR-NCH201	Power Integ
MOSFET Array, 4 Channel (400 V/335 mA per Channel)		
	PWR-NCH401	Power Integ
N- and P-Channel Quad Power MOSFET Array, 20V		
	VQ7254	Supertex
N- and P-Channel Quad Power MOSFET Array, 40V		
	TQ3001	Supertex
	VQ3001	Supertex
N-Channel Enhancement-Mode Vertical DMOS Power FET Quad Array, 40V		
	TN0604	Supertex
	TN0606	Supertex
	VN0104	Supertex
	VN0106	Supertex
	VN0109	Supertex
	VN0204	Supertex
	VN0206	Supertex
	VN2106	Supertex
	VN2110	Supertex
	VQ1000	Supertex
	VQ1001	Supertex
	VQ1004	Supertex
P-Channel Enhancement-Mode Vertical DMOS Power FET Quad Array, 40V		
	TP0604	Supertex
	TP0606	Supertex
	VP0104	Supertex

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Arrays (Cont'd)

Function	Device	Source	Line
Special Arrays (Cont'd)			
P-Channel Enhancement-Mode Vertical DMOS Power FET Quad Array, –60V (Cont'd)			
	VP0106	Supertex	
	VP0204	Supertex	
	VP0206	Supertex	
	VQ2001	Supertex	
	VQ2006	Supertex	5
Printer Driver (12 Circuit) Plus Ribbon-Shift Driver (one circuit)	IR2402	Sharp	
Schottky Diode Array, Programmable (8x10)	**CA416**	**Newbridge (3569)**	
Thyristor/Transistor Array (SCR, programmable unijunction transistor, PNP/NPN transistor pair, NPN transistor and zener diode)	CA3097	† Harris	
Dual Diode Bridge Circuit, 1A/Diode	**SG3212**	◊ **SiliconG (3643)**	
Dual High-Speed MOSFET Driver	**SG1626**	† **SiliconG (3643)**	10
	SG2626	**SiliconG (3643)**	
	SG3626	**SiliconG (3643)**	
Dual Schottky Diode Bridge	L6210	SGS-Thomson	
Quad High Voltage N-Channel MOSFET Array	LH1162AAP	AT&T	
Quad PIN Diode Driver	SG5792	† SiliconG	15
	SG5793	† SiliconG	
Octal High Voltage N-Channel MOSFET Array	AN0132NAR	AT&T	
Octal High-Voltage P-Channel MOSFET Array	AP0130NA	AT&T	
Seven 100 mA Diodes, Straight Through Configuration	**SG6100**	† **SiliconG (3643)**	
Eight Common Anode Diode Array	**SG5770**	† **SiliconG (3643)**	20
	SG5770A	† **SiliconG (3643)**	
Eight 100 mA Diodes, Straight Through Configuration	**SG6101**	† **SiliconG (3643)**	
8-Channel Logic to High-Voltage Level Translator, for P-Channel MOSFET Arrays	HT0130	Supertex	
8-Channel Power MOSFET Array, N-Channel Enhancement-Mode, 160V	AN0116	Supertex	
	AN0120	Supertex	25
	AN0130	Supertex	
	AN0132	Supertex	
	AN0140	Supertex	
8-Channel Power MOSFET Array, P-Channel Enhancement-Mode, 160V	AP0116	Supertex	
	AP0120	Supertex	30
	AP0130	Supertex	
	AP0132	Supertex	
	AP0140	Supertex	

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LINEAR

LINEAR—Comparators

Comparators-Single

Offset Voltage mV (25°C)	Bias Current (25°C)	Offset Current (25°C)	Response Time ns	Max. Differential Voltage	Gain V/V	Fan Out	Supply Voltage, V	Device	Source	Line
0.025	100 pA		150				±8 to ±20	LMC669	National	
0.25	1.2 μA	80 nA	30	—	20	—	5,–16	RC4805A	Raytheon	
								RM4805A	† Raytheon	
	1200 nA	80 nA	35 *	—	8000	—	5 to ±18	**CMP05C**	**† AD (3239)**	
0.3	4 μA	.2 μA	2.7	6			7, –7	μA6685	National	5
0.5			4.2		1		5	HCMP96900	Signal Proc	
	3.0 nA	1000 nA	80 μs				2.8 to 16	LTC1042C	LinearTech	
			80 us				2.8 to 16	LTC1042M	† LinearTech	
0.5 *	15 μA *	2 μA *	2.5 *	6	—	—	7,–7	AM6685C	AMD	
	15 μA*	2 μA*	2.5 ns*	6	—	—	7,–7	AM6685M	† AMD	10
0.5	25 nA	3 nA	250	36	200	5	±18	LT1011AC	TI	
	35 nA	3 nA	250	36	200	5	5	LT1011AC	LinearTech	
								LT1011AM	† LinearTech	
0.6	1.8 μA	150 nA	30	—	20	—	5,–16	RC4805	Raytheon	
								RM4805	† Raytheon	15
	1800 nA	150 nA	35 *	—	7000	—	5 to ±18	**CMP05B**	**† AD (3239)**	
								CMP05F	**AD (3239)**	
0.75	10μA		6*	±5			5	TL714C	TI	
0.8	50 nA	3 nA	270	11	200		5 to ±18	**CMP02E**	**AD (3239)**	
	600 nA	25 nA	38	11	200		5 to ±18	**CMP05**	**‡ AD (3239)**	20
			180	11	200		5 to ±18	**CMP01E**	**AD (3239)**	
1			35	±10			5	**AD790**	**AD (3239)**	
	10μA	1μA	25	5	1500			MB4002	Fujitsu	
	100 nA	10 nA	250	30	200	5	5 to ±15	LT311A	LinearTech	
1.5	50 nA	4 nA	250	36	200	5	±18	LT1011C	TI	25
							5	LT1011C	LinearTech	
								LT1011M	† LinearTech	
2			2.5	5			–5.2,5	**AD96685**	**AD (3239, 3260)**	
	5 μA	500 nA	10	5			±5	LT685C	LinearTech	
								LT685M	† LinearTech	30
		500 nA	10	5			±5	VLC931	ThirdDomain	
	10 μA	1 μA	2	±5			±7	AD9686B	AD	
								AD9686T	† AD	
			6.5	6			–5.2,6	AM685L	◊ AMD	
								AM685M	◊† AMD	35
		1μA	50	5	1500			MB4001	Fujitsu	
		1.2 μA	12	6		5	–6,5	AM686M	◊† AMD	
	10μA	1μA	6.5	6			–5.2, 6	μA685	National	
	20 μA	3 μA	40	5	40 *	10	–3 to –12,12	LM106	◊‡ National	
								LM206	National	40
			40 *	5	1250	1	–6,12	μA710M	† National	
								LM710	† National	
								SFC2710	† SGS-Thomson	
	20μA	3μA	40	±5	1250		7to14	μA710m	TI	
	35 μA	1 μA	4.5					**AD9696**	**AD (3239, 3260)**	45
								AD9698	**AD (3239, 3260)**	
	45μA	3μA	40	7	40000		15	LM206	TI	
2.5	13 μA	1.3 μA	9.5	±16	800		–6 to 6.5	**CMP08F**	**AD (3239)**	
	500 nA	50 nA	80	±5	100			PM119	AD	
2.8	100 nA	15 nA	270	11	100		5 to ±18	**CMP02C**	**‡ AD (3239)**	50
	900 nA	80 nA	180	11	200		5 to ±18	**CMP01C**	**‡ AD (3239)**	
3	4 mA	1 mA	1.76	5	4		5,–5.2	HCMP96850	† Signal Proc	
	5 μA	2 μA *	20	5	3 *	2	5,(–6, 5– ±15)	LM161	† National	
								LM261	National	
	10 μA	1 μA	12	6			–6,5	AM686C	◊ AMD	
		1.3 μA	10*	5	3 *		±7	LT1016M	† LinearTech	55
	16 μA	1.6 μA	12	±16	800		–16 to 6.5	**CMP08B**	**† AD (3239)**	
	25 nA	5 nA	9	6			±5	MAX9686	† Maxim	
	50 nA	0.3 nA	180	30	200		±15	PM111	◊† AD	
	100 nA	10 nA	—	30	40	5	5 to ±15	LM111	† LinearTech	60
			200 *	30	200 *	5	5, 0 to ±15	AD111	† AD	
								AD211	AD	
								LM111	† Motorola	
								LM211	Motorola	
								LM111	‡ National	65

(Continued)

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LINEAR

LINEAR—Comparators (Cont'd)

Offset Voltage mV (25°C)	Bias Current (25°C)	Offset Current (25°C)	Response Time ns	Max. Differential Voltage	Gain V/V	Fan Out	Supply Voltage, V	Device	Source	Line
Comparators-Single										**(Cont'd)**
3	100 nA	10 nA	200 *	30	200 *	5	5, 0 to ± 15		(Cont'd)	
								LM211	National	
								LM111	† Raytheon	
								LM111	† SGS-Thomson	
								LM211	SGS-Thomson	
								LM111	† Signetics	5
								LM211	Signetics	
								SG111	**◊† SiliconG (3643)**	
								SG211	**◊ SiliconG (3643)**	
	300 nA	150 nA	30	± 18	15		± 5 to ± 18	EL2018	† Elantec	
3.5	10 μA	1 μA	14	5	3 *		± 7	LT1016C	LinearTech	10
4	2 μA	0.5 μA	26	5	5 *		5,(–6, 5– ± 10)	SE527	† Signetics	
	12 μA	3 μA	22	5	5 *		5,(–6, 5– ± 10)	SE529	† Signetics	
	25 pA	50 pA	200	—	200	2	36 *	LF111	† National	
5	5 μA	5 μA	6					**VC7696J**	**VTC (3713)**	
			8					**VC7698J**	**VTC (3713)**	15
	10 μA	2 μA	20	5	3 *	2	(–6, 5 to ± 15)	LM361	National	
		5 μA	1.4	5			5,–5.2	**VC7695J**	**VTC (3713)**	
			2.2	5	—	—	5,–5.2	AD9685	◊ AD	
			2.7	5	—	—	5,–5.2	AD9687	◊ AD	
	10 nA	5 nA	1.4	5			–5.2, 5	MAX9685	† Maxim	20
			1.8	5			–5.2, 5	MAX9690	† Maxim	
	20 μA	3 μA	14 *	5	3 *	4	± 5	LM160	† National	
								LM260	National	
								LM360	National	
		5 μA	1.4	3.5			± 6	**VC7690J**	**VTC (3713)**	25
	20μA	5μA	25	± 5			± 8	NJM360	NJR	
	25 μA	5 μA	40 *	5			14/–7	KA710C	Samsung	
			40	5	40 *	10	–3 to –12,12	LM306	National	
					40	10	–3 to ± 15	LM306	TI	
			40 *	5	1000	1	–6,12	μA710C	National	30
								LM710C	National	
	100 nA	25 nA	300K	36	200		2 to 36	TL331I	TI	
	150 nA	50 nA	1300 *	36	200 *		2 to 36	TL331C	TI	
	300 nA	150 nA	20	± 18	103 dB		± 5 to ± 18	EL2019	† Elantec	
6	2 μA	0.75 μA	26	5	5 *		5,(–6,5– ± 10)	NE527	Signetics	35
	20 μA	5 μA	22	5	5 *		5,(–6,5– ± 10)	NE529	Signetics	
	60 μA	7.5 μA	25 *	5	5 *	2	± 4.5 to ± 6.5	μA760C	National	
								μA760M	† National	
	75	10μA	40	5	75			TL710M	TI	
	250 nA	100 nA	250	10	15		± 6 to ± 18	AD351J	AD	40
								AD351K	AD	
								AD351S	† AD	
7.5	100 nA	25 nA	1.2 μs	± 30	200		36	LP311	National	
			1200	30	100		36	LP211	TI	
						2	± 18 to ± 36	LP311	TI	45
	250 nA	50 nA	—	30	40	5	5 to ± 15	LM311	LinearTech	
		50 na	200	± 30	200		± 18	NJM311	NJR	
		50 nA	200 *	13	40		36	LM311	Samsung	
				30	200 *	5	5, 0 to ± 15	AD311	AD	
								CA311	Harris	50
								LM311	Motorola	
								LM311	National	
								LM311	SGS-Thomson	
								LM311	Signetics	
								SG311	◊ SiliconG	55
			200	30	200	5	5, 0 to ± 15	LM311	TI	
	250 pA	50 pA	165 *	30	200 *	5	5, 0 to ± 15	LM211	◊ TI	
10	3μA			11	1			MB4205	Fujitsu	
	75 pA	150 pA	200	—	200	2	36 *	LF311	National	
50	10 μA	10 μA		± 10			–0.5 to 14	MC14578	Motorola	60
100	1 μA		25	5			–7 to 14	TL712	◊ TI	
Comparators-Dual										
0.5	0.3 nA		10000	16			2.8 to 16/ ± 2.8 to ± 8	LTC1040C	LinearTech	
								LTC1040M	† LinearTech	

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LINEAR

LINEAR—Comparators (Cont'd)

Comparators-Dual (Cont'd)

Offset Voltage mV (25°C)	Bias Current (25°C)	Offset Current (25°C)	Response Time ns	Max. Differential Voltage	Gain V/V	Fan Out	Supply Voltage, V	Device	Source	Line
0.5 *	15 μA *	2 μA *	2.5	6	—	—	7,–7	AM6687C	AMD	
	15 μA*	2 μA*	2.5 ns*	6	—	—	7,–7	AM6687M	† AMD	
1	0.05	0.05	10					Bt681	Brooktree	
	6μA	200 nA	6	36	8K	3	± 15	EL2252C	Elantec	
	15 nA	2 nA		40	300	1	± 0.75 to ± 20	LT1017C	LinearTech	5
								LT1017M	† LinearTech	
	75 nA	8 nA		40	300	1	± 0.75 to ± 20	LT1018C	LinearTech	
								LT1018M	† LinearTech	
	500 nA	—	80 *	5	20	5	5 to ± 15	LT319A	LinearTech	
		75 nA	80 *	5	20	2	5 to ± 15	LT119A	† LinearTech	10
2			2.5	5			–5.2,5	**AD96687**	**AD (3239, 3260)**	
		2	2.8	16			10,–8	Bt688	◊ Brooktree	
	–250 nA	50 nA	1300	36	200		2 to 30, 1 to ± 18	LM239A	TI	
	0.2 nA	0.2 nA	650	12	50	45	3 to 12	ALD2301A	◊† AdvLinear	
	10 μA	1 μA	8	6			–5.2, 5	AM687AM	◊† AMD	15
								μA687A	† National	
			10	6			–5.2, 5	AM687M	◊† AMD	
								μA687	† National	
	15μA	3μA	80	± 7	12500		–7to14	TL820M	TI	
	20 μA	3 μA	30 *	5	1250	1	–6,12	LM1514	† National	20
			40 *	5	1250		–6,12	MC1514	† Motorola	
	100 nA	25 nA	1300 *	36	50		2 to 36	LM193A	† Motorola	
								LM193A	† National	
								LM193A	† SGS-Thomson	
								LM193A	† Signetics	25
	250 nA	50 nA		± 5	50			LM293A	Samsung	
			1.3 μs	± 5	50		36	LM393A	Samsung	
			300	36	200		5	LM293A	TI	
			1300 *	36	50		2 to 36	GL393A	GoldStar	
								LM293A	Motorola	30
								LM393A	Motorola	
								LM293A	National	
								LM393A	National	
								LM293A	◊ SGS-Thomson	
								LM393A	◊ SGS-Thomson	35
			1300	36	200		± 1 to ± 18	LM339A	TI	
							2 to 36	LM295A	TI	
			1300 *	36	200		2 to 36	LM393A	TI	
2.5	500	50	80		1000		5	PM219	AD	
3	4 mA	1 mA	1.76	5	4		5,–5.2	HCMP96870	† Signal Proc	40
	5 μA	1 μA	1.8	± 6	350		–5.2, 5	BT687	Brooktree	
	10 μA	1 μA	8	6			–5.2, 5	AM687AL	◊ AMD	
			10	6			–5.2, 5	AM687L	◊ AMD	
	25 nA	5 nA	9	6			–5, 5	MAX9698	† Maxim	
	100 nA	10 nA	200 *	30	200 *	5	5, 0 to ± 15	LH2111	† National	45
								LH2211	National	
								LH2111	Raytheon	
	100na	200na	80	± 30	8		± 18	NJM319	NJR	
3.5	75 μA	10 μA	40 *	5	750	1	–6, 12	μA711M	† National	
4	0.5 μA	75 nA	80	—	40	2	± 15	LM119	◊‡ National	50
	500 nA	75 nA	80	5	10		36	KA219	Samsung	
			80 *	5	10	2	5 to ± 15	LM119	† LinearTech	
							5, 0 to ± 15	LM119	◊‡ National	
								LM219	National	
								LM119	† SGS-Thomson	55
								LM119	† Signetics	
								LM219	Signetics	
5	.025 nA	20 nA	1300	36			2 to 36	LP2901	TI	
	0.005 nA *	0.001 nA *	2500 *	36	50		–0.3 to 18	TLC193M	† TI	
								TLC3702C	TI	60
								TLC3702I	TI	
								TLC3702M	† TI	
								TLC393C	TI	
								TLC393I	TI	
	0.2 nA	0.2 nA	650	12	50	45	3 to 12	ALD2301B	◊°† AdvLinear	65
	5 μA *	1 μA	2.7 *	30			–5.2,5	SP9685	Plessey	
								SP9687	Plessey	

(Continued)

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LINEAR

LINEAR—Comparators (Cont'd)

Offset Voltage mV (25°C)	Bias Current (25°C)	Offset Current (25°C)	Response Time ns	Max. Differential Voltage	Gain V/V	Fan Out	Supply Voltage, V	Device	Source	Line
Comparators-Dual									**(Cont'd)**	
5									(Cont'd)	
	10 μA	5 μA	1.8	5			5,-5.2	**VC7697J**	**VTC (3713)**	
	10 nA	5 nA	1.9	5			-5.2, 5	MAX9687	† Maxim	
	25 μA	5 μA	30 *	5	1000	1	-6,12	LM1414	National	
			40 *	5	1000		-6,12	MC1414	Motorola	
	25 nA	5 nA	8000	36	500		± 18 to 36	LP239	TI	5
		20 nA	8000	36	500		± 18 to 36	LP339	TI	
	100 μA	15 μA	40 *	5	700	1	-6,12	μA711C	National	
								SFC2711	SGS-Thomson	
	100 nA	25 nA	1300 *	36	50		2 to 36	LM193	† Motorola	
								LM193	‡ National	10
								LM193	† SGS-Thomson	
								LM193	† Signetics	
	100nA	25nA	1.3*	± 36				LM193	TI	
	250 nA	50 nA	1.3 μs	± 5	50		36	LM293	Samsung	
								LM393	Samsung	15
			2 μs	36			36	MB47393	Fujitsu	
			1300 *	36	50		2 to 36	LM293	Motorola	
								LM393	Motorola	
								LM293	National	
								LM393	National	20
								LM293	◊ SGS-Thomson	
								LM393	SGS-Thomson	
								LM293	Signetics	
								LM293A	Signetics	
								LM393A	Signetics	25
			1300	36	200		2 to 36	LM293	TI	
								LM339	TI	
			1300 *	36	200		2 to 36 ± 1 to ± 18	LM393	TI	
5 (2 operational amplifiers, 2 comparators)										
	500 nA	75 nA	1300 *	36	200 *		3-36	MC3505	† Motorola	
6	40 μA	10 μA	2.4 *	30			-5.2,5	SP9680	Plessey	30
7	250 nA	50 nA	1.5 μs	± 5	25		36	LM2903	Samsung	
			300	36	100		2 to 36	LM2901	TI	
			1500 *	36	25		2 to 36	LM2903	Motorola	
								LM2903	National	
								LM2903	SGS-Thomson	35
								LM2903	Signetics	
								LM2903	TI	
7.5	20 μA	5 μA	18	6	5 *	10	± 5	NE521	Signetics	
								SE521	† Signetics	
			25	6	5 *	10	± 5	NE522	Signetics	40
								SE522	† Signetics	
8	-1 μA	0.2 μA	80 *	5	8	2	5 to ± 15	LM319	LinearTech	
	1 μA	0.2 μA	80 *	5	8	2	5, 0 to ± 15	LM319	National	
								LM319	SGS-Thomson	
								LM319	Signetics	45
	250 nA	25 nA	600 *	40	—	1	4.5 to 40	SG3524A	◊ SGS-Thomson	
	1000 nA	200 nA	80	± 5	8		36	KA319	Samsung	
9 (2 operational amplifiers, 2 comparators)										
	10	500 nA	1300 *	36			3-36	MC3405	Motorola	
10	0.05 nA	0.001 nA	200	18	270		2 to 18	TLC372C	TI	
								TLC372M	† TI	50
	0.2 nA	0.2 nA	650	12	50	45	3 to 12	ALD2301	◊°† AdvLinear	
	1 pA	1 pA		± 18			18	NJU7102	NJR	
	5 pA	1 pA	200	18	200		5	TLC352C	TI	
								TLC372I	TI	
		50 nA	200	18			18, 2 to 30	TLC374I	TI	55
	40 pA	25 pA	200 *	36	50	2	4 to 36	CA3290A	Harris	
	100 nA	25 nA	300 *	38	—	1	4.5 to 40	SG3524	◊† SGS-Thomson	
	250 nA	100 nA					1.5	**BA10393**	**ROHM (3583)**	
14	500na	100na	1500	± 18	200		± 18	NJM2903	NJR	
20	0.2 nA	0.2 nA	650	12	50	45	3 to 12	ALD2301C	◊°† AdvLinear	60
	50 pA	30 pA	200 *	36	25	2	4 to 36	CA3290	Harris	
		100 pA	250	13	20	1	3 to 15	HI8575	Holt	

(Continued)

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LINEAR

LINEAR—Comparators (Cont'd)

Offset Voltage mV (25°C)	Bias Current (25°C)	Offset Current (25°C)	Response Time ns	Max. Differential Voltage	Gain V/V	Fan Out	Supply Voltage, V	Device	Source	Line
Comparators-Dual										**(Cont'd)**
20									(Cont'd)	
	500 nA	100 nA	1300	28	30		2 to 28	LM3302	TI	
	500na	200na	1500	±18	200		±18	NJM2403	NJR	
30	50 pA	100 pA	240	13	20	1	±1.5 to ±7.5	MC14575	Motorola	
			250	13	20	1	±1.5 to ±7.5	MC14575	Motorola	
	150						5, ±15	**SG2111**	**† SiliconG (3643)**	5
140	40	40	15	±5	50k		5 *	AH9915	OEI	
Comparators-Quad										
0.8	100 nA	25 nA	1300	36	50	2	2–36/±1–±18	**CMP04B**	**† AD (3239)**	
								CMP04F	**AD (3239)**	
1	6 μA	250 nA	12	±5			5	MAX900AC	Maxim	
								MAX900AM	◊† Maxim	10
								MAX901AC	Maxim	
								MAX901AE	Maxim	
								MAX901AM	◊† Maxim	
				5			5	MAX900AE	Maxim	
1 *	20 nA	1 nA*	5000 *	30	10		±18	L161B	Siliconix	15
								L161C	Siliconix	
					20		±18	L161A	Siliconix	
1	50 nA	10 nA	3500	36	50	2	2–36/±1–±18	**CMP404A**	**† AD (3239)**	
								CMP404E	**AD (3239)**	
2 *	20 μA	1 μA *	55	5	1.2 *	10	±5	MC3430	Motorola	20
								MC3431	Motorola	
			65	5	1.2 *	10	±5	MC3432	Motorola	
								MC3433	Motorola	
2	100 nA	25 nA	1300 *	36	50	2	2–36/±1–±18	PM139A	◊† AD	
								CA139A	◊† Harris	25
								LM139A	† Motorola	
								LM139A	◊‡ National	
								LM139A	† SGS-Thomson	
			3500	36	50	2	2–36/±1–±18	**CMP404B**	**† AD (3239)**	
								CMP404F	**AD (3239)**	30
	250 nA	50 nA	1.3 μs	±5	50		36	LM339A	Samsung	
			1–4	36	200		5	LM239A	Samsung	
			1300 *	36	50	2	2–36/±1–±18	CA239A	◊ Harris	
								CA339A	◊ Harris	
								LM239A	Motorola	35
								LM339A	Motorola	
								LM239A	National	
								LM339A	National	
								AN1339	Panasonic	
								LM239A	◊ SGS-Thomson	40
								LM339A	◊ SGS-Thomson	
								LM339A	Signetics	
3	50 nA	20 nA	4000 *	36	500 *		4–36/or ±2 to ±18	LP165	† Raytheon	
	75 nA	25 nA	130 *	15	400 *		5 to ±15	HA4900	◊† Harris	
	400 nA	60 nA	200	20			1 to 20	GC8302	Gennum	45
4	4μA	0.5 μA *	0.8	4	20 *		5—10.2	SCC8004	STC	
	10 μA	500 nA	15	±5			5	MAX900BC	Maxim	
								MAX900BE	Maxim	
								MAX900BM	◊† Maxim	
								MAX901BC	Maxim	50
								MAX901BE	Maxim	
								MAX901BM	◊† Maxim	
4 (octal unit)										
	4 μA *	0.5 μA *	0.8	4	20 *		5—10.2	SCC8008	STC	
5	0.005 nA *	0.001 nA *	2500 *	36	50		–0.3 to 18	TLC339C	TI	
								TLC339I	TI	55
								TLC3704C	TI	
								TLC3704I	TI	
								TLC3704M	† TI	
	0.2 μA	0.2 μA	250 ns	12	50	30	2–12V	ALD4302A	◊°† AdvLinear	
	2.5 nA *	0.5 nA *	8000	36	500	2	2–36/±1.5–±18	LP339	National	60
	30 nA	15 nA	2000 *				16	TLC339M	† TI	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Comparators (Cont'd)

Offset Voltage mV (25°C)	Bias Current (25°C)	Offset Current (25°C)	Response Time ns	Max. Differential Voltage	Gain V/V	Fan Out	Supply Voltage, V	Device	Source	Line
Comparators-Quad										**(Cont'd)**
5									(Cont'd)	
	100 nA	25 nA	1300 *	± 36	200 *		36	LM139	† TI	
				36	200 *	2	2–36/ ± 1, ± 18	PM139	◊† AD	
								CA139	◊† Harris	
								LM139	† Motorola	
								LM139	◊† National	5
								LM139	† Raytheon	
								LM139	† SGS-Thomson	
								LM139	◊† Signetics	
								LM139A	† Signetics	
	150 nA	35 nA	200	15	400 *	—	5 to ± 15	HA4902	† Harris	10
	250 nA	50 nA	1.3 μs	± 5	200		36	LM339	Samsung	
			1–4	36	200 *		5	LM239	Samsung	
			300	36	200		5	LM239	TI	
			1300 *	15	200 *	1	3–15	MM54C909	† National	
								MM74C909	National	15
				36	200	1	1 to 18	MB4204	Fujitsu	
					200 *	2	2–36/ ± 1, ± 18	CA239	◊ Harris	
								CA339	◊ Harris	
								LM239	Motorola	
								LM339	Motorola	20
								LM239	National	
								LM339	National	
								AN6912	Panasonic	
								LM339	Raytheon	
								LM239	◊ SGS-Thomson	25
								LM339	SGS-Thomson	
								LM239	Signetics	
								LM239A	Signetics	
								LM339	Signetics	
7	250 nA	50 nA	1.3 μs	± 5	25		36	LM2901	Samsung	30
			1300 *	36	50	2	2–36/ ± 1– ± 18	LM2901	Motorola	
								LM2901	National	
								LM2901	SGS-Thomson	
								LM2901	Signetics	
	250na	50na	1300	± 18	200		± 18	NJM2901	NJR	35
7.5	150 nA	50 nA	130 *	15	400 *		5 to ± 15	HA4905	◊ Harris	
10	0.05 nA	0.001 nA	200	18	270			TLC374C	TI	
								TLC374M	† TI	
	0.2 μA	0.2 μA	250	12	50	30	3–12V	ALD4302B	◊°† AdvLinear	
	1 pA	1 pA		± 18			18	NJU7104	NJR	40
	5 pA	1 pA	200	18	200		5	TLC354C	TI	
	250 nA	100 nA					1.5	BA10339	ROHM	
15	0.2 μA	0.2 μA	250	12	50	30	2–12V	ALD4302	◊°† AdvLinear	
20	50 pA	100 pA	250	13	20	1	3 to 15	HI8574	Holt	
	250 nA	100 nA	1.3 μs	± 5	2		36	LM3302	Samsung	45
	500 nA	3 nA *	2000 *	Vcc	2	1	2 to 28	MC3302	Motorola	
								MC3302	◊ SGS-Thomson	
								TDF3302	SGS-Thomson	
								MC3302	Signetics	
		100 nA	1300 *	Vcc	2	2	5 to ± 15	LM3302	National	50
30	50 pA	100 pA	250	13	20	1	± 1.5 to ± 7.5	MC14574	Motorola	

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LINEAR

LINEAR—Consumer Circuits

Audio Circuits

Function	Device	Source
Active Element for Post Filtering (for compact disc players, digital audio)	TDA1542	Signetics
AESIC Transceiver (implements AES/EBU interface standard)	CA16C440	Newbridge
AF Power Amp (2-channel, 25W)	STK4142	Sanyo
AF Power Amp (2-channel, 50W)	STK4192	Sanyo
Amplifier, Headphone	TA7688	Toshiba
Amplifier, Hearing Aid	LC505	Gennum
	LC506	Gennum
	LC507	Gennum
	LC508	Gennum
	LC547	Gennum
	LC549	Gennum
	LC550	Gennum
	LD501	Gennum
	LD502	Gennum
	LD505	Gennum
	LD511	Gennum
	LD547	Gennum
	LD548	Gennum
	LD549	Gennum
	LE507	Gennum
	LP508	Gennum
	LR505	Gennum
	LS505	Gennum
	LT505	Gennum
	LU547	Gennum
	LV506	Gennum
	LV549	Gennum
Amplifier, Wideband with AGC	MC1490	Motorola
Amplifier, with AGC, for Recorders	TDA7137	Toshiba
	TDA7137-ST	Toshiba
AMPS/NMT Audio Filter	MX306	MX-COM
Attenuator, Digital	AD7115K	AD
Attenuator, Digital (logarithmic D/A converter)	AD7111K	◊ AD
	AD7111L	◊ AD
	AD7111T	◊† AD
	AD7111U	◊† AD
	AD7118T	◊† AD
	AD7118U	◊† AD
Attenuator, Digital (with loudness compensation switch), 0 to 88.5 dB Attenuation in 1.5 dB Steps	AD7110K	◊ AD
	AD7118K	◊ AD
	AD7118L	◊ AD
Attenuator, Dual	LC7500	Sanyo
Audible Signal Device (generates two tone frequencies)	SAE0700	Siemens
Audio Amplifier (2 W mono)	TDA7233	SGS-Thomson
Audio Bandpass Filter	MX326	MX-COM
Audio Filter (for radio equipment)	MB87079	Fujitsu
	MB87080	Fujitsu
Audio Level Detection System, Linear and logarithmic outputs	**SSM2110**	**AD (3262)**
Audio Power Amp (>10W)	TDA1520	Signetics
Audio Power Amp (<10W)	TDA2613	Signetics
Audio Power Amp (<5W)	TDA7056	Signetics
Audio Power Amp (two 6W amps)	TDA1517	Signetics
Audio Power Amp (two 7W amps)	TDA1515	Signetics
Audio Power Amplifier, Dual (440 mW)	LM831	National
Audio Power Amplifier (1W)	**TDA7052**	**Signetics (3628)**
Audio Power Amplifier (2x11W or 22W BTL)	TDA1516	Signetics
	TDA1518	Signetics
	TDA1519	Signetics
	TDA1519A	Signetics
Audio Power Amplifier (2x12W)	TDA1521	Signetics
	TDA1521A	Signetics
Audio Power Amplifier, 4.6Wx2	KA22063	Samsung
Audio Power Amplifier (4w with DC volume control)	TDA1013	Signetics
	TDA1013B	Signetics
Audio Power Amplifier, 14W	MB3732	Fujitsu
	MB3734	Fujitsu
Audio Power Amplifier, 15W	MB3742	Fujitsu
Audio Power Amplifier, 23W	KA22101	Samsung
Audio Power Amplifier (40W hi-fi)	TDA1514	Signetics
	TDA1514A	Signetics
Audio Power Amplifier (2x1W stereo)	TDA7053	Signetics
Audio Processing Array For Cellular Telephones	MX346	MX-COM
Audio Processor-Amplifier and Compandor Section	NE5750	Signetics
	SA5750	Signetics
Audio Processor-Filter and Control Section	**NE5751**	**Signetics (3590)**
	SA5751	Signetics
Audio/Subaudio Filter Array	MX336	MX-COM
Balanced Line Driver (for audio mix consoles)	**SSM2142**	**AD (3300)**
Car Audio System Power Supply Circuit	MB3774	Fujitsu
CD/CDV Digital Audio Processor	YM7402	Yamaha
CD Player Servo Linear Circuit	XC488A0	Yamaha
CD Player Signal Processor and Controller	YM3805	Yamaha
	YM3815-H	Yamaha
CD Player Signal Processor and Controller (plus RAM)	YM7121B	Yamaha
Cellular Radio Analog Processor (DTMF generator, D/A, filter, electronic volume controller	MB87084	Fujitsu
Cellular Radio Audio Processor (filter, electronic volume control, limiter)	MB87085	Fujitsu
Compandor, Low Voltage	NE575	Signetics
Comparator Circuit (2/1 compression, 1/2 expansion by Logarithm)	MB3120	Fujitsu
Controls (loudness, treble, bass)	TDA4290-2	Siemens
Controls, Stereo, DC Operated	TDA1524	Motorola
	LM1035	National
	TDA1074A	Signetics
	TDA1524A	Signetics
DAC for Volume Control	M50601	Mitsubishi
	M50602	Mitsubishi
Digital Audio Companding Processor	CA16C001	Newbridge
Digital Audio Interface Receiver	YM3436	Yamaha
	YM3623B	Yamaha
Digital Audio Interface Transmitter	YM3437	Yamaha
	YM3613C	Yamaha
Digital Equalizer (for digital filters)	YM3608	Yamaha
Digital Noise Source	MM5437	National
Digital Volume Control (330-Step,–66dB in 0.2 dB steps)	YM3614B	Yamaha
Distortion Limiting Circuit (for car audio)	MB3113	Fujitsu
Distortion Suppressor	AH201-1	Analogic
	MP201A	Analogic
Distortion Suppressor, Dual	AH201-2	Analogic
Dolby B-Type Noise Reduction System	HA12134A	Hitachi
	HA12135A	Hitachi
	HA12136A	Hitachi
Dolby HX Pro System	μPC1297	NEC
Dolby Noise Reduction (dual channel B/C)	HA12088	Hitachi
	HA12090	Hitachi
	HA12091	Hitachi
Dolby-B/C Noise Reduction Processor	NJM2065A	NJR
	NJM2075A	NJR
Dolby-B Noise Reduction Processor	NJM2063A	NJR
Dynamic Range Processor with Dual VCAs	**SSM2120**	**AD (3262)**
	SSM2122	**AD (3262)**
Electronic Graphic Equalizer, Serial Control	TC9170	Toshiba
Electronic Graphic Equalizer, Up/Down	TC9169	Toshiba
Equalizer Amplifier	GL5529	GoldStar
Equalizer Amplifier and ALC	KA2220	Samsung
Equalizer Amplifier (dual)	KA1222	Samsung
	KA2221	Samsung
	KA22211	Samsung
Equalizer Amplifier with Automatic Program Select, Dual	MB3115	Fujitsu
EVR for Graphic Equalizer (electrical variable resistor)	NJU7305	NJR
Filter, Hearing Aid, High-pass.	LF580	Gennum
FM Front End	KA22495	Samsung
	KA22496	Samsung
	TDA7359	SGS-Thomson
	TDA7361	SGS-Thomson

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Audio Circuits (Cont'd)

Function	Device	Source	Line
FM Melody Sound Generator	YM64AXX	Yamaha	
Graphic Equalizer Amp (3 band)	KA22233	Samsung	
Graphic Equalizer Amp (5 band)	KA2223	Samsung	
	KA22235	Samsung	
Graphic Equalizer, Digitally Controlled	LMC835	National	5
Head Phone Driver, Dual	NJM2066	NJR	
Level Sensor, dbx (RMS)	μPC1253HA2	NEC	
Logarithmic Nine-Level Detector and Driver (peak hold detector amplifier)	MB3766	Fujitsu	
Motor Speed Controller for Direct Drive Turntables	TC9142	Toshiba	
MTS Audio Multiplexing Decoder Circuit	CXA1124A	Sony	10
Music Selector	KA2230	Samsung	
	KA2231	Samsung	
Music Voicing System	SSM2045	AD	
Music Voicing System with Three VCAs	SSM2047	AD	
Music, Voltage Controlled Filter, Four Stage	SSM2044	AD	15
Muting Circuit (switching noise suppressor)	TA7324	Toshiba	
	TA7362	Toshiba	
NMT Audio Filter Array	MX316	MX-COM	
Noise Reduction, DNR	LM832	National	
Noise Reduction, Dolby	HA12088NT	Hitachi	20
	HA12091MP	Hitachi	
	LM1131A	National	
	LM1131B	National	
	LM1131C	National	
	LM1894	National	25
	NE5240	Signetics	
	NE645	Signetics	
	NE646	Signetics	
	NE650	Signetics	
Oversampling Digital Filter (2-channel, 4 times)	YM3404B	Yamaha	30
Oversampling Digital Filter (2-channel, 8 times)	YM3414	Yamaha	
	YM3433	Yamaha	
	YM3434	Yamaha	
Parallel Sound Processor	TDA4480B	AEG Corp	
Passive Surround Circuit (for dolby circuits)	LV1000	Sanyo	35
PLL Stereo Decoder	TEA5581	Signetics	
Power Amplifier Driver	LM391	National	
Power Amplifier Driver (30—50 W)	μPC1270	NEC	
Power Amplifier Driver (50—80 W)	μPC1298V	NEC	
Power Amplifier (gain = 10)	NJM387	NJR	40
Power Amplifier (gain = 20)	**NJM386**	**NJR**	**(3570)**
	NJM386B	**NJR**	**(3570)**
Power Amplifier, Single, >10 Watts	TDA2030	AEG Corp	
	HA13116	Hitachi	
	HA13117	Hitachi	45
	HA13118	Hitachi	
	LM1875	National	
	LM2005	National	
	LA4461	Sanyo	
	STK4392	Sanyo	50
	TDA2008	SGS-Thomson	
	TDA2009	SGS-Thomson	
	TDA2030	SGS-Thomson	
	TDA2030A	SGS-Thomson	
	TDA2040	SGS-Thomson	55
	TDA1512A	Signetics	
	TDA1520A	Signetics	
	TA7237A	Toshiba	
	TA7268	Toshiba	
Power Amplifier, Single, <5 Watts	U413B	AEG Corp	60
	U420	AEG Corp	
	GL386	† GoldStar	
	CA3020	† Harris	
	CA3094	† Harris	
	MC13060	Motorola	65
	MC1454	Motorola	
	MC1554	† Motorola	
	LM2895	National	
	KA2201	Samsung	
	KA2212	Samsung	70
	LA4138	Sanyo	
	LA4180	Sanyo	
	LA4182	Sanyo	
	TBA820M	SGS-Thomson	
	TDA1904	SGS-Thomson	75
	TDA2822M	SGS-Thomson	
	TDA1011	Signetics	
	TDA1015	Signetics	
	TA7140	Toshiba	
	TA7207	Toshiba	80
	TA7313A	Toshiba	
	TA7336	Toshiba	
Power Amplifier, Single, >10 Watts	MB3731	Fujitsu	
Power Amplifier, Single, <5 Watts	LM380	National	
	LM386	National	85
	LM388	National	
	LM389	National	
	LM390	National	
Power Amplifier, Single, 5–10 Watts	TDA2006	AEG Corp	
	LM2002	National	90
	LM383	National	
	LM383A	National	
	LM384	National	
	TDA2002	National	
	TDA2002A	National	95
	μPC2002	NEC	
	LM386	Samsung	
	LA4140	Sanyo	
	LA4440	Sanyo	
	STK4362	Sanyo	100
	L149	SGS-Thomson	
	TBA810	SGS-Thomson	
	TCA940	SGS-Thomson	
	TDA1905	SGS-Thomson	
	TDA1908	SGS-Thomson	105
	TDA1908A	SGS-Thomson	
	TDA1910	SGS-Thomson	
	TDA2002	SGS-Thomson	
	TDA2003	SGS-Thomson	
	TDA2006	SGS-Thomson	110
	ULN2002A	◊ SGS-Thomson	
	TDA1037	Siemens	
	TDA1010	Signetics	
	TDA1010A	Signetics	
	TDA1020	Signetics	115
		(Continued)	
Power Amplifier, Single, 5–10 Watts (Cont'd)	TDA2611	Signetics	
	TDA2611A	Signetics	
	TA7205A	Toshiba	
	TA7217A	Toshiba	
	TA7222A	Toshiba	120
	TA7238	Toshiba	
Power Amplifier, Single (30W)	STK4028II	Sanyo	
	STK4028V	Sanyo	
	STK4028X	Sanyo	
Power Amplifier, Single (35W)	STK4065	Sanyo	125
Power Amplifier, Single (40W)	STK4032II	Sanyo	
Power Amplifier, Single (50W)	STK4036II	Sanyo	
	STK4036V	Sanyo	
	STK4036X	Sanyo	
	STK4036XI	Sanyo	130
Power Amplifier, Single (70W)	STK4040II	Sanyo	
	STK4040V	Sanyo	
	STK4040X	Sanyo	
	STK4040XI	Sanyo	
Power Amplifier, Single (100W)	STK4044II	Sanyo	135
	STK4044V	Sanyo	
	STK4044X	Sanyo	
Power Amplifier, Single (120W)	STK4046X	Sanyo	
Power Amplifier, Single (150W)	STK4048II	Sanyo	
	STK4048V	Sanyo	140
	STK4048X	Sanyo	
Power Amplifier, Single (200W)	STK4050V	Sanyo	
Power Amplifier, Dual, >10 Watts	HA13130	Hitachi	
Power Amplifier, Dual, <5 Watts	ULN3750B	Allegro Micro	
	HA13122	Hitachi	145
	LM1877	National	
	TEA2025	SGS-Thomson	
	TDA7050	Signetics	
	TA7215	Toshiba	
	TA7230	Toshiba	150
	TA7232	Toshiba	
	TA7233	Toshiba	
	TA7269	Toshiba	
Power Amplifier, Dual (for portable radio, cassette)	**NJM2073**	**NJR**	**(3570)**
Power Amplifier, Dual (for small radio, headphones)	NJM2076	NJR	155
	NJM2096	NJR	
Power Amplifier, Dual, <5 Watts	LM1895	National	
	LM1896	National	
	LM2877	National	
	LM2896	National	160
Power Amplifier Dual, 5–10 Watts	HA13119	Hitachi	
	LM2878	National	
	LM2879	National	
	TDA2004	SGS-Thomson	
	TDA2005	SGS-Thomson	165
	TEA2021	SGS-Thomson	
	TEA2024	SGS-Thomson	
	TDA1510	Signetics	
	TDA1515A	Signetics	
	TA7227	Toshiba	170
	TA7240A	Toshiba	
	TA7241A	Toshiba	
	TA7252	Toshiba	
		(Continued)	

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Audio Circuits (Cont'd)

Function	Device	Source
Power Amplifier, Dual, 5–10 Watts (Cont'd)		
	TA7263	Toshiba
	TA7264	Toshiba
	TA7270	Toshiba
	TA7271	Toshiba
Power Amplifier, Dual (10W)		
	STK4112II	Sanyo
Power Amplifier, Dual (20W)		
	STK4132II	Sanyo
	STK4412	Sanyo
Power Amplifier, Dual (25W)		
	STK4432	Sanyo
Power Amplifier, Dual (30W)		
	STK4151V	Sanyo
Power Amplifier, Dual (40W)		
	STK4171II	Sanyo
	STK4171V	Sanyo
Power Amplifier, Dual (50W)		
	STK4191II	Sanyo
	STK4191V	Sanyo
Power Amplifier, Dual (70W)		
	STK4211V	Sanyo
Power Amplifier, Dual (100W)		
	STK4231II	Sanyo
Power Amplifier, Dual (1 W)		
	KA2209	Samsung
Power Amplifier, Dual (2.3 W)		
	KA2206	Samsung
Power Amplifier, Dual (5.5 W)		
	KA2210	Samsung
Pre-Amplifier, Dual		
	KA2228	Samsung
Pre-Amplifier, Dual with ALC		
	KA22242	Samsung
Pre-Amplifier, Three-Band Dual Graphic Equalizer		
	KA22232	Samsung
Pre-Amplifier, Five-Band Dual Graphic Equalizer		
	KA22234	Samsung
Pre-Servo Amplifier (for CD player)		
	XD777A0	Yamaha
Preamplifier	**SSM2017**	**AD (3300)**
	MA106	AnalogSys
	LM1837	National
	LM3080	National
	LM3080A	National
	SL561B	Plessey
	SL561C	Plessey
	ZN459	† Plessey
	ZN459C	Plessey
	ZN459CP	Plessey
	ZN460	† Plessey
	ZN460C	Plessey
	ZN460CP	Plessey
	LM1837	SGS-Thomson
	TDA3410	SGS-Thomson
	TDA3420	SGS-Thomson
	TA7063	Toshiba
	TA7120	Toshiba
	TA7122B	Toshiba
	TA7129A	Toshiba
	TA7136A	Toshiba
	TA7322	Toshiba
Preamplifier, Microphone		
	SSM2015	**AD (3249)**
	SSM2016	**AD (3249)**
Preamplifier, Dual		
	XR4739	Exar
	XR4739M	† Exar
	LM1897	National
	LM381	National
	LM382	National

(Continued)

Function	Device	Source
Preamplifier, Dual (Cont'd)		
	LM387	National
	LA3160	Sanyo
	LA3161	Sanyo
	L387A	SGS-Thomson
	TDA2320A	SGS-Thomson
	NE542	Signetics
	TA7325	Toshiba
	TA7359	† Toshiba
	TA7658	Toshiba
	TA7685	Toshiba
	TA7709	Toshiba
Preamplifier, Dual (with ALC)		
	μPC1313HA	NEC
	KA2224	Samsung
Preamplifier, Dual with Auto-Reverse		
	NJM2067	**NJR (3570)**
Preamplifier, Quad		
	XR4212	Exar
Receiver System		
	TDA2220	SGS-Thomson
	TDA7220	SGS-Thomson
Signal Delay	MN3001	Panasonic
	MN3010	Panasonic
	MN3204	Panasonic
	MN3207	Panasonic
Sound Generator		
	AY3-8910A	Microchip
	AY3-8912A	Microchip
Sound Generator Controller for Microprocessor-Based Systems	NCR8496	NCR
Sound Generator, Programmable		
	AY3-8913	Microchip
Sound Generator, Programmable (enhanced)		
	AY8930	Microchip
Sound Recording and Playback LSI Chip		
	LR3990	Sharp
Sound Signal Processor, Digital Compressor		
	YM3412B	Yamaha
Speech Processor		
	SP0256A	Microchip
	SP0264	Microchip
Speech Processor, Supports Allophone Synthesis		
	SP0256A-AL2	Microchip
Speech Synthesis Processor		
	LR3681	Sharp
Stereo Modulator		
	NJM2035	NJR
Stereo Sound Control System		
	CA3259	Harris
Stereo, Volume, Bass, Treble, Balance		
	TDA1524	Motorola
Surround Signal Processor, Pitch Changer		
	YM3408	Yamaha
Surround Sound Processor		
	YM3411	Yamaha
	YM7128	Yamaha
Surround Sound Processor-B		
	YM3428	Yamaha
Tone Control, Serial		
	TC9156	Toshiba
Tone Control System, Stereo		
	TDA1524A	Motorola
Tone Control, Up and Down		
	TC9155	Toshiba
Tone Controller w/ Source Inputs, Active, I^2C		
	TEA6300	Signetics
Voice Module (increases voice channel BW to 8:1 compression)	CA16M801	Newbridge
Voice Recognition/Synthesis Circuit		
	SP1000	Microchip

Function	Device	Source
Voice Recording/Reproducing (using delta-modulation with external DRAM, for answering machines, message alarm clocks, and talk-back toys)		
	STBC1	Microchip
Voltage Controlled Amplifier, dbx		
	μPC1252HA2	NEC
Voltage Controlled Amplifier (188 dB dynamic range)		
	SSM2018	**AD (3300)**
Volume Balance Tone Control, Dual		
	GL3230	GoldStar
Volume Control, Serial		
	TC9154	Toshiba
Volume Control, Up and Down		
	TC9153	Toshiba
Volume Controller, Two Channel (selection of volume, balance, loudness)		
	MB37032	Fujitsu
	MB87032	Fujitsu
Volume Controller, 6-Bit/4 Channel (gain controlled from 0 to 32 dB in 0.5 dB steps)		
	MB87077	Fujitsu
	MB87078	Fujitsu
Dual DC Operated Tone/Volume/Balance Circuit		
	LM1036	National
	TA7630	Toshiba
Dual DC Operated Tone/Volume/Balance Circuit with Stereo Enhancement		
	LM1040	National
Dual Equalizer Amp and ALC		
	KA22241	Samsung
Dual Equalizer Amp and REC Amp		
	KA22261	Samsung
Dual Power Amplifier (5.8 W)		
	KA2211	Samsung
Dual Power Amplifier (1 W)		
	KA2214	Samsung
Dual Power Amplifier (4.5 W)		
	KA22062	Samsung
Dual Pre-Amp for Auto Reverse (cassette recorders)		
	KA22131	Samsung
Dual Pre-Amplifier (for 3V radio stereo-cassette recorder)	KA2225	Samsung
Dual Pre-Power Amp and DC Motor Speed Control		
	KA22135	Samsung
One Chip Tape Recorder System		
	KA2213	Samsung
7W Power Amplifier		
	μPC1310	NEC
19W, Dual BTL Power Amplifier		
	μPC2502	NEC
20W Dual Power Amplifier		
	μPC1335	NEC
50 to 110W Power Amplifier Driver		
	μPC1342	NEC

Automotive Circuits

Function	Device	Source
Alternator Voltage Regulator		
	L485	◊ SGS-Thomson
Automotive Lamp Monitor		
	ULN2455A	Allegro Micro
Clock	μPD6529	NEC
Clock with Vacuum Fluorescent Display Drivers		
	SCL5233	Allegro Micro
Electronic Ignition Circuit		
	NCM6001Z	NCM
Electronic Ignition Control, Magnetic		
	L482	◊ SGS-Thomson
	L484	◊ SGS-Thomson
	L497	◊ SGS-Thomson

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Consumer Circuits (Cont'd)

Automotive Circuits (Cont'd)

Function	Device	Source
High Energy Ignition Circuit (Flip-Chip)	MCCF3334	Motorola
High Side Driver (high stress applications)	CA3273	Harris
High Side Driver, Single	HA13702	Hitachi
Inductive Load Driver, Quad	HA13007A	Hitachi
	HA13415	Hitachi
Injector Drive Controller	LM1949	National
Injector Driver Control	L583	SGS-Thomson
Lamp Flasher	U243	AEG Corp
Lamp Open Detector (single lamp failure detection among 2 to 4 lamps)	MB4210	Fujitsu
Multiplex Communications (8-bit programmable counter)	CDP1863	Harris
Noise Blanker	CA3258	Harris
PLL FM Multiplex Stereo Demodulator	CA3257	Harris
Power Switch w/Curent Limiter Sense Flag	CA3274	Harris
Sealed Lead-Acid Battery Charger	UC2906	Unitrode
Speed Control	CA3228	Harris
Voltage Regulator	MC3325	Motorola
	TEA7034	SGS-Thomson
Voltage Regulator (with reverse battery protection)	CA3276	Harris
Dual H-Driver (for instrumentation)	CA3275	Harris
Quad Driver, See also Interface—Memory and Peripheral Drivers	DS3656	National
Quad-Gated Power Driver (interfaces low-level logic to high-current loads)	**CA3272**	**Harris (3461)**
20-Watt Automotive Power Amplifier	LM2005	National

Calculator Circuits

Function	Device	Source
Eight Digit Basic Calculator Circuit	KS6025B	Samsung
	KS6026	Samsung
	KS6028	Samsung
10 Digit Basic Calculator Circuit	KS6029	Samsung
10 Digit Desktop/Basic Calculator Circuit	KS6027B	Samsung
10 Digit Scientific Calculator Circuit (56 function)	KS6041	Samsung
12 Digit Basic Calculator Circuit	KS6027C	Samsung
12/10 Digit Desktop/Basic Calculator Circuit	KS6027A	Samsung
10/12-Digit Calculator	UM3150	UMC
8-Digit Calculator	UM3135	UMC

Camera Circuits

Function	Device	Source
Exposure Control	CS102	Cherry Semi
NTSC 1H Delay Line Charge Coupled Device	LC8991	Sanyo
Strobe Light Controller	U2000B	AEG Corp
Synchronizing Signal Generator for Video Camera (for NTSC, PALM, PAL and SECAM)	CXD1217	Sony
Video Camera Encoder	HA11720	Hitachi
2/3 Inch Optical Size Solid State Image Sensor for EIA B/W TV Systems	LC9913	Sanyo

CB Radio Circuits

Function	Device	Source
Channel Selector/Display Driver	LC7181	Sanyo
	LC7191	Sanyo
Synthesizer Set, 40 Channel, BCD Channel Setting	LC7131	Sanyo

Clock/Watch Circuits

Function	Device	Source
Alarm Clock	KS5206	Samsung
	KS5207	Samsung
	LM8361	Sanyo
Alarm Clock Radio	LM8364	Sanyo
Alarm Clock/Radio Circuit	NCM3459Z	NCM
Analog Alarm Clock	UM3252	UMC
	UM3253	UMC
	UM3262	UMC
Analog Alarm Clock w/Snooze	UM3254	UMC
Analog Clock Circuit	KS5209	Samsung
	KS5210	Samsung
	KS5211	Samsung
	KS5221	Samsung
Analog Clock (drives a stepping motor)	NJU6301	◊ NJR
	NJU6302	◊ NJR
	NJU6303	◊ NJR
Analog Clock with Electronic Melody Generator	LR34651	Sharp
Analog Clock with Snooze Function (soft start alarm sound)	NJU6304	◊ NJR
Analog Clock (4.19 MHz crystal)	LR3428	Sharp
	LR3429	Sharp
Analog LCD Watch Circuit, 3 Hand (120 segment)	KS5113	Samsung
Analog Watch	UM3231	UMC
Analog Watch Circuit, Motor Output	KS5243	Samsung
CCD Clock Driver, Dual	M66700	Mitsubishi
CCD Clock Driver, Quad	M66705	Mitsubishi
Clock Automotive, with Vacuum Fluorescent Display Drivers	SCL5458	Allegro Micro
	SCL5466	Allegro Micro
	SCL5467	Allegro Micro
	SCL5604	Allegro Micro
Clock Circuits (See Also: Digital—CMOS Oscillators/Dividers. Linear—Other Linear Devices—Oscillator)	SCL5233	Allegro Micro
	SCL5238	Allegro Micro
	SCL5455	Allegro Micro
	SCL5463	Allegro Micro
	SCL5468	Allegro Micro
	SCL5474	Allegro Micro
	SCL5601	Allegro Micro
	MM53110	National
Crystal Clock LSI, 32 kHz (CMOS)	LR3468	Sharp
Digital Tuner	MM58142	National
LCD Digital Clock	LR3441	Sharp
LCD Display Digital Clock LSI (3 1/2 digit hour/minute display)	NJU6351	◊ NJR
LCD Display DigitalClock LSI (3 1/2 digit hour/minute display)	NJU6354	◊ NJR
LCD Watch Circuit, 3.5 Digit	KS5120	Samsung
LCD Watch Circuit, 4 Digit	KS5194A	Samsung
LCD Watch Circuit, 6 Digit	KS5112	Samsung
	KS5184	Samsung
	KS5190	Samsung
Melody Circuit, for Clocks	2009Z	NCM
	KS5310A	Samsung
	KS5310C	Samsung
	KS5313	Samsung
	KS5314	Samsung
	KS5340	Samsung
	KS5380	Samsung
Watch (LCD), Digital	KS5199A	Samsung
Watch (LCD), Digital with Alarm	KS5194	Samsung
3 1/2 Digit Multiplexed LCD Alarm Clock	UM3273	UMC
4-Digit Multiplexed LCD World Time Clock	UM3280	UMC
5 Function 3 1/2 Digit Multiplexed LCD Watch	UM3203	UMC
	UM3219	UMC
5 Function 4-Digit Multiplexed LCD Watch w/Alarm	UM3216	UMC
6-Digit Multifunction Watch	UM3217	UMC

Music

Function	Device	Source
Accompaniment Generator for Chords, Arpeggi, Keyboard or Pedalboard Bass	M151	SGS-Thomson
Consumer Music Synthesizer	ICS1261	IntCirSys
Digital-to-Audio Converter	PCM53	Burr-Brown
	PCM54	Burr-Brown
	PCM55	Burr-Brown
	PCM56	**Burr-Brown (3342)**
	PCM58	**Burr-Brown (3342)**
Dolby B-Type Noise Reduction Processor	LM1112A	National
	LM1112B	National
	LM1112C	National
Dolby Surround Sound	LA2770	Sanyo

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Music (Cont'd)

Function	Device	Source
Electret Preamplifier (for electret microphones)	LB1027AB	AT&T
Electronic Attenuator	XR13600	◊ Exar
Frequency Divider, 7-Stage	M740	SGS-Thomson
	M741	SGS-Thomson
	M747	SGS-Thomson
Graphic Equalizer, 5-Band	M5226	Mitsubishi
High Fi Music Synthesizer, 25 Voices, Digital Filters	ICS1399	IntCirSys
Melody Circuit, Harmonic with Rhythm Box	NJU503	◊ NJR
Melody Circuit, Speaker Drive	KS5814	Samsung
Melody Circuit, Speaker or Piezo Drive	KS5381	Samsung
	KS5381A	Samsung
Melody Circuit, Single-Tone	NJU501	◊ NJR
	NJU505	◊ NJR
Melody Circuit, Single-Tone with LED Blinking Function	NJU502	◊ NJR
Melody Circuit, Single-Tone (with tri-state buffer)	NJU511	NJR
	NJU512	NJR
Melody Circuit, Eight Sound Effect (speaker drive)	KS5401	Samsung
Melody Circuit (255 note capacity Mask-programmable ROM)	LS3404	LSI Comp
Melody Generator (automatic)	LR34611	Sharp
Melody Generator (by piezo-electric buzzer)	LR34621	Sharp
Melody Generator With Accompaniment	UM3491	UMC
	UM3492	UMC
Melody Organ Generator	UM3511	UMC
Monophonic Synthesizer	M110	SGS-Thomson
Multi-instrument Melody Generator	UM348X	UMC
Music Selector (9 program, random)	KA2230	Samsung
Musical Instrument with High Accurate Pitch	NJU5201	NJR
Paper Organ	UM3522	UMC
Polyphonic Sound Generator	M112	SGS-Thomson
Random Music Selector, 5-Program	IR3R20A	Sharp
	IR3R31	Sharp
Random Music Selector, 9-Program	IR3R24	Sharp
Simple Melody Generator	UM3161	UMC
	UM3166	UMC
	UM66T	UMC
Sound Color Changeable Musical Instrument	NJU5202	NJR
Sound Generator, stereo, for Music and Sound Effects	SAA1099	Signetics
Toy Organ	KS5390	Samsung
Voice Synthesizer, 1.5 sec. Speaker and Piezo Driver	NJU5502	◊ NJR
Voice Synthesizer, 1.5 sec Piezo Buzzer Direct Drive	NJU5503	◊ NJR
	NJU5504	◊ NJR
Voice Synthesizer, 3 sec Piezo Buzzer Direct Drive	NJU5505	◊ NJR
	NJU5506	◊ NJR
Three Siren Sound Generator	UM3561	UMC

Radio Circuits, AM

Function	Device	Source
AM IF and Detector, Double Conversion	SL6700A	Plessey
	SL6700C	Plessey
AM IF Circuit	LA1137	Sanyo
AM Radio Receiver	μPC1322	NEC
	μPC1344	NEC
AM Radio Receiver Chip	IR3R26	Sharp
AM Receiver for AM Stereo	TDA4010	Siemens
AM Receiver with IF Output	TDA1572	Signetics
AM Receiver with up Conversion	TEA6200	Signetics
AM Stereo Front End and Tuner Stabilizer	MC13023	Motorola
AM Tuner System (converter, IF amp, detector)	KA22461	Samsung
AM One-Chip Radio	KA22421	Samsung
CQUAM AM Stereo Decoder	MC13020	Motorola
Frequency Synthesizer	DS8910	National
High-Level Mixer	SL6440C	Plessey
Radio Circuit, AM Stereo Noise Blanker	ULN3845	Allegro Micro
	ULN3846	Allegro Micro
Radio System for Electronically Tuned Radios	LM1863	National
Receiver System	ULN3839A	Allegro Micro
	CA3088	† Harris
	MC13041	Motorola
	ZN415E	Plessey
	ZN416E	Plessey
	TCA440	Siemens
	TDA1072	Signetics
	TA7641B	Toshiba
Receiver System (AM radio circuit)	ULN3841	◊ Allegro Micro
RF, IF Detector	LM3820	National
RF, IF, Detector, AGC	ZN414Z	Plessey
SSB Detector	SL623C	Plessey
Stereo Decoder	MC13022	Motorola
Stereo Decoder, C-QUAM (tuning stabilized)	MC13021	Motorola
Tuner for Car Radio	TA7402	Toshiba
	TA7616	Toshiba
Tuner System	LA1240	Sanyo
	LA1245	Sanyo

Radio Circuits, AM/FM

Function	Device	Source
AM/FM Digital Tuning Synthesizer	TSA6057	Signetics
AM/FM If Amplifier	TDA1220B	AEG Corp
AM/FM IF System	KA2243	Samsung
AM/FM One-Chip Radio	KA22424	Samsung
AM/FM One-Chip Radio Circuit	KA22427	Samsung
Antenna Diversity Circuit	LA1061M	Sanyo
Audio Power Amplifier	TDA2040	AEG Corp
Auto Program Search Chip	IR3R32	Sharp
Bandswitch Operational Amplifier	CA3263	Harris
Broadband Demodulator System (Configurable for AM or FM Based Signals)	LM1211	National
Cellular Radio Receiver (bipolar)	**CA412**	**Newbridge (3569)**
Digital Tuning System	TC9140	Toshiba
	TC9146	Toshiba
	TC9147	Toshiba
Digital Tuning System, 4-bit microcomputer	MB88561	Fujitsu
	MB88562	Fujitsu
Display Driver for Receiving Frequency Digital Display	TD6301A	Toshiba
Electronic Tuning AM Receiver for Car Stereo	KA22461	Samsung
FM/AM IF System	IR3R27A	Sharp
FM IF/AM Tuner System	KA2247	Samsung
	KA22471	Samsung
	KA2248A	Samsung
FM IF System, Low Power	NE614A	Signetics
FMX Decoder	ULN3800	Allegro Micro
Frequency Counter; for 3 1/2 Digit VF Displays	MSM5525	OKI
IF Amplifier	LM1868	National
	TA7060A	Toshiba
	TA7061B	Toshiba
IF Amplifier and Demodulator Circuit	TDA1596	Signetics
IF Amplifier/Detector	TBA120U	AEG Corp
IF, Narrowband (FM/FSK)	MC3367	Motorola
IF System (low supply voltage)	TA7640A	Toshiba
	TA7757	Toshiba
IF System (3 volt use)	TA7687A	Toshiba
Interprogram Sensor (one program skipping)	TA7341	Toshiba
Mixer/Oscillator	TBB204	Siemens
Mixer (to 200 MHz)	TBB042	Siemens
PLL Frequency Synthesizer with 3-Line Bus	TBB206	Siemens

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LINEAR—Consumer Circuits (Cont'd)

Radio Circuits, AM/FM (Cont'd)

Function	Device	Source
Radio Frequency Display Driver and Clock	T1400	Toshiba
Receiver System	TDA1083	AEG Corp
	ULN2204A	Allegro Micro
	ULN2241A	Allegro Micro
	LM1866	National
	TDA1220B	SGS-Thomson
	TDA1220L	SGS-Thomson
	MC3361	Signetics
	NE605	**Signetics (3590)**
	NE615	Signetics
	TEA5570	Signetics
	TA7613A	Toshiba
Receiving Frequency Display Driver for DTS-6/8 Digital Tuning System	TC9158	Toshiba
	TC9159	Toshiba
Sound (IF detector, dc volume control, preamplifier)	TBA120C	Motorola
Stereo/Bridge AF Amplifier (class B)	TDA4935	Siemens
Stereo Decoder	TCA4511	AEG Corp
	ULN3827A	Allegro Micro
Superheterodyne Receiver (Mobile Radio, Radio Pagers)	**CA422**	**Newbridge (3569)**
Tone Control System, Stereo	TDA1524A	Motorola
Transmitter, FM/FSK	MC2831A	Motorola
	MC2833	Motorola
Tuner (car radios and home receivers)	TUA1574	Siemens
Tuner, PLL	SDA2121	Siemens
Tuning Synthesizer	SAA1057	Signetics
Dual-Modulus Divider (÷128/129)	TBB202	Siemens
One Chip IF, Noise Canceller and Multiplexer	LA1861	Sanyo
One Chip Tuner, Car Radio	LA1886	Sanyo

Radio Circuits, FM

Function	Device	Source
Digitally-Controlled Stereo Tone/Volume Circuit w/4-Channel Input Selector	LMC1992	National
Direct Conversion FM Receiver Chip Set for Data	**CA408/CA411**	**Newbridge (3569)**
FM Front End	μPC1276G	NEC
FM Front End for Portable Radio	KA2249	Samsung
FM IF and PLL Detector with RF Mixer	SL6691C	Plessey
FM IF and Quadrature Detector with RSSI (received signal strength indicator)	SL6652C	Plessey
	SL6653C	Plessey
FM IF System for Car Stereo	KA2244	Samsung
	KA22441	Samsung
	KA2245	Samsung
FM IF Quadrature Detector (with RSSI)	NE604A	Signetics
	NE605	**Signetics (3590)**
FM Stereo Demodulator with Noise Canceller	μPC1287	NEC
FM Stereo Multiplex Decoder	KA2266	Samsung
FM Stereo Multiplex Decoder (PLL, lamp driver)	KA2262	Samsung
	KA2265	Samsung
FM Stereo Multiplex Demodulator	MB4105	Fujitsu
FM Stereo Multiplexer Decoder	KA2261	Samsung
	KA2263	Samsung
	KA2264	Samsung
FM Tuner (one chip)	μPC1265	NEC
FMX Decoder	LA3440	Sanyo
Front End	TDA1574	Signetics
	TA7358	Toshiba
Front End, Low Voltage	TDA7211	SGS-Thomson
	TDA7212	SGS-Thomson
	TDA7215	◊ SGS-Thomson
Front End Timer	TA7335	Toshiba
Front-End, VHF	U4062B	AEG Corp
IF/AF PLL Circuit (for narrowband FM)	NJM2206	NJR
IF/Amp Detector	MC3361	Signetics
IF Amplifier	CA3002	† Harris
	CA3012	† Harris
	CA3028	† Harris
	MC1350	Motorola
	MC3361	Samsung
	TDA1576	Signetics
	TA7302	Toshiba
IF Amplifier/Detector	TBA120S	AEG Corp
	TDA4210	AEG Corp
	CA2111A	† Harris
	CA3013	Harris
	CA3014	† Harris
	CA3065	Harris
	CA3089	† Harris
	CA3189	Harris
	CA3209	Harris
	LM1865	National
	LM3089	National
	LM3189	National
	LM3361	National
	TBA750	Plessey
	KA2243	Samsung
	LA1140	Sanyo
	LA1150	Sanyo
	LA1231N	Sanyo
	TCA3089	SGS-Thomson
	S041	Siemens
	TBA120	Siemens
	TBA129-2	Siemens
	TBA229-2	Siemens
	TDA1047	Siemens
	TDA4210-3	Siemens
IF Amplifier, Narrow Band	ULN3859A	Allegro Micro
	MC3359	◊ Motorola
	MC3361	Motorola
	IR3N06	Sharp
IF Amplifier, PLL, Squelch, Narrow Band	SL6640	Plessey
	SL6690	Plessey
	SL6691	Plessey
IF Circuit (for narrowband FM)	NJM3357	NJR
	NJM3359	NJR
IF System	LA1235	Sanyo
	TCA3189	SGS-Thomson
	TA7303	Toshiba
IF System, FM	LM2065	National
If System, for Manually Tuned Radios	LM1965	National
IF System, Low Voltage/Power	LM3361A	National
Interference Absorption Circuit	TDA1001B	Signetics
LED Level Meter Driver	KA2281	Samsung
	KA2284	Samsung
	KA2285	Samsung
	KA2286	Samsung
	KA2287	Samsung
	KA2288	Samsung
LED Tuning Indicator	LB1450	Sanyo
Log Amplifier, 6-Stage	NJM2204B	NJR
Mixer FM IF System	SA605	Signetics
Mixer, Full Balanced	NJM2203	NJR
Mixer (up to 500 MHz)	NE602	Signetics
Modulator/Demodulator (Double balanced)	NJM1496	NJR
Noise Canceller	LA2110	Sanyo
Noise Reduction, FM Noise Canceller	KA2272	Samsung
Prescaler (for digital tuning)	TD6104	Toshiba
Radio Circuit, FM, Single Chip	TDA7021T	Signetics
Receiver for Cellular Radio	**CA412**	**Newbridge (3569)**
Receiver Subsystem, Dual Conversion	MC3362	Motorola
	MC3363	Motorola
Receiver System	TBB1469	Siemens
	TBB2469	Siemens
	TBB469	Siemens
	TDA7000	Signetics
	TDA7010T	Signetics
Receiver System with Squelch and Scan Control	MC3357	Motorola
RF/IF Amplifier	CA3127	Harris
Stereo Decoder	CA3195	Harris
	TCA4500A	Motorola
	LM1310	National
	LM1800	National
	LM1870	National
	LM4500A	National
	LA3361	Sanyo
	LA3365	Sanyo
	LA3370	Sanyo
	LA3375	Sanyo
	TEA1330	SGS-Thomson
	μA758	Signetics
	TDA1578A	Signetics
	TA7157A	Toshiba

(Continued)

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Radio Circuits, FM (Cont'd)

Function	Device	Source	Line
Stereo Decoder (Cont'd)			
	TA7342	Toshiba	
	TA7401A	Toshiba	
Stereo Decoder, PLL, Low Voltage			
	TDA7040T	Signetics	
Superheterodyne FM Receiver Chip Set			
	CA404/CA406	**Newbridge (3569)**	
	CA404/CA407	**Newbridge (3569)**	5
Tuner	TDA1062S	AEG Corp	

Remote Control Circuits

NOTE: In the following category ONLY, the dagger symbol in front of a company name indicates a transmitter/encoder. Absence of a dagger designates a receiver/decoder.

Function	Device	Source	Line
Active High IR Receiver Preamplifier With BFP			
	μPC1491	NEC	
Active Low IR Receiver Preamplifier With BFP			
	μPC1490	NEC	
Amplifier for IR systems			
	U2501B	AEG Corp	10
Amplifier-Detector			
	GL3274	GoldStar	
	MC3373	Motorola	
	KA2181	Samsung	
	KA2182	Samsung	
	KA2183	Samsung	15
Infrared Remote Control Circuit			
	SAA3049	Signetics	
Infrared Remote Control Receiver, 38 kHz			
	SBX1610-52	Sony	
	SBX1620-52	Sony	
Infrared Remote Control Receiver, 40 kHz			
	SBX1610-51	Sony	
	SBX1620-51	Sony	20
Infrared Remote Control Transmitter (two operating modes: single or repetitive transmission)			
	PCF1254	Signetics	
IR Transmitter/Receiver With MSK			
	μPD6130	NEC	
IR Transmitter, 5 I/O			
	μPD6123	NEC	
IR Transmitter, 8 I/O			
	μPD6124	NEC	
IR Transmitter, 20 Keys			
	μPD6120	NEC	25
IR Transmitter, 32 Keys			
	μPD6121	NEC	
IR Transmitter, 64 Keys			
	μPD6122	NEC	
Learning Remote Control Circuit (24 I/O)			
	μPD17203	◊ NEC	
Pre-Amplifier for Remote Control, 0.3 W Diss.			
	CX1261	Sony	
Pre-Amplifier for Remote Control, 0.6 W Diss.			
	CX20106	Sony	30
Preamplifier	TA7344	Toshiba	
Preamplifier, for Infrared Control			
	μPC1474	NEC	
	μPC1475	NEC	
	TDA2320	SGS-Thomson	
Programmable IR Transmitter			
	μPD6125	NEC	35
	μPD6126	NEC	
Radio Control, Programmable 7-Channel RC Encoder			
	NE5044	Signetics	
Receiver, Infrared			
	TDA3047	Signetics	
	TDA3048	Signetics	
Remote Control Amplifier, Infrared			
	CA3237	Harris	40
Remote Control Carrier Generator (LCD driver, 16 I/O ports)			
	μPD17202	◊ NEC	
Remote Control Carrier Generator (LCD driver, 8-bit A/D, 23 I/O ports)			
	μPD17201	◊ NEC	
Remote Control, Infrared			
	TDA8160	SGS-Thomson	
	TDA8162	SGS-Thomson	
	SAA3004	Signetics	45
	SAA3027	Signetics	
	SAA3028	Signetics	
Remote Control Receiver			
	LR3715M	Sharp	
	LU59002	Sharp	
	TA7657	Toshiba	50
Remote Control Transmitter			
	TA7333	Toshiba	
Remote Control Transmitter LSI for TV			
	LR3718	Sharp	
Remote Controller, 3/4 Wired			
	NJM2404	NJR	
RF Amplifier/Mixer			
	CA3049	† Harris	
Transceiver (ultrasonic)			
	LM1812	National	55
Transmitter, Infrared			
	GM3043	GoldStar	
	GM3044	GoldStar	
	SDA2208-2	Siemens	
	SAA3006	Signetics	
Transmitter, Infrared PCM			
	MC14497	◊ Motorola	60
Transmitter, PPM			
	UAA4009	SGS-Thomson	
Transmitter/Receiver (encoder/decoder), 2 device sets			
	U327	† AEG Corp	
	SCL5284	† Allegro Micro	
	SCL5285	† Allegro Micro	
	MC145026	◊† Motorola	65
	MC145027	Motorola	
	MC145028	◊ Motorola	
	LM1871	National	
	LM1872	National	
	MM58250	† National	70
	MSL9362	OKI	
	MSL9363	OKI	
	ML920	Plessey	
	ML922	Plessey	
	ML923	Plessey	75
	ML924	Plessey	
	ML926	Plessey	
	ML927	Plessey	
	ML928	Plessey	
	ML929	Plessey	80
	SL490	Plessey	
	TC9132	† Toshiba	
	TC9134	Toshiba	
	TC9148	† Toshiba	
	TC9149	Toshiba	85
	TC9150	Toshiba	
6-channel Address-D/A Control Circuit			
	U3042	AEG Corp	

Speech Circuits

Function	Device	Source	Line
Dedicated Mask ROM for Voice Synthesis (128K)			
	T6684	Toshiba	
Dedicated Mask ROM for Voice Synthesis (64K)			
	T6772	Toshiba	
Delta Modulation System, Continuously Variable Slope			
	HC55536	Harris	90
	HC55564	◊ Harris	
Full-Duplex Voice Band Inverter			
	MX304	MX-COM	
Read-Only Memory			
	TSP60C20	TI	
Recorder, ADPCM (stand alone)			
	MSM6258	OKI	
Recording/Reproduction (SRAM/EPROM)			
	TC8830F	Toshiba	95
Recording/Reproduction (1 MB DRAM type)			
	TC8831F	Toshiba	
Remote Control Receiver Pre-Amplifier			
	IR3T24	Sharp	
	IR3T26	Sharp	
Speaker Driver/Amplifier			
	MSC1161	OKI	
Speech Analysis and Synthesis LSI			
	T6831	Toshiba	100
Speech Analyzer/Synthesizer, ADPCM			
	MSM5218	OKI	
Speech Encoding A/D Converter			
	PCM75	Burr-Brown	
Speech Interface Control Logic			
	SPR000	Microchip	
Speech Network Circuit			
	IR3N82	Sharp	
Speech Procesor, ADPCM (for SRAM interface)			
	MSM6309	OKI	105
Speech Processor			
	TSP50C50	TI	
Speech Processor, ADPCM (for DRAM interface)			
	MSM6308	OKI	
Speech Recognition			
	MSM6253	OKI	
Speech Recognition LSI			
	T6658A	Toshiba	
Speech Recording and Reproduction with DRAM			
	UM93520	UMC	110
Speech Recording and Reproduction with SRAM			
	UM93510	UMC	
Speech Scrambler/Descrambler			
	COM9046	SMC	
Speech Synthesis (Male/Female)			
	PCF8200	Signetics	
Speech Synthesis Processor			
	SP0256A	Microchip	
	SP0264	Microchip	115
	SC01	Votrax	
Speech Synthesizer, Microprocessor and Memory			
	TSP50C41	TI	
	TSP50C42	TI	
	TSP50C43	TI	
	TSP50C44	TI	120
Speech Synthesizer, ADPCM			
	MSM5205	OKI	
	MSM5248	OKI	
	MSM6212	OKI	
	MSM6243	◊ OKI	
	L6212	SGS-Thomson	125
Speech Synthesizer Chip (duration: 15 sec.)			
	MSS1501	Mosel	
Speech Synthesizer Chip (duration: 20 sec.)			
	MSS2001	Mosel	
Speech Synthesizer Chip (duration: 3 sec.)			
	MSS0301	Mosel	
Speech Synthesizer Chip (duration: 6 sec.)			
	MSS0601	Mosel	

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Speech Circuits (Cont'd)

Function	Device	Source
Speech Synthesizer, Voice, Music and Sound Effects	SC02	Votrax
Variable Speech Controller	IR3R41	Sharp
	IR3R51	Sharp
Voice Band Inverter	MX004	MX-COM
	MX014	MX-COM
Voice Recorder and Reproducer	UM5101	UMC
Voice Recording/Reproducing LSI	T6668	Toshiba
Voice Recording/Reproducing (using delta-modulation with external DRAM, for answering machines, message alarm clocks, and talk-back toys)	STBC1	Microchip
Voice Store Retrieve Codec	MX709	MX-COM
Voice Synthesis LSI, Single Chip ADM	T6667	Toshiba
Voice Synthesis, 4-Channel ADPCM	MSM6295	OKI
Voice Synthesizer	UM5000	UMC
	UM5100	UMC
Voice Synthesizer Circuit, ADM Method	KS5911	Samsung
	KS5912	Samsung
Voice Synthesizer Circuit, LPC Method	KS5901A	Samsung
	KS5902	Samsung
Voice Synthesizing LSI	T6721A	Toshiba
	T6803	Toshiba
VSB Inverter	MX214/224	MX-COM

Tape Recorder Circuits, Audio

Function	Device	Source
Amplifier System (for cassette recorders)	TA7738	Toshiba
Amplifier, with AGC, for Recorders	TA7137	Toshiba
	TA7137-ST	Toshiba
Audio System	LM1818	National
Auto Reverse and Auto Eject Plunger Driver	TD6304A	Toshiba
	TD6308A	Toshiba
	TD6309	Toshiba
Automatic Cuing Circuit	LC7512	Sanyo
Automatic Music Selection	TC9165	Toshiba
	TC9167	Toshiba
Automatic Music Selection, Index Scan	TC9166	Toshiba
Automatic Program Search	TC9138A	Toshiba
	TC9139A	Toshiba
Broad Band Compandor	NE572	Signetics
	NE575	Signetics
Controller (mode change, absence recording)	TC9121	Toshiba
CVSD Voice Recorder (continuously variable slope delta-modulation)	TSP3477	TI
Digital Audio Tape (DAT) System, Drum Capstan Driver	HA13403	Hitachi
Digital Audio Tape (DAT) System, Filter	HD49202	Hitachi
Digital Audio Tape (DAT) System, PLL Data Strobe	HA12062	Hitachi
IC Switch (cassette)	TC9143	Toshiba
	TC9144	Toshiba
Motor Speed Control (automatic stop, dc manual stop, biasing and erasing oscillator)	TDA7770	SGS-Thomson
Motor Speed Control, Stop, Pause, Cassette Ejection	TDA7270	SGS-Thomson
Power Amplifier (cassette)	TA7283	Toshiba
Power Amplifier (minicassette)	TA7331	Toshiba
Preamplifier, for auto-reversing systems	LM1837	National
	LM1837	SGS-Thomson
Preamplifier, Low-Noise Dual, for Autoreverse Car Stereo	TA7405	Toshiba
Preamplifier with ALC	TDA2054	SGS-Thomson
Preamplifier with ALC (minicassette)	TA7330	Toshiba
Preamplifier with ALC, Dual	TA7668B	Toshiba
Signal Level Sensor System (for microcassette)	NJM2072	NJR
Tape Deck Amplifier System	TA7663	Toshiba
Tape Deck Amplifier, Dual Channel	TA7639	Toshiba
Voice Recording/Reproducing (using delta-modulation with external DRAM, for answering machines, message alarm clocks, and talk-back toys)	STBC1	Microchip
Single-Key On-Tape Program Selector	HA12054	SGS-Thomson
Dual Preamplifier for Auto-Reverse Car Stereo	TA7705	Toshiba

Tape Recorder Circuits, Video

Function	Device	Source
Timer/Driver, Precision 16 Channel	CD22401	Harris
VCR Audio Play/Record	GL3615	GoldStar

Television Circuits

Function	Device	Source
Microprocessor Interface	M206	SGS-Thomson
Microcontroller for Television and Video	P87C054	Signetics
	87C054	Signetics
Microcontroller for Television and Video (8kx8 ROM)	P83C053	Signetics
	83C053	Signetics
Analog Interface Unit	CA3247	Harris
FM/IF Amplifier-Limiter and Quadrature Detectort	CA2136A	Harris
AFC/Horizontal Oscillator Signal Processor with Sync Separator and AGC	CA3261	Harris
Analog Interface for Telex System	KA6101	Samsung
	KA6102	Samsung
Audio and Video Switch	KA2186	Samsung
Audio/Video Switch	GL3810	GoldStar
Auto Focus	RF3L06	Ricoh
AV Switch for TV	IR3P27	Sharp
Bilingual Signal Processor	GL3813	GoldStar
Broadband RF Amplifiers	MWA0270	Motorola
	MWA0304	Motorola
	MWA0311	◊ Motorola
	MWA0370	Motorola
Cable TV Channel Processor	SDA2110	Siemens
Camera Sync. Generator	HD44007A	Hitachi
	ZNA134E	Plessey
	ZNA134J	† Plessey
CATV Amplifier	MHW5222A	Motorola
CATV Amplifiers (hybrid), 27 dB, 330 MHz	HSW3272A	Motorola
CATV Feedforward Amplifier	FF124	Motorola
	FF224	Motorola
Channel Display and Clock	MM58146	National
Channel Display Driver/Decoder	U143M	AEG Corp
Chroma Circuit (horizontal/vertical, digital video)l	HA11532	Hitachi
Chroma Circuits (demodulators, IF amplifiers, luminance control, signal processors, and various combinations)	TDA3506	AEG Corp
	TDA3560A	AEG Corp
	TDA3562A	AEG Corp
	GL3320	GoldStar
	CA3070	Harris
	CA3126	Harris
	CA3194	Harris
	CA3217	Harris
	HA11247	Hitachi
	HA11431NT	Hitachi
	HA11436A	Hitachi
	HA11480	Hitachi
	MC1377	Motorola
	TDA3301	Motorola
	TDA3303	Motorola
	TDA3330	Motorola
	TDA3333	Motorola
	KA2151	Samsung
	TDA3300	SGS-Thomson
	TEA1030	SGS-Thomson
	TEA5030	SGS-Thomson
	TDA3505	Signetics
	TDA4555	Signetics
	TA7141A	Toshiba
	TA7193	Toshiba
	TA7607A	Toshiba
	TA7611A	Toshiba
	TA7621	Toshiba
	TA7622A	Toshiba
	TA7659	Toshiba
	TA7660	Toshiba
	TA7661	Toshiba
	TA7675A	Toshiba
	TA7676	Toshiba
	TA7678A	Toshiba
Chroma/Y-Mixer (digital video)	HA11525	Hitachi
Circle Generator	4006Z	NCM

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Television Circuits (Cont'd)

Function	Device	Source	Line
Clock Generator (for video DSP chipset)	**SAA9057**	**Signetics (3627)**	
Clock Synchronizer	RCS401	ThirdDomain	
Color Bar Generator Chip	NCM4322Z	NCM	
Color Bar Generator Circuit	NCM5322Z	NCM	
Color Comb Filter for TV	IR3P38A	Sharp	5
Color Transient Improvement Circuit	TDA4565	Signetics	
Color TV, Small-Signal Subsystem	TDA4505	Signetics	
Composite Video Overlay Synchronizer for Color TV	MC1378	Motorola	
CRT Controller	RP5C16	Ricoh	
	RP5C17	Ricoh	10
CRT Interface Chip	IR3P78	Sharp	
CRT View Finder Chip	IR3P75	Sharp	
DC Volume and Tone Control	KA2107	Samsung	
DC Volume, Dual	μPC1406	NEC	
Decoder, Multistandard (negative)	TDA4555	AEG Corp	15
Decoder, Multistandard (positive)	TDA4556	AEG Corp	
Decoder, 1 of 16	M054	SGS-Thomson	
	M055	SGS-Thomson	
Decoder, 4:2:2	Bt294	Brooktree	
Deflection Signal Processing IC for Color TV	KA2134	Samsung	20
Deflection System	KA2138	Samsung	
	KA2921	Samsung	
Digital Color Space Converter	SAA7192	Signetics	
Digital Multistandard Decoder-Square Pixel (DMSD-SQP)	SAA7191	Signetics	
Digital Multistandard Television Decoder	**SAA9051**	**Signetics (3627)**	25
	TDA9051	**Signetics (3627)**	
Digital Tuning	SAB3035	Signetics	
	SAB3036	Signetics	
	SAB3037	Signetics	
Digital Tuning, Divider ÷64	SDA2311	Siemens	30
Digital Tuning, PLL	SDA3112	Siemens	
Digital Tuning System Memory Controller	TA7619A	Toshiba	
Digital Tuning System (PLL)	TC9137B	Toshiba	
Digital Tuning, 1.3 GHz Divider ÷64	SDA4212	Siemens	
Digital Tuning 1.3 GHz PLL	SDA3202	Siemens	35
Digital Volume Control	KA2611	Samsung	
Display Controller, 20 characters x 9 lines	MB88303	Fujitsu	
Double-Balanced Mixer for UHF/VHF/HF	NE602A	Signetics	
East-West Pincushion Correction Circuit	TDA4950	SGS-Thomson	
Electronic Program Memory, 32-Station	M293	SGS-Thomson	40
Encoder, 4:2:2	Bt291	Brooktree	
Enhance Video Processor D/A (for video DSP chipset)	**SAA9060**	**Signetics (3627)**	
FM/IF Amplifier and Demodulator for TV/STEREO	U2829B	AEG Corp	
Frequency Synthesizer	SAB3035	Signetics	
Frequency Synthesizer for TV tuner	U6316	AEG Corp	45
Gray Scale Enhancer, Real Time	2545	OEI	
Horizontal & Vertical Processor	GL1150	GoldStar	
	CA3202	Harris	
	CA3223	Harris	
	HA11235	Hitachi	50
	HA11517	Hitachi	
	LM1880	National	
	TEA2017	SGS-Thomson	
	TDA2578A	Signetics	
	TDA2595	Signetics	55
Horizontal Processor	TDA1940	AEG Corp	
	TDA1950	AEG Corp	
	TDA2591	AEG Corp	
	TDA2593	AEG Corp	
	CA1391	Harris	60
	CA1394	Harris	
	CA3210	Harris	
	MC1391	Motorola	
	LM1391	National	
	TBA920	SGS-Thomson	65
	TDA1180	SGS-Thomson	
	TDA2593	SGS-Thomson	
	TDA2593	Signetics	
	TDA2594	Signetics	
Horizontal Signal Processing System	KA2135	Samsung	70
	KA2137	Samsung	
IF Amplifier/Detector	TBA120T	AEG Corp	
IF and PLL Detector System	MC13011	Motorola	
	MC44301	Motorola	
IF Circuit	HA11485	Hitachi	75
IF, Video, Chroma, Deflection Signal Processor	μPC1800CA	NEC	
Image Colorizer, Real Time (256 colors)	6730	OEI	
In-Set TV Pattern Control Logic	NCM3010Z	NCM	
Infrared Pre-Amplifier	KA2184	Samsung	
Intercarrier Frequency Modulator	NCM4002Y	NCM	80
Intercarrier Rrequency Modulator (internal PLL and Comparator)	4002Y-A	NCM	
IR Amplifier, Narrow Band	IR3N37/N	Sharp	
IR Remote Control Amplifier	CA3237	Harris	
Line Buffer for NTSC TV (1135x8-bit)	μPD42102-3	NEC	
Line Selector	4003Z	NCM	85
Low Power Compandor	NE576	Signetics	
LSI Sync Generator (for TV and video processing systems)	CD22402	Harris	
Luma/Chroma Processor	HA11431	Hitachi	
Luminance Delay	TDA4565	AEG Corp	
Modulator	NCM4032Z	NCM	90
Modulator Circuit	TDA5660	Siemens	
Modulator Circuit for Video Tape Recorders and Disc Players	MC1374	Motorola	
Modulator for TV, Video and Sound Signals	TDA5665	Siemens	
Modulator Oscillator, to 600 MHz	MC13024	Motorola	
Monochrome TV, Small-Signal Subsystem	TDA4503	Signetics	95
Multi Sound Decoder (U.S. TVs)	μPC1871	NEC	
Multimode Monitor Processor (horiz., vert., and video combo)	MC1384	Motorola	
NTSC C/TV One-Chip	KA2159	Samsung	
NTSC Color Decoder	TDA3567	Signetics	
NTSC Color Difference Decoder	TDA4570	Signetics	100
NTSC/PAL Decoder	V7020	Sony	
	V7040	Sony	
NTSC Synchronization Generator	NCM3019Z	NCM	
NTSC TV Synchron Generator	NCM3009Z	NCM	
On-Screen Display (48 characters, 2 lines by 12 columns)	μPD6141C/G	NEC	105
On-Screen Display (64 Characters, 12 lines by 24 columns)	μPD6142C/G	NEC	
ON-Screen Display (64 characters, 2 lines by 16 columns)	μPD6143C/G	NEC	
On-Screen Display (64 characters, 6 lines by 16 columns)	μPD6144C/G	NEC	
On-Screen Display (128 characters, 12 lines by 24 columns)	μPD6145C/G	NEC	
PAL/NTSC Color Decoder	TDA3566	Signetics	110
PAL/NTSC Decoder w/ RGB Inputs	TDA2582	Signetics	
PAL/NTSC TV Sync Generator	SAA1101	Signetics	
Pattern Generator	4001Z	NCM	
Phase Control	U210B	AEG Corp	
Picture Tube Bias Circuit, Automatic	CA3224	Harris	115
Picture-in-Picture AD/D-A (video chipset)	MB40176	Fujitsu	
Picture-in-Picture Controller	**MB86140N**	**Fujitsu (3417)**	
Picture-in-Picture Controller (for TV/VTR)	MB86152	Fujitsu	
Picture-in-Picture Generator (allows multiple video inputs to be viewed on one TV screen)	μPD42272	NEC	
Picture-in-Picture Phase Lock Loop (video chipset)	MB3511	Fujitsu	120

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Television Circuits (Cont'd)

Function	Device	Source
Picture-in-Picture Dual-Port RAM (video chipset)	MB81461	Fujitsu
PIF Circuit	GL3101A	GoldStar
Remote Control Receiver, PCM	M104	SGS-Thomson
Remote Control Transmitter (key in/out, driver, output control, osc., data register)	KS5803A	Samsung
Remote Control Transmitter, PCM	M709	SGS-Thomson
	M710	SGS-Thomson
RF Modulator	CA1890	Harris
	HA11466S	Hitachi
RGB Amplifier	TDA8153	SGS-Thomson
RGB Encoder (converts RGB to a composite signal)	CXA1145	Sony
RGB Interface for TV	IR3P32A	Sharp
RGB Pattern Generator	NCM4011Z	NCM
RGB Sign Mixing Amplifier for TV	IR3P56	Sharp
RGB Switch for TV	IR3P36	Sharp
RGB to NTSC Converter	6291	OEI
RGB Video Amplifier System (for high resolution RGB color monitors)	LM1203	National
RGB Video Processor (for video DSP chipset)	**TDA4680**	**Signetics (3627)**
RGB/YUV Switch	TDA8443	Signetics
	TDA8443A	Signetics
Sign Mixer for TV	IR3P54A	Sharp
Signal Processor, Bilingual	CA3154	Harris
SMPS Controller	TDA4601B	SGS-Thomson
Sound and Picture Processor	GL3120	GoldStar
	HA11485ANT	Hitachi
Sound Circuits	GL3201A	GoldStar
	CA1190	Harris
	CA1191	Harris
	CA3065	Harris
	TBA120	Motorola
	TDA3190P	Motorola
	TBA750	Plessey
	TDA1190	SGS-Thomson
	TDA3190	SGS-Thomson
	TDA4190	SGS-Thomson
	TDA8190	SGS-Thomson
	TBA130-2	Siemens
	TDA6220	Siemens
	TDA2545A	Signetics
	TDA2546A	Signetics
	TA7130	Toshiba
	TA7176A	Toshiba
	TA7243	Toshiba
	TA7314	Toshiba
	TA7632	Toshiba
Sound IF and Audio Output	KA2102A	Samsung
Sound IF Subsystem for Multiplex	KA2105	Samsung
	KA2106	Samsung
Sound IF System	KA2101	Samsung
Sound Mute System for TV	KA2103L	Samsung
Sound Muting & Auto Power OFF	KA2104	Samsung
Sound MUX (Two carrier system)	KA2268N	Samsung
Sound, Parallel IF	TDA4445	AEG Corp
	GL3202	GoldStar
Source, Select, Gain Control and A/D (for video DSP chipset)	**TDA8708**	**Signetics (3627)**
Stereo Decoder	LM1884	National
Stereo Sound Control	TDA6200	Siemens
Sychron Generator	2001Z	NCM
Sync Generator	CA3254	Harris
	CA3255	Harris
	HD440072	Hitachi
Sync Separator	HA11423	Hitachi
Sync Separator (phase inverter, horiz. sync separator, vert. sync separator, composite sync separator, vert/horiz filter)	KA2605	Samsung
	KA2606	Samsung
Synchronization and Deflection Circuit	LA7801	Sanyo
	LA7806	Sanyo
Synchronization Circuit	TDA2579	Signetics
Teletext Data Slicer	GL3917	GoldStar
Test Pattern Generator	ZNA234	Plessey
Timing Processor	TEA2026	AEG Corp
Tone Control	TDA1524A	Signetics
Traffic Camera Controller	4004Z	NCM
Tuner Band Switching	TA7315B	Toshiba
Tuner, CATV (to 700 MHz)	TUA2007	Siemens
Tuner Controller	GL3711	GoldStar
	SL952	Plessey
Tuner, VHF Mixer-Oscillator	TDA5030	Signetics
TV Analog Switch	IR3P76	Sharp
TV Display Controller	MB88313	Fujitsu
	MB88321	Fujitsu
	MB88322	Fujitsu
	MB88323	Fujitsu
	MB88324	Fujitsu
	MB88325	Fujitsu
	MB88331	Fujitsu
TV Horizontal/Vertical Countdown Digital Sync System for 525-Line Operation	CA3218	Harris
	CA3236	Harris
	CA3241	Harris
TV Multiplexer/Demodulator Chip	IR3P59A	Sharp
	IR3P77	Sharp
TV Multiplexer/Demodulator (Europe)	IR3P02	Sharp
TV RGB Pattern Generator	NCM4001Z	NCM
TV Synchron Generator	NCM2001Z	NCM
	NCM2011Z	NCM
TV Tuner	μPC1405	NEC
TV Voltage Synthesizer Controller (CMOS)	LR3772	Sharp
	LR3790	Sharp
	LR3791	Sharp
U. S. Multi-Sound Decoder	μPC1870CA	NEC
UHF Power Amplifier	MHW707	Motorola
	MHW720A	Motorola
	MHW721A	Motorola
Unity Gain Level Programmable Low Power Compandor	NE577	Signetics
	NE578	Signetics
	SA578	Signetics
VCR Data-Back LSI Circuit	LR3727	Sharp
Vertical Deflection	TDA1170	AEG Corp
	LA7800	Sanyo
	TDA1170	SGS-Thomson
	TDA1170D	SGS-Thomson
	TDA1170N	SGS-Thomson
	TDA1670	SGS-Thomson
	TDA1770	SGS-Thomson
	TDA2270	SGS-Thomson
	TDA8170	SGS-Thomson
	TDA8172	SGS-Thomson
	TDA2653A	Signetics
	TDA3653	Signetics
	TA7242	Toshiba
Vertical Deflection Output Circuit	TDA3654	Signetics
Vertical Deflection System	KA2130A	Samsung
	KA2136	Samsung
Vertical Output (driver, output, flyback gen., pulse shaper)	KA2131	Samsung
Vertical Output (14 to 21 inch CRT tube)	μPC1488H	NEC
Vertical Output (22 to 29 inch CRT tube)	μPC1498H	NEC
VHF Mixer	U4777B	AEG Corp
VHF Mixer/Oscillator, Low Power	NE612	Signetics
VHF Power Amplifier	MHW607	Motorola
VHF Tuner	TUA2000-4	Siemens
Video Amplifier (single channel, 100 MHz)	HA11505	Hitachi
Video and Sound IF Amp for Monochrome TV	KA2913A	Samsung
	KA2917	Samsung
Video Chroma and Deflection Signal Processing	IR3P04B	Sharp
Video Circuits (IF amplifiers, detectors, AGC, AFC, and various combinations)	TDA4426	AEG Corp
	TDA4427	AEG Corp
	TDA4440	AEG Corp
	TDA4442	AEG Corp
	TDA4450	AEG Corp
	HA11440A	Hitachi
	HA11476	Hitachi
	MC13001	Motorola
	MC13001X	Motorola
	MC13002	Motorola

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Television Circuits (Cont'd)

Function	Device	Source
Video Circuits (IF amplifiers, detectors, AGC, AFC, and various combinations) (Cont'd)		
	MC13002X	Motorola
	MC13010	Motorola
	MC13014	Motorola
	MC1330A1	Motorola
	MC1350	Motorola
	LM1822	National
	LM1823	National
	LM1886	National
	LM1889	National
	LM2889	National
	SL1430	Plessey
	SL1431	Plessey
	SL1432	Plessey
	TDA440	Plessey
	TBA1440G	SGS-Thomson
	TBA1441	SGS-Thomson
	TDA2540	SGS-Thomson
	TDA2541	SGS-Thomson
	TDA2542	SGS-Thomson
	TDA5400-2	Siemens
	TDA5835	Siemens
	TDA4501	Signetics
	TDA4502	Signetics
Video Control Combo Circuit w/ Auto Cut-Off Control	TDA4580	Signetics
Video, IF and RF Amplifier		
	VA592	**VTC (3713)**
	VA733	**VTC (3713)**
Video IF and RF Amps		
	MC3361	Signetics
	NE604A	Signetics
	NE605	**Signetics (3590)**
Video IF and Sound IF System for Color TV		
	KA2914A	Samsung
	KA2918	Samsung
	KA2919	Samsung
Video IF Processor for B/W TV	KA2912	Samsung
Video IF, Sound IF, and Detector	KA2915	Samsung
Video IF System for Color TV		
	KA2911	Samsung
	KA2916	Samsung
Video IF (VCR connection and quasi-parallel sound)	TDA5830-2	Siemens
Video Line Driver	VLD212	ThirdDomain
Video Op Amp	HA2544	Harris
	VOA901	ThirdDomain
Video Output Amplifier	HA11465	Hitachi
Video Output for CTV	STK185B	Sanyo
Video Signal Controller	VSC920	ThirdDomain
Video Switch	TDA5850	Siemens
Video Switch (high-speed multiplex)	HA11544	Hitachi
Video Switch/Multiplexer	VSM912	ThirdDomain
Video Switch (pin programmable)	HA118088	Hitachi
Video Sync Separator	LM1881	National
Video Sync Stripper (standard video input levels of 1–1.4 V p-p)	RSS100A	ThirdDomain
Video Sync-Stripper	RSS100C	ThirdDomain
	RSS100M	† ThirdDomain
Video-Chroma Deflection System for Color TV		
	KA2153	Samsung
	KA2154	Samsung
VIF and SIR Circuit	GL3130	GoldStar
Wide Band Mixer/Oscillator for TV/VTR Tuners	μPC1685	NEC
Wide Band Mixer/Oscillator/IF Amplifier	μPC1694	NEC
Wide Band Mixer/Oscillator/IF Amplifier for UHF	μPC1687	NEC
Wide Band Mixer/Oscillator/IF Amplifier for VHF	μPC1686	NEC
Wideband Variable Gain Amplifier	SA5209	Signetics
Wideband Variable Gain Amplifier (bw = 600 MHz)	NE5209	Signetics
One Chip Deflection System	KA2133	Samsung
Z8 Digital Television Controller (Z8 core MPU with 8 Kbyte program ROM)	Z86C27	Zilog
128 Character On Screen Display	μPD6450	NEC
128 Character On Screen Display with Double Scan TV Mode	μPD6451	NEC
900 MHz Power Amplifier		
	MHW801	◊ Motorola
	MHW803	Motorola
	MHW807	Motorola
	MHW851	Motorola

Video

Function	Device	Source
Audio/Video Switch	KA8402	Samsung
Auto White Balance Circuit	HA11844B	Hitachi
Buffered Amplifier (for video gain block, zero insertion loss line driver)	HA5004	Harris
Cable/Line Driver (for impedance matching)	VN3018	Vanguard Semi
Chroma Single Processor	KA2988	Samsung
Chrominance Signal Procesor	KA8104	Samsung
Digital Servo Controller	KA8303	Samsung
Electronic Switch	GL3816	GoldStar
Encoder Circuit	HA11883	Hitachi
FIP/LCD, LED Driver	μPD6320/1	NEC
Game Controller	UM6599	UMC
Horizontal/Vertical Scan Circuit, AFC Horizontal Oscillator Signal Processor (with sync separator and AGC)	CA3261	Harris
LCD Column Driver, 40 Outputs	μPD6308A	NEC
LCD Row Driver, 32 Outputs	μPD6307A	NEC
LED/Lamp Driver for VTR (4 NPN transistor array)		
	KA2615	Samsung
	KA2616	Samsung
		(Continued)
LED/Lamp Driver for VTR (4 NPN transistor array) (Cont'd)		
	KA2617	Samsung
	KA2618	Samsung
Luminance Signal Processor	KA8103	Samsung
Mixer Circuit, Video Processor	CA3253	Harris
Motor Driver	KA8304	Samsung
	KA8306	Samsung
Motor Driver for VTR (preamp, logic circuit, driver)	KA8301	Samsung
Multistandard Video IF	TDA4439	AEG Corp
NTSC Chroma and Deflection System	KA2156	Samsung
PIF and SIF Circuit	GL3130	GoldStar
Pre-Amplifier, Equalizer Amp, Chrominance Amp	KA8102	Samsung
Recording/Playback Amp (Switchless)		
	KA2983	Samsung
	KA8401	Samsung
Remecon Transmitter	KA5803A/B	Samsung
RF Amplifier, Precision FET-Input		
	LH4117	National
	LH4117C	National
RF/IF Circuit, Video IF Amplifier/PLL Detector System		
	LM1822N	Harris
	LM1823N	Harris
RF/IF Circuit, Video IF Amplifier System for NPN Tuner Stages	CA7611	Harris
RF Modulator (for VCR)	**NJM2219**	**NJR (3570)**
RF Modulator, Video Clamp	KA2981	Samsung
RF-IF Circuit, Video IF Amplifier System (suitable for FET applications)	CA7607	Harris
Servo Control Amp	KA8302	Samsung
Sound Multiplexer (sound IF amp, limiter, detector, LED driver, VCO)	KA2268	Samsung
Sound System (IF system and 2.4W audio power amp)	KA2102A	Samsung
Sync Processor, TV Horizontal/Vertical Countdown Digital Sync System		
	CA3218	Harris
	CA3236	Harris
	CA3241	Harris
Sync Signal Generator	HD44007A	Hitachi
Synchronizing Signal Detector	GL8121	GoldStar
TV/μP Interface	M106	SGS-Thomson
TV Video Modulator		
	NJM1372A	NJR
	NJM2208	NJR
Video Amplifier for VTR (AGC, FM limiter, demodulator, sync separator, output amplifier)	KA2945	Samsung
Video Amplifier (preamplifier of memory equipment, video and pulse signal)	**NJM592**	**NJR (3570)**
Video Amplifier System (wideband, 200 MHz)	LM1201	National

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LINEAR—Consumer Circuits (Cont'd)

Video (Cont'd)

Function	Device	Source	Line
Video Amplifier (wideband : 50 MHz)			
	M51387	Mitsubishi	
	M51392	Mitsubishi	
Video Amplifier (wideband : 70 MHz)			
	M51387A	Mitsubishi	
Video Amplifier (wideband : 100 MHz)			
	M51399	Mitsubishi	
Video Camera Auto-Iris Function			
	NJM2225	NJR	5
	NJM2225A	NJR	
Video Circuit, SIF Amp, IF Limiter, IF Detector, LED Driver, Mode SW, Matrix, VCO			
	KA22682	Samsung	
Video DC-Restore Amplifier with 100 MHz Bandwidth			
	EL2090	Elantec	
Video Display Generator			
	MC6847	Motorola	
Video IF	TDA4443	AEG Corp	10
Video IF Circuit			
	TDA4437	AEG Corp	
Video IF (high performance)			
	TDA4453	AEG Corp	
Video Modulator (interfaces audio, color, difference, and luminance signals to TV antenna terminals)			
	LM1889	National	
Video Multiplexer Module, 8x1 (HDTV quality)			
	GM8108	**Gennum (3427)**	
Video Multiplexer Module, 10x1 (HDTV quality)			
	GM8110	Gennum	15
Video Multiplexer Module, 16x1 (broadcast quality)			
	GM8116	**Gennum (3427)**	
	GM8216	Gennum	
Video Multiplexer Module, 16x1 (CCTV quality)			
	GM8316	Gennum	
	GM8416	Gennum	
Video Multiplexer, 4x1 Wideband			
	AD9300	◊ AD	20
Video Noise Reducer			
	NJM2210	NJR	
Video On-Screen Display Circuit			
	NJM2214	NJR	
Video Picture Enhancer			
	NJM2209	NJR	
Video Signal Field Memory, 3-Port VRAM			
	CXK1206	Sony	
Video Subcarrier Signal Doubler/Tripler			
	NJM2228	**NJR (3570)**	25
Video Subcarrier Signal Tripler			
	NJM2238	NJR	
Video Subcarrier Signal Quadrupler			
	NJM2240	NJR	
Video Superimposer			
	NJM2207	NJR	
Video Superimposer with AFC			
	NJM2217	NJR	
Video Switch, High Frequency (200 MHz, for use with all Harris op amps and buffers)			
	HI222	Harris	30
Video Switch with 8 dB Amplifier			
	NJM2223	NJR	
Video Switch, 2-Input Single Unit			
	NJM2233B	NJR	
Video Switch, 3-Input			
	NJM2234	**NJR (3570)**	
	NJM2235	NJR	
Video Switch, 3-Input (with 6 dB amplifier)			
	NJM2245	NJR	35
	NJM2246	NJR	
Video Switch, 3-Input (with 75-ohm drivers)			
	NJM2243	NJR	
	NJM2244	**NJR (3570)**	
Video Sync Detector (for VCR, TV Video Camera)			
	NJM2220	NJR	
	NJM2230	NJR	40
VIF and SIF System			
	KA2922	Samsung	
	KA2923	Samsung	
Write/Read Amplifier for VTR			
	KA2944	Samsung	
SPDT RF Switch (break-before-make)			
	LH4266	National	
Decade Counter/Divider			
	CD4083B	Harris	45
4-Channel Processor			
	HA11882A	Hitachi	
32 Character On Screen Display			
	μPD6140	NEC	
40V FIP Driver	μPD6323A	NEC	
40V FIP Driver, 20 Outputs			
	μPD6300	NEC	
8-mm Video A-D/D-A Converter			
	CXD1077	Sony	50

Miscellaneous

Function	Device	Source	Line
Appliance Controller, D/A Converter			
	DAC1201	Burr-Brown	
Capacitance Keyboard Encoder			
	UM82C01	UMC	
Capacitive Touch Light Dimmer Circuit			
	HI2410	Holt	
	HI2413	Holt	
CD Motor Drive			
	KA9256	Samsung	55
CD Player, Dual Amplifier for CDP Motor Driver			
	KA9257	Samsung	
Comparator plus Alarm Driver Circuitry (piezo driver and low battery detect)			
	MC14471	Motorola	
Data Processor for AMPS and TACS Cellular Radios			
	UMA1000	**Signetics (3590)**	
DC Motor Speed Control			
	KA2404	Samsung	
DC Motor Speed Controller			
	KA2401	Samsung	60
	KA2402	Samsung	
	KA2407	Samsung	
Detection Circuit, Low Voltage			
	PCF1252	Signetics	
Digital Lock	**LS7220**	**LSI Comp (3526)**	
	LS7225	**LSI Comp (3526)**	65
	LS7226	**LSI Comp (3526)**	
	LS7228	**LSI Comp (3526)**	
	LS7229	**LSI Comp (3526)**	
Dimmer Circuit (replaces electomechanical wall switches)	SLB0586A	Siemens	
FDD Circuit, Two-Phase Stepping Motor Driver			
	KA6202	Samsung	70
FDD Read Amplifier (gain selector, peak detector and wave shape)	KA6201	Samsung	
Frequency Synthesizer, 1.3 GHz (I^2C controlled)			
	TSA5511	Signetics	
Ground Fault Interrupter			
	GL7101	GoldStar	
	LM1851	National	
	RV4143	Raytheon	75
	RV4144	Raytheon	
	KA2803	Samsung	
Infrared Signal Receiver			
	TDA4060	Siemens	
	TDA4061	Siemens	
Ionization Chamber Type Smoke Detector Circuit			
	SD3A	Supertex	80
LINEAR - Consumer Circuits - Miscellaneous Battery Fast Charge Controller and Discharge Monitor			
	bq2001	◊ Benchmarq	
LINEAR - Other Devices Battery Fast Charge Controller and Discharge Monitor			
	bq2001	◊ Benchmarq	
Micro Power Receiver (up to 200 kHz bandpass)			
	DS1203S-B1	◊ Dallas	
Modulator Oscillator, to 600 MHz			
	MC13024	Motorola	
Motor, Brushless DC Motor Commutator, 3 Phase			
	LS7262	**LSI Comp (3526)**	85
Motor, Brushless DC Motor Speed Controller, 4 Phase			
	LS7264	**LSI Comp (3526)**	
Motor Controller, D/A Converter			
	DAC710	**Burr-Brown (3341)**	
	DAC711	**Burr-Brown (3341)**	
Motor Driver, for 3-Phase brushless dc motors			
	HA13406W	Hitachi	
Motor Speed Regulator			
	CS2917	Cherry Semi	90
Motor Speed Regulator and Driver for 3-Phase brushless dc motors	HA13426	Hitachi	
Music Chimes	SAB0600	Siemens	
	SAB0601	Siemens	
	SAB0602	Siemens	
Pager Circuit, POCSAG Decoder, Alphanumeric Output			
	STC5233N	STC	95
Pager Circuit, POCSAG Decoder, Tone Output			
	STC5223N	STC	
Peak Power Meter Driver, Dual (for hi-fi stereo)			
	TA7318	Toshiba	
	TA7332	Toshiba	
Photo-Electric Smoke Detector Circuit			
	SD2	Supertex	
Prescaler, 1 GHz (÷64/256)			
	SAB6456	Signetics	100
Programmable Encoder/Decoder			
	UMK3751	UMC	
	UM3750	UMC	
	UM3752	UMC	
	UM3753	UMC	
	UM3754	UMC	105
	UM3755	UMC	
PROM, 30-Bit Field Programmable			
	CA414	Newbridge	
Protector Circuit (overcurrent detection for OCL and speaker)	TA7317	Toshiba	
RC Toy Car Circuit, KA2311 Transmitter			
	KA2312	Samsung	
RC Toy Car Circuit, Three Function			
	KA2305A	Samsung	110
RC Toy Car Circuit, Three Function and Turbo			
	KA2306A	Samsung	
RC Toy Car Circuit, Seven Function			
	KA2311	Samsung	
Remote Control Transmitter			
	KS5803A/B	Samsung	
Servo Driver	NE544	Signetics	
Smoke Detector			
	SCL5331-5	Allegro Micro	115
	SCL5331-6	Allegro Micro	
	SCL5332	Allegro Micro	
	SCL5334	Allegro Micro	

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LINEAR

LINEAR—Consumer Circuits (Cont'd)

Function	Device	Source	Line
Miscellaneous (Cont'd)			
Smoke Detector (Cont'd)			
	SCL5341	Allegro Micro	
	CS235	Cherry Semi	
	MC14467	Motorola	
	LM1801	National	
Smoke Detector, Photoelectric with I/O			
	MC145010	Motorola	5
Switch, Video and Audio			
	TDA8440	Signetics	
Switches, DC-Controlled, Audio			
	LM1037	National	
	LM1038	National	
	TDA1029	Signetics	
Switches, Proximity			
	TDA0159	SGS-Thomson	10
	TDA0161	SGS-Thomson	
	TDA0162	SGS-Thomson	
	TCA305	Siemens	
Switches, Touch-Sensitive Light Dimmer			
	LS7231	**LSI Comp (3526)**	
	LS7232	**LSI Comp (3526)**	15
	LS7233	**LSI Comp (3526)**	
	LS7234	**LSI Comp (3526)**	
	LS7237	**LSI Comp (3526)**	
Tachometer Circuit			
	CS189	Cherry Semi	
	XR2917	Exar	20
	LM2907	National	
	LM2917	National	
Touch Activated Light Dimmer Circuit			
	HI1220	Holt	
Toy Radio Control Actuator			
	KA2303	Samsung	
	KA2304	Samsung	25
	KA2309	Samsung	
	KA2310	Samsung	
Traffic Light Control Circuit			
	4004Z	NCM	
Tuning Voltage Stabilizer, for use with Variable Capacitance Diodes			
	KA33V	Samsung	
Universal Infrared Locking System (EEPROM 1K bit)			
	SDE2506	Siemens	30
Universal Infrared Locking System (pre-amp with demodulator)	TDE4061	Siemens	
Universal Infrared Locking System (receiver)			
	SLE5002	Siemens	
Universal Infrared Locking System (transmitter)			
	SLE5001	Siemens	
VU Meter LED Driver			
	KA2288	Samsung	
Zero Voltage Switch			
	KA2804	Samsung	35
2048x9-Bit CMOS Parallel FIFO			
	UM4503	**UMC (3688)**	
3 1/2 Digit Count Down/Up Timer			
	UM3206	UMC	

LINEAR

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LINEAR—Followers

Bias Current nA 25°C	Offset Voltage mV 25°C	Voltage Drift µV/°C	Unity Gain Bandwidth MHz min	Slew Rate v/us	Output V @ mA	Supply Range, V	Comments	Device	Source	Line
0.1	5	100	100 *	1000	9@100	±5 to ±20	Fast follower	LH0033A	Maxim	
	10	25 *	100 *	1000	9@100	±5 to ±20	Fast Follower	ADLH0033	† AD	
								ELH0033	† Elantec	
								LH0033	◊† National	
								TP0033-HR	† TeledyneS	5
		25*	100*	1000	9@100	±5, ±20	Fast Follower	CLH0033	TeledyneS	
		100	100 *	1000	9@100	±5 to ±20	Fast Follower	LH0033	† Maxim	
0.15	20	25 *	100 *	1000	9@100	±5 to ±20	Fast Follower	ADLH0033C	AD	
								ELH0033C	Elantec	
								LH0033C	◊ National	10
								TP0033	TeledyneS	
0.2 *	50	300 *	300 *	2000	10@200	±5 to ±20	Gain 0.094 (50 Ohm)	BB3553	† Maxim	
							Gain 0.92 (50 Ohm)	**3553**	**† Burr-Brown (3331, 3333)**	
0.25	15	100	100 *	1000	9@100	±5 to ±20	Fast follower	LH0033AC	Maxim	
0.4	6	90	55 *	220	10@22	±6 to ±18	Very Fast Follower	BUF03E	AD	15
		100	55 *	220	10@21	±6 to ±18	Very Fast Follower	BUF03A	◊ AD	
0.5	20	100	100 *	1000	9@100	±5 to ±20	Fast Follower	LH0033C	Maxim	
0.7	15	150	50 *	180	10@25	±6 to ±18	Very Fast Follower	BUF03F	AD	
			170	50 *	180	±6 to ±18	Very Fast Follower	BUF03B	† AD	
1	0.25	100	100	100	9@100	±5 to ±20	Fast Follower	LH0033/HR	† Maxim	20
	1	3	100	200	±12, ±250	±5 to ±15	Fast High Power Closed Loop Buffer	EL2012C	Elantec	
	2	7	70	2000	±11, ±100	±5, ±15	Low Quiescent Power, Audio/Video Buffer	EL2001	‡ Elantec	
					±11, ±100	±5, ±15	Low Quiescent Power, Audio/Video Buffer	EL2001C	◊ Elantec	
3	4	6 *	20 *	30 *	10@1	±5 to ±18	Follower, Replaces 102	LM210	National	
								SFC2210	SGS-Thomson	25
		12 *	20 *	30 *	10@1	±5 to ±18	Dual 110 Foliower	LH2110	† National	
							Follower, Replaces 102	LM110	‡ National	
	5	20	180	2000	±11, ±100	±5 to ±15	Fast Follower, Video Buffer	EL2002	‡ Elantec	
					±11, ±100	±5 to ±15	Fast Follower, Video Buffer	EL2002C	◊ Elantec	
5	0.1	100	100	100	9@100	±5 to ±20	Fast Follower	LH0033A/HR	† Maxim	30
	0.5	25	140	1000	9@100	±5 to ±20	High Accuracy, Fast Follower	EL2005	† Maxim	
						±5 to ±20	High Accuracy, Fast Follower	MAX460M	† Maxim	
	5	20	100	1200	±10, ±100	±2.5 to ±15	Fast Follower, Video Buffer	EL2003	‡ Elantec	
								EL2003C	Elantec	
	10	33	100	2500	±10, ±1A	±5 to ±15	Fast High Power Follower	EL2008C	Elantec	35
					±10, ±1A		Fast High Power Follower	el2008c	Elantec	
			125	3000	±10, ±1A	±5 to ±15	Fast High Power Follower	EL2009C	Elantec	
	20.0	100	200	1000	10@500	±11 to ±18	Fast, High Current	9911	OEI	
7	7.5	10 *	20 *	30 *	10@1	±5 to ±18	Follower, Replaces 102	LM310	National	
10	1	25	140	1000	9@100	±5 to ±20	High Accuracy, Fast Follower	EL2005C	Maxim	40
						±5 to ±20	High Accuracy, Fast Follower	MAX460I	Maxim	
	5	6 *	10 *	10 *	10@1.25	±12 to ±18	Follower	LM102	† National	
25	0.5	300 *	200 *	2000	10@200	±5 to ±20	Very Fast Follower	LH0063	† Maxim	
								LH0063	† National	
30	15	20 *	10 *	10 *	10@1.25	±12 to ±18	Follower	LM302	National	45
	20	100	25	1000	10@±50	±3 to ±15	6 Identical Sections	MZ320	AnalogSys	
35	15	33 *	250 *	1300	10@100	±5 TO ±20	Video Buffer	HA5033-5	◊ Harris	
50	0.5	300 *	200 *	2000	10@200	±5 to ±20	Very Fast Follower	LH0063C	Maxim	
								LH0063C	National	
5000	5	25	125 *	1400	12@100	—	Fast Follower	HOS100A	AD	50
								HOS100S	† AD	
	10	33	300*	1800	3.5@100	±3 to ±6		**VA033**	**VTC (3713)**	
7000	20	10 *	110	1300 *	10@100	±5 to ±22	Monolithic Buffer	HA5002-5	◊ Harris	
		30 *	110 *	1300*	10@100	±5 to ±22	Monolithic Buffer	HA5002-2	† Harris	

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LINEAR

LINEAR–Followers (Cont'd)

Bias Current nA 25°C	Offset Voltage mV 25°C	Voltage Drift µV/°C	Unity Gain Bandwidth MHz min	Slew Rate v/us	Output V @ mA	Supply Range, V	Comments	Device	Source	Line
15000	1.5	33	275	2500	10@100	±5 to ±16	Gain = 0.99 (1k ohm)	**OPA633A**	**† Burr-Brown (3331, 3333)**	
								OPA633K	**† Burr-Brown (3331, 3333)**	
								OPA633S	**† Burr-Brown (3331, 3333)**	
20000	10	25	100	1000	±4@±100					
						16	Wideband, high speed amplifier/buffer/current booster.	EHOS200SH	† Elantec	
					±12@±100					
						16	Wideband, high speed amplifier/buffer/current booster.	EHOS200SH	† Elantec	5
						40	Wideband, high speed, amplifier/buffer/current booster.	EHOS100SH	† Elantec	
							Wideband, high speed amplifier/buffer/current booster.	EHOS100SH	† Elantec	
	20	100	24 *	1500 *	10@100	±6 to ±18	Follower, Current Booster	AH0010C	OEI	
								AH0010F	◊ OEI	
25000	5 *		100	1200 *	±12@105	±2.5 to ±18	Video line driver/Video buffer.	EL2033	† Elantec	10
	25	25	100	1000	±4@±100					
						16	Wideband, high speed amplifier/buffer/current booster.	EHOS200AH	Elantec	
					±12@±100			EH05100AH	Elantec	
						40	Wideband, high speed amplifier/buffer/current booster.	EHOS100AH	Elantec	
								EHOS100AH	Elantec	
35000	15	33 *	250 *	1300*	10@100	±5 TO ±20	Video Buffer	HA5033-2	† Harris	15

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Operational Amplifiers

High Output Current

mA V	Device	Source	Line
30000@68	**PA03**	**Apex (3325)**	
20000@100	**PA04**	**Apex (3325)**	
20000@80	**OPA541S/883B**	**† Burr-Brown (3333)**	
15000@43	**PA12A**	**† Apex (3325)**	
10000@39	**PA12**	**Apex (3325)**	5
	PA12M	**† Apex (3325)**	
10000@32	**PA51A**	**† Apex (3325)**	
	PA51M	**† Apex (3325)**	
10000@28	**PA51**	**Apex (3325)**	
10000@26	**OPA501S**	**† Burr-Brown (3333)**	10
10000@20	**OPA501A**	**Burr-Brown (3333)**	
10000@39	**PA61A**	**Apex (3325)**	
10000@38	**PA61**	**Apex (3325)**	
	PA61M	**† Apex (3325)**	
7000@75	HC2000H	Harris	15
	HC2500	Harris	
5000@45	**PA07**	**Apex (3325)**	
5000@44	**PA10A**	**† Apex (3325)**	
5000@37	**PA10**	**Apex (3325)**	
	PA10M	**† Apex (3325)**	20
5000@22	**PA73**	**Apex (3325)**	
5000@18	**PA01**	**Apex (3325)**	
5000@45	**PA07M**	**† Apex (3325)**	
5000@22	**PA73M**	**† Apex (3325)**	
5000@15	**PA02**	**Apex (3325)**	25
	PA02M	**† Apex (3325)**	
4000@35	**PA19**	**Apex (3326)**	
2500x2@18	**PA21**	**Apex (3325)**	
2000@32	**PA09**	**Apex (3326)**	
2000@22	LH0101	Maxim	30
	LH0101A	† Maxim	
	LH0101AC	Maxim	
	LH0101C	Maxim	
2000@20	**3573**	**Burr-Brown (3333)**	
2000@12	LH0021	† National	35
2000@11	ELH0101	† Elantec	
	ELH0101A	† Elantec	
	ELH0101AC	Elantec	
	ELH0101C	Elantec	
	LH0101	† National	40
	LH0101A	† National	
	LH0101AC	National	
	LH0101C	National	
2000@100	**PB50**	**Apex (3325)**	
2000@32	**PA09M**	**† Apex (3326)**	45
1500@139	**PB58**	**Apex (3325)**	
1100@11	ELH0021	Elantec	
1000@10	ELH0021C	Elantec	
	LH0021C	National	
750@34	1461	TeledyneS	50
500@10	LH0061	† National	
	LH0061C	National	
200@10	**3553**	**† Burr-Brown (3331, 3333)**	
	CLC103AM	† Comlinear	
	BB3553	† Maxim	55
200@215	**PA85**	**Apex (3326)**	
200@10	μA759C	National	
	μA759M	† National	
150@160	**PA08**	**Apex (3326)**	
	PA08M	**† Apex (3326)**	60
130@13	ELH0041	† Elantec	
	ELH0041C	Elantec	
130@13	LH0041	◊† National	
	LH0041C	◊ National	
100@10	3329	Burr-Brown	65
	3554A	**Burr-Brown (3332)**	
	3554B	**Burr-Brown (3332)**	
	3554S	**Burr-Brown (3332)**	
	CLC200AM	† Comlinear	
	HA2542	Harris	70
100@215	**PA88**	**Apex (3326)**	
100@15	CA3094	† Harris	
100@10	AD3554A	AD	
	AD3554S	† AD	
	HOS060S	† AD	75
	LH0003	† National	
	TP3554	TeledyneS	
75@40	3583	Burr-Brown	
75@145	1480	TeledyneS	
75@140	**PA83**	**Apex (3326)**	80
	PA83M	**† Apex (3326)**	
60@30	**3580J**	**Burr-Brown (3333)**	
50@10	AD380S	† AD	
	AD382S	† AD	
50@10	**AMP01**	**‡ AD (3250)**	85
	AM500MM	**Datel (3360)**	
	9914A	OEI	
	1430	TeledyneS	
47@14	LH0020	† National	
	LH0020C	National	90
40@143	**PA84**	**Apex (3326)**	
30@70	**3581J**	**Burr-Brown (3333)**	
25@10 *	HA2541	Harris	
10@35	**OPA541B**	**Burr-Brown (3333)**	
	OPA541S	**† Burr-Brown (3333)**	95

High Speed

Unity Gain Slew Rate (V/μs min)	Device	Source	Line
8000	CLC220AM	† Comlinear	
6000	CLC103AM	† Comlinear	
4000	**WA01**	**Apex (3326)**	
	CLC200AM	† Comlinear	
2000	**AD844**	**AD (3240, 3243)**	100
1800	**AD9618C**	**AD (3240)**	
	AD9618M	**† AD (3240)**	
1600	**AD9617C**	**AD (3240)**	
	AD9617M	**† AD (3240)**	
1500	ADLH0033	† AD	105
	HOS100S	† AD	
1400	ADLH0033C	AD	
	AD9615	**AD (3240)**	
	HOS100A	AD	
1000 (dual device)	**OP260**	**AD (3241, 3248)**	110
1000	AD3554	AD	
	AD3554S	† AD	
	PA85	**Apex (3326)**	
1000 *	**OPA603A**	**Burr-Brown (3332)**	
1000	**3554**	**Burr-Brown (3332)**	115
	AM500GC	**Datel (3360)**	
	AM500MC	**Datel (3360)**	
	AM500MM	**Datel (3360)**	
	HFA0001	Harris	
	AH9914	OEI	120
	9914A	OEI	
900	**PA19**	**Apex (3326)**	
600	HA2539	◊ Harris	
	HFA0005	Harris	
500	ADLH0032	† AD	125
	ADLH0032C	AD	
	1430	TeledyneS	
	1430HR	† TeledyneS	
400	**AD840**	**◊ AD (3240)**	
	PA09	**Apex (3326)**	130
	HA2540	◊ Harris	
	LH0024	† National	
350 *	**AD842**	**AD (3241)**	
350	ELH0032	† Elantec	
	ELH0032C	Elantec	135
350 *	HA2542	Harris	
350	LH0032C	◊ National	
300	**AD848**	**AD (3240)**	
	AD849	**AD (3240)**	
	HOS050	† AD	140
	HOS050A	† AD	
	HOS050C	AD	
	HOS060S	† AD	
	AM1435MC	**Datel (3360)**	
	AM1435MM	**Datel (3360)**	145
250	**AD841**	**AD (3241)**	
	AD843	**AD (3241)**	
	3551J	**Burr-Brown (3332)**	
	3551S	**† Burr-Brown (3332)**	
	HA2541	Harris	150
	LH0024C	National	
	1435	† TeledyneS	
200	AD380S	† AD	
160	HA5190	◊ Harris	
	HA5195	Harris	155
135	HA2529	Harris	
120	HA2525	Harris	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Operational Amplifiers (Cont'd)

High Speed (Cont'd)

Unity Gain Slew Rate (V/µs min)	Device	Source	Line
100	AD509K	AD	
	AD509S	† AD	
	3550K	**Burr-Brown (3332)**	
	HA2520	◊† Harris	
	HA2544	Harris	5
	HA5160	Harris	
	HA5162	Harris	

High Voltage

Maximum Supply Voltage	Device	Source	Line
1000/±500	**PA89**	**Apex (3326)**	
450/±225	**PA85**	**Apex (3326)**	
	PA88	**Apex (3326)**	10
350/±175	**PA08V**	**Apex (3326)**	
300/±150	**PA08M**	**† Apex (3326)**	
	PA82J	**Apex (3326)**	
	PA84M	**† Apex (3326)**	
	PB58	**Apex (3325)**	15
300	**PA08**	**Apex (3326)**	
	PA83	**Apex (3326)**	
	PA83M	**† Apex (3326)**	
	PA84	**Apex (3326)**	
200/±100	**PA04**	**Apex (3325)**	20
	PB50	**Apex (3325)**	
150/±75	**PA81J**	**Apex (3326)**	
150	**PA03**	**Apex (3325)**	
100/±50	**PA07M**	**† Apex (3325)**	
100	**PA07**	**Apex (3325)**	25
	PA10A	**† Apex (3325)**	
	PA12A	**† Apex (3325)**	
90/±45	**PA10M**	**† Apex (3325)**	
	PA12M	**† Apex (3325)**	
	PA61	**Apex (3325)**	30
	PA61M	**† Apex (3325)**	
90	**PA10**	**Apex (3325)**	
	PA12	**Apex (3325)**	
80/±40	**PA09**	**Apex (3326)**	
	PA09M	**† Apex (3326)**	35
	PA19	**Apex (3326)**	
80	**PA51A**	**† Apex (3325)**	
	PA51M	**† Apex (3325)**	
72	**PA51**	**Apex (3325)**	
60/±30	**PA73M**	**† Apex (3325)**	40
60	**PA73**	**Apex (3325)**	
56/±28	**PA01**	**Apex (3325)**	
±150	**3582J**	**Burr-Brown (3333)**	
	3583	Burr-Brown	
	3584	Burr-Brown	45
±85	LB1013AD	AT&T	
±40	HA2640	† Harris	
	HA2645	Harris	
	MC1536	† Motorola	
	LH0004	† National	50
	LH0004C	National	
	LM143	† National	
	LM144	† National	
	LM1536	† National	
	SG143	**† SiliconG (3643)**	55
	SG1536	**◊† SiliconG (3643)**	
	SG343	◊ SiliconG	
	1332	TeledyneS	
±35	**3580J**	**Burr-Brown (3333)**	
±34	MC1436	Motorola	60
	LM344	National	
	SG1436	◊ SiliconG	
±30	MC1436C	Motorola	
	LM343	National	

Low Bias Current

Current pA 25°C	Device	Source	Line
0.075	**AD515A**	**AD (3247)**	65
	AD515L	**AD (3247)**	
	OPA104CM	Burr-Brown	
	3528C	Burr-Brown	
0.1	OPA106W	† Burr-Brown	
0.15	**AD515K**	**AD (3247)**	70
	OPA104BM	Burr-Brown	
	OPA106V	† Burr-Brown	
	3528B	Burr-Brown	
0.2	**ADOP07**	**◊† AD (3243, 3245)**	
	HA5180	Harris	75
0.3	**AD515J**	**AD (3247)**	
	OPA104AM	Burr-Brown	
	OPA106U	† Burr-Brown	
	3528A	Burr-Brown	
0.5	AD504M	AD	80
	AD510L	AD	
	AD517L	**AD (3243)**	
	AD546	**AD (3247)**	
	3510C	Burr-Brown	
	LH0044A	† National	85
	LH0044AC	National	
1	**AD545K**	**AD (3247)**	
	AD545L	**AD (3247)**	
	AD545M	**AD (3247)**	
	AD645C	**AD (3240, 3247)**	90
	AD645M	**† AD (3240, 3247)**	
	OPA105	† Burr-Brown	
	LH0052	† National	
2	OPA103BM	Burr-Brown	
	3527B	Burr-Brown	95
3	OPA103AM	Burr-Brown	
50	**AD705C**	**AD (3243, 3245)**	
	AD705M	**† AD (3243, 3245)**	
	HA5160	† Harris	
100	HA5170	◊† Harris	100

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LINEAR—Operational Amplifiers (Cont'd)

Low Drift

Function	Device	Source	Line
0.2	RC4207	Raytheon	
	RC4227	Raytheon	
	RM4207	† Raytheon	
	RM4227	† Raytheon	
0.5	AD510L	AD	5
	OP05A	**‡ AD (3245)**	
	3510C	Burr-Brown	
	LT1002AC	LinearTech	
	OP05A	† LinearTech	
	LH0044B	National	10
0.6	**OP05E**	**AD (3245)**	
	OP07A	**◊‡ AD (3243)**	
	OPA27A	**† Burr-Brown (3329)**	
	OPA27E	**Burr-Brown (3329)**	
	OPA37A	**† Burr-Brown (3329)**	15
	OPA37E	**Burr-Brown (3329)**	
	AM430B	Datel	
	HA5127A	Harris	
	HA5137A	Harris	
	HA5147A	Harris	20
	LT1001AC	LinearTech	
	LT1001AM	† LinearTech	
	LT1007AC	LinearTech	
	LT1007AM	† LinearTech	
	LT1037AC	LinearTech	25
	LT1037AM	† LinearTech	
	OP05E	LinearTech	
	OP07A	† LinearTech	
	OP27A	† LinearTech	
	OP27E	LinearTech	30
	OP37A	† LinearTech	
	OP37E	LinearTech	
	μA714M	† National	
	LT1007AM	TI	
	LT1007M	TI	35
	LT1037AM	TI	
	LT1037M	TI	
	OP37A	TI	
	OP37C	TI	
0.8	**OPA627**	**Burr-Brown (3332)**	40
1	AD504L	AD	
	AD504S	† AD	
	AD510K	AD	
	AD510S	† AD	
	AD517K	**AD (3243)**	45
	AD517S	**† AD (3243)**	
	AD547L	**AD (3244, 3247)**	
	OP05	**‡ AD (3245)**	
	3291	Burr-Brown	
	3510B	Burr-Brown	50
	3510S	† Burr-Brown	
	3521L	Burr-Brown	
	OP05	† LinearTech	
	LH0044	‡ National	
	LH0044C	National	55
	LM11	† National	
	LM11C	National	
	LM725A	National	
1.2	HA5134A	Harris	
1.8	HA5127	Harris	60
	HA5137	Harris	
	HA5147	Harris	
2.0	HA5134	Harris	
5	**OPA2107**	**Burr-Brown (3329)**	

Low Power

Supply Current μA @ ± 15V	Device	Source	Line
9	**OP215B**	**◊† AD (3241, 3248)**	65
	OP215C	**◊† AD (3241, 3248)**	
	OP215F	**◊ AD (3241, 3248)**	
	OP215G	**◊ AD (3241, 3248)**	
15	ICL7711	Harris	
20	LM4250	Harris	70
30	ICL8021C	Harris	
	ICL8021M	† Harris	
45	**OP20B**	**† AD (3244, 3246)**	
	OP20C	**† AD (3244, 3246)**	
	OP20F	**AD (3244, 3246)**	75
	OP20G	**AD (3244, 3246)**	
	OP20H	**◊ AD (3244, 3246)**	
80	HA5141	Harris	
	HA5142	Harris	
	HA5144	Harris	80
150	ICL7712	Harris	
220	**OP420B**	**† AD (3246)**	
	OP420C	**◊† AD (3246)**	
	OP420F	**AD (3246)**	
	OP420G	**AD (3246)**	85
250	HA5151	† Harris	
	HA5152	† Harris	
	HA5154	† Harris	
275	OP21G	Burr-Brown	
350	**OP21F**	**AD (3243, 3246)**	90
400	**OP21G**	**AD (3243, 3246)**	
	LF442A	National	
500	LF442	National	
600	PM108	‡ AD	
	LM108	† Motorola	95
	LM108	◊† National	
	LM112	† National	
	LM212	National	
	LH2108A	Raytheon	
	LM108A	Raytheon	100
	LM108	† SGS-Thomson	

Wide Band

Unity Gain Bandwidth MHz	Device	Source	Line
1 GHz	HFA0002	Harris	
40 *	AD380J	AD	
	AD380K	AD	
	AD380L	AD	105
	AD380S	† AD	
40	HA2400	◊† Harris	
40 *	HA2404	Harris	
	HA2405	Harris	
	HA2406-5	Harris	110
40	HA2541	Harris	
	HA2544	Harris	
40 *	**VA2705**	**VTC (3713)**	
	VA2706	VTC	
	VA4705	**VTC (3713)**	115
	VA4706	**VTC (3713)**	
	VA705	VTC	
	VA706	VTC	
50 *	**3551J**	**Burr-Brown (3332)**	
	3551S	**† Burr-Brown (3332)**	120
	CA3015	† Harris	
	CA3030	Harris	
60	HA5112	◊ Harris	
	HA5114	◊ Harris	
	HA5137	Harris	125
60 *	1430	TeledyneS	
	1430HR	† TeledyneS	
65 *	μA715C	National	
	μA715M	† National	
70 *	ADLH0032	† AD	130
	ADLH0032C	AD	
	3554A	**Burr-Brown (3332)**	
	3554B	**Burr-Brown (3332)**	
	3554S	**Burr-Brown (3332)**	
	ELH0032	† Elantec	135
	ELH0032C	Elantec	
70	HA2542	Harris	
70 *	LH0024	† National	
	LH0024C	National	
	LH0032A	◊† National	140
	LH0032C	◊ National	
90 *	AD3554	AD	
	AD3554S	† AD	
90 (dual device)	**OP260**	**AD (3241, 3248)**	
100 *	HOS050	† AD	145
	HOS050C	AD	
	HOS060S	† AD	
100	**AM500GC**	**Datel (3360)**	
	AM500MC	**Datel (3360)**	
	AM500MM	**Datel (3360)**	150
	HA2620	◊† Harris	
	HA5160	Harris	
	HA5162	Harris	
	NE5539	Signetics	
	SE5539	† Signetics	155
	HA2622	† Harris	
	HA2625	Harris	
100 (−3db)	CLC200AM	† Comlinear	
120	HA5147	Harris	
150	EHA5190	Elantec	160
	EHA5195	Elantec	
	XR4560	Exar	
	HA5190	◊ Harris	
	HA5195	Harris	

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LINEAR—Operational Amplifiers (Cont'd)

Unity Gain Bandwidth MHz	Device	Source	Line
	Wide Band (Cont'd)		
150 (–3db)	CLC103AM	† Comlinear	
170	**OPA620**	**Burr-Brown (3332)**	
180	VN2018	Vanguard Semi	
200	9916	OEI	
200 (–3db)	CLC220AM	† Comlinear	5
250	**OPA621**	**Burr-Brown (3332)**	
300	9914A	OEI	
400	EHA2540 HA2540	Elantec ◊ Harris	
500 *	1435	† TeledyneS	10
600	EHA2539 HA2539	Elantec ◊ Harris	
1000	**WA01** **OPA600/883B**	**Apex (3326)** **Burr-Brown (3332)**	
3000	**OPA675** **OPA676**	**Burr-Brown (3332)** **Burr-Brown (3332)**	15
150	LH4117 LH4117C	† National National	

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LINEAR

LINEAR—Operational Amplifiers-Characteristics

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units												
± 0.2	30000	5000		120 *		8 *	60			KA733	◊ Samsung	
± 0.5	± 0.02	± 0.02	± 10	1	5	100	100	1	450 V Amplifier	**PA88A**	**† Apex (3326)**	
	0.025	0.020	10		30	100	110		± 50 to ± 600V supply 150 mA output.	**PA89A**	**Apex (3326)**	
± 1.5	± 0.05	± 0.1	± 30		1000	316	110	1	± 15V to ± 225V, 200 mA output.	**PA85M**	**† Apex (3326)**	
± 2	± 0.05	± 0.05	± 30	1	5	100	100	1	450 V Amplifier	**PA88**	**† Apex (3326)**	5
	0.05	0.1	30		30	100	110		± 50 to ± 600V supply 150 mA output.	**PA89**	**Apex (3326)**	
± 5	± 0.05	± 1.5	10		30	126	98		± 10V to ± 45V supply, 20V out	**PA77A**	**Apex (3325)**	
± 10	± 0.1	± 25	30		30	126	98		± 10V to ± 45V supply, 20A out.	**PA77**	**Apex (3325)**	
± 1000			-7000	1	75	6		1	± 15V to ± 150V supply, power booster, 2.0A out.	**PB58A**	**Apex (3325)**	
± 1500			-7000	1	50	6		1	± 15V to ± 150V supply, power booster, 1.5A out.	**PB58**	**Apex (3325)**	10
± 1750			-7000	1	50	6		1	± 30V to ± 100V supply, power booster, 2A out.	**PB50**	**Apex (3325)**	
0.001	0.004 *	0.002 *	0.03	1.9 *	2	1000	120	0	Precision Chopper-Stabilized	TLC2652AM	◊† TI	
	0.005	0.001	0.01	12	10		160	1	Precision, Autozero	MAX426C	◊ Maxim	
										MAX426M	† Maxim	
	0.05	0.05	0.02	1	1		160	0		MAX425C	Maxim	15
										MAX425M	◊† Maxim	
0.003	0.004 *	0.002 *	0.03	1.9 *	2	1000	120	0	Precision Chopper-Stabilized	TLC2652M	◊† TI	
0.005	0.003	0.06	0.05	0.45 *	0.5 *	10000	120	0	Ultra Low Offset, ± 15V, Chopper Stabilized	MAX421C	Maxim	
										MAX421M	† Maxim	
									Ultra Low Offset, ± 15V, Low Power Chopper Amp	MAX422C	Maxim	20
										MAX422M	† Maxim	
										MAX423C	Maxim	
										MAX423M	† Maxim	
	0.01	0.0005	0.05	2	2.5	10000	120	0	Auto-Zeroed	TSC7650	TeledyneS	
		0.005	0.01	2 *	2.5 *	10000	120	0	Chopper Stabilized	ICL7650C	◊ Maxim	25
		0.008	0.05	2	2.5	10	120		Low Cost Chopper-Stabilizer OpAmp	AM7650-1	Datel	
									Low-Cost, low power Chopper-Stabilizer OpAmp	AM7650-2	Datel	
		0.02	0.02	2 *	2.5 *	10000	120		Chopper Stabilized	ICL7650S	Harris	
			0.05	2 *	2.5 *	5000	120	0	Chopper Stabilized	ICL7650	◊† Maxim	
	0.015	0.5	0.2	1	4	1000	120	0	Auto-Zeroed Amplifier	TSC7650A	◊ TeledyneS	30
	0.03	0.04	0.07	0.5	1	10000	1000		Low Noise, Chopper-Stabilized	ICL7652S	Harris	
		0.06	0.05	0.45 *	0.5 *	1000	110	0	Chopper Stabilized	ICL7652	Harris	
										ICL7652	◊ Maxim	
				1	3 *	1000	120	0	Low Noise, Chopper Stabilized	LTC1052C	LinearTech	
										LTC1052M	† LinearTech	35
										LTC7652C	LinearTech	
			0.1	0.5	0.5	1000	120	0	High Voltage Auto-Zeroed Amplifier	TSC9420	TeledyneS	
										TSC9421	TeledyneS	
	0.035	0.065	0.05	2.5	4	3000	120	0	Chopper Stabilized	LTC1050AC	LinearTech	
										LTC1050AM	† LinearTech	40
	0.05	0.0005 *	0.05	0.7 *	0.2 *	1000	110	0	Auto-Zeroed	TSC900A	TeledyneS	
		0.1	0.05	2.5	4	1000	110	0	Chopper Stabilized	LTC1050M	† LinearTech	
	0.075	0.125	0.05	2.5	4	1000	110	0	Chopper Stabilized	LTC1050C	LinearTech	
	0.1	0.15	0.05	0.4	1	1000	120	2	Auto-Zeroed	TSC7652C	TeledyneS	
		0.2	0.05	0.125	0.125	1000	120	0	Ultra Low Offset Chopper with Capacitors.	MAX432C	Maxim	45
				0.5	0.5	1000	120	0	Ultra Low Offset Chopper with Capacitors.	MAX430C	Maxim	
0.01	0.02	0.04	0.1	2 *	2.5 *	5000	120	0	Chopper Stabilized	ICL7650B	◊† Maxim	
	0.05 *	0.03 *	0.05	1.9 *	1.5	1000	110	0	Low Noise, Chopper-Stabilized	TLC2654AM	◊† TI	
	0.1	0.1	0.1	0.5	0.5	1000	120	2	Auto-Zeroed	TSC915C	TeledyneS	
			0.3	0.5	0.5	1000	120	0	High Voltage Auto-Zeroed Amplifier	TSC76HV52	TeledyneS	50
		0.2	0.05	0.125	0.125	1000	120	0	Ultra Low Offset Chopper with Capacitors.	MAX432E	Maxim	
				0.5	0.5	1000	120	0	Ultra Low Offset Chopper with Capacitors.	MAX430E	Maxim	

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† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
0.01											(Cont'd)	
	1.2	0.3	0.1	0.6	0.3	12000	140	0	Low Cost Op Amp	**OP177F**	**AD (3243)**	
	1.5	1	0.2	0.4	0.1	12000	130	0	Ultra-Precision Op Amp	**OP177A**	**AD (3243)**	
									Ultra-Precision Operational Amplifier	**OP177E**	◊ **AD (3243)**	
	2	2	0.3	0.4	0.1	500	114	0	Ultra Low Offset, Low Drift.	MAX400M	† Maxim	
0.010	1.2	0.3	0.1	0.6	0.3	12000	140	0	Low Cost Op.Amp	**OP177B**	**† AD (3243)**	5
	2	1.5	0.3	0.4	0.1	2.5	120			RC4077A	◊‡ Raytheon	
0.015	0.03	0.06	0.1	0.45 *	0.5	5000	110	0	Chopper Stabilized	ICL7652B	◊ Maxim	
	0.05		0.25	1	1.2	400	140			1701	TeledyneS	
		0.1	0.15	0.8	2	1000	120	0	Auto-Zeroed	TSC901C	TeledyneS	
	0.07	0.15		1.5 *	2.5 *	500	120	0	Auto-Zeroed	TSC911	TeledyneS	10
	0.08	0.0005 *	0.2	0.7 *	0.2 *	100	100	0	Auto-Zeroed	TSC900B	TeledyneS	
	1.2	0.3	0.1	0.9	0.3	8000	130	0	Ultra-Low Offset Voltage	**AD707**	**AD (3245)**	
	2	2	0.3	0.4	0.1	500	114	0	Ultra Low Offset, Low Drift.	MAX400C	Maxim	
										MAX400E	Maxim	
			0.6	0.4	0.1	450	114	0	Ultra Low Offset, Low Drift	LT1001AM	† LinearTech	15
				0.8	0.25		126	0	Precision Amplifier	LT1001AM	† Maxim	
				2	0.1	0.45	114			LT1001	◊‡ Raytheon	
0.02	0.05 *	0.03 *	0.06	1.9 *	1.5	1000	105	0	Low Noise, Chopper-Stabilized	TLC2654M	◊† TI	
	1.2	0.3	0.7	0.6	0.3	6000	140	0	Low Cost Op Amp	**OP177G**	◊ **AD (3243)**	
0.025	0.02	0.1	0.6	0.9*	0.05	200	108	0	Low power.	**OP97A**	**† AD (3243, 3245)**	20
	0.2	0.1	0.6	0.9*	0.05	200	108	0	Low power.	**OP97E**	**AD (3243, 3245)**	
	1	0.25	0.5	0.25 *	0.1 *	1000	110	0	Ultra Low Offset Voltage, Low Drift	**AD517L**	**AD (3243)**	
	1.2	0.3	0.1	0.6	0.3	12000	120	0	Ultra-Low Offset Voltage	**OP77A**	**† AD (3243, 3245)**	
	2	1.5	0.3	0.4	0.1	150	120		High Precision, High Gain	OP77	◊† Raytheon	
		2	0.3	0.6	0.5	2000	120	2	Ultra Low Offset Voltage	HA5177A-2	† Harris	25
										HA5177A-5	Harris	
			0.6	0.4	0.1	300	110	0	Ultra Low Offset, Low Drift	OP07A	◊† Maxim	
						450	114	0	Ultra Low Offset, Low Drift	LT1001AC	LinearTech	
				0.5 *	0.1	150	110	0	Ultra Low Noise	OP07A	† Raytheon	
				0.6 *	0.17 *	300	110	0	Ultra Low Offset Voltage, Low Drift	**ADOP07A**	**◊† AD (3243, 3245)**	30
				0.8	0.25		126	0	Precision Amplifier	LT1001AC	◊ Maxim	
				1.2 *	0.25 *	300	110	0	Ultra Low Offset Voltage, Low Drift	**OP07A**	**◊‡ AD (3243)**	
	10	2.5	2	0.3 *	0.1 *	1000	110	0	Trimmed Offset	AD510L	AD	
	15	2.5	0.5	0.4 *	0.06 *	1000	120	1	Precision, Low Noise	LH0044A	† National	
										LH0044AC	National	35
	35			5	2.5	7000		0	Low Noise, High Speed Precision Input	LT1007AC	‡ TI	
				60	15	7			Low Noise, High Speed Bipolar	LT1037AC	TI	
	40			8	2.8	1000		0	Low Noise, High Speed	OP27E	TI	
				63	17	1			Low Noise, High Speed Bipolar	OP37E	TI	
		35	—	63 *	11 *	—	—	0	Low Noise, High Slew Rate	OP37A	† Raytheon	40
										OP37E	Raytheon	
			0.2	25 *	18 *	1000	—	0	Ultra Low Noise, Low Offset	**ADOP37A**	**† AD (3240, 3243)**	
										ADOP37E	**AD (3240, 3243)**	
										OP37A	**‡ AD (3240, 3243)**	
										OP37E	**AD (3240, 3243)**	45
										OP37A	‡ TI	
			0.6	5	1.7	600	114	0	Ultra Low Noise	OP27A	† Raytheon	
										OP27E	Raytheon	
									Ultra Low Noise, Low Offset	OP27A	◊† TI	
						1000	114	0	Ultra Low Noise	**ADOP27A**	**† AD (3240, 3243)**	50
										ADOP27E	**AD (3240, 3243)**	
										OP27A	**‡ AD (3240, 3243)**	
										OP27E	**AD (3240, 3243)**	
										AM427-1B	Datel	
										AM427-2B	Datel	55
									Ultra Low Noise.	OP27A	† Maxim	
										OP27E	Maxim	
				8 *	1.7	1000	114	0	Ultra Low Noise	**OPA27A**	**† Burr-Brown (3329)**	
										OPA27E	**Burr-Brown (3329)**	
				8.5 *	10	1000	114	0	Ultra-Low Noise	HA5127A	◊† Harris	60
				45	11	1000	114	0	Ultra Low Noise.	OP37A	† Maxim	
										OP37E	Maxim	

(Continued)

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
0.025	40	35	0.6								(Cont'd)	
				63	11	1000	114	0	Ultra Low Noise, Gain >5	**OPA37A**	**† Burr-Brown (3329)**	
										OPA37E	**Burr-Brown (3329)**	
				80 *	20 *	1000	114	1	Ultra-Low Noise	HA5137A	◊† Harris	
				120	28	1000	114	2	Ultra-Low Noise	HA5147A	◊† Harris	
		40	10	90	40			0		VA711L	VTC	5
				500	150			0		VA721L	VTC	
0.03	10000	200	10	1000	250	31.6	80	1		1467	TeledyneS	
										1467HR	† TeledyneS	
0.035	0.1	0.1	1.5	0.8*	0.1	300	114	0	Precision Low Drift Bipolar	LT1012C	LinearTech	
	0.2	0.1	1.5	0.9 *	0.2 *	300	114			**PM1012A**	**† AD (3243, 3245)**	10
0.04	4	4	0.3	1	0.4	2000	120			LM607AC	National	
	60	100	0.3	8	5	1000	114		Fast Settling	VA701K	VTC	
	90	50	0.8	50	11	30*	114		Low Noise Frequency Synthesizers	LT1028AC	LinearTech	
										LT1028AM	† LinearTech	
0.05	0.15	0.15	1.5	0.8*	0.1	200	110	0	Precision Low Drift Bipolar	LT1012M	† LinearTech	15
	0.3	0.15	1.5	0.9 *	0.2 *	200	110			**PM1012G**	**◊ AD (3243, 3245)**	
	2	0.75	1	0.25 *	0.1 *	1000	100	0	Ultra Low Offset Voltage, Low Drift	**AD517K**	**AD (3243)**	
										AD517S	**† AD (3243)**	
	5	0.5	0.3	0.57	3.5	10	125	0	Instrumentation Amplifier	**AMP01A**	**‡ AD (3250)**	
										AMP01E	**AD (3250)**	20
			0.5	0.2	—	2000	126	0	Precision Instrumentation	LM363A	† National	
	13	4	1	0.3 *	0.1 *	1000	110	0	Trimmed Offset	AD510K	AD	
										AD510S	† AD	
	15	0.5	1.3	0.7 *	0.25	1000	100	0	Single Supply	LT1006AC	LinearTech	
										LT1006AM	† LinearTech	25
		10	0.5	—	5	1000	90	0	Precision Insrumentation	**AD524C**	**AD (3250)**	
	20	20	0.6	1	3	3000	120			LM627AC	National	
										LM637AC	National	
	30	—	0.2	0.25	5	1	115	0	Precision Instrumentation	**AD624C**	**AD (3250)**	
		5	0.5	0.4 *	0.06 *	500	114	1	Precision, Low Noise	LH0044B	National	30
			1	0.4 *	0.06 *	500	114	1	Precision, Low Noise	LH0044	‡ National	
0.055	20	20	0.3	1	3	3000	120			LM627AM	† National	
										LM637AM	† National	
0.06	4	3.8	1	0.4	0.1	400	110	0	Low Offset Voltage	LT1001C	LinearTech	
										LT1001M	† LinearTech	35
	8	4	1.3	0.4	0.1	200	106			OP-07A	† National	
	15	10	0.5	0.4 *	0.8	1000	110	1	Low Drift	3510C	Burr-Brown	
	55			5	2.5	5000		0	Low Noise, High Speed Precision Input	LT1007C	TI	
				60	15	5			Low Noise, High Speed Bipolar	LT1037C	TI	
		50	1.3	5	1.7	1000	106	0	Ultra Low Noise	**ADOP27B**	**† AD (3240, 3243)**	40
										ADOP27F	**AD (3240, 3243)**	
										OP27B	**◊‡ AD (3240, 3243)**	
										OP27F	**AD (3240, 3243)**	
										OPA27B	**† Burr-Brown (3329)**	
										OPA27F	**Burr-Brown (3329)**	45
									Ultra Low Noise.	OP27B	† Maxim	
										OP27F	Maxim	
									Ultra Low Noise	OP27B	† Motorola	
										OP27F	Motorola	
										OP27B	† Raytheon	50
										OP27F	Raytheon	
				45	11	1000	106	0	Ultra Low Noise.	OP37B	† Maxim	
										OP37F	Maxim	
									Ultra Low Noise, Gain >5	**ADOP37B**	**† AD (3240, 3243)**	
										ADOP37F	**AD (3240, 3243)**	55
										OP37B	**◊‡ AD (3240, 3243)**	
										OP37F	**AD (3240, 3243)**	
										OPA37B	**† Burr-Brown (3329)**	
										OPA37F	**Burr-Brown (3329)**	

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
0.06	55	50	1.3	45							(Cont'd)	
					25	100	106	1	Very Low Noise	OP47A	Raytheon	
										OP47F	Raytheon	
						500	106	1	Very Low Noise	OP47B	† Raytheon	
										OP47C	† Raytheon	
				63 *	11	1000	106	0	Ultra Low Noise, Gain >5	OP37B	† Raytheon	5
										OP37F	Raytheon	
0.060	4	3.8	1	0.8	0.25		126	0	Precision Amplifier	LT1001C	◊ Maxim	
										LT1001M	† Maxim	
	6	6	0.6	0.6	0.5	1000	110	1	Ultra Low Offset Voltage	HA5177-5	Harris	
0.070	0.1	0.0005 *	0.8	0.7 *	0.2 *	100	98	0	Auto-Zeroed	TSC918	TeledyneS	10
0.075	0.3	0.15	1.5	0.9*	0.05	150	108	0	Low power.	**OP97F**	**AD (3243, 3245)**	
	3	2.8	1.3	0.4	0.1	200	110	0	Low Offset Voltage, Low Drift	OP07	† LinearTech	
				0.6 *	0.17 *	200	110	0	Low Offset Voltage, Low Drift	**ADOP07**	**◊† AD (3243, 3245)**	
				1.2 *	0.25 *	200	110	0	Low Offset Voltage, Low Drift	OP07	◊† Maxim	
										µA714M	† National	15
	4	3.8	0.2	0.4	0.2	150	106	0	Low Offset Voltage, Low Drift	OP07E	TI	
			1.3	0.4	0.1	200	110	0	Low Offset Voltage, Low Drift	OP07E	LinearTech	
				0.6 *	0.17 *	200	123 *	0	Low Offset Voltage, Low Drift	**ADOP07E**	**◊ AD (3243, 3245)**	
				1.2 *	0.25 *	200	106	0	Low Offset Voltage, Low Drift	**OP07E**	**◊ AD (3243, 3245)**	
										OP07E	◊ Maxim	20
										µA714EC	National	
	75	3	2	46	450			0	Very High-Speed Transimpedance	**AD846**	**AD (3240, 3243)**	
		60		45	17				Audio Op-Amp	MA362C	AnalogSys	
										MA362M	AnalogSys	
	200		1	60	2000			0	60 MHz, 2000 V/µs	**AD844**	**AD (3240, 3243)**	25
0.08	0.05	0.01	1.5	1 *	0.3 *	500	114	0	Improved LM11	LM11A	† National	
	4	4	0.3	1	0.4	2000	120			LM607AM	† National	
	15	0.5	1.5	0.1 *	—	1000	105	0	Precision, Low Power	**OP20B**	**† AD (3244, 3246)**	
	25	0.9	1.3	0.7 *	0.25	70	97	0	Single Supply	LT1006C	◊ LinearTech	
										LT1006M	† LinearTech	30
	180	100	1.0	50	11	30*	110		Low Noise Frequency Synthesizers	LT1028C	LinearTech	
										LT1028M	† LinearTech	
										LT1028M	† TI	
0.09	6	5.6	0.6	1	0.4	1500	112			LM607BC	National	
0.1	0.0008	0.0015	5	2	5		110	0		SP111	† Sipex-HSD	35
	0.005	0.05	25	1.5	7	100	60	1		1009	TeledyneS	
	2	0.4	0.5	0.5	0.3	1000	90	0		1018	TeledyneS	
	3	2	1.5		5	500	90		High Precision	MAX480C	Maxim	
		2.8	0.4 *	1.2 *	0.25 *	500	—	0	Ultra Low Offset Voltage	**OP207A**	**† AD (3243)**	
										OP207B	**AD (3243)**	40
	5pA	5pA	0.8	16 *	40	200	106	0	Fast settling, Low noise	**OPA627SM**	**† Burr-Brown (3332)**	
									Fastsettling, Low noise	**OPA627**	**◊ Burr-Brown (3332)**	
	6	2	1	0.57 *	3	10	115	0	Instrumentation Amplifier	**AMP01G**	**◊ AD (3250)**	
	15	3	1	0.57	3	10	110	0	Instrumentation Amplifier	**AMP01B**	**◊‡ AD (3250)**	
										AMP01F	**◊ AD (3250)**	45
	20	15	0.5	—	5	1000	90	0	Precision Insrumentation	**AD524B**	**AD (3250)**	
	25		1		0.2					OPA21Z	Burr-Brown	
		0.7 *	0.5 *	0.5 *	0.1	1000	95	1	Selectable Input	OPA201C	Burr-Brown	
		1	1	0.3 *	0.2	1000	100	0	Low Power	OPA21E	Burr-Brown	
		5	3	3 *	0.1 *	250	94	0	Trimmed Offset	AD510J	AD	50
	35	5	1	0.4 *	0.06 *	500	114	1	Precision, Low Noise	LH0044C	National	
	40	40	10	90	40			0		VA711K	VTC	
				500	150			0		VA721K	VTC	
	50	—	0.5	0.25	5	1	110	0	Precision Instrumentation	**AD624B**	**AD (3250)**	
		3	2	0.5	0.7		85			TLE2021BC	TI	55
										TLE2021BI	TI	
		5	2 *	2 *	0.7	1000	100	0	Low Power Precision	TLE2021BM	◊† TI	
		35	0.5	—	5	1000	90	0	Precision Insrumentation	**AD524S**	**† AD (3250)**	
	70	1	0.8	—	0.01	100	120	4	High-Gain Instrumentation	OP06A	‡ AD	
	80			8	2.8	700		0	Low Noise, High Speed	OP27G	TI	60
				63	17	700			Low Noise, High Speed Bipolar	OP37G	TI	
		75	—	63 *	11 *	—	—	0	Low Noise, High Slew Rate	OP37C	† Raytheon	
										OP37G	Raytheon	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
0.1	80	75										
			0.4 *	8 *	3.2 *	1200 *	120	0	Ultra Low Noise	**ADOP27C**	**† AD (3240, 3243)**	
						1200	120	0	Ultra Low Noise	**ADOP27G**	**AD (3240, 3243)**	
						1200 *	120	0	Ultra Low Noise	**OP27C**	**‡ AD (3240, 3243)**	
										OP27C	Motorola	
						1200	120	0	Ultra Low Noise	OP27G	Motorola	
						1200 *	120	0	Ultra Low Noise	OP27C	TI	5
				25 *	18 *	700	120	0	Ultra Low Noise	**ADOP37C**	**† AD (3217, 3240)**	
										ADOP37G	**AD (3240, 3243)**	
										OP37C	**‡ AD (3240, 3243)**	
										OP37G	**◊ AD (3240, 3243)**	10
			1.8	5	1.7	700	100	0	Ultra Low Noise	AM427-1A	Datel	
										AM427-2A	Datel	
										OP27C	† LinearTech	
										OP27G	LinearTech	
									Ultra Low Noise.	OP27C	† Maxim	
										OP27G	Maxim	15
									Ultra Low Noise	OP27C	† Raytheon	
										OP27G	Raytheon	
					7	1000	100	0	Ultra-Low Noise	HA5127	◊† Harris	
				45	11	700	100	0	Ultra Low Noise	**OPA37C**	**† Burr-Brown (3329)**	20
										OPA37G	**Burr-Brown (3329)**	
									Ultra Low Noise.	OP37C	† Maxim	
										OP37G	Maxim	
									Ultra Low Noise, Gain >5	OP37C	† LinearTech	
										OP37G	LinearTech	25
					25	450	100	1	Very Low Noise	OP47E	Raytheon	
										OP47G	Raytheon	
				60	14	1000	100	1	Ultra-Low Noise	HA5137	◊† Harris	
				120	28	700	100	2	Precision, High Slew	HA5147	◊† Harris	
	100	—	1	0.25	5	1	100	0	Precision Instrumentation	**AD624S**	**† AD (3250)**	30
	150	15	0.5	0.6 *	0.25	2000	110	0	Precision, Low Power	**OP21B**	**† AD (3243, 3246)**	
										OP21F	**AD (3243, 3246)**	
0.11	20	20	0.6	1	3	2000	120			LM627BM	† National	
										LM637BM	† National	
			1	1	3	3000	120			LM627BC	National	35
										LM637BC	National	
0.12	0.1	0.1	1.5	1*	0.1	200	114	1	Precision Low Drift Bipolar	LT1008C	LinearTech	
										LT1008M	† LinearTech	
										LT1008M	† TI	
	0.3	0.15	1.5	0.5 *	0.1	2 *	114	0	Low Power	**PM1008A**	**† AD (3245)**	40
										PM1008G	**AD (3245)**	
	6	5.6	0.6	1	0.4	1500	112			LM607BM	† National	
	25	15	1	0.4 *	0.8	1000	110	1	Low Drift	3510B	Burr-Brown	
										3510S	† Burr-Brown	
			2	0.25	0.5	1000	110	1	Precision, Low Drift	3510V	† Burr-Brown	45
0.13	11	5.3	1.3	0.4	0.1	180	103			OP-07E	National	
	12	6	0.2	0.4	0.2	100	110	0	Low Offset Voltage	OP07D	TI	
0.14 *	0.000075 *	0.000030 *	5	1.0 *	3.0 *	700	118 *	0	FET Electrometer	OPA128L	Burr-Brown	
	0.00015	0.000030 *	10	1.0 *	3.0 *		118 *	0	FET Electrometer	OPA128K	Burr-Brown	
										OPA128S	**† Burr-Brown (3330)**	50
0.14	150	150	1	8	5	700	100		Fast Settling	VA701J	VTC	
0.15	0.05	0.01	4.0	6.5 *	10	150	86		High Speed Instrumentation Amplifier	LT1055AC	LinearTech	
										LT1055AM	† LinearTech	
		0.010	4.0	6.5 *	12	150	86		High Speed Instrumentation Amplifier	LT1056AC	LinearTech	
										LT1056AM	† LinearTech	55
	0.075	0.01	0.7 *	1 *	0.3 *	500	114	0	Improved LM11	LM11AC	National	
	2	0.2	2.5	0.8 *	0.12 *	80	104	0	Improved 108 A, Low Bias, Compensated	OP12A	‡ AD	
										OP12E	AD	
								1	Improved 108 A, Low Bias	OP08A	‡ AD	
										OP08E	AD	60
		2	0.9	1.2 *	0.25 *	300	114	0	Instrumentation	**OP05A**	**‡ AD (3245)**	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
0.15											(Cont'd)	
	2.8	2.8	1.2	0.4	0.1	2000	100		Ultra-Low Offset	**OP77G**	◊ **AD (3243, 3245)**	
	5	1	3	0.25 *	0.1 *	1000	94	0	Ultra Low Offset Voltage, Low Drift	**AD517J**	**AD (3243)**	
		3	1.5		5	500	90		High Precision	MAX480E	Maxim	
	7	6	0.2	0.4	0.2	100	100	0	Ultra-Low Offset Voltage	OP07C	TI	
			1.8	0.4	0.1	120	100		Ultra-Low Offset	**OP07C**	◊ **AD (3243, 3245)**	5
								0	Low Offset Voltage, Low Drift	OP07C	LinearTech	
				0.5 *	0.1	100	100	0	Ultra Low Noise	OP07C	Raytheon	
				0.6 *	0.17 *	120	100	0	Ultra Low Offset Voltage, Low Drift	**ADOP07C**	◊ **AD (3243, 3245)**	
				1.2 *	0.25 *	120	100	0	Low Offset Voltage, Low Drift	OP07C	◊ Maxim	
	10	1.0			0.08	2000	110			**OP90A**	**† AD (3243, 3246)**	10
										OP90E	**AD (3243, 3246)**	
	12	6	2.5	0.5 *	0.1	100	94	0	Ultra Low Noise	OP07D	Raytheon	
				0.6 *	0.17 *	120	94	0	Ultra Low Offset Voltage, Low Drift	**ADOP07D**	◊ **AD (3243, 3245)**	
				1.2 *	0.25 *	120	94	0	Low Offset Voltage, Low Drift	OP07D	◊ Maxim	
									Ultra Low Offset, Low Drift	**OP07D**	◊‡ **AD (3243, 3245)**	15
	35	20	2	0.4 *	0.8*	1000	110	1	Low Drift	3510A	Burr-Brown	
	100	4	1	0.6	0.25 *	1000	100	0	High Speed, Low Power	**OP21A**	**AD (3243, 3246)**	
										OP21E	**AD (3243, 3246)**	
	250	120	3	100	900	140	95	1	Fast Settling	EL2029	‡ Elantec	
										EL2029C	Elantec	20
0.16	8	7.6			0.1	200	106	0	200°C Operation	LT1001X	† LinearTech	
	95	85			0.7	2000	104	0	200°C Operation	LT1007X	† LinearTech	
0.2	0.001 *	0.0005 *	0.5 *	1.9 *	2	90	90	0	Low Noise, Precision	TLC2201AM	◊† TI	
	7	2	1.5		5	225	85		High Precision	MAX480M	† Maxim	
		6	0.7 *	1.2 *	0.25 *	400	—	0	Ultra Low Offset Voltage	**OP207E**	**AD (3243)**	25
										OP207F	**AD (3243)**	
	10	3	3	0.2 *	—	1000	114	0	Precision Instrumentation	LM363	National	
	12	5.6	1.3	0.4	0.1	150	106			OP-07	† National	
	15	15	2	0.3 *	0.1 *	1–1000	80	0	Instrumentation	**AD522B**	**AD (3250)**	
	20	5	3	1.2 *	0.25	300	110	0	Precision, Instrumentation	CA3193A	Harris	30
					0.25 *	1000	120	0	Precision Instrumentation	CA3493A	† Harris	
	25	2.5	5	0.1 *	—	400	100	0	Precision, Low Power	**OP20C**	**† AD (3244, 3246)**	
										OP20G	**AD (3244, 3246)**	
		20	6	0.3 *	0.1 *	1–1000	75	0	Instrumentation	**AD522S**	**† AD (3250)**	
	40	2	0.9*	0.5 *	0.1	1000	90	1	Selectable Input	OPA201B	Burr-Brown	35
										OPA201S	† Burr-Brown	
	50	3	2	0.5	0.7		85			TLE2021AC	TI	
										TLE2021AI	TI	
		5	2 *	2 *	0.7	1000	100	0	Low Power Precision	TLE2021AM	◊† TI	
	200	20	0.5	0.6 *	0.25	1500	105 *	0	Precision, Low Power	**OP21G**	**AD (3243, 3246)**	40
0.21	50	50	1.8	1	3	2500	116			LM627C	National	
										LM637C	National	
0.25	-	0.15	-	0.35	18	128	85	0	Programmable gain instrumentation amp	**AD526**	**† AD (3250)**	
	0.000075		5	1	3 *				FET-Input Electrometer	**AD549C**	**AD (3247)**	
	0.0001	0.00004	5	1 *	1.2	150	76	0	Ultra Low Bias Military	OPA106W	† Burr-Brown	45
	0.00015	0.00004	5	0.7	0.7	—	80	—	Ultra Low Bias FET	3528B	Burr-Brown	
		0.00008	10	1 *	1.2	150	76	0	Low Bias Military	OPA106V	† Burr-Brown	
	0.0003	0.00008	50	1 *	1.2	150	76	0	Low Bins Military	OPA106U	† Burr-Brown	
	0.001	.0002	2	1	0.9	200	76			OPA105WM/883B	† Burr-Brown	
		0.0002	2	1 *	0.9	100	76	0	Low Bias, FET Input	OPA105W	† Burr-Brown	50
						200	76	0	Low Drift, Low Bias FET	OPA103DM	Burr-Brown	
			5	1 *	0.9	100	76	0	Low Bias, FET Input	OPA105V	† Burr-Brown	
						200	76	0	Low Drift, Low Bias FET	OPA103CM	Burr-Brown	
			25	1 *	0.9	100	76	1	Low Bias, FET Input	OPA105UM	† Burr-Brown	
		0.00025	1	2	1	—	100	1	Low Noise, Dielectrically Isolated	**OPA111B**	**Burr-Brown (3329)**	55
		0.0005	3	0.7 *	0.3	40	76	0	Precision, Low Drift FET	**AD545M**	**AD (3247)**	
		0.001	2	5	28	40	92	0	High-speed precision Di-FET	**OPA602C**	**Burr-Brown (3329)**	
	0.002	0.0003 *	5	1 *	0.6	100	76 *	0	Low Drift FET	3527B	Burr-Brown	
	0.005	0.0003 *	2	1 *	0.6	100	76 *	0	Ultra Low Drift FET	3527C	Burr-Brown	
		0.001	8	2.4 *	5	100	95		Low Bias Current	**OP43E**	**AD (3244, 3246)**	60

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
0.25											(Cont'd)	
	0.01	0.004	5 *	10 *	5	50	80	0	Low Noise, Wideband JFET	**OPA101BM**	**Burr-Brown (3332)**	
					10	50	80	0	Low Noise, Wideband JFET	**OPA102BM**	**Burr-Brown (3332)**	
	0.010		2	1	1.8 *		86		Precision Low-Power BiFET	**AD548**	**AD (3244, 3247)**	
	0.025	0.002	1	1	3	250	80	2	Ultra Low Drift BIFET	**AD547L**	**AD (3244, 3247)**	
		0.010	3			200			High-Speed BiFET	**AD711C**	**AD (3242, 3245)**	5
	0.03	0.03	3	200	75	250	90	0	BiFET, 500 ms settling time	**AD744**	**† AD (3242)**	
	0.05	0.01	5	8*	23	150	86	0	Wideband, Low-Drift JFET	LT1022AC	† LinearTech	
										LT1022AM	† LinearTech	
	0.5	25	5	12.8	100	250	110	0	JFET Input, Bipolar	**AD845**	**† AD (3241)**	
	1.5	0.005	2	1	1	300	86		Precision Low Power BiFET	**AD548C**	**AD (3244, 3247)**	10
	2	2	0.6	2.5 *	0.5	1000	100	0	Ultra Low Drift	AM430B	Datel	
	14	10	2.5	1	0.4	1000	108			LM607C	National	
	18	8	1.8	0.4	0.1	100	97			OP-07C	National	
	20	2.5			0.08	1000	104			**OP90F**	**AD (3243, 3246)**	
	28	8	2.5	0.4	0.1	100	94			OP-07D	National	15
	50		2		100		104			OPA637	◊ Burr-Brown	
			7	1.5	6				Programmable gain = 1,10,100	**PGA102S**	**† Burr-Brown (3335)**	
									Programmable gains = 1,10,100	**PGA102B**	**Burr-Brown (3335)**	
		0.005	5	5 *	30 *	60	80	—	High Speed, Low Drift FET	AD381L	AD	
		35	0.5	—	5	1000	90	0	Precision Instrumentation	**AD524A**	**AD (3250)**	20
	80	75	1.8	5	1.7	700	100	0	Ultra Low Noise, Gain >5	**OPA27C**	**† Burr-Brown (3329)**	
										OPA27G	**Burr-Brown (3329)**	
	100	—	1	0.25	5	1	100	0	Precision Instrumentation	**AD624A**	**AD (3250)**	
	250	120	3	50	700	80	95	0	Fast Settling	EL2028	‡ Elantec	
										EL2028C	Elantec	25
	500		0.25	190						**AD9615**	**AD (3240)**	
0.26 *	0.000150 *	0.000065 *	20	1.0 *	3.0 *	700	118 *	0	FET Electrometer	OPA128J	Burr-Brown	
0.3	0.05	0.01	1 *	1 *	0.3	100	110	0	Improved 108 A, Low Power	LM11	Motorola	
										LM11	† National	
	0.1	0.03	5	4	5	300	100	0	Precision JFET Input	HA5170-2	† Harris	30
		0.06	5	4	5	300	100	0	Precision JFET Input	HA5170-5	Harris	
	2	0.2	3.5	0.8 *	0.12 *	80	104	0	Improved 108 A, Low Power, Compensated	OP12B	‡ AD	
										OP12F	AD	
	5	1	1.5	—	0.7 *	1000	100	0	Programmable Micropower	**OP32E**	**AD (3246)**	
				0.25	0.08	400	82	0	Programmable Micropower	**OP22A**	**AD (3246)**	35
							88	0	Programmable Micropower	**OP22E**	**AD (3246)**	
			2	—	0.7 *	1000	100	0	Programmable Micropower	**OP32A**	**† AD (3246)**	
	25	2	5	0.1 *	—	500	90	0	Precision, Low Power	**OP20H**	**◊ AD (3244, 3246)**	
0.3 *	30	0.3 *		0.5 *	0.2 *		70			TA75254	Toshiba	
0.3	50	50	7	150	120	1000	80		Closed Loop Gain >5	HA2548	† Harris	40
	3500	100	5	400	400	400	110	0	Wideband, Fast Settling	**AD840**	**† AD (3240)**	
0.4	0.05	0.02	8.0	5.5*	7.5	120	83		High Speed Instrumentation Amplifier	LT1055C	LinearTech	
										LT1055M	† LinearTech	
					9.0	120	83		High Speed Instrumentation Amplifier	LT1056C	LinearTech	
										LT1056M	† LinearTech	45
0.4 *	0.075		25	0.35*	1.0 *	25	70	0	FET Electrometer	**AD515L**	**Burr-Brown (3330)**	
	0.15		15	0.35*	1.0 *	40	80	0	FET Electrometer	**AD515K**	**Burr-Brown (3330)**	
	0.3		50	0.35*	1.0 *	15	94 *	0	FET Electrometer	**AD515J**	**Burr-Brown (3330)**	
0.4	25	20	6	0.3 *	0.1 *	1–1000	75	0	Instrumentation	**AD522A**	**AD (3218)**	
0.5		2000	4 *	100				0	Wideband, Fast Settling	**AD9610B**	**AD (3240)**	50
										AD9610T	**† AD (3240)**	
	0.000075	0.00002	10	0.5 *	0.3	—	70	—	Ultra Low Bias FET	3528C	Burr-Brown	
		0.00004	10	1 *	1.6 *	100	80	0	Ultra Low Bias FET	OPA104CM	Burr-Brown	

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LINEAR–Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
0.5											(Cont'd)	
	0.00015	.0003	10	0.5	1	300	90			**OPA128SM/883B**	**† Burr-Brown (3330)**	
		0.00008	15	1 *	1.6 *	100	66	0	Ultra Low Bias FET	OPA104BM	Burr-Brown	
	0.0003	0.00008	10	0.5 *	0.3	—	66	—	Ultra Low Bias FET	3528A	Burr-Brown	
	0.001	0.0001	5	1 *	1.5	100	80	0	Precision FET	LH0052	† National	
	0.001 *	0.0005 *	0.5 *	1.9 *	2	90	90	0	Low Noise, Precision	TLC2201M	◊† TI	5
	0.001	0.002 *	15	1 *	0.9	200	76	0	Low Drift, Low Bias FET	OPA103BM	Burr-Brown	
	0.002	.002	5	4	24	25	88			**OPA602SM/883B**	**† Burr-Brown (3329)**	
		0.001	10	2	1			0		**OPA111M/883B**	**† Burr-Brown (3329)**	
		0.0015	5	2	1	560	90	1	Low Noise, Dielectrically Isolated	**OPA111A**	**Burr-Brown (3329)**	
										OPA111S	**† Burr-Brown (3329)**	10
		0.002	5	4	24	25	88	0	High-speed precision Di-FET	**OPA602B**	**Burr-Brown (3329)**	
										OPA602S	**† Burr-Brown (3329)**	
		0.003 *	25	1 *	0.9	200	76	0	Low Drift, Low Bias FET	OPA103AM	Burr-Brown	
	0.003 *	0.001 *	6 *	0.4	10 *	15	65			TLE2061BC	TI	
										TLE2061BI	TI	15
										TLE2161BC	TI	
										TLE2161BI	TI	
	0.004 *	0.002 *	6 *	2 *	2	30	72	0	J-FET Low Power, High Drive	TLE2061BM	◊† TI	
								1	J-FET Low Power, High Drive	TLE2161BM	◊† TI	
	0.005	0.001	5	0.5 *	1	1000	100	0	JEFT	**OP41A**	**† AD (3247)**	20
				2.4 *	5	100	95		Low Bias Current	**OP43A**	**† AD (3244, 3246)**	
			8	0.5 *	1	1000	100	0	JEFT	**OP41E**	**AD (3247)**	
0.5*	0.005	0.004	10	2*	2*	320	86	0	Dielectrically Isolated FET, Low Noise	**OPA121K**	**Burr-Brown (3330)**	
0.5	0.005	0.025	10	2 *	8	500	80	0	Ion Implanted FET	AD611K	AD	
	0.01	0.01	10	—	20	800	96	0	to ± 150V supply, 150mA output	**PA08A**	**Apex (3326)**	25
				1.3 *	3.5	100	120 *	0	to ± 50V supply, 5A output	**PA07A**	**Apex (3325)**	
				5	12	30	74	0	to ± 75 V supply, 30 A output	**PA03A**	**Apex (3325)**	
		0.02	10	20 *	70	63	90	2	To ± 225 V Supply, 200 mA Output	**PA85A**	**† Apex (3326)**	
	0.015	0.006	10	10 *	5	50	80	0	Low Noise, Wideband JFET	**OPA101AM**	**Burr-Brown (3332)**	
					10	50	80	0	Low Noise, Wideband JFET	OPA102AM	Burr-Brown	30
	0.02	0.01	10	—	100 *	—	104 *	2	to ± 50V supply, 4A output	**PA09A**	**Apex (3326)**	
				150	75	31	104	2	Video Amp	1449	† TeledyneS	
				150*	600	150*	100*	1	± 40 V supply, 4 A output	**PA19A**	**Apex (3326)**	
	0.025	0.002	2	1	3	250	80	2	Ultra Low Drift BIFET	**AD547K**	**AD (3244, 3247)**	
			5	1	3	250	80	2	Ultra Low Drift BIFET	**AD547S**	**AD (3244, 3247)**	35
				2	17 *	50	80	0	High Speed Precision Bipolar JFET	**AD544L**	**AD (3245)**	
			10	5 *	30 *	40	80	1	High Speed, Low Drift FET	AD382K	AD	
						60	80	—	High Speed, Low Drift FET	AD381K	AD	
		0.01	5	1 *	3	200	80	0	Precision Bipolar JFET	**AD542L**	**AD (3245)**	
	0.035	0.002	5	20	94 *	60*	80	1	Wideband, Fast Settling	**OPA605C**	**Burr-Brown (3331)**	40
										OPA605K	**Burr-Brown (3331)**	
	0.05	0.01	5	—	45	100	86	—	Wideband, Decompensated, Settles to 0.01% in 1.5 µs	**OP17A**	**‡ AD (3241, 3247)**	
										OP17E	**AD (3241, 3247)**	
				14 *	10	35	85	0	Bias Compensated Bipolar-JFET	OP15E	LinearTech	
										OP15A	† LinearTech	45
						100	86	0	Bipolar-JFET, Bias Comp.	**OP15A**	**‡ AD (3241, 3247)**	
										OP15E	**AD (3241, 3247)**	
				19 *	18	35	85	0	Wideband-JFET, Bias Comp.	OP16A	† LinearTech	
										OP16E	LinearTech	
						100	86	0	Wideband-JFET, Bias Comp.	**OP16A**	**‡ AD (3241, 3247)**	50
										OP16E	**AD (3241, 3247)**	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source
											(Cont'd)
0.5	0.05										
		0.025	10	1	1	50	80	0	Low Power BIFET	LF441A	National
				3	10	50	80	0	Wideband JFET	LF411A	National
				3.4	18	200	80		Precision High Speed BiFET	**AD711B**	**AD (3242, 3245)**
									Precision High Speed BiFET	**AD711K**	**AD (3242, 3245)**
										AD711T	**† AD (3242, 3245)**
	0.1	—	50	15 *	150 *	100	90	1	High Speed, High Power	1461HR	† TeledyneS
	0.10	0.02	5 *	2.5 *	5 *	50	85	0	Bipolar—JFET	PM155	† AD
	0.2	0.1	10 *	3	13	50	80	0	BiFET, Low Offset	TL087I	TI
				8 *	30 *	50	—	0		MC34081A	Motorola
										MC35081A	† Motorola
				16 *	55 *	50	—	—	Decompensated	MC34080A	Motorola
										MC35080A	† Motorola
	0.25	0.1	3	4.5	2.8	1000	110		Ultralow Noise BiFET	AD743	AD
	0.4	0.05	10 *	3 *	13 *	25	70	0	Low Offset JFET	TL087C	TI
	1	0.5	1	130	1000	10			Ultra-Fast OpAmp	**AM500MM**	**† Datel (3360)**
		1		100	35	150	100	0		2600	Sipex-HSD
										2620	Sipex-HSD
										2622	Sipex-HSD
										2625	Sipex-HSD
	1.5	0.005	5	1	1	300	82		Precision Low Power BiFET	**AD548B**	**AD (3244, 3247)**
									Precision Low Power BiFET	**AD548K**	**AD (3244, 3247)**
									Precision Low Power BiFET	**AD548T**	**† AD (3244, 3247)**
	2	0.2	5	1 *	0.3 *	80	96	1	Precision Bipolar, Low Bias	**AD208A**	**AD (3250)**
										PM108A	◊‡ AD
										LM108A	† LinearTech
										LM108A	† Motorola
										LM208A	Motorola
										LM108A	◊‡ National
										LM108AFRH	◊‡ National
										LM208A	National
										LM108A	† SGS-Thomson
										LM208A	SGS-Thomson
										LM108A	† TI
		1	5	220				0	Wideband, Fast-Settling	**AD9611**	**AD (3240)**
	3	2.8	2	0.6	0.25 *	200	110	0	Instrumentation	**OP05**	**‡ AD (3245)**
	4	3.8	2	0.6	0.25 *	200	107	0	Instrumentation	**OP05E**	**AD (3245)**
	5µA	1µA	20	1.1 GHz	1000	15	90	1	Wideband	EL2038	‡ Elantec
										EL2038C	Elantec
				400	400	15	90	1	Wideband	EL2039	‡ Elantec
										EL2039C	Elantec
	7	1	5			80	96			LM308A	TI
				1 *	0.3 *	80	96	1	Precision Bipolar	AD308A	AD
										LM308A	LinearTech
										LM308A	Motorola
										LM308A	National
										LM308A	SGS-Thomson
	7.5	2	2	—	0.7 *	750	95	0	Programmable Micropower	**OP32B**	**◊† AD (3246)**
										OP32F	**AD (3246)**
				0.25	0.08	250	80	0	Programmable Micropower	**OP22B**	**AD (3246)**
							85	0	Programmable Micropower	**OP22F**	**AD (3246)**
	26	2.5	1	1	27	100	80	0		LF400AM	† National
		5	10	16	27	100	90	0		LF400AC	National
	30	5	5	1 *	0.25 *	80	90	1	High Accuracy 301	AD301AL	AD
	35	2	8	0.8	0.25	100	90	0	General Purpose	**OP02A**	**‡ AD (3245)**
	40	10	5	1.2 *	0.25 *	100	100	0	Precision, Instrumentation	CA3193	Harris
										CA3493	Harris
	50		7	1.5	6				Programmable Gain (G = 1,10,100)	**PGA102A**	**Burr-Brown (3335)**
		3	2	0.5	0.7		85			TLE2021C	TI
										TLE2021I	TI
		4	1.4 *	0.3 *	0.2	500	84	0	Low Power	OPA21G	Burr-Brown
				0.5 *	0.1	1000	85	1	Selectable Input	OPA201A	Burr-Brown
		5	2 *	2 *	0.7	1000	100	0	Low Power Precision	TLE2021M	◊† TI
			5	1 *	0.5 *	50	90	0	Higher Accuracy 741	**AD741L**	**AD (3245)**
	50 fA		50	0.3	0.3	1000	80	1		1035	TeledyneS
	80	5	2	—	0.01	1000	120	4	High Gain Instrumentation	OP06B	‡ AD
										OP06F	AD
											(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
0.5	80										(Cont'd)	
		10	0.5	0.3 *	0.12 *	1000	110	1	Precision Low Noise	AD504M	AD	
			1	0.3 *	0.12 *	1000	110	1	Precision Low Noise	AD504L	AD	
										AD504S	† AD	
		100	10	90	40			0		VA711J	VTC	
				500	150			0		VA721J	VTC	5
	150	6	5	0.6	0.25	500	84		Low Power	**OP21H**	◊ **AD (3243, 3246)**	
	500	20	30	10	13	10	100		Low-noise, Wideband Monolithic OpAmp	AM453-2M	† Datel	
0.5 *	5000 *		5 *	95	4000	50	60 *	0		CLC201AI	Comlinear	
										CLC201AM	Comlinear	
				160	6000	50	56 *	0		CLC203AI	Comlinear	10
										CLC203AM	Comlinear	
				170	6500	50	60 *	0		CLC221AI	Comlinear	
										CLC221AM	Comlinear	
0.5	25000	2000	8 *	300 *	250	582	70	0	Wideband Precision	**OPA620L**	**Burr-Brown (3332)**	
0.50	0.005	0.0003 *	10	1 *	0.6	100	76 *	0	Low Drift FET	3527A	Burr-Brown	15
0.500	0.01	0.005	5	13*	25	100	85	0	Wideband-JFET, Dielectrically Isolated	**OPA606L**	**Burr-Brown (3331)**	
0.6	0.05	0.02	9	8*	18	120	82	0	Wideband, Low-Drift JFET	LT1022C	† LinearTech	
										LT1022M	† LinearTech	
	0.1	0.01	5	1 *	0.3 *	100	110	0	Precision, Low Input Current	LM11C	Motorola	
										LM11C	National	20
	26	5	10	3	70	100	90			LF401AC	National	
0.7	30	2	5	2.5 *	18 *	50	90	0	High Speed	**OP01**	‡ **AD (3241, 3245)**	
0.75	0.010	0.002	7.5	2.4 *	5	500	85		Low Bias Current	**OP43F**	**AD (3244, 3246)**	
	0.075	2.8	1.3	0.5 *	0.1	150	110	0	Ultra Low Noise	OP07	† Raytheon	
		3.8	1.3	0.5 *	0.1	150	106	0	Ultra Low Noise	OP07E	Raytheon	25
	0.2	0.04	10	1.5	100	500	86		High-speed, precision	**OP44E**	**AD (3241)**	
				10 *	50	200	86	1	Fast Settling	**OP42E**	**AD (3242)**	
	4	4	1.3	2.5 *	0.5	1000	100	0	Ultra Low Drift	AM430A	Datel	
			3 *	5	28	100 *	100 *	0		**OPA404BG**	**Burr-Brown (3330, 3332)**	
	80	5	—	0.44 *	0.3	50	80	0	High Performance	µA741EC	◊ National	30
				1 *	0.3 *	50	80	0	High Performance	µA741AM	◊† National	
		50	0.5*	35	25 *	300	86	0		HA5221	† Harris	
			2.5	30	15		106		Low Noise, Wideband	HA5221/883	† Harris	
0.9	0.03	0.015	7	0.30	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1706A	◊°† AdvLinear	
		0.025	7	0.4	0.33	40	70	0	CMOS, Rail-to-Rail	ALD1701A	◊°† AdvLinear	35
				1	1.4	50	70	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1702A	◊°† AdvLinear	
	0.85	0.025	7	2.1	5	50	70	0		ALD1704A	◊°† AdvLinear	
1	—	—	—	1G *					High Speed	**MN542**	† **MicroNet (3548)**	
			30	13	13	100				AM453-2C	Datel	
	0.000075	—	25	0.35	0.3	50	70	0	FET Electrometer	**AD515L**	**AD (3247)**	40
	0.00015	—	15	0.35	0.3	100	80	0	FET Electrometer	**AD515K**	**AD (3247)**	
	0.0003	0.00008	25	1 *	1.6 *	100	66	0	Ultra Low Bias FET	OPA104AM	Burr-Brown	
	0.001	0.0005	15	0.7 *	0.3	40	70	0	Precision Low Drift FET	**AD545K**	**AD (3247)**	
	0.002	0.001	25	0.7 *	0.3	20	66	0	Precision Low Drift FET	**AD545J**	**AD (3247)**	
	0.004	0.003	20	2	1		90	0	Low Noise	**OPA111V**	† **Burr-Brown (3329)**	45
										OPA111V/883B	† **Burr-Brown (3329)**	
	0.005	—	10	1 *	3	75	80	0	High Accuracy, FET	AD506L	AD	
		0.0002	10	1 *	1	75	76	0	Precision FET	LH0052C	National	
	0.01	0.002	7.5 *	0.5 *	1	500	90	0	JFET	**OP41F**	**AD (3247)**	
			10	0.5 *	1	500	90	0	JFET	**OP41B**	† **AD (3247)**	50
		0.002 *	50	1 *	0.6	50	90 *	0	Low Offset FET	3522J	Burr-Brown	
		0.01	10	—	125 *	100	130 *	2	to ± 150V supply, 40mA output	**PA84A**	**Apex (3326)**	
				3	20	1000	130 *	0	to ± 150V supply, 75mA output	**PA83A**	**Apex (3326)**	

(Continued)

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
1	0.01	0.01										
			15	3.5	20	6	75	0	High-speed precision Di-FET	**OPA602A**	**Burr-Brown (3329, 3331)**	
			25	1	20	4000	110	1		1022	TeledyneS	
	0.010	0.002	10	2.4 *	5	500	85		Low Bias Current	**OP43B**	**† AD (3244, 3246)**	
	0.015	—	25	10 *	50	50	80	0	Fast Wide Band, High Accuracy, FET Input	AD528K	AD	
									Fast Wideband, High Accuracy, FET Input	AD528S	† AD	5
	0.025	0.002	10	2	16	50	80	0	High Speed Precision Bipolar JFET	**AD544K**	**† AD (3245)**	
				5 *	30 *	40	80	1	High Speed, Low Drift FET	AD382S	† AD	
						60	80	—	High Speed, Low Drift FET	AD381S	† AD	
			15	2	16	50	80	0	High Speed Precision Bipolar JFET	**AD544S**	**AD (3245)**	
		0.01	10	1 *	3	50	76	0	Precision Bipolar JFET	**AD542S**	**† AD (3245)**	10
						200	80	0	Precision Bipolar JFET	**AD542K**	**AD (3245)**	
	0.035	0.002	25	20	94	60	70	1	Wideband, Fast Settling	**OPA605A**	**Burr-Brown (3331)**	
										OPA605H	**Burr-Brown (3331)**	
		0.005	5	1	3	100	76	2	Ultra Low Drift BIFET	**AD547J**	**AD (3244, 3247)**	
	0.05	0.005	15	5 *	30 *	40	76	1	High Speed, Low Drift FET	AD382J	AD	15
						60	76	—	High Speed, Low Drift FET	AD381J	AD	
		0.01	10	2 *	10 *	100	80	0		**OPA445SM**	**† Burr-Brown (3333)**	
			15	70	1000	30	60	1	Wideband, Fast Settling FET	AD3554B	AD	
			25	70	1000	30	60	1	Wideband, Fast Settling FET	AD3554S	† AD	
		0.03	30	1.6 *	6	32	95	0	High Current	**OPA541BM**	**Burr-Brown (3333)**	20
		0.1	15	150	1000	0	44	1	Wideband, Fast Settling	BB3554B	Maxim	
							60	1	Wideband, Fast Settling	MX3554B	Maxim	
			25	150	1000	0	44	1	Wideband, Fast Settling	BB3554S	† Maxim	
							60	1	Wideband, Fast Settling	MX3554S	† Maxim	
	0.050	0.01	15	70	1000	100	44	1	150 ns Settling to 0.05%	**3554B**	**Burr-Brown (3332)**	25
			25	70	1000	100	44	1	150 ns Settling to 0.05%	**3554S**	**Burr-Brown (3332)**	
	0.1	0.005*	5	3	190	10	58	0	Fast Settling FET	AH103L	OEI	
				4.8	220	10	58	1	Fast Settling FET	AH104L	OEI	
			10	3	190	10	58	0	Fast Settling FET	AH103S	† OEI	
				4.8	220	10	58	1	Fast Settling FET	AH104S	OEI	30
		0.01	50	50 *	250 *	100	70 *	1	Wideband, Fast Settling	**3551J**	**Burr-Brown (3332)**	
										3551S	**† Burr-Brown (3332)**	
		0.02	10	—	35	75	86	—	Wideband, Decompensated, Settles to 0.01% in 1.5 µs	**OP17B**	**‡ AD (3241, 3247)**	
				13 *	7.5	30	85	0	Bias Compensated	OP15B	† LinearTech	
										OP15F	LinearTech	35
						75	86	0	Bipolar-JFET, Bias Comp.	**OP15F**	**AD (3241, 3247)**	
				18 *	12	30	85	0	Wideband-JFET, Bias Comp.	OP16B	† LinearTech	
										OP16F	LinearTech	
						75	86	0	Wideband-JFET, Bias Comp.	**OP16B**	**‡ AD (3241, 3247)**	
										OP16F	**AD (3241, 3247)**	40
			15	0.4	23	10	100		Low-Cost Programmable Gain Instrumentation Amp.	**AM551MM**	**† Datel (3360)**	
			20	40	330 *	25	60	1	Wideband, Fast Settling	AD380K	AD	
										AD380L	† AD	
										AD380S	AD	
		0.04	50	10 *	65	100	70 *	0	Fast Settling, 1 µs to 0.01%	**3550J**	**Burr-Brown (3332)**	45
		0.040	50	10 *	65	25	70 *	0	Fast Settling, 1 µs to 0.01%	**3550S**	**† Burr-Brown (3332)**	
				20 *	100	100	70 *	0	Fast Settling, 0.6 µs to 0.01%	**3550K**	**Burr-Brown (3332)**	
	0.12		10	35	300					**AD843**	**AD (3241)**	
	0.2	0.04	10	1.5	100	500	86		High-speed, precision.	**OP44A**	**† AD (3241)**	
				10 *	45	160	80	1	Fast Settling	**OP42A**	**† AD (3242)**	50
											(Continued)	

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
1	0.2											
		0.1	10 *	3	13	50	80	0	BiFET	TL088I	TI	
				8 *	30 *	25	—	0		MC35081	† Motorola	
					32 *	25	—	0		MC34081	Motorola	
				16 *	55 *	25	—	—	Decompensated	MC35080	† Motorola	
	0.3	0.02	15	40 *	220 *	25	60	1	Wideband, Fast Settling	1437	TeledyneS	5
										1437HR	† TeledyneS	
	2	100	10	30	300 *	100	70	2	Low Offset, Fast Settling	HOS060	† AD	
										HOS060/883	† AD	
	5			1.0	1.5	56	110			SL562	Plessey	
		0.5	10	0.8 *	0.12 *	40	84	0	Precision, Low Input Current	OP12C	‡ AD	10
										OP12G	AD	
								1	Precision, Low Input Current	OP08C	‡ AD	
										OP08G	AD	
	6	0.5			4		80			TA7540	Toshiba	
	8	8	3 *	4	24	100 *	100 *	0		**OPA404AG**	**Burr-Brown (3330, 3332)**	15
										OPA404SG	**† Burr-Brown (3330, 3332)**	
	10	3	3	—	0.7 *	500	85	0	Programmable Micropower	**OP32G**	**AD (3246)**	
	100	—	2	200	1800	1000	—	1	Bipolar	9808	OEI	
		20	4 *	1 *	0.25 *	30	70	2	High Voltage	LH0004	† National	
			5	1 *	0.005 *	1000	110	4	High Accuracy Instrumentation	LM725	† National	20
	250	20		15	50	100	86		Wideband Amplifier	LT118A	† LinearTech	
										LT318A	LinearTech	
		70	20	—	—	20	70	1	General Purpose	TA7502B	Toshiba	
	300	50		15	±5		100		Power Op Amp	MA921	AnalogSys	
	650	15	4.3	40 *	30	10	60	0		VA705L	VTC	25
	1000	1000	-	80 *	130	30	90	0	High Speed, Wide Band Operational Amplifier	**OP64A**	**‡ AD (3241)**	
	3100	500	10	165	2500		40		Wide Bandwidth, Fast Settling	THC4231	TRWLSI	
	3300	50	15	50	300	5500	80	0	High-Speed, Low Power	**AD847**	**◊† AD (3241)**	
	3500	100	14	80	375	9000	115	0	Wideband, Fast Settling	**AD842**	**† AD (3241)**	
	5000		10 *	100	1200	400	58	0		HA5004	† Harris	30
1 *	5000 *		10 *	165	3000	5	46 *	0		CLC231ABC	Comlinear	
										CLC231AI	Comlinear	
										CLC231AM	Comlinear	
1	8200	500	0.3	25	150	30	100		High Speed, Low Noise	AD829	AD	
	30000	2000	8 *	300 *	250		65	0	Wideband Precision	**OPA620K**	**Burr-Brown (3332)**	35
										OPA620S	**† Burr-Brown (3332)**	
		5000	5	100 *	240		85	1	Wideband	**OPA675K**	**Burr-Brown (3332)**	
										OPA676K	**Burr-Brown (3332)**	
	50000	1	5	100	3000	1	35	0	Transimpedance fast-settling	SP9610	† Sipex-HSD	
1.0	1000	1000	-	80 *	130	30	90	0	High Speed, Wide Band Operational Amplifier	**OP64E**	**◊‡ AD (3241)**	40
			2 *	1000 *	250 *	80	100		Closed Loop Gain >10	HFA0002	Harris	
1.2	0	3	2	0.35	0.08	250 *	80	0	Programmable Micropower	**OP22H**	**AD (3246)**	
1.3	7	6	4.5	0.4	0.1	120	100	0	Instrumentation	OP05C	LinearTech	
				1.2 *	0.25 *	120	100	0	Instrumentation	**OP05C**	**‡ AD (3245)**	
	110	13	1.4 *	—	0.01	500	110	4	High Gain Instrumentation	OP06G	AD	45
1.5	0.00025	0.000005*		0.3*	0.2	100000	50	0	Low Bias Current	**OP80E**	**AD (3246)**	
	0.001	0.000008*		0.3*	0.2	100000	50	0	Low Bias Current	**OP80F**	**AD (3246)**	
		0.0005	20	1.2	10	400	110	1		1032	TeledyneS	
	0.003 *	0.001 *	6 *	0.4	10 *	15	65			TLE2061AC	TI	
										TLE2061AI	TI	50
										TLE2161AC	TI	
					18 *	15	65			TLE2161AI	TI	
	0.004 *	0.002 *	6 *	2 *	2	30	72	0	J-FET Low Power, High Drive	TLE2061AM	◊† TI	
								1	J-FET Low Power, High Drive	TLE2161AM	◊† TI	
	0.01	—	25	1 *	3	50	80	0	High Accuracy, FET	AD506K	AD	55
			50	1 *	3	50	80	0	High Accuracy, FET	AD506S	† AD	

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
1.5											(Cont'd)	
	0.015	0.01	5*	10	22	56	80	0	Wideband-JFET, Dielectrically Isolated	**OPA606K**	**† Burr-Brown (3331)**	
										OPA606S	**† Burr-Brown (3331)**	
	0.02	0.003		120		500	86		Differential Video Amp	µA733	† Signetics	
	0.025	0.005	7.5	2.4 *	5	300	85		Low Bias Current	**OP43G**	**AD (3244, 3246)**	
	0.03	0.005		120		600	86		Differential Video Amp	µA733C	† Signetics	5
	0.2	0.1	4.3 *	1.1 *	2	4	75	0	Low Power Bipolar J-FET	TL031M	◊† TI	
			8 *	3.1 *	15	50	75	0	Bipolar J-FET	TL051M	◊† TI	
	0.25	0.05	8	1.2	80	500	80		High-speed, precision.	**OP44F**	**AD (3241)**	
			8 *	10 *	40	200	80	1	Fast Settling	**OP42F**	**AD (3242)**	
1.5 *	10 µA *		10 *	120 *	1200 *		70 *	0	Clamped Output Voltage and Fast Overload Recovery	CLC501	† Comlinear	10
1.5	26	5	10	3	70	100	80			LF401C	National	
	80	5	2	0.5 *	0.005 *	1000	120	4	Instrumentation	LM725A	National	
	100	10			0.17 *	130	100	0	200°C Operation	LM118X	† LinearTech	
		15	3	0.3 *	0.12 *	500	100	1	Low Drift, Low Noise	AD504K	AD	
	120	45	4 *	1 *	0.25 *	30	70	2	High Voltage	LH0004C	National	15
1.9	0.2	0.1	10 *	16 *	55 *	25	—	—	Decompensated	MC34080	Motorola	
2									24 W BTL Audio Amplifier	TDA1515A	Signetics	
	0.001 *	0.001 *	0.7 *	0.1 *	0.04 *	30	60	1	Programmable, Low Bias	TS271BC	◊ SGS-Thomson	
							70	1	Programmable, Low Bias	TLC251BC	◊ TI	
										TLC271BC	◊ TI	20
			5 *	2.3 *	4.5 *	10	70	1	Programmable, High Bias	TLC271BC	◊ TI	
	0.002	0.0001*		0.3*	0.2	100000	50	0	Low Bias Current	**OP80B**	**† AD (3246)**	
	0.005	0.001	0.7 *	2.2	5.3	7	70	0	LinCMOS, Programmable	TLC271BI	◊ TI	
		0.004	10	2	5		116	0		SP121	† Sipex-HSD	
	0.01			60	1000					SP4010	† Sipex-HSD	25
	0.02	—	50	100	1000	100	90	1	Fast-Settling, FET Input	1443HR	† TeledyneS	
		0.01	25	15	75	400	94	1		1027	TeledyneS	
	0.025 *	0.01 *	20	1 *	3	50	76	0	Precision Bipolar JFET	**AD542J**	**AD (3245)**	
	0.03	0.015	7	0.3	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1706B	◊°† AdvLinear	
		0.025	7	1	1.4	50	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1702B	◊°† AdvLinear	30
	0.05	0.005	20	2	15	30	74	0	High Speed Precision Bipolar JFET	**AD544J**	**AD (3245)**	
		0.01	5	—	40	50	85	—	Wideband Decompensated	PM157A	◊† AD	
										LF157A	† National	
										LF357A	National	
				2.5 *	3	50	85	0	Bipolar - JFET	PM155A	◊† AD	35
										LF155A	† National	
										LF355A	National	
				2.5	3	50	85	1	JFET Input	LF155A	† SGS-Thomson	
				4	10	50	85	0	Wideband - JFET	PM156A	◊† AD	
										LF156A	† National	40
										LF356A	National	
									Wideband-JFET, Dielectrically Isolated	**OPA156A**	**† Burr-Brown (3329, 3331)**	
										OPA356A	**† Burr-Brown (3329)**	
								1	JFET Input	LF156A	† SGS-Thomson	
				15	40	50	85	1	JFET Input	LF157A	† SGS-Thomson	45
			50	70	1000	100	60	1	Wideband, Fast Settling FET	AD3554A	AD	
		0.025	20	3	16	150	76		Precision High Speed BiFET	**AD711A**	**AD (3242, 3245)**	
									Precision High Speed BiFET	**AD711J**	**AD (3242, 3245)**	
									Precision High Speed BiFET	**AD711S**	**† AD (3242, 3245)**	
		0.03	10 *	0.48 *	0.16 *	20	76	1	Low Power	ICL7614AC	◊ Maxim	50
										ICL7614AM	◊† Maxim	
				1	1.6	80 *	70	0	Low Power	ICL7611AC	◊ Harris	
										ICL7611AM	† Harris	
									Low Power, Extended CMVR	ICL7612AC	◊ Harris	
										ICL7612AM	◊† Harris	55

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† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
2	0.05	0.03	10 *	1.4 *	1.6 *	10	76	0	CMOS, Low Power, Programmable Low Bias	ICL7611AC	◊ Maxim	
										ICL7611AM	◊† Maxim	
									Programmable Bias, Extended CMVR	ICL7612AC	◊ Maxim	
										ICL7612AM	◊† Maxim	
										ICL7616AC	Maxim	5
										ICL7616AM	† Maxim	
		0.05	30	—	30 *	800	96	0	to ± 150V supply, 150mA output	**PA08**	**Apex (3326)**	
				1.3 *	5 *	40	120 *	0	High Voltage, High Output Current	**PA07M**	**† Apex (3325)**	
					5	100	120 *	0	to ± 50V supply, 5A output	**PA07**	**Apex (3325)**	
				5	20	63	90	0	± 15 V to ± 150 V supply, 150 mA	**PA08M**	**† Apex (3326)**	10
					30 *	800	96	0	To ± 175 V supply, 150 mA output	**PA08V**	**Apex (3326)**	
		0.1	30	20 *	100 *	63	90	2	To ± 225 V supply, 200 mA output	**PA85**	**Apex (3326)**	
			50	150	1000	0	44	1	Wideband, Fast Settling	BB3554A	Maxim	
							60	1	Wideband, Fast Settling	MX3554A	Maxim	
		2	20	1000	275	31.6	80	0		TP3554-HR	† TeledyneS	15
	0.050	0.01	50	70	1000	100	78 *	1	150 ns Settling to 0.05%	**3554A**	**Burr-Brown (3332)**	
	0.075	0.025	10 *	4 *	13 *	50	80	0	Precision BIFET	MC35001A	† Motorola	
	0.1	0.005*	20	3	190	10	58	0	Fast Settling FET	AH103J	OEI	
				4.8	220	10	58	0	Fast Settling FET	AH104J	OEI	
		0.025	50 *	70 *	500 *	20	70	2		EL2006	† Elantec	20
		0.05	10 *	3 *	13 *	50	80	0	Bipolar JFET	µA771AC	National	
										µA771AM	† National	
				4 *	13 *	50	80	0	Precision BIFET	MC34001A	Motorola	
			20	150	400	10	60	3	Fast Settling, Wideband	**OPA600V**	**Burr-Brown (3332)**	
										OPA600V/MIL	**† Burr-Brown (3332)**	25
										OPA600V/883B	**† Burr-Brown (3332)**	
	0.2	0.02	50	40 *	225	30	60	1	Wideband, Fast Settling	1438	TeledyneS	
										1438HR	† TeledyneS	
		0.1	10 *	8 *	25 *	25	70	0	Low offset, low drift JFET input	LF411C	◊ Motorola	
			20	2.7	8	25	70	0	J-FET Input	LF411C	TI	30
									Wideband JFET	LF411	National	
				3	10	50	80	0	JFET Input, High Speed	LF351A	SGS-Thomson	
				17	165	56	80	0		1463HR	† TeledyneS	
							90	0		1463	† TeledyneS	
	0.3	0.025	7	0.4	0.33	32	65	0	CMOS, Rail-to-Rail	ALD1701B	◊°† AdvLinear	35
	0.5	10	5	2.5 *	5	75	85	0	Bipolar-JFET	LF155A	† LinearTech	
										LF355A	LinearTech	
				4	10	75	85	0	Wideband-JFET	LF156A	† LinearTech	
										LF356A	LinearTech	
	0.50	—	75	60 *	500	200	—	0	Inverting, Settles to 0.01% in 200 ns	1430	TeledyneS	40
										1430HR	† TeledyneS	
	0.85	0.025	7	2.1	5	50	70	0		ALD1704B	◊°† AdvLinear	
	1.5	0.01	20		1	300	76		Precision Low Power BiFET	**AD548A**	**AD (3218, 3244, 3247)**	
				1	1	300	76		Precision Low Power BiFET	**AD548J**	**AD (3244, 3247)**	
									Precision Low Power BiFET	**AD548S**	**† AD (3244, 3247)**	45
	2	0.2	15	1 *	0.2 *	50	85	0	Micropower, Supply Current 600 µa	LM112	† National	
										LM212	National	
					0.3 *	50	85	1	Precision Bipolar	**AD208**	**AD (3250)**	
										PM108	‡ AD	
										LM108	† LinearTech	50
										LM108	† Motorola	
										LM208	Motorola	
										LM108	◊† National	
										LM208	National	
										LM108	† SGS-Thomson	55
										LM108M	† SGS-Thomson	
										LM208	SGS-Thomson	
										LM108	† TI	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
2											(Cont'd)	
	5	0.6	18	50	75		110	0		**VA703**	**† VTC (3713)**	
	6 *	1		40 *	280 *	10	70		Wideband, Unity Gain Stable	SP2541	† Sipex-HSD	
	7.5	3	10	1	0.03	25	70			LM776	National	
	10µA	1µA	10	200	700	1000	50	0	Wideband, Current Mode Feedback	EL400	◊ Elantec	
										EL400J	‡ Elantec	5
									Wideband, Current Mode Feedback Amp and Disable	EL2070	◊ Elantec	
										EL2070J	‡ Elantec	
		5µA	7	85	625	2	60	0	Wideband, Current Mode Feedback	EL2130	◊ Elantec	
2*	11*	0.3*	15	2	0.45	40	80		With Adjustable Reference	LM611AC	National	
										LM611AM	† National	10
										LM611C	National	
2	20	0.7	2 *	—	—	60	89	0	Op Amp and Voltage Reference	LM10BL	LinearTech	
										LM10BL	National	
						120	93	0	Op Amp and Voltage Reference	LM10	LinearTech	
										LM10B	LinearTech	15
										MCELM10	MCE	
										LM10	† National	
										LM10B	National	
	20 µA *		20 *	730 *	800 *	0.95 *		0	Unity Gain Closed-Loop Buffer Amplifier	CLC110	† Comlinear	
	35	7	20 *	40 *	200	10	70	0	Wideband, Unity Gain Stable	HA2541-5	Harris	20
	50	5	10	0.8	0.25	50	90	0	General Purpose	**OP02C**	**‡ AD (3245)**	
	60	10	15	—	40	50	70	1	60 V/µs Comp. for g = 5	SE538	† Signetics	
				3 *	25	50	70	0	High Slew Rate	SE530	† Signetics	
	75	5	10	0.8	0.5 *	50	80	0	Dual Matched	**OP14C**	**◊ AD (3245, 3248)**	
		10	3 *	1 *	0.5 *	50	80	1	High Performance Bipolar	LM201A	◊ TI	25
			15	1 *	0.5 *	25	80	1	General Purpose, Uncompensated	LM101A	† SGS-Thomson	
						50	80	0	General Purpose, Compensated	LM107	† LinearTech	
										LM107	‡ National	
										LM207	National	
										SG107	**◊† SiliconG (3643)**	30
										SG207	◊ SiliconG	
									Higher Accuracy 741	**AD741S**	**† AD (3245)**	
								1	General Purpose, Improved 101, Uncompensated	AD101A	† AD	
										AD201A	AD	
										LM101A	† LinearTech	35
										LM101A	† Motorola	
										LM201A	Motorola	
										LM101A	◊‡ National	
										LM201A	National	
										LM101A	† Raytheon	40
										LM201A	SGS-Thomson	
										SG101A	**◊† SiliconG (3643)**	
										SG201A	**◊ SiliconG (3642)**	
							90	0	Higher Accuracy 741C	**AD741K**	**AD (3245)**	
	200	50	10	5 *	0.3 *	25	80	3	General Purpose	LM709A	† National	45
										SFC2709A	† SGS-Thomson	
	250	200	20	3	32	10	70			LH4105C	National	
	350	250	20	3	32	10	70			LH4105	† National	
	500	50	10 *	3.5 *	13 *	50	80	1	High Performance, Single Supply	MC33071A	Motorola	
										MC34071A	Motorola	50
										MC35071A	† Motorola	
	800	200	—	10 *	13 *	50	80	1	Wideband, Low Noise	XR5534M	† Exar	
										RM5534	† Raytheon	
										RM5534A	† Raytheon	
										SE5534	† Signetics	55
										SE5534A	† Signetics	
	1000		6 *	90	1000 *		62		High-Speed, Current Feedback	**OP160A**	**‡ AD (3241)**	
										OP160E	**‡ AD (3241)**	
	1500	300	—	10 *	6 *	25	70	1	Low Noise, Comp. for G = 3	**SSM2134**	**AD (3262)**	
	2000	2000		80 *	130	20	84			**OP64F**	**AD (3241)**	60
2 *	10000		20 *	200 *	700 *		50 *	0	Wideband, Fast-settling	CLC400	† Comlinear	
2	20000	6000	20 *	400 *	350	10	70		Low power enhanced HA-2540; I supply < 16 mA.	EL2040	◊† Elantec	
		7000	20 *	50 *	150	10	70		Low power, enhanced HA-2541; I supply < 16 mA.	EL2041	† Elantec	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
2	20000	7000	20 *									
				150 *	160	10	74		I supply < 16 mA.	EL2195	Elantec	
									Low power, enhanced HA-5190; I supply < 16 mA.	EL2190	◊† Elantec	
	35000	5000	10	100 *	200		75	1	Wideband	**OPA675J**	**Burr-Brown (3332)**	
										OPA675S	**† Burr-Brown (3332)**	
										OPA676J	**Burr-Brown (3332)**	5
										OPA676S	**† Burr-Brown (3332)**	
		7000	9 *	40 *	200	10	70	0	Wideband, Unity Gain Stable	HA2541-2	† Harris	
			20 *	40 *	200	10	70		Wideband, unity gain stable, fast settling.	EHA-2541-2	† Elantec	
										EHA-2541-5	Elantec	
2.5	0.002	0.0001 *	-	0	0.2	75	50	0	Low Bias Current 0V In/0V Out	**OP80G**	**AD (3246)**	10
	12	12	5 *	4	24	100 *	100 *	0		**OPA404KP**	**Burr-Brown (3330, 3332)**	
										OPA404KU	**◊ Burr-Brown (3330, 3332)**	
	50	5		0.6	0.2	1000	110		Low Power	LC810	Gennum	
	125	35	2 *	—	—	250	96	4	Low Drift	IR9725	Sharp	
				1 *	0.005 *	250	94	4	High Accuracy Instrumentation	LM725C	National	15
	200	40	5	0.3 *	0.12 *	250	94	1	Low Drift, Low Noise	AD504J	AD	
	250	50	10 *	1 *	0.25 *	100	90	2	High Gain Instrumentation, 50 mA	LH0020	† National	
	2500	2500		80 *	130	20	84			**OP64G**	**AD (3241)**	
	5000 *		10 *	165	1800	70	46		Current mode amplifier.	EL2022	† Elantec	
	25000		15	110	500		60	0	High Speed, Fast Settling	CLC500	† Comlinear	20
3	0.0003	—	50	0.35	0.3	40	66	0	FET Electrometer	**AD515J**	**AD (3247)**	
	0.001	0.0002	5 *	0.11	2 *	1000 *	90	0	Low Bias Current, Low Power	HA5180-2	† Harris	
			5	2	7	1000	90			1346	TeledyneS	
										1346-01	† TeledyneS	
	0.003 *	0.001 *	6 *	0.4	10 *	15	65			TLE2061C	TI	25
										TLE2061I	TI	
										TLE2161C	TI	
										TLE2161I	TI	
	0.004 *	0.002 *	6 *	2 *	2	30	72	0	J-FET Low Power, High Drive	TLE2061M	◊† TI	
								1	J-FET Low Power, High Drive	TLE2161M	◊† TI	30
	0.020	0.020 *	25	5	20 *	400	110 *	0	High Voltage FET	**3581J**	**Burr-Brown (3333)**	
				5 *	20 *	400	110 *	0	High Voltage FET	3583	Burr-Brown	
				5	20 *	800	110 *	0	High Voltage FET	**3582J**	**Burr-Brown (3333)**	
				7 *	—	1000	110 *	2	High Voltage FET	3584	Burr-Brown	
	0.03	—	50	10 *	50	25	70	0	Fast Wideband, High Accuracy FET	AD528J	AD	35
		0.005		1	3.5		70			TA75060	Toshiba	
										TA75061	Toshiba	
				3	13		70			TA75070	Toshiba	
										TA75071	Toshiba	
	0.05	—	75	90	900	56	80	1	Fast-Settling, FET Input	1443	TeledyneS	40
		0.01	10 *	100 *	100	75	74	1	Wideband, High Slew Rate	HA5160-2	† Harris	
			10	100	120	150	74			1344-01	† TeledyneS	
			20	100	120	150	74			1344	TeledyneS	
		0.025	10	2	10	33		0		**OPA445BM**	**Burr-Brown (3333)**	
		0.05	25	—	125 *	100	130 *	2	to ± 150V supply, 40mA output	**PA84**	**Apex (3326)**	45
				5 *	20 *	100	110 *	0	± 32/75Vs, ± 30mA.	**PA81J**	**Apex (3326)**	
									± 70/150Vs, ± 15mA.	**PA82J**	**Apex (3326)**	
				5	20	1000	130 *	0	Hi-Rel Screened	**PA83Q**	**† Apex (3326)**	
									to ± 150V supply, 75mA output	**PA83**	**Apex (3326)**	
										PA83M	**† Apex (3326)**	50
				75 *	25 *	100	130 *	2	Fast Settling, High Voltage	**PA84S**	**Apex (3326)**	
									High Voltage	**PA84M**	**† Apex (3326)**	
	0.1	0.01	25	4.5	25	398	94	0	High Voltage	1481	† TeledyneS	
		0.025	25	40 *	350	20	70	2	FET Input	EL2006A	† Elantec	
		0.05	25	4.5*	13		70	0	Wideband, High Output Current	**PA02A**	**† Apex (3325)**	55
				4.5	20	141	100	0	Video Amp	1447	† TeledyneS	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
3	0.1	0.05										
			30	—	100 *	—	104 *	2	to ± 50V supply, 4A output	**PA09**	**Apex (3326)**	
				10	20	10	64	2	to ± 40 V supply, 2 A output	**PA09M**	**† Apex (3326)**	
				150*	600	150*	100*	1	± 40 V supply, 4 A output	**PA19**	**Apex (3326)**	
			100	4	38					**PA04**	**Apex (3325)**	
	0.2	0.04	100	18	100	56	110	2		1480HR	† TeledyneS	5
		0.05	10 *	3 *	13 *	50	80	0	Low Noise, Bipolar JFET	TL071BC	◊ SGS-Thomson	
				4 *	13 *	50	80	0	Low Noise Bipolar-JFET	TL071BC	Motorola	
										TL071BC	◊ TI	
			15	—	25	50	82	—	Wideband, Decompensated, Settles to 0.01% in 1.6 µs	**OP17C**	**‡ AD (3241, 3247)**	
										OP17G	**AD (3241, 3247)**	10
				0.2 *	5	25	80	0	Bias Compensated	OP15G	LinearTech	
				12 *	5	50	82	0	Bipolar-JFET, Bias Comp.	**OP15C**	**‡ AD (3241, 3247)**	
										OP15G	**AD (3241, 3247)**	
				17 *	9	25	80	0	Wideband-JFET, Bias Comp.	OP16C	† LinearTech	
										OP16G	LinearTech	15
						50	82	0	Wideband-JFET, bias comp.	**OP16C**	**‡ AD (3241, 3247)**	
										OP16G	**AD (3241, 3247)**	
		0.1	—	3	13 *	50	70	0	Bipolar JFET	TL081B	Motorola	
										TL081BC	◊ TI	
			10 *	1 *	3.5 *	4	80	0	Low Power, Bipolar JFET	TL061BC	◊ SGS-Thomson	20
									Low Power, Bipolar-JFET	TL061BC	◊ TI	
									Programmable Bipolar JFET	TL066BC	TI	
				1	3.5	4	80	1	BiFET, Low Power	TL060BC	TI	
				2 *	2	4	80	0	Low-Power J-FET	TL061BC	Motorola	
				3 *	13 *	50	80	0	Bipolar JFET	TL081BC	◊ SGS-Thomson	25
									Bipolar-JFET	TL088C	TI	
	0.3	0.075	10 *	0.3	10	200 *	85	0	2 A Power	LH0101A	† National	
										LH0101AC	National	
				4	7.5	50	85		2A Power, 5A Peak	LH0101ACK	Maxim	
										LH0101AK	† Maxim	30
								0	2 A Power	ELH0101A	† Elantec	
										ELH0101AC	Elantec	
			10	5	7.5	50	85	0	High Output Current	LH0101A/HR	† Maxim	
	0.30	0.075	10 *	4.0	10	50	85	0	2 A Power	LH0101A	† Maxim	
		75	10 *	0.3	10	200 *	85	0	2 A Power	LH0101AC	Maxim	35
	0.5	0.05	25	40 *	350	20	70	2	FET Input	EL2006AC	Elantec	
	1	5	20	600	600	30	60	0		2539	Sipex-HSD	
	2	1	10 *	3	10 *	25	70	2	Wideband	MC34181	Motorola	
	4	0.5	5	100	1000	1000	0		Settles to 0.01% in 200 ns	**AM500GC**	**Datel (3360)**	
										AM500MC	**Datel (3360)**	40
	5	5	5	20	35	150	100	1	Wideband, Uncompensated	SP2620	◊† Sipex-HSD	
	7.5	3	—	0.25 *	0.16 *	100	70	0	Programmable	LM4250	† National	
										UC4250	† Solitron	
	10	1000	50	1	500	300	80	2	High Slew Rate	MA207	AnalogSys	
	15	5	5	12	7	150	100	0	Wideband	SP2600	† Sipex-HSD	45
		15	15	35 *	25	100	80	1	Wideband, General Purpose	AD507K	AD	
	20	5	—	0.85 *	0.55	80	80	0	Low Power, Radiation Resistant	HS3530RH	‡ Harris	
		10	40	1 *	1.8 *	63	74	0	± 45Vs, ± 10A, 97W.	**PA61A**	**Apex (3325)**	
				4 *	2.5	70	74	0	to ± 50V supply, 15A output	**PA12A**	**† Apex (3325)**	
				4	2.5	316	100	0	High Current (15A), High Power	**OPA512S**	**† Burr-Brown (3333)**	50
				6 *	2.5	70	74	0	to ± 50V supply, 5A output	**PA10A**	**† Apex (3325)**	
	26	5	10	16	27	100	80	0		LF400C	National	
	60	12	5.5 *	3	1.5	25	70	0	Four Channel Multiplexed Input	LM604AC	National	
										LM604AM	† National	
	80	30	—	1 *	0.6	50	80	0	to 500 mA, single supply	µA759M	† National	55
			15	0.4	0.3	50	80	0	General purpose	LM741E	◊ SGS-Thomson	
									Higher Performance	LM741A	† National	
										LM741E	National	
	100	100	—	10	22	30	80	1	High Slew Rate, Wideband	HS3516RH	‡ Harris	
	150	30	10	1	0.6	25	80			LM759	National	60
	200	30		3.5	1.6				741 General Purpose	RM4741	† Raytheon	
		50	20	1 *	0.5 *	50	80	0	Higher Accuracy 741C	**AD741J**	**AD (3245)**	
		75	10	6	6	1000	80	0	Low Noise, Wideband	HA5101	◊† Harris	
				100	40	1000	80	1	Low Noise, High Slew Rate	HA5111	◊† Harris	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
3											(Cont'd)	
	250	50	3 *	1.3 *	2	50	80	0	Low Power	HA5151-2	† Harris	
										HA5151-5	Harris	
	300	50		3.5	1.6				741 General Purpose	RC4741	Raytheon	
		100	3 *	1 *	1.5	100	70	1	0.2 A Power	ELH0041	† Elantec	
					1.5 *	100	70	1	0.2 A Power	LH0041	◊† National	5
			25	0.015	3 *	100	70		High Power, High Current	52063	Micropac	
										52106	Micropac	
				1 *	1.5	100	70	1	1 A Power	ELH0021	Elantec	
										LH0021	† National	
	500	75	3 *	2 *	4.2 *	50	80	2	General Purpose	MC1539	† Motorola	10
	600	100	5	1 *	0.5 *	25	80	3	High Performance MC1709	MC1709A	† Motorola	
	1000	200	10	40	20	100	70	0	Low Noise, Wideband	MA322	AnalogSys	
	2000		8 *	90	1000 *		60		High-Speed, Current Feedback	**OP160F**	**‡ AD**	**(3241)**
		200	4	10 *	—	20	70	0	General Purpose Wide Bandwidth	LH0003	† National	
										LH0003C	National	15
3 *	5000 *		10 *	50	300	70	50		Current mode amplifier.	EL2020	† Elantec	
3	6000	800	10	4.5	225	0.3	74		High Slew Rate	LH4161A	† National	
3 *	10000 *		20 *	150 *	1200 *		50 *	0	Wideband, Fast-settling	CLC401	† Comlinear	
3	13000	30	-	1460	600	47	70	1		**AD5539**	**† AD**	**(3240)**
3 to 16	0.001 *	0.001 *	5 *	2.3 *	4.5 *	10	70	1	Programmable, High Bias	TLC271C	◊ TI	20
3.5	0.015	—	75	1*	3	20	70	0	High Accuracy, FET	AD506J	AD	
	0.1	20	15	2.5 *	5	50	85	0	Bipolar-JFET	LF155	† LinearTech	
				5 *	9	50	85	0	Wideband-JFET	LF156	† LinearTech	
	4	2	10 *	3	10 *	25	70	2	Wideband	MC33181	Motorola	
	20	4	25	0.79	0.55	100000	85	0	Includes Precision Voltage Reference	TDC4611	◊† TRWLSI	25
3.5 *	3000 *		11 *	170 *	2400 *		60 *	0	Overdrive Protected	CLC205	† Comlinear	
	4000 *		11 *	180	3400 *		60 *	0	Overdrive Protected	CLC206	† Comlinear	
4	0.01	0.002	10	1 *	1.5	100	80	0	Micropower	LH0022	† National	
		0.005		4	10	32	90			CA5130A	Harris	
										CA5160A	Harris	30
	3	—	12	20 *	30 *	—	70	0	Unity Gain, Noninverting	SFC2110M	SGS-Thomson	
	10	10	5 *	12 *	4	100	80	0	High Impedance	HA2600	† Harris	
				12	4	100	80	0	Wideband, High Impedance	EHA2600	‡ Elantec	
	15	2	10 *	1 *	2.5 *	100	80	0	High Performance	MC1556	Motorola	
		15		100 *	25	100	80	1	Wideband	EHA2620	◊‡ Elantec	35
			10 *	100	25	100	80	1	Wide Band, High Impedance, Gain ± 5	HA2620	◊† Harris	
			20	35 *	20	100	80	1	Wideband, General Purpose	AD507S	† AD	
	25	4	15	1	0.7	200	80		With Adjustable Reference	LM611M	† National	
		12	15 *	4 *	5 *	100	80	0	High Voltage	HA2640	† Harris	
	30	2	5	—	—	40	80	0	Op Amp and Voltage Reference	LM10CL	LinearTech	40
										LM10CL	National	
						80	90	0	Op Amp and Voltage Reference	LM10C	LinearTech	
										LM10C	National	
	100	10	20	12	30	30	90	0	High Slew Rate	SP2500	† Sipex-HSD	
									Offbeat Compensation	2500	◊‡ Sipex-HSD	45
										2502	◊‡ Sipex-HSD	
										2505	◊‡ Sipex-HSD	
					65	15	90	0	High Slew Rate	SP2510	◊† Sipex-HSD	
									Offset Compensation	2510	◊‡ Sipex-HSD	
										2512	◊‡ Sipex-HSD	50
										2515	◊‡ Sipex-HSD	
				20	120	15	90	0	Offbeat Compensation	2520	◊‡ Sipex-HSD	
										2522	◊‡ Sipex-HSD	
										2525	◊‡ Sipex-HSD	
								1	High Slew Rate, Uncompensated	SP2520	◊† Sipex-HSD	55
	200	50	15	12 *	10	50	80	0	High Speed, Fast Setting	AD518K	AD	
			20	12 *	10	50	80	0	High Speed, Fast Settling	AD518S	† AD	
		100	5	0.6	0.25		95		Low Voltage Op Amp	NE5230	◊ Signetics	
										SA5230	◊ Signetics	
	250	50	—	15 *	50	50	80	0	Precision High Speed	LM118	† LinearTech	60
										LM118	◊‡ National	
										LM218	National	
										LM118	† SGS-Thomson	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
4	250	50	—	15 *	50	50	80	0	Precision High Speed		(Cont'd)	
										LM218	SGS-Thomson	
										LM218	TI	
									Precision High-Speed	LM118 ◊†	TI	
		100			0.7 *				General Purpose	AN1741	Panasonic	
										AN6570	Panasonic	5
									General Purpose, Dual Power Supply	AN6573	Panasonic	
	300	100	5 *	1 *	25	50	70	1	0.5 A Wideband	LH0061	† National	
	500	75	10 *	4.5 *	13 *	25	70	1	High Performance, Single Supply	MC33071	Motorola	
										MC34071	Motorola	
										MC35071	† Motorola	10
		150	42	0.5	18	440	76	0		**SG1173**	**† SiliconG (3642)**	
	700	100	10	—	—	25	70	1	40mA Output	MA342	AnalogSys	
			25	—	9 *	18	70	1	General Purpose, OC Output	SFC2761M	† SGS-Thomson	
										SFC2861M	† SGS-Thomson	
	1500	300	—	10 *	6 *	25	70	1	Low noise, Comp. for G = 3	XR5534	Exar	15
										XR5534A	Exar	
										XR5534C	Exar	
										RC5534	Raytheon	
										RC5534A	Raytheon	
										NE5534	Signetics	20
										NE5534A	Signetics	
				10	13	25	70	1	Low Noise, High Performance	NE5534	TI	
										NE5534A	TI	
	5000	600	3 *	4.5 *	210	6	84	0		LM6265	National	
	6000	800	3 *	4.5 *	200	5	82	0		LM6165	† National	25
	30000	5000	20 *	70 *	400	4	60 *	3	High Slew Rate	LH0024	† National	
4 to 16	0.001 *	0.001 *	5 *	2.3 *	4.5 *	10	70	1	Programmable, High Bias	TLC271M	◊† TI	
4.5	0.03	0.015	7	0.30	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1706	◊°† AdvLinear	
		0.025	7	0.4	0.33	32	65	0	CMOS, Rail to Rail Single/Dual 5V Supply	ALD1701	◊°† AdvLinear	
	0.030	0.025	7	1	1.4	50	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1702	◊°† AdvLinear	30
	0.85	0.025	7	2.1	5	70	70	0	Rail to Rail	ALD1704	◊°† AdvLinear	
	6	1		30*		400	74	1	High Current, Wideband	LB1102AB	◊ AT&T	
										LB1102AS	◊ AT&T	
	25	13	10 *	3	10 *	25	70	2	Wideband	MC35181	† Motorola	
	100	2		1.8	2.1	50	80		Low Power, Single Supply	MC35171	† Motorola	35
		50	10	1.8	2.1	50		0	Low Power, Single-Supply	MC33171	Motorola	
	170	32	6 *	—	0.04 *	25	80	1	Micropower	CA3078	† Harris	
	3500	3	—	4	1.5 *	100	86	0	Programmable	LB1031AC	AT&T	
5	—	—	—	1G *					High Speed	MN541	MicroNet	
	0.001	0.0005	5	0.7 *	0.3	40	76	0	Precision, Low Drift FET	**AD545L**	**AD (3247)**	40
	0.001 *	0.001 *	0.7 *	0.1 *	0.04 *	30	60	1	Programmable, Low Bias	TS271AC	◊ SGS-Thomson	
							70	1	Programmable, Low Bias	TLC251AC	◊ TI	
										TLC271AC	◊ TI	
										TLC271AM	◊ TI	
			5 *	2.3 *	4.5 *	10	70	1	Programmable, High Bias	TLC271AC	◊ TI	45
										TLC271AM	◊ TI	
	0.001	0.05		0.5	0.5	18	85			CA5420A	Harris	
	0.003	0.002	4 *	0.5 *	0.5 *	20	70	0	Low Supply Voltage	CA3420A	† Harris	
	0.005	0.001	0.7 *	2.2	5.3	7	70	0	LinCMOS, Programmable	TLC271AI	◊ TI	
	0.02	0.01	30	2	50				High Power	**PA04A**	**Apex (3325)**	50
		300 *	25	150 *	250	30	70	1	Ultra High Speed, Wideband	**AM1435MC**	**Datel (3360)**	
										AM1435MM	**† Datel (3360)**	
	0.025	0.002	25	15 *	50	50	80	0	Precision, High Speed FET	LH0062	† National	
	0.03	0.02	6 *	4 *	10 *	50	80	0	MOS-Bipolar	CA3160A	† Harris	
	0.030	0.02	10 *	4 *	10 *	50	80	1	MOS, Single Supply, Strobe	CA3130A	◊† Harris	55
	0.04	0.02	4 *	0.063 *	0.03 *	10	70	0	Nanopower BIMOS	CA3440A	Harris	
			6 *	4.5 *	9 *	20	70	0	MOS FET, Single Supply	CA3140A	◊ Harris	
	0.05		25 *	140 *	1000			0	Buffer Amplifier	EL2005	† Elantec	
			50	30	800	316	100	1	FET input, VMOS output	1465	† TeledyneS	
		0.03	15 *	0.48 *	0.16 *	10	70	1	Low Power	ICL7614BC	◊ Maxim	60
										ICL7614BM	◊† Maxim	
				1	1.6	80 *	70	0	Low Power	ICL7611BC	◊ Harris	
										ICL7611BM	◊† Harris	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
5	0.05	0.03	15 *	1	1.6	80 *	70	0			(Cont'd)	
									Low Power, Extended CMVR	ICL7612BC	◊ Harris	
										ICL7612BM	◊† Harris	
				1.4 *	1.6 *	6	70	0	CMOS, Low Power, Programmable Low Bias	ICL7611BC	◊ Maxim	
										ICL7611BM	◊† Maxim	
									Programmable Bias, Extended CMVR	ICL7616BC	Maxim	5
										ICL7616BM	† Maxim	
						10	70	0	Programmable Bias, Extended CMVR	ICL7612BC	◊ Maxim	
										ICL7612BM	◊† Maxim	
			25 *	1.4 *	1.6 *	6	70	0	Programmable Bias, Extended CMVR	ICL7616DC	Maxim	
										ICL7616DM	† Maxim	10
						10	70	0	Programmable Bias, Extended CMVR	ICL7612DC	◊ Maxim	
										ICL7612DM	◊† Maxim	
		200		1.0		50	94			CA101	Harris	
	0.1	0.02	5 *	—	—	50	85	—	Wideband Decompensated	PM157	† AD	
										LF357B	Motorola	15
										LF157	† National	
										LF257	National	
										LF357B	National	
				2	30	25	80	1	JFET Input	LF157	† SGS-Thomson	
				2.5	5 *	25	80	1	JFET Input	LF155	† SGS-Thomson	20
				2.5 *	5 *	50	85	0	Bipolar-JFET	LF355B	Motorola	
										LF155	† National	
										LF255	National	
										LF355B	National	
				5	7.5	25	80	1	JFET Input	LF156	† SGS-Thomson	25
				5 *	7,5 *	50	85	0	Wideband-JFET	PM156	† AD	
										LF356B	Motorola	
										LF156	† National	
										LF156HRH	‡ National	
										LF256	National	30
										LF356B	National	
		0.025	10	1	1	25	70	0	Low Power-BIFET	LF441	National	
			25 *	70 *	350	1	50	2	Ultra Fast FET	TP0032	† TeledyneS	
			25*	80*	350	1	50	2	Ultra Fast FET	TP0032-HR	† TeledyneS	
			50 *	70 *	500 *	3	70	2		EL2006C	Elantec	35
		0.05	10	2	0.6	25	70		Low-Power J-FET Input	LF441C	Motorola	
			10 *	3 *	13 *	50	80	0	Bipolar-JFET	µA771BC	National	
										µA771BM	† National	
				4 *	13 *	50	80	0	Precision-BIFET	MC35001B	† Motorola	
			80	150	400	10	60	3	Fast Settling, Wideband	**OPA600U**	**Burr-Brown (3332)**	40
			100	150	400	10	60	3	Fast Settling, Wideband	**OPA600U/883B**	**† Burr-Brown (3332)**	
	0.10	0.025	25 *	70 *	350	1	50	2	Ultra Fast-FET	ADLH0032	† AD	
										ELH0032	† Elantec	
										ELH0032C	Elantec	
										LH0032AC	◊† National	45
	0.15	—	50	20 *	210	10	70	1	Wideband, Fast Settling	AH0605	◊ OEI	
	0.2	0.025	3 *	1 *	0.3 *	25	96	0	Precision Bipolar	LM11CL	National	
						50	110	0	Precision, Low Input Current	LM11L	Motorola	
		0.1	10 *	4 *	13 *	50	80	0	Precision-BIFET	MC34001B	Motorola	
			20				80	0		1464HR	† TeledyneS	50
						56	80	0		1464	† TeledyneS	
			30	4 *	13 *	50	80	0	JFET Input, High Speed	LF351B	SGS-Thomson	
	1	0.25	25	70	500		60			CLH0032	† TeledyneS	
		5	20	400	400	30	60	0		2540	Sipex-HSD	
	4	2	10	4	8	25	80			LF451C	National	55
5 *	5 *	1 *		400 *	400 *	10	60		Wideband	SP2540	† Sipex-HSD	
				600 *	600 *	10	60		High Slew Rate	SP2539	† Sipex-HSD	
5	5 fA		30	0.0005	0.5	100	100	0		1702	TeledyneS	
	7.5	3	—	1 *	0.1	20	70	0	Multi-Purpose, Programmable	µA776M	† SGS-Thomson	
	10	6	—	0.25 *	0.16 *	50	70	0	Programmable	LM4250C	† National	60
										UC4250C	Solitron	
	17	0.004		0.063	0.03		80			CA6078A	Harris	
	20	3	—	—	2.5 *	100	80	1	High Voltage	LM144	† National	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
5	20	3	—								(Cont'd)	
				1 *	2 *	100	80	0	High Voltage	MC1536	† Motorola	
										LM1536	† National	
										SG1536	**◊† SiliconG (3643)**	
			40	1 *	1.5	60	80	0	Output 26V@10A	**OPA501B**	**Burr-Brown (3333)**	
										OPA501S	**† Burr-Brown (3333)**	5
				1*	1.5	98	80	0	Output 32V@10A	**PA51A**	**† Apex (3325)**	
										PA51M	**† Apex (3325)**	
		10	40	1	2.6				High Power	**PA51C**	**Apex (3325)**	
	25	25		12	4	80	74	0	Wideband, High Impedance	EHA2602	‡ Elantec	
										EHA2605	Elantec	10
				100 *	20	80	74	1	Wideband	EHA2622	‡ Elantec	
										EHA2625	Elantec	
			5 *	12 *	4	300	100	0	Wide Temperature Range	**OPA11HT**	**† Burr-Brown (3329)**	
			10 *	12 *	4	80	74	0	High Impedance	AM460-2	Datel	
										HA2602	† Harris	15
										HA2605	Harris	
			15 *	100	20	80	74	1	Wide Band, High Impedance, Gain ± 5	AM462-2	Datel	
										AM464-2	† Datel	
										HA2622	† Harris	
										HA2625	Harris	20
			30 *	1	—	80	74	1	Wideband	3508J	Burr-Brown	
				70	20	80	100 *			1321	TeledyneS	
								1	Wideband, High Gain	1321-01	† TeledyneS	
	30	30	20	2	0.4	50	80	0	General Purpose	3500R/MIL	† Burr-Brown	
			60	2	0.4	50	80	0	General Purpose	3500U/883B	† Burr-Brown	25
	35	7	40	1	1.35	100	80		High Current, High Power	**OPA501V**	**† Burr-Brown (3333)**	
										OPA501V/883B	**† Burr-Brown (3333)**	
	50	15	—	—	0.8 *	50	70	0	Programmable	MC1776	◊ SGS-Thomson	
				0.2	0.35	50	70	0	Programmable Low Power	MC1776	† Motorola	
	100	12	5.5 *	3	1.5	25	70	0	Four Channel Multiplexed Input	LM604C	National	
										LM604I	National	30
		20	10	2.5 *	18 *	25	80	0	High Speed	**OP01C**	**‡ AD (3241, 3245)**	
										OP01G	**† AD (3241, 3245)**	
		25	20	0.8	0.25	25	70	0	Dual Matched	**OP14B**	**† AD (3245, 3248)**	
				1.3	0.25	25	70	0	General Purpose	**OP02D**	**AD (3245)**	35
		100	—	1 *	0.4 *	50	70	0	Programmable	XR146	† Exar	
	120	40	6 *	3 *	20	50	70	0	High Slew Rate	NE530	Signetics	
	150	30	—	—	—	50	70	0	Single Supply	TL321I	TI	
		40	6 *	—	60 *	50	70	1	60 V/µs, Comp. for G = 5	NE538	Signetics	
	160	40		0.75 *	0.16	40	86			**GC810**	**Gennum (3430)**	40
	200	25	10 *	20	135	15 *	80	1	High-Speed, High Output Current	HA2529	◊† Harris	
			20 *	12	25	20	80	0	High Slew Rate	EHA2500	‡ Elantec	
				12 *	25	20	80	0	High Slew Rate	HA2500	† Harris	
		50	20 *	8 *	15 *	50	80	1	Four Addressable Inputs, Single Amplifier	HA2400	◊† Harris	
										HA2404	Harris	45
	500	150	20	—	—	20	70	1	General Purpose	TA7502	Toshiba	
										TA7502A	Toshiba	
		200	—	—	—	20	70	0	General Purpose	IR3741	Sharp	
					0.5 *	50	70	0	General purpose	LM741	◊ SGS-Thomson	
								1	Uncompensated 741	LM748	◊ SGS-Thomson	50
				1	0.5	50	70	0	Bipolar, General Purpose	µA741I	TI	
										µA748I	TI	
				1 *	0.5 *	50	70	0	General Purpose Compensated	µA741M	◊† TI	
			—	1 *	0.5	50	70	0	High Performance	µA741M	† SGS-Thomson	
								1	General Purpose	LM748M	† SGS-Thomson	55
					30 *	50	70	1	High Slew Rate	SE531	† Signetics	
				1.0	0.5	50	94			LM741	Harris	
										LM748	Harris	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
5	500	200									(Cont'd)	
			3 *	0.5 *	0.3 *	25	70	3	General Purpose	LM709	† National	
				1 *	0.5 *	50	70	0	General Purpose Compensated	**AD741**	**† AD (3245)**	
										PM741	AD	
										MC1741	† Motorola	
										µA741M	◊† National	5
										LM741	† National	
										RM741	† Raytheon	
										SG741	◊† SiliconG	
									Low Noise 741	CA6741	† Harris	
								1	General Purpose, Uncompensated	LM101	◊† National	10
									Uncompensated 741	CA748	† Harris	
										MC1748	† Motorola	
										LM748	† National	
										LM748C	National	
					10	50	70	0	High Slew Rate 741	MC1741S	† Motorola	15
				5 *	0.3 *	12	80	3	General Purpose	SFC2709M	† SGS-Thomson	
			4 *	30 *	0.7 *	20	70	2	Programmable	CA3094A	† Harris	
										CA3094B	† Harris	
			15 *	1 *	0.3 *	25	70	3	General Purpose	MC1709	† Motorola	
	650	50	10	40 *	30	4	60	0		VA705K	VTC	20
	750	250			15	10	92		High-Speed	LM715M	† National	
			6 *	65 *	15	15	74	3	High Speed High Gain	µA715M	† National	
	1000	300	20	30	15	50	90	0	Precision, Audio; High Linearity	MA332	AnalogSys	
				45	20		90		Audio Op-Amp	MA332C	AnalogSys	
									Audio Op-Amp	MA332M	† AnalogSys	25
		300 *	50	150	60	10	70	1	High Power	1460	TeledyneS	
	1000 *	5000 *	50	—	8000	50	60	0	200 MHz –3db bandwidth, G = 1–40	CLC220AI	Comlinear	
									200 MHz –3db bandwidth, G = 1–40; settles to 0.02% in 15 ns.	CLC220AM	† Comlinear	
	2000	400	—	38 *	25 *	0.6	76	1	Large Signal Wideband	CA3100	† Harris	
										L3100	† SGS-Thomson	30
		500	25 *	5.5 *	8.0 *		70	0	Thermal Protection with Parole Circuit	LM675	National	
	3000		10 *	90	1000 *		60		High-Speed, Current Feedback	**OP160G**	**◊‡ AD (3241)**	
	5000	20000	8	100	1000	N/A	60	0	Current-Feedback	**OPA603**	**Burr-Brown (3332)**	
	6000	800	10	4.5	225	0.3	74		High Slew Rate	LH4161	† National	
	6000 *	3000 *	50	—	4000	50	60	0	100 MHz –3db bandwidth, G = 1–40	CLC200AI	Comlinear	35
									100 MHz –3db bandwidth, G = 1–40; settles to 0.02% in 25 ns.	CLC200AM	† Comlinear	
	10000		25		4500*	10*	40*	0	150 MHz –3dB bandwidth, up to 4 A output.	**WA01A**	**Apex (3326)**	
		300	50	1000	300	10	70	0		1460HR	† TeledyneS	
	12000	5000	1.2 *	15 *	3 *	0.7	70	1	6 Volt, Wideband	CA3010	† Harris	
										CA3029	Harris	40
	15000	4000	20	6.5			74	0		SP5190	† Sipex-HSD	
			20 *	150	100	15	74	2	Wideband, Fast Settling	HA5190	◊† Harris	
				150 *	160	15	74		Wideband, fast settling.	EHA-5190-2	◊† Elantec	
	20000	—	10	—	800	250	70	1	Fast, Slews 800 V/µs	NE5539	Signetics	
										SE5539	† Signetics	45
		300 *	25	500 *	250	10	80	1	Settles to 0.01% in 70 ns	1435	† TeledyneS	
		300	25	700	250	31.6	80	1		1435HR	† TeledyneS	
	24000	5000	3.5 *	50 *	7 *	2	80	1	12 Volt, Wideband	CA3015	† Harris	
										CA3030	Harris	
	25000		50	150	2000		46	0	Wideband, High Slew Rate	CLC404	◊† Comlinear	50
5.5	25000		40	150	430		40	0	Fast Video with disable	CLC410	◊† Comlinear	
6	0.025	0.002	15	1 *	1	75	70	0	High Performance FET	LH0022C	National	
	0.2	0.05	10 *	3 *	13 *	25	80	0	Low Noise, Bipolar JFET	TL071I	◊ SGS-Thomson	
						35	80	0	Low Noise, Bipolar JFET	TL071M	◊† SGS-Thomson	
						50	80	0	Low Noise, Bipolar JFET	TL071AC	◊ SGS-Thomson	55
					13	50	80	0	Low Noise Bipolar-JFET	TL071M	◊† TI	
				4 *	13 *	35	80	0	Low Noise Bipolar-JFET	TL071M	† Motorola	
						50	80	0	Low Noise Bipolar-JFET	TL071AC	Motorola	
										TL071AC	◊ TI	
		0.1	—	3	13 *	50	70	0	Bipolar JFET	TL081A	Motorola	60
										TL081AC	◊ TI	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
6	0.2	0.1									(Cont'd)	
			10 *	1	3.5	4	80	0	BiFET, Adjustable, Low Power	TL066I	TI	
									BiFET, Low Power	TL061I	◊ TI	
				1 *	3.5 *	4	80	0	Low Power, Bipolar JFET	TL061AC	◊ SGS-Thomson	
										TL061I	◊ SGS-Thomson	
										TL061M	◊† SGS-Thomson	5
				1	3.5	4	80	1	BiFET, Low Power	TL060I	TI	
				1 *	3.5 *	40	80	0	Low Power Bipolar JFET	TL061AC	◊ TI	
										TL061M	◊† TI	
								1	Low Power Bipolar JFET	TL060AC	TI	
				2 *	2	4	80	0	Low-Power J-FET	TL061AC	Motorola	10
										TL061M	† Motorola	
				3	13	50	80	0	BiFET, General Purpose	TL081I	◊ TI	
									BiFET, Low Noise	TL071I	◊ TI	
				3 *	13 *	50	80	0	Bipolar JFET	TL081AC	◊ SGS-Thomson	
										TL081I	◊ SGS-Thomson	15
										TL081M	◊† SGS-Thomson	
								1	BiFET, General Purpose	TL080AC	TI	
			10	3	13	200	86		BIFET, General Purpose	TL081M	◊† TI	
			10 *	4 *	13 *	25	80	0	JFET Input	TL081M	† Motorola	
	0.3	0.1	10 *	1 *	3.5 *	4	80	0	Programmable Bipolar JFET	TL066AC	TI	20
	10	6	—	1 *	0.1	50	70	0	Multi-Purpose, Programmable	µA776C	SGS-Thomson	
	20	5		1	10	10	70		On-Chip Buffers	MB3604	◊ Fujitsu	
	25	25	15 *	35 *	20	80	74	1	Wideband, General Purpose	AD507J	AD	
	30	30	15 *	4 *	5 *	100	74	0	High Voltage	HA2645	Harris	
										1332	TeledyneS	25
			65	1 *	1.8 *	63	74	0	±45Vs, ±10A, 97W.	**PA61**	**Apex (3325)**	
										PA61M	**† Apex (3325)**	
				4	2.5	5	74	0	to ±41 V supply, 5 A output	**PA12H**	**Apex (3325)**	
				4 *	2.5	70	74	0	Hi-Rel Screened	**PA12Q**	**† Apex (3325)**	
									to ±45V supply, 5A output	**PA12**	**Apex (3325)**	30
										PA12M	**† Apex (3325)**	
				4	2.5	316	100 *	0	High Current (10A), High Power	**OPA511B**	**Burr-Brown (3333)**	
					4	316	100	0	External Current Limit	1468	† TeledyneS	
				6 *	2.5	70	74	0	to ±45V supply, 5A output	**PA10**	**Apex (3325)**	
										PA10M	**† Apex (3325)**	35
	50	25	—	—	0.8 *	20	70	0	Programmable	MC1776C	◊ SGS-Thomson	
	75	20							General Purpose	AN4250	Panasonic	
					—				General Purpose, Dual Power Supply	AN6593	Panasonic	
					0.6		74		Programmable Micropower	**NJM4250**	**◊ NJR (3570)**	
	100	10	3 *	0.4	1	100	77	—	Ultra-Low Power	HA5141	Harris	40
		20	20	125	400	200	60		Fast Settling, Wideband	**OPA600C**	**Burr-Brown (3332)**	
										OPA600T	**† Burr-Brown (3332)**	
	200	0.1	10 *	3	13	50	80	1	BiFET, Low Noise	TL070I	TI	
	250	50	—	1 *	0.5	25	80	0	to 500 mA, Single Supply	µA759C	National	
			10	1	0.5	25	70			LM759C	National	45
	400	0.1	10 *	3	13	25	80	1	BiFET, Low Power	TL080I	TI	
	500	200			0.5		70		Precision High-Speed	NJM741	◊ NJR	
						20	70			LM741	◊ Samsung	
			—	—	0.5 *	20	70	0	General purpose	LM741C	◊ SGS-Thomson	
				0.6	0.5		70			**SG2173**	**† SiliconG (3642)**	50
			—	1	0.5	20	70	0	General Purpose, Compensated	LM741C	Samsung	
				1 *	0.5	20	70	0	High Performance	µA741C	SGS-Thomson	
								1	General Purpose	LM748C	SGS-Thomson	
						20–50	70	0	General Purpose Compensated	**AD741C**	**AD (3245)**	
										PM741C	AD	55
										CA741C	Harris	
										MC1741C	Motorola	
										µA741C	◊ National	
										LM741C	National	
										SG741C	◊ SiliconG	60
										µA741C	TI	
					0.5 *	20–50	70	1	General Purpose	CA748C	Harris	
										MC1748C	Motorola	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
6	500	200	—	1 *	0.5 *	20–50	70	1	General Purpose		(Cont'd)	
										µA748C	National	
										µA748C	TI	
					1	100	70	1	0.2 amp Power	LH0041C	◊ National	
				1.0	0.5	20	86			LM741C	Harris	
										LM748C	Harris	5
			3 *	1 *	10	20	70	0	High Slew Rate 741	MC1741SC	Motorola	
			5 *	1 *	1	100	70	1	0.2 A Power	ELH0041C	Elantec	
			10 *	1 *	0.25	100	90	2	High Gain, Instrumentation, 50 mA Output	LH0020C	National	
					0.5 *	20	—	0	Automotive Temperature Range (–40°C to 85°C)	SA741C	Signetics	
			15 *	0.2 *	0.2 *	20	70	0	High Power	µA791	SGS-Thomson	10
			30	1 *	1 *	100	70	0	1 A Power	ELH0021C	Elantec	
									1 amp Power	LH0021C	National	
		300	10 *	12 *	50	25	70	0	High Speed, Fast Setting	AD518J	AD	
	650	35	20	100	90	10	70	1	High Speed, Fast Settling	MAX408C	◊ Maxim	
										MAX408M	† Maxim	15
		120		100	100	10	60	2		VA708K	† VTC	
				500	135	10	60	10		VA707K	† VTC	
	700	200	2	0.5	18	25	70	0		**SG3173**	**SiliconG (3642)**	
	1000	200	6	1 *	9 *	10	70	1	General Purpose	SFC2861AM	† SGS-Thomson	
		300	6 *	—	9 *	12	65	1	General Purpose, OC Output	SFC2761C	SGS-Thomson	20
	1200	500	5 *	4 *	100 *	10	70	2	Gated	ZN424	Plessey	
	1500	200	—	1 *	20 *	20	70	1	High Slew Rate, High Performance	NE531	Signetics	
		500	10	1 *	0.5 *	50	90	0	General Purpose Compensated	µA741	◊† Signetics	
	5000	600	6 *	4.5 *	210	1.2	82	0		LM6264	National	
	6000	800	6 *	4.5 *	200	0.9	80	0		LM6164	† National	25
		1900	10	4.5	200	0.35	70		High Slew Rate	LH4161C	National	
	15000	4000	20 *	150 *	160	10	74		Wideband, fast settling.	EHA-5195	Elantec	
				150	160	15	74	2	Wideband, Fast Settling	HA5195	◊† Harris	
		6000	100	300	420	230	45	0		HFA0005	Harris	
		18000	50	350	1000	200	47	0		HFA0001	Harris	30
6.0	0.25	0.05	8 *	10 *	40	500	80	0	Ultra-low distortion	**SSM2131**	**◊ AD (3242)**	
7	400	75	5 *	—	—	3	60	0	150mA Output	IR91308	Sharp	
							63	0	250 mA Output, Electronic Shutdown	LM13080	National	
	6000	75	5 *	—	1.6	3	63	0	400 MHz, Electronic Shutdown	MA324	AnalogSys	
		1900	3 *	4.5 *	180	5	78	0		LM6365	National	35
7.5	0.025	50		1.0	10	25	88			LM301A	Harris	
	0.15	500		1.0		20	85			CA201	Harris	
										LM201	Harris	
	7	—	10 *	20 *	30 *	—	70	0	Unity Gain, Noninverting	SFC2310	SGS-Thomson	
		1	30	1 *	0.3 *	25	80	0	Micropower, Supply Current 800 µA	LM312	National	40
								1	Precision Bipolar	AD308	AD	
										LM308	Motorola	
										LM308	National	
										LM308	SGS-Thomson	
	250	50			0.5		25			LM301A	◊ Samsung	45
			6	1	7.5	15	70	1	High Performance	LM301A	TI	
			30		0.1	25	70			LM301A	LinearTech	
				1 *	0.5 *	25	70	0	General Purpose, Compensated	LM307	LinearTech	
										LM307	Motorola	
										LM307	National	50
										SG307	◊ SiliconG	
			30 *	1	0.5	25	70	0	High Performance	LM307	TI	
			30	1 *	0.5 *	25	70	1	General Purpose Uncompensated	AD301A	AD	
										CA301A	Harris	
										LM301A	Motorola	55
										LM301A	National	
										LM301A	SGS-Thomson	
										SG301A	◊ SiliconG	
	800	300	10	1 *	0.5	20–50	70	0	General Purpose Compensated	µA741C	◊† Signetics	
	1000	150	3 *	2 *	4.2 *	15	80	2	General Purpose	MC1439	Motorola	60
		500	5	1	1	100	70			LH4141C	National	
	1500	250			10	8	92		High-Speed	LM715C	National	
			6	65 *	10	10	74	3	High Speed	µA715C	National	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
7.5	1500										(Cont'd)	
		500		1	0.3 *	15	65	3	Bipolar, General Purpose	µA709C	TI	
			6 *	1 *	0.5 *	20	65	1	General Purpose	LM201	National	
			6–10 *	1 *	0.3 *	15	65	3	General Purpose	LM709C	National	
			15 *	1 *	0.3 *	15	70	3	General Purpose	MC1709C	Motorola	
8	0.2	0.05	25		2.5	40	80			LF355	LinearTech	5
										LF356	LinearTech	
	40	10	—	1 *	2.5 *	70	70	1	High Voltage	LM344	National	
	200	25	20 *	12	50	10	80	0	High Slew Rate	EHA2510	‡ Elantec	
				12 *	50	10	80	0	High Slew Rate	HA2510	† Harris	
				20 *	100	10	80	1	100 v/µs, Gain = 3	HA2520	◊† Harris	10
				20	100	10	80	2	High Slew Rate	EHA2520	◊‡ Elantec	
			30	20 *	100	10	80	1	High Speed, Fast Settling	AD509K	AD	
										AD509S	† AD	
	250	50	—	1	0.5 *	25	70	0	Power Op Amp	µA77000	National	
			10	1	0.5	25	70			LM77000	National	15
			20 *	12 *	20	15	74	0	High Slew Rate	AM450-2	Datel	
										AM450-2M	Datel	
				12	20	15	74	0	High Slew Rate	EHA2502	‡ Elantec	
										EHA2505	Elantec	
				12 *	20	15	74	0	High Slew Rate	HA2502	† Harris	20
										HA2505	Harris	
	18000		50	115	1200		48	0	High Speed, Programmable Supply Current	CLC505	◊† Comlinear	
	40000	15000	25 *	70 *	250	3	60 *	3	High Slew Rate	LH0024C	National	
9	200	50		4	6	50	80		Four input programmable amplifier.	EHA-2400	† Elantec	
	250	50	30 *	8 *	15 *	50	74	1	Four Addressable Inputs, single Amplifier	HA2405	Harris	25
										HA2406-5	Harris	
	5000	600	10 *	4.5 *	210	400	76	0		LM6261	National	
10	0.001	0.001		0.1	0.1		60		Low Voltage	**NJU7001**	**◊ NJR (3571)**	
				0.4	0.4		60	Low Voltage				
									Low Voltage	NJU7021	◊ NJR	
				1.5	3.5		60		Low Voltage	NJU7031	◊ NJR	30
	0.001 *	0.001 *	0.07 *	0.1 *	0.04 *	30	60	1	Programmable, Low Bias	TS271I	◊ SGS-Thomson	
										TS271M	◊† SGS-Thomson	
			0.7 *	0.1 *	0.04 *	30	60	1	Programmable, Low Bias	TS271C	◊ SGS-Thomson	
							70	1	Programmable, Low Bias	TLC251C	◊ TI	
										TLC271C	◊ TI	35
										TLC271M	◊† TI	
	0.002	0.001		0.5	0.5	18	85			CA5420	Harris	
	0.003	0.002	4 *	0.5 *	0.5 *	10	70	0	Low Supply Voltage	CA3420	† Harris	
	0.005	0.001	0.7 *	2.2	5.3	7	70	0	LinCMOS, Programmable	TLC271I	◊ TI	
	0.01	0.005		4	10	18	85			CA5130	Harris	40
										CA5160	Harris	
	0.03	—	25	300	3000	120	90	1	FET Input	9740	OEI	
		0.015	7	0.30	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1706G	◊°† AdvLinear	
		0.025	7	0.7 *	0.7 *	20	60	0	CMOS, Rail-to-Rail	ALD1701G	◊°† AdvLinear	
	0.05	0.02	30	5	15	32	86	1	High Voltage, FET input	OPA8780V	† Burr-Brown	45
			50	5	15	32	86	1	High Voltage, FET input	OPA8780U	† Burr-Brown	
		0.020 *	30	5	15 *	20	86 *	0	High Voltage FET	**3580J**	**Burr-Brown (3333)**	
		0.025	4 *	0.063 *	0.03 *	10	70	0	Nanopower BiMOS	CA3440	Harris	
		0.03	7	0.7 *	0.7 *	10	60	0	CMOS, Rail-to-Rail	ALD2701	◊°† AdvLinear	
			40	1.6 *	6	32	95	0	High Power	**OPA541AP**	**Burr-Brown (3333)**	50
	0.050	0.03	7	0.7	1.1	32	60	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD1703	◊°† AdvLinear	
	0.1	0.03	10	—	10	3	90	1	FET Input, Low Noise	MA333	AnalogSys	
					35	100	90	1	JFET Input	MA334	AnalogSys	
										MA400	AnalogSys	
	0.10		25 *	140 *	1000			0	Buffer Amplifier	EL2005C	Elantec	55
	0.2	0.05	5 *	—	—	25	80	—	Wideband Decompensated	LF357	Motorola	
										LF357	National	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Single Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
10	0.2	0.05	5 *									
				2.5	5 *	25	80	0	Bipolar-JFET	LF355	Motorola	
										LF355	National	
				5	12 *	25	80	0	Wideband-JFET	LF356	Motorola	
										LF356	National	
			10 *	3 *	13 *	25	70	0	Low Noise, Bipolar JFET	TL071C	◊ SGS-Thomson	5
				4 *	13 *	15	80	0	Low Noise Bipolar-JFET	TL071	Motorola	
										TL070AC	TI	
										TL070C	TI	
						25	80	0	Low Noise Bipolar-JFET	TL071C	◊ TI	
										TC071	Toshiba	10
		0.1	10 *	3 *	8	25	70	0	J-FET Input, Wide Bandwidth	LF351	TI	
			10	4	13	25	70			KF351	◊ Samsung	
			10 *	4 *	13	25	70	0	Bipolar-JFET	LF351	Motorola	
					13 *	25	70	0	Bipolar-JFET	MC35001	† Motorola	
									JFET Input, High Speed	LF351	SGS-Thomson	15
									Precision BIFET	MC34001	Motorola	
			50	4.5	13	20	70	0	Hi-Rel Screened	**PA02Q**	**† Apex (3325)**	
									to ± 19 V supply, 5 A output	**PA02M**	**† Apex (3325)**	
				4.5 *	13	20	70	0	Wideband, High Output Current	**PA02**	**Apex (3325)**	
		0.10	10 *	3 *	13*	50	70	0	Bipolar JFET	µA771C	National	20
		2	10 *	4 *	13 *	15	80	0	Low Noise Bipolar-JFET	TL075C	TI	
										TC075	Toshiba	
	0.20	0.1	10 *	4 *	13	25	70	0	Bipolar-JFET	LF351	National	
	0.25			350 *	2000			0	Buffer Amplifier	EL2004	† Elantec	
	0.6	0.1	20 *	18 *	57 *	200	80	0	Wideband-JFET	LF400	National	25
	1	0.25	10	5	10 *	50	85	0	High Output Current	LH0101/HR	† Maxim	
			10 *	5 *	10 *	50	85	0	2 A Power	ELH0101	† Elantec	
										ELH0101C	Elantec	
			10	5	10	50	85	0	2 A Power	LH0101	Maxim	
										LH0101C	Maxim	30
										LH0101	† National	
										LH0101C	National	
5*			25*	85*	3000*	50	88	0	85 MHz –3dB bandwidth, G = 1 to 40	CLC300A	Comlinear	
10µA	5µA		25	120	2000	3	60	0	Wideband, Current Mode Feedback	EL2030	‡ Elantec	
										EL2030C	◊ Elantec	35
25	20	20	20	18	32	100	70		Fast Settling	LH4104	† National	
										LH4104C	National	
30	10	—	1 *	2.5 *	70	70	0		High Performance	MC1456	Motorola	
35	7	20 *	120	300	10	70	1		High Speed, 100mA Output, Gain ± 2	HA2542-2	† Harris	
										HA2542-5	Harris	40
40	10	—	1 *	2 *	70	70	0		High Voltage	MC1436	Motorola	
										SG1436	◊ SiliconG	
			65	1 *	1	446 *	110 *	0	High Current (5A), High Power	**OPA511A**	**Burr-Brown (3333)**	
					1.35	562 *	110 *	0	2 A Continuous	**3573**	**Burr-Brown (3333)**	
					1.5	50	70	0	Output 28V@10A	**PA51**	**Apex (3325)**	45
						500	70	0	to ± 30V supply, 5A output	**PA73**	**Apex (3325)**	
						562 *	70	0	Output 20V@10A	**OPA501A**	**Burr-Brown (3333)**	
										OPA501R	**† Burr-Brown (3333)**	
					1.8 *	35	70	0	± 30Vs, ± 5A, 67W.	**PA73M**	**† Apex (3325)**	
									Hi-Rel Screened	**PA73Q**	**† Apex (3325)**	50
50	10	65	1	1.35	100	70			High Current, High Power	**OPA501U**	**† Burr-Brown (3333)**	
										OPA501U/883B	**† Burr-Brown (3333)**	
250	50	20 *	20 *	80	7.5	74	1		High Speed, Fast Settling	AD509J	AD	
		25 *	12	40	7.5	74	0		High Slew Rate	EHA2512	‡ Elantec	
			12 *	40	7.5	74	0		High Slew Rate	HA2512	† Harris	55
			20 *	80	7.5	74	1		80 V/µs Gain = 3	HA2522	† Harris	
			20	80	7.5	74	2		High Slew Rate	EHA2522	‡ Elantec	
		30 *	1.6 *	70 *	32	90 *	1		Fast Slewing	**3507J**	**Burr-Brown (3332)**	
			12	40	7.5	74	0		High Slew Rate	EHA2515	Elantec	
			12 *	40	7.5	74	0		High Slew Rate	HA2515	Harris	60
				80	7.5	74	1		80 V/µs Gain = 3	AM452-2	Datel	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
10	250	50	30 *	12 *	80	7.5	74	1	80 V/µs Gain = 3		(Cont'd)	
										AM452-2M	Datel	
										HA2525	Harris	
				20	80	7.5	74	2	High Slew Rate	EHA2525	Elantec	
				20 *	80	7.5	90 *	1	High Slew Rate	1322	TeledyneS	
										1322-01	† TeledyneS	5
		200		15	70	25	70	0	High Performance	LM318	TI	
	500	200			50	25	70		Precision High-Speed	**NJM318**	◊ **NJR (3570)**	
				0.6	0.5		70			SG2172	SiliconG	
										SG3172	◊ **SiliconG (3642)**	
			—	15 *	50	25	70	0	Precision, High Speed	LM318	LinearTech	10
										LM318	National	
										LM318	SGS-Thomson	
			5 *	1 *	25	25	60	1	0.5 A, Wideband	LH0061C	National	
	600	220		1	0.1	100	70		µA741 Equivalent	MB3609	Fujitsu	
	650	35	33	40 *	38	2	60	0	Fast Settling	VA706K	VTC	15
		100	20	40 *	30	2	60	0		VA705J	VTC	
	700	50	20	40 *	158 *	10	58	0	High-Speed	VA707	VTC	
	750	—	—	—	—	14	—	1	Telephone Channel Amplifier	LS045	SGS-Thomson	
	1000	100			0.5	100	80			TCA1365	Siemens	
					2	100	80			TCA365A	Siemens	20
					4	100	80			TCA2365A	Siemens	
			15*	0.8*	1	100 *	60	0	Output 3.5A peak	**ULN3751Z**	**Allegro Micro (3206)**	
		200	—	—	8 *	10 *	70 *	0	Output current to 3A	L165	SGS-Thomson	
		300	6 *	—	9 *	5.6	60	1	General Purpose, OC Output	SFC2861C	SGS-Thomson	
	1000 *	5000 *	50	150	6000	5	60	0	150 MHz –3db bandwidth, G = 1–40	CLC103AI	Comlinear	25
	1200	300	6	1 *	9 *	5.6	65	1	General Purpose, High Voltage	TAA861	SGS-Thomson	
	6000	800	10 *	4.5 *	200	300	74	0		LM6161	† National	
	20000		50		4500	10	40	0	150 MHz–3dB bandwidth, up to 4 A output.	**WA01**	**Apex (3326)**	
		6000	20 *	400 *	350	10	60		Wideband, Fast Settling.	EHA-2540-2	◊† Elantec	
			20	400 *	350	15 *	60	—	Wideband, Fast Settling	HA2540-2	◊† Harris	30
			20 *	600 *	550	10	60		High slew rate, wideband.	EHA-2539-2	◊† Elantec	
						15 *	60	—	High Slew Rate, Wideband	HA2539-2	◊† Harris	
	50000	20000	25	1	250	4	60			LH4124C	National	
11	6000	1900	6 *	4.5 *	180	1.1	78	0		LM6364	National	
12	50	15	65	1 *	1.5	500	70	0	to ± 28V supply, 5A adjustable output	**PA01**	**Apex (3325)**	35
	90	25	—	1 *	2 *	50	50	0	High Voltage	MC1436C	Motorola	
		30	—	1 *	2.5	25	110 *	0	High Performance	MC1456C	Motorola	
	650	35		500	150*	10	60	0	High Speed	VA707J	VTC	
		120		100	100	10	60	2		VA708J	† VTC	
15	0.05	0.025	10	3	16 *	1	110	1	Instrumentation Amplifier	**AMP05A**	**AD (3250)**	40
										AMP05E	**AD (3250)**	
		0.03	25 *	0.48 *	0.16 *	10	70	1	Low Power	ICL7614DC	◊ Maxim	
										ICL7614DM	◊† Maxim	
				1.4 *	1.6 *	6	70	0	CMOS, Low Power, Programmable Low Bias	ICL7611DC	◊ Maxim	
										ICL7611DM	◊† Maxim	45
	0.050	0.030	8 *	4 *	10 *	50	70	0	MOS FET, Single Supply	CA3160	† Harris	
				4.5 *	9 *	20	70	0	MOS FET, Single Supply	CA3140	† Harris	
			10 *	4 *	10 *	50	70	1	MOS FET Single Supply, Strobe	CA3130	† Harris	
			25 *	1	1.6	80	70	0	Low Power	ICL7611C	◊ Harris	
										ICL7611C	◊ Maxim	50
									Low Power, Extended CMVR	ICL7612C	◊ Harris	
										ICL7612C	◊ Maxim	
										ICL7616C	Maxim	
	0.065	0.005	35	15 *	50	25	70	0	Precision, High Speed, FET	LH0062C	National	
		0.01	20 *	100 *	50	25	70	1	Wideband, High Slew Rate	HA5162-5	Harris	55
			35	100	70	100	70			1345	TeledyneS	
	0.2	0.05	10 *	1 *	0.5 *	25	70	0	JFET–741	LF13741	National	
		0.1	10 *	3 *	13 *	50	70	0	Bipolar-JFET	µA771LC	National	
				4	13 *	25	70	0	Bipolar JFET	TL081C	National	
		0.2	10 *	2 *	2	3	70	0	Low-Power J-FET	TL061C	Motorola	60
	0.20	0.05	25 *	50 *	350	1	50	2	Ultra Fast FET	ADLH0032C	AD	
										LH0032C	◊ National	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
15											(Cont'd)	
	0.4	0.2	—	3	13 *	25	70	0	Bipolar JFET	TL081	Motorola	
										TL081C	SGS-Thomson	
										TC081	Toshiba	
			10 *	1 *	3.5 *	3	70	0	Low Power, Bipolar JFET	TL061C	◊ SGS-Thomson	
									Low Power Bipolar-JFET	TL061C	◊ TI	5
									Programmable Bipolar JFET	TL066C	TI	
								1	Low Power Bipolar-JFET	TL060C	TI	
			10	3	13	25	70	0	BIFET, General Purpose	TL081C	TI	
			10 *	3 *	13 *	25	70	1	Bipolar-JFET	TL080C	TI	
				4 *	13 *	25	80	0	JFET Input	TL081C	Motorola	10
	25	10			30		70			TCA312A	Siemens	
										TCA315A	Siemens	
										TCA322A	Siemens	
										TCA325A	Siemens	
	35		25	250	1300	0.93		0	Video Buffer	1359	† TeledyneS	15
	50	25	12 *	—	—	2	60	1	High Output Current	SFC2315	SGS-Thomson	
		30	25	1	1.6	80	70	0	Low Power, dual 1458	GLC9458	GoldStar	
									Low Power, quad 1458	GLC9459	GoldStar	
	100	20	100	125	400	200	60		Fast Settling, Wideband	**OPA600B**	**Burr-Brown (3332)**	
										OPA600S	**† Burr-Brown (3332)**	20
	350	150		170	330	1.0	60		Wideband	CA3450	Harris	
	1000	50	10	0.2	1.6 *		90 *		Dual Power Op Amp	**SG3272**	◊ **SiliconG (3642)**	
		300	2	60	9	30	70		Supply Voltage ± 80V	LM12L	† National	
						40	70		Supply Voltage ± 100V	LM12	† National	
	6000	1200	10	1	120	10	70			LH4106C	National	25
	10000	2000	10 *	40	100	4	75	0	Video Op Amp	HA2544	◊† Harris	
	20000	6000	20	9.5	600	30	60			1342	TeledyneS	
			20 *	400 *	350	10	60		Wideband, Fast Settling.	EHA-2540-5	Elantec	
			20	400 *	350	10	60	—	Wideband, Fast Settling	HA2540-5	◊ Harris	
				400	400	30	60			1341	TeledyneS	30
			20 *	600 *	550	10	60		High slew rate, wideband.	EHA-2539-5	Elantec	
								—	High Slew Rate, Wideband	HA2539-5	◊ Harris	
	50000	25000		37	700	150	45		Ultra High Slew Rate	HFA0001/883	† Harris	
20				10	70	200		4	High Speed Video Amp.	MAX450C	Maxim	
	0.00025	—	60	0.5 *	3	40	80	0	Electrometer, FET	AD523L	AD	35
	0.01	—	25	0.75 *	0.5 *	50	70	0	Low Noise FET	AD514L	AD	
	0.02	—	25	0.75 *	0.5	50 *	70	0	Low Noise FET	AD514K	AD	
			50	0.75 *	0.5 *	50 *	70	0	Low Noise FET	AD514S	† AD	
	0.025	—	50	1 *	0.5 *	25	80	0	FET	AD3542J	AD	
		0.01	20	1 *	1.5	50	70	0	Low Cost FET Input	LH0042	† National	40
	0.05	0.005	25	1 *	1	25	70	0	Low Cost FET	LH0042C	National	
	0.1	—	25	1 *	3	50	80	0	Low Cost FET Input	AD503K	AD	
										AD503S	† AD	
	0.3	—	100	10 *	250 *	80	80		FET Input	AH0008	† OEI	
	1	2		10	70	200		4	High Speed Video Amp.	MAX451C	Maxim	45
	2			350 *	2000			0	Buffer Amplifier	EL2004C	Elantec	
	650	120	40	40 *	38	1	60	0	Fast Settling	VA706J	VTC	
	1000	200	—	—	14 *	10 *	70 *	0	High efficiency output current to 4A	L465A	SGS-Thomson	
		300	2	60	9	20	65		Supply Voltage ± 80V	LM12CL	National	
									Supply Voltage ± 100V	LM12C	National	50
		400			8	100	70			CS365	Cherry Semi	
	5000		400		100	100	80	0		9697	OEI	
	6000	1500	10	1	120	10	70			LH4106	National	
	7000	1900	10	3	250	2	70		High Slew Rate	LM6313	National	
	50000	—	50	1000	1000	1000	50	1	Bipolar	9826	OEI	55
22	6000	1900	10 *	4.5 *	180	350	70	0		LM6361	National	
25	0.01	0.05	20	3	16 *	1	100	1	Instrumentation Amplifier	**AMP05F**	**AD (3250)**	
	0.1	0.05	20	3	16 *	1	100	1	Instrumentation Amplifier	**AMP05B**	**AD (3250)**	
	0.2	0.1	0.6		0.1	300	110			LT1012AC	LinearTech	
										LT1012AM	† LinearTech	60
	4	1.5	0.3	0.6	0.3	5000	120		Low Offset Voltage	OP77A	Raytheon	
										OP77E	Raytheon	
				0.8	0.3	5000	120		Ultra Low Offset Voltage	RC4077E	Raytheon	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Single Units											**(Cont'd)**	
25											(Cont'd)	
	5	1	0.3	15	2.5	10000	126	0	High Output Current, Comp. for G >50	**OP50A**	**† AD (3240, 3243)**	
										OP50E	**† AD (3240, 3243)**	
	10 K	-	100	3.5	250	100 *	100 *	0	Wideband operation, low noise	AH0014	◊ OEI	
	500	200	25	30	200		50	0	100 mA Output Current	LH4101	† National	
										LH4101C	National	5
30	2000	20	100	3000	1000				Wideband, for RADAR and SONAR.	AH9914	OEI	
	50000	20000	100	300	1	4	90	1	Wideband	9914A	OEI	
35	2	0.1	150	100	300	100	70	0	High Slew Rate	HDS060	AD	
50	0.001	0.0005 *	90	0.5 *	3	20	70	0	Electrometer, FET	AD523J	AD	
	0.015	—	75	1 *	3	20	70	0	Low Cost FET Input	AD503J	AD	10
	0.05	—	75	0.75 *	0.5 *	20	70	0	Low Noise FET	AD514J	AD	
60	5.6	2.8	0.6	0.6	0.3	2000	116		Low Offset Voltage	OP77B	Raytheon	
										OP77F	Raytheon	
				0.8	0.3	2000	116		Ultra Low Offset Voltage	RC4077F	Raytheon	
100	5.6	2.8	1.2	0.6	0.3	2000	116		Low Offset Voltage	OP77G	Raytheon	15
	10	3	1	15	2.5	7500	110	0		**OP50B**	**AD (3240, 3243)**	
										OP50F	**AD (3240, 3243)**	
	30000		500		5000				High Speed	**WB05**	**Apex (3326)**	
150	15	3	2		5	700	90			OP90E	Maxim	
			2.5		5	700	90			OP90A	† Maxim	20
250	20	5	5		5	500	80			OP90F	Maxim	
450	25	5	5		5	400	80			OP90G	Maxim	
500	500	150	5	200	45	475	108	0	Wide-Bandwidth, Low-Noise, Precision	**OP61A**	**‡ AD (3240)**	
750	600	200	7	200	45	425	100	0	Wide-Bandwidth, Low-Noise, Precision	**OP61F**	**‡ AD (3240)**	
1000	600	200	7	200	45	425	100	0	Wide-Bandwidth, Low-Noise, Precision	**OP61G**	**◊ AD (3240)**	25
25000	16	10	0.3	60	15	20000	130	0	Low Noise, Wideband, Precision	MA367	AnalogSys	
	20	15	0.6	60	17	10000	130	0	Ultra Low Distortion	MA362	AnalogSys	
	40	35	0.6	120	28	1000	114	1	Precision, Low Noise, High Speed	HA5147A-2	† Harris	
										HA5147A-5	Harris	
100000	80	75	1.8	120	28	700	100	1	Precision, Low Noise, High Speed	HA5147-2	† Harris	30
										HA5147-5	Harris	
Dual Units												
± 1.5	250		10	0.3	1.2	100	85	0	± 5V single to ± 20V supply, 3.0A output.	**PA21A**	**† Apex (3325)**	
	1000		15	0.3	1.2	100	85	0	+ 5V single to ± 20V supply, 2.5A output.	**PA21**	**Apex (3325)**	
			15	0.3	1.2	100	85	0	+ 5V single, to ± 20V supply, 2.5A output.	**PA21M**	**† Apex (3325)**	
0.015	0.05	0.1	0.15	0.8	2	1000	120	0	Auto-Zeroed	TSC903C	TeledyneS	35
	0.09	0.02	0.15	1.5	2.5	1000	110	0	Auto-Zeroed	TSC913A	TeledyneS	
										TSC913AC	TeledyneS	
0.03		2.5	1	0.9 *	0.3					**AD708**	**AD (3243, 3248)**	
	0.12	0.04	0.25	1.5	2.5	1000	100	0	Auto-Zeroed	TSC913B	TeledyneS	
							110	0	Auto-Zeroed	TSC913BC	TeledyneS	40
	4	3	0.3	1.5	0.1	5	110			RC4277	Raytheon	
0.05	0.1	0.05	0.6			2000				OP297	AD	
		0.1	0.6	0.5 *	0.05	2000000	120	0	Low Power, Precision	**OP297E**	**‡ AD (3243, 3246)**	
				0.5*	0.05	2000000	120	0	Low Power,Pricision	**OP297A**	**‡ AD (3243, 3246)**	
	0.11	0.05	0.6	3		400	110		Picoamp Input Current	AD706	AD	45
	10	10		6*	1.4	1000	110		Low noise, precision.	**OP270A**	**† AD (3240, 3248)**	
										OP270E	**AD (3240, 3248)**	
0.06	3	2.8	0.9	0.4	0.1	400	110	0	Ultra Low Offset Matched	LT1002AC	LinearTech	
										LT1002AM	† LinearTech	
0.07	5	0.25	2.2		0.13	70	87			LT1178AM	† LinearTech	50
						105	90			LT1178AC	LinearTech	
	8	0.25	1.8	0.2	0.04	20	97	0	Single Supply	LT1078AC	LinearTech	
										LT1078AM	† LinearTech	
0.075	2	1	0.5	0.5 *	0.1	3	120	0	Low Power	**OP200A**	**† AD (3246, 3248)**	
										OP200E	**AD (3246, 3248)**	55

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
0.08	40	35	1	5	1.7	250	114	0	Ultra Low Noise Instrumentation	**OP227A**	**† AD (3240, 3243, 3248)**	
										OP227E	**AD (3240, 3243, 3248)**	
										OP227A	LinearTech	
										OP227E	LinearTech	
										OP237A	LinearTech	5
										OP237E	LinearTech	
0.1	0.15	0.15	2.0	0.5 *	0.05	1500000	114	0	Low Power, Precision	**OP297F**	**‡ AD (3243, 3246)**	
	4.5	4.2	1.3	0.4	0.1	350	110	0	Ultra Low Offset Matched	LT1002C	LinearTech	
										LT1002M	† LinearTech	
	15	15		6*	1.4	800	100		Low Noise, Precision	**OP270F**	**AD (3240, 3248)**	10
0.12	0.25	0.25	1.5		0.1	250	112	0	Low Noise	LT1024AC	LinearTech	
	6	0.35	3		0.13	55	84			LT1178M	† LinearTech	
						80	86			LT1178C	LinearTech	
	10	0.35	2.5	0.2	0.04	20	94	0	Single Supply	LT1078C	LinearTech	
										LT1078M	† LinearTech	15
	55	50	1.5	5	1.7	250	106	0	Ultra Low Noise Instrumentation	**OP227B**	**† AD (3240, 3243, 3248)**	
										OP227F	**AD (3240, 3243, 3248)**	
										OP227B	LinearTech	
										OP227F	LinearTech	
0.15	4	2	1.5	0.5 *	0.1	2	115	0	Low Power	**OP200F**	**AD (3246, 3248)**	20
	7	6	1.8	1.2 *	0.25 *	120	100	0	Ultra Low Offset Voltage, Low Drift	**OP07C**	**◊‡ AD (3243, 3245)**	
										µA714C	National	
	15	3	2	0.02*	5K	500	90	0	Precision, low voltage.	**OP290E**	**AD (3246, 3248)**	
			2.5	0.02*	5K	225	85	0	Precision, low voltage.	**OP290A**	**† AD (3246, 3248)**	
	20	0.8	2	1 *	0.2	1500	100	0	Precision	LT1013AC	LinearTech	25
										LT1013AM	† LinearTech	
				3 *	0.4	1500	100	0		**OPA1013**	**Burr-Brown (3332)**	
										OPA1013AMH	**† Burr-Brown (3332)**	
		2	2	100 *	—	500	96	0	Low Power, Single/Dual Supply	**OP220A**	**† AD (3246, 3248)**	
										OP220E	**AD (3246, 3248)**	30
	50	3	2	1	0.7		100			TLE2022BC	TI	
										TLE2022BI	TI	
	80	3	1.5	—	0.2	1500	95	0	Low Power, Precision Matched	**OP221A**	**† AD (3246, 3248)**	
										OP221E	**AD (3246, 3248)**	
0.18	80	75	2	5	1.7	200	106	0	Ultra Low Noise Instrumentation	**OP227C**	**† AD (3240, 3243, 3248)**	35
										OP227G	**AD (3240, 3243, 3248)**	
										OP227C	LinearTech	
										OP227G	LinearTech	
										OP237C	LinearTech	
										OP237G	LinearTech	40
0.2	0.2	0.2	2.0	0.5 *	0.05	1200000	114	0	Low Power, Precision	**OP297G**	**◊‡ AD (3243, 3246)**	
	0.4	0.3	2		0.1	180	108	0	Low Noise	LT1024C	LinearTech	
	0.7	0.35	1.5		0.1	250	112	0	Low Noise	LT1024AM	† LinearTech	
	5	3.5	2	0.5 *	0.1	2	110	0	Low Power	**OP200G**	**◊ AD (3246, 3248)**	
	20	20		6*	1.4	800	100		Low noise, precision.	**OP270G**	**AD (3240, 3248)**	45
0.25		0.15	20	13	75					**AD746**	**AD (3242, 3248)**	
	0.035	0.002	2.5	1 *	3 *	250	80	—	Ultra Low Drift BiFET	**AD647L**	**◊ AD (3244, 3248)**	
	0.050	0.010	5	3	16				High-Speed BiFET	**AD712C**	**AD (3242, 3248)**	
	10	5		3	3	100			Single-Supply	OP292	AD	
	20	5	5	0.02*	5K	350	80	0	Precision, low voltage.	**OP290F**	**AD (3246, 3248)**	50
0.3	1.3	0.5	2		0.1	180	108	0	Low Noise	LT1024M	† LinearTech	
	10	10		6.5*	6.5	500	105	0	High speed, low noise.	**OP271A**	**† AD (3240, 3248)**	
										OP271E	**AD (3240, 3248)**	
	15	15		6.5*	6.5	300	95	0	High speed, low noise.	**OP271F**	**AD (3240, 3248)**	
		16	3	8 *	18	1000	86	0	High-Speed, Precision	**OP249E**	**AD (3242, 3248)**	55
	25	2.5	5	100 *	—	300	90	0	Low Power, Single/Dual Supply	**OP220B**	**† AD (3246, 3248)**	
										OP220F	**AD (3246, 3248)**	
	30	1.5	2.5	1 *	0.2	1200	97	0	Precision	LT1013C	LinearTech	
										LT1013M	† LinearTech	
										LT1013M	† TI	60

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
0.3											(Cont'd)	
	40	15	0.5	35	25	2500	95	0		HA5222	† Harris	
	50	3	2 *	2.8 *	0.7	1500	96	0	Low Power, Precision	TLE2022BM	◊† TI	
	55	4	2	1	0.7		97			TLE2022AC	TI	
										TLE2022AI	TI	
	100	5	2	—	0.2	1000	90	0	Low Power, Precision Matched	**OP221B**	**† AD (3246, 3248)**	5
										OP221F	**AD (3246, 3248)**	
	500	10		10	7	250	100			MB47833	◊ Fujitsu	
0.45	0.05	0.04	7	3.5	10	150	86		High Speed Instrumentation Amplifier	LT1057AC	LinearTech	
										LT1057AM	† LinearTech	
	25	5	1.2*	0.02*	5K	300	80	0	Precision, low voltage.	**OP290G**	**AD (3246, 3248)**	10
	55	4	2 *	2.8 *	0.7	1000	93	0	Low Power Precision	TLE2022AM	◊† TI	
0.5	0.001	0.0005 *	0.5 *	1.9 *	2	90	80	0	Low Noise, Precision	TLC2202AM	◊† TI	
	0.004	0.003	2.8	2 *	2 *	500	96			**OPA2111BM**	**Burr-Brown (3329)**	
	0.005	0.001	0.7 *	0.1	0.05	30	70	0	LinCMOS, Low Bias	TLC27L7I	◊ TI	
			2 *	0.6	0.6	20	70	0	LinCMOS, Medium Bias	TLC27M7I	◊ TI	15
			5 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC277I	◊ TI	
		0.003	5	5					Precision FET	**OPA2107B**	**Burr-Brown (3329)**	
	0.035	0.002	5	1 *	3 *	250	80	—	Ultra Low Drift BiFET	**AD647K**	**◊ AD (3244, 3248)**	
										AD647S	**◊† AD (3244, 3248)**	
										AD647S/883B	**◊† AD (3244, 3248)**	20
		0.005 *	5 *	1 *	3 *	300 *	80	0	Dual 542	**AD642L**	**◊ AD (3248)**	
			5	2 *	3 *	250	80	0	Dual 544	**AD644L**	**AD (3248)**	
			15	2 *	3 *	250	80	0	Dual 544	**AD644S**	**† AD (3248)**	
	0.1	0.05	5	30	12	50		0	Low Input Offset JFET	MC33282	Motorola	
	0.2	0.1	10 *	3	13	50		0	BiFET, General Purpose	TL287I	◊ TI	25
	1.5µA	200	3	500	350	40	90	1	Wideband	EL2223	‡ Elantec	
										EL2223C	◊ Elantec	
			20	60	200	6	80	0	Wideband	EL2224	‡ Elantec	
										EL2224C	◊ Elantec	
	2	0.2	5			80	96		Dual 108 Type	LH2108A	National	
										LH2208A	National	30
				1 *	0.3 *	40	96	1	Dual 108A	PM2108A	† AD	
						80	96	1	Dual 108A	LH2108A	† LinearTech	
	3	2.8	2	0.6 *	0.17 *	200	110	0	Dual Matched Instrumentation	**OP10**	**† AD (3248)**	
										OP10A	**† AD (3248)**	35
	4	6	2	0.6 *	0.17 *	200	106	0	Dual Matched Instrumentation	**OP10E**	**AD (3248)**	
	7	1	5			80	96		Dual 108 Type	LH2308A	National	
		6	0.6 *	0.17 *	0.25 *	120	100	0	Dual Matched Instrumentation	**OP10C**	**AD (3248)**	
	20	0.1	10	3	13	50	80	0	Bipolar-JFET	TL287C	◊ TI	
	35	15	0.7 *	0.1 *	0.04	500*	88			TLC27L7M	◊† TI	40
			2 *	0.7 *	0.6	280*	88			TLC27M7M	◊† TI	
			5 *	2.3	4.5	40K*	82			TLC277M	◊† TI	
0.5 *	60	5		3.0	1.0		70			TA75557	Toshiba	
										TA75558	Toshiba	
				5	2		70			TA75559	Toshiba	45
0.5	60	5	2	1	0.7		95			TLE2022C	TI	
										TLE2022I	TI	
	80	50	2.5	10 *	7	1000	94	0		**SSM2139**	**◊ AD (3242)**	
	120	7	3	—	0.2	800	80	0	Low Power, Precision Matched	**OP221C**	**† AD (3246, 3248)**	
										OP221G	**◊ AD (3246, 3248)**	50
	200	20	15	40	400	40	78	1		1493	TeledyneS	
	5000	700		9	125	50	94			CA3280A	Harris	
0.500	25	25	5	8 *	18	1000	80	0	High-Speed, Precision	**OP249A**	**AD (3242, 3248)**	
0.6	40	4	10	100 *	—	500 *	76	0	Low Power, Single/Dual Supply	**OP220C**	**† AD (3246, 3248)**	
										OP220G	**◊ AD (3246, 3248)**	55
0.7	25	25	6	8 *	18	500	80	0	High-Speed, Precision	**OP249F**	**AD (3242, 3248)**	
	60	5	2 *	2.8 *	0.7	800	91	0	Low Power Precision	TLE2022M	◊† TI	
0.75	0.008	0.006	6	2 *	2 *	316	90			**OPA2111AM**	**Burr-Brown (3329)**	
									Low Noise	**OPA2111S**	**† Burr-Brown (3329)**	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
0.75											(Cont'd)	
	0.2	0.04	10	10 *	50	200	88	0	Fast Settling, Precision	**OP42E**	**AD (3242)**	
	20	20		6.5*	6.5	300	95	0	High speed, low noise.	**OP271G**	**AD (3240, 3248)**	
	50	2	8	0.8	0.5	100	90	0	Dual Matched	**OP04A**	**† AD (3245)**	
										OP04E	**AD (3245)**	
										OP14A	**† AD (3245, 3248)**	5
										OP14E	**AD (3245, 3248)**	
	80	50	2.5	30	15		106		Low Noise, Wideband	HA5222/883	† Harris	
0.8	0.0007 *	0.0001 *	1.4 *	0.1 *	0.05 *	50	65	0	LinCMOS, Low Bias Precision	TLC2767M	◊† TI	
	0.075	0.05	12	3.0	8	100	82		High Speed Instrumentation Amplifier	LT1057C	LinearTech	
										LT1057M	† LinearTech	10
1	0.004 *	0.002 *	6 *	2 *	2	30	72	0	J-FET Low Power, High Drive	TLE2062BM	◊† TI	
	0.01	0.005	10	1	1	300	82		Precision Low Power BiFET	**AD648B**	**AD (3244, 3248)**	
										AD648K	**AD (3244, 3248)**	
										AD648T	**† AD (3244, 3248)**	
		0.008	10	5	18		80		Precision FET	**OPA2107A**	**Burr-Brown (3329)**	15
										OPA2107S	**† Burr-Brown (3329)**	
	0.035	0.005 *	10	1 *	3 *	300 *	80 *	0	Dual 542	**AD642K**	**◊ AD (3248)**	
										AD642S	**◊† AD (3248)**	
				2 *	3 *	250	80	0	Dual 544	**AD644K**	**AD (3248)**	
	0.05	0.025	10	1	1	50	80	0	Low Power BIFET	LF442A	National	
		0.03	30	1.6	6	32	95	0		**OPA2541B**	**Burr-Brown (3333)**	20
										OPA2541S	**† Burr-Brown (3333)**	
	0.075	0.005	10	1 *	3 *	100	76	—	Ultra Low Drift BiFET	**AD647J**	**◊ AD (3244, 3248)**	
		0.025	10	3/4	20	200	80		Precision High Speed BiFET	**AD712B**	**AD (3242, 3248)**	
				3.4	20	200	80		Precision High Speed BiFET	**AD712K**	**AD (3242)**	25
										AD712T	**† AD (3242, 3248)**	
	0.1	0.05	10	3.0	10	100	80		High Input Impedance Instrumentation Amplifier	LF412AC	LinearTech	
										LF412AM	† LinearTech	
						150	100*		High Input Impedance Instrumentation Amplifier	OP215A	† LinearTech	
										OP215E	LinearTech	30
				13 *	10	150	86	0	Dual JFET	**OP215A**	**◊† AD (3241, 3248)**	
									Precision JFET	**OP215E**	**AD (3241, 3248)**	
	0.2	0.04	10	10 *	45	200	86	0	Fast Setling, Precision	**OP42A**	**‡ AD (3242)**	
		0.1	10	3	10	50	80	0	Wideband JFET	LF412A	National	
			10 *	3	13	50		0	BiFET, General Purpose	TL288I	◊ TI	35
				8 *	30 *	50	—	0		MC34082A	Motorola	
				16 *	55 *	50	—	—	Decompensated	MC34083A	† Motorola	
	2	0.8	6	1.8	3.4 *	15	65			TLE2062BC	TI	
	4	2	6	1.8	3.4 *	15	65			TLE2062BI	TI	
	20	10		4	9	1			High Speed, Low Power	**OP282**	**AD (3287)**	40
	40	5	10	0.15 *		300	86 *	0	Micropower, Precision	**OP220H**	**AD (3246, 3248)**	
	500	600	—	2 *	50 *	20	80	0	Transconductance Amplifier	LM13700A	National	
	1000	180	2	37	11	150		0	Low Noise	MC33077	Motorola	
1.0	0.001	0.0005 *	0.5 *	1.9 *	2	90	80	0	Low Noise, Precision	TLC2202M	◊† TI	
1.2	0.0007	0.0001	1 *	0.11	0.05	50	65	0	LinCMOS, Low Bias	TLC27L9I	TI	45
1.5	0.15	0.1	0.7 *	0.1	0.04	500*	88			TLC27L7C	◊ TI	
			2	0.7	0.6	280*	88			TLC27M7C	◊ TI	
			5 *	2.3	4.5	40	88			TLC277C	◊ TI	
	0.2	0.1	9 *	3 *	13	50	75	0	Bipolar J-FET	TL052M	◊† TI	
			9.7 *	1 *	2	4	70	0	Low Power Bipolar J-FET	TL032M	◊† TI	50
	500	10	5	70	90	500	100		Wideband, Single Supply	EL2243	‡ Elantec	
										EL2243C	◊ Elantec	
2	0.0007	0.0001	1 *	0.11	0.05	50	65	0	LinCMOS, Low Bias	TLC27L4BI	◊ TI	
	0.001 *	0.001 *	0.7 *	—	0.04 *	10	70	0		TLC27L2BC	◊ TI	
			2 *	—	0.6 *	10	70	0	LinCMOS, Medium Bias	TLC27M2BC	◊ TI	55
				1 *	0.6 *	30	65	0	LinCMOS, Medium Bias	TS27M2BC	◊ SGS-Thomson	
			5 *	—	4.5 *	10	70	0		TLC272BC	◊ TI	
			5	3.5 *	5.5 *	10	65	0	LinCMOS, High Bias	TS272BC	◊ SGS-Thomson	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
2	0.001 *										(Cont'd)	
		0.005 *	0.7	0.11	0.05	30	70	0	LinCMOS, Low Power, Low Bias Mode	TLC25L2BC	TI	
			2	0.635	0.62	20	70	0	LinCMOS, Low Power, Medium Bias Mode	TLC25M2BC	TI	
		0.01 *	0.7 *	0.1 *	0.04 *	60	65	0	LinCMOS, Low Bias	TS27L2BC	◊ SGS-Thomson	
	0.004 *	0.002 *	6 *	2 *	2	30	72	0	J-FET Low Power, High Drive	TLE2062AM	◊† TI	
	0.005	0.001	0.7 *	0.1	0.5	30	70	0	LinCMOS, Low Bias	TLC27L2BI	◊ TI	5
			2 *	0.6	0.6	20	70	0	LinCMOS, Medium Bias	TLC27M2BI	◊ TI	
			5	2.2	5.3	10		0	LinCMOS, High Bias	TLC252BC	TI	
			5 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC272BI	◊ TI	
	0.01	0.005	20	60	300	180	80	0		MAX457	Maxim	
	0.015	0.012	15	2 *	2 *		82		Low Noise	**OPA2111K**	**Burr-Brown (3329)**	10
	0.02	0.01	20	1	1	300	76		Precision Low Power BiFET	**AD648A**	**AD (3244, 3248)**	
										AD648J	**AD (3244, 3248)**	
										AD648S	**† AD (3244, 3248)**	
	0.03	0.015	7	0.30	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD2706A	◊°† AdvLinear	
		0.025	7	0.4	0.7 *	15	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD2701A	◊°† AdvLinear	15
	0.05	0.03	10 *	1	1.6	80 *	70	0	Low Power, Dual 747	ICL7622AC	Maxim	
										ICL7622AM	† Maxim	
									Low Power, Dual 1458	ICL7621AC	Harris	
										ICL7621AM	† Harris	
										ICL7621AC	Maxim	20
										ICL7621AM	† Maxim	
		0.1	20	3	10	50	80	0	Dual 0351A	LF353A	SGS-Thomson	
	0.075	0.025	10 *	4 *	13 *	50	80	0	Precision BIFET	MC35002A	† Motorola	
		0.075 *	20 *	1 *	3 *	200 *	76 *	0	Dual 542	**AD642J**	**◊ AD (3248)**	
				2	3 *	100	76	0	Dual 544	**AD644J**	**AD (3248)**	25
	0.1	0.05	10 *	3 *	13 *	50	80	0	Bipolar-JFET	µA772AC	National	
										µA772AM	† National	
				4 *	13 *	50	80	0	Precision BIFET	MC34002A	Motorola	
	2	0.2	15			50	85		Dual 108 Type	LH2108	National	
										LH2208	National	30
				1 *	0.3 *	50	85	1	Dual 108	PM2108	AD	
									Dual 108	LH2108	† LinearTech	
		0.8	6	1.8	3.4 *	15	65			TLE2062AC	TI	
	4	2	6	1.8	3.4 *	15	65			TLE2062AI	TI	
	5	0.6	18	50	75		110	0		**VA2703**	**† VTC (3713)**	35
										VA2713	**† VTC (3713)**	
	5µA	4µA	10	50	600	2	63	0	Wideband, Current Mode Feedback	EL2232C	◊ Elantec	
		4µA	10	50	600	2	60	0	Wideband, Current Mode Feedback	EL2232	‡ Elantec	
	20	10		4	9	1			Precision, Low Power	**OP482**	**AD (3287)**	
	25	25	25	8 *	18	500	76	0	High-Speed, Precision	**OP249G**	**AD (3242, 3248)**	40
	45	5				100	85			IR9358	Sharp	
2 *	45	5		0.6	0.3		60			TA75358	Toshiba	
2	45	5	20	1	2	25	85			MB47358	◊ Fujitsu	
	50	10		7.0	±3		90		Dual Power Op Amp	MA912	AnalogSys	
			15	1 *	—	50	70	0	Low Power, Single Supply	CA158A	◊† Harris	45
										LM158A	† SGS-Thomson	
	75	5	10	0.8	0.5	50	90	0	Dual Matched	**OP04C**	**AD (3245)**	
										OP14	**† AD (3245, 3248)**	
										OP14C	**◊ AD (3245, 3248)**	
		10	15	0.4	10	25	80			LH2101A	† National	50
										LH2201A	National	
				1 *	0.5 *	50	80	1	Dual LM101A High Performance	LH2101A	Raytheon	
	100	20	10	5.7 *	16 *	220	100 *	0	Precision Bipolar-JFET	**OP215B**	**◊† AD (3241, 3248)**	
										OP215F	**◊ AD (3241, 3248)**	
	150	30	3 *	1.3 *	2	10	80	0	Low Power	HA5152-2	† Harris	55
	200	75	3 *	8 *	1	100	86	0	Low Noise, High Performance	HA5102-2	† Harris	
										HA5102-5	◊ Harris	
				60 *	12	100	86	1	Wideband	HA5112-2	◊† Harris	
										HA5112-5	◊ Harris	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
2											(Cont'd)	
	300	400	15	35	200	2	80		High Speed, Low Power	AD827	AD	
	500	10	7	30	40	300	95		Wideband, Single Supply	EL2242	‡ Elantec	
										EL2242C	◊ Elantec	
		50	10 *	3.5 *	13 *	50	80	1	High Performance, Single Supply	MC33072A	Motorola	
										MC34072A	Motorola	5
										MC35072A	† Motorola	
	750	150	2 *	16 *	5		100 *			MC33078	Motorola	
	800	200	—	10 *	13	50	80	1	Dual 5534	SE5532	† Signetics	
										SE5532A	† Signetics	
	950	100	10	2	50	100	85			LM6118	† National	10
										LM6218A	National	
3	—	200			6 *				Low Noise, Dual Power Supply	AN6557	Panasonic	
										AN6558	Panasonic	
	–80	15	7	0.6	0.2	50	70	0	Bipolar, High Gain, Low Power	LM258A	TI	
3 *	0.03	0.005		1	3.5		70			TA75062	Toshiba	15
				3	13		70			TA75072	Toshiba	
3	0.03	0.005		3	13	200	76			IR9082	Sharp	
	0.075	0.025	20	3	20	150	76		Precision High Speed BiFET	**AD712A**	**AD (3242, 3248)**	
										AD712S	**† AD (3242, 3248)**	
	0.1		10	50	100		60		Video Speed	CA5202	Harris	20
	0.2			3	13	25		0	BiFET, Low Offset	LF412	TI	
		0.05	10 *	3 *	13 *	50	80	0	Low Noise, Bipolar JFET	TL072BC	◊ SGS-Thomson	
				4 *	13 *	50	80	0	Low Noise Bipolar-JFET	TL072BC	Motorola	
		0.1	10 *	1 *	3.5 *	4	80	0	Low Noise Bipolar-JFET	TL062BC	◊ TI	
									Low Power, Bipolar JFET	TL062BC	◊ SGS-Thomson	25
				2 *	2	4	80	0	Low-Power J-FET	TL062BC	Motorola	
				3 *	13	50	80	0	Bipolar-JFET	TL082B	◊ SGS-Thomson	
					15 *	50	80	0	Bipolar-JFET	TL082B	Motorola	
										TL082BC	SGS-Thomson	
										TL082BC	◊ TI	30
										TL288C	◊ TI	
										TL288M	◊† TI	
				4 *	13 *	25	70	0	Low offset, low drift JFET input	LF412C	◊ Motorola	
				8 *	30 *	25	—	0		MC34082	Motorola	
				16 *	55 *	25	—	—	Decompensated	MC34083	Motorola	35
										MC34083	† Motorola	
			20	0.7	8	25	70	0	Wideband JFET	LF412	National	
				3.0	8	50	82		High Input Impedance Instrumentation Amplifier	OP215C	† LinearTech	
										OP215G	LinearTech	
	5	5	—	1	1	100	100	0	Low Noise	SE5512	† Signetics	40
	80	15	15			50	50		Selectable gain of 10, 100, 400	LM258A	◊ Samsung	
				1 *	—	50	70	0	Low Power, Single Supply	CA258A	◊ Harris	
										LM258A	National	
										LM258A	◊ SGS-Thomson	
		30	15	0.44	0.3	50	80	0	Dual 741	µA747AM	† National	45
										µA747EC	National	
										LM747A	† National	
										LM747E	National	
	100	20	10						Dual Independent Op Amps	SG2101A	† SiliconG	
		30	20	1 *	—	25	65	0	Low Power, Single Supply	CA358A	◊ Harris	50
										LM358A	National	
			30	—	—	25	65	0	Low Power, Single Supply	LM358A	◊ SGS-Thomson	
		200			6		70		Low Noise	MJN2043	NJR	
	150	30	3 *	1.3 *	2	50	80	0	Low Power	HA5152-5	Harris	
	200	50			4	20	70			NJM4565	◊ NJR	55
	500	50	2	2.5	1.2	50	80	0		MC33178	◊ Motorola	
		200			3		70		Low Noise	**NJM2041**	**◊ NJR (3570)**	
	750	400	3 *	—	2 *	20	70	3	Audio Preamp	µA749C	National	
	1000	200		5.5	7		80		Low Noise	**NJM2068**	**◊ NJR (3570)**	
	5000	700	5 *	9 *	125 *	50	80	1	Transconductance Amp	CA3280	◊ Harris	60
3.3	0.004	0.002	1.3	1	0.11	300	68			LPC662AI	National	
				1.4	0.6	220	68	0		LMC662AI	National	
3.5	0.03	0.03	1.3	1.4	0.5	150	68	0		LMC662AM	† National	
	0.1	0.1	1.3	1	0.11	250	68			LPC662AM	† National	
	300	50	5 *	1.5	1 *	—	86	0	High Performance	LS204	SGS-Thomson	65
											(Continued)	

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Dual Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
3.5											(Cont'd)	
	1000		8	90	1000		62	0	Current Feedback Operational Amplifier	**OP260A**	**‡ AD (3241, 3248)**	
			8	90	1000		62	0	Current Feedback Operational Amplifier	**OP260E**	**AD (3241, 3248)**	
3.9	1.8	0.65	20		10	50	76		JFET Input	LF412C	LinearTech	
4	0.004 *	0.002 *	6 *	2 *	2	30	72	0	J-FET Low Power, High Drive	TLE2062M	◊† TI	
	0.015	0.01		4	10	14	83			CA5260A	◊ Harris	5
	2	0.8	6	1.8	3.4 *	15	65			TLE2062C	TI	
		1	10 *	3	10 *	25	70	2	Wideband	MC34182	Motorola	
	4	2	6	1.8	3.4 *	15	65			TLE2062I	TI	
	80	20	4 *	1 *	10	50	70	0	High Slew Rate	SE5535	† Signetics	
	200	50	20	5.4 *	15 *	200	96 *	0	Precision Bipolar-JFET	**OP215C**	**◊† AD (3241, 3248)**	10
										OP215G	**◊ AD (3241, 3248)**	
	250		10	0.014	0.5		60			PA25A	† Apex	
		100			0.7 *				General Purpose	AN1458	Panasonic	
										AN6572	Panasonic	
									General Purpose, Dual Power Supply	AN6571	Panasonic	15
	500	75	10 *	4.5 *	13 *	25	70	1	High Performance, Single Supply	MC33072	Motorola	
										MC34072	Motorola	
										MC35072	† Motorola	
		600	—	2 *	50 *	20 *	80	0	Transconductance Amplifier	LM13700	† National	
	700	100	25	—	9 *	18	70	0	General Purpose, OC Output	TEC1761M	† SGS-Thomson	20
	800	150		10	9	25	70	0	Low Noise	NE5532	TI	
										NE5532A	TI	
	1250	200	10	2	50	70	75			LM6218	National	
	1500	300							Low Noise	**BA10358**	**ROHM (3583)**	
			—	10 *	13 *	25	70	1	Dual 5534	XR5532	Exar	25
										XR5532A	Exar	
										XR5533	Exar	
										XR5533A	Exar	
										NE5532	Signetics	
										NE5532A	Signetics	30
										NE5533	† Signetics	
			5		100				Low Noise	**BA15532**	**ROHM (3583)**	
			5 *	10 *	13 *	25	70	3	Can be compensated with 1 capacitor, but reduces BW and slew rate.	NE5533A	Signetics	
	5000	1000			50		80		Transconductance Amp.	NJM13600	NJR	
										NJM13700	NJR	35
	6000	800	10	4.5	200	0.3	74		High Slew Rate	LH4162A	† National	
4.5	4	2	10 *	3	10 *	25	70	2	Wideband	MC33182	Motorola	
	100	2		1.8	2.1	50	80		Low Power, Single Supply	MC33172	Motorola	
										MC35172	† Motorola	
5	−100	30	7	0.6	0.2	25	65	0	Bipolar, High Gain, Low Power	LM358A	TI	40
	−150	30	7	0.6	0.2	50	70	0	HighGain, Low Power Bipolar	LM258	TI	
	0.0007	0.0001	1 *	0.11	0.05	50	65	0	LinCMOS, Low Bias	TLC252AC	TI	
										TLC27L4AI	◊ TI	
	0.001 *	0.001 *	0.7 *	—	0.04 *	10	70	0		TLC27L2AC	◊ TI	
				0.1 *	0.04 *	60	65	0	LinCMOS, Low Bias	TS27L2AC	◊ SGS-Thomson	45
			2 *	—	0.6 *	10	70	0		TLC27M2AC	◊ TI	
			2	1 *	0.6 *	30	65	0	LinCMOS, Medium Bias	TS27M2AC	◊ SGS-Thomson	
			5 *	—	4.5 *	10	70	0		TLC272AC	◊ TI	
				3.5 *	5.5 *	10	65	0	LinCMOS, High Bias	TS272AC	◊ SGS-Thomson	
		0.005 *	2	0.635	0.62	20	70	0	LinCMOS, Low Power, Medium Bias Mode	TLC25M2AC	TI	50
	0.005	0.001	0.7 *	0.1	0.05	30		0	LinCMOS, Low Bias	TLC25L2AC	◊ TI	
							70	0	LinCMOS, Low Bias	TLC27L2AI	◊ TI	
			2 *	0.6	.0.6	20	70	0	LinCMOS, Low Bias	TLC27M2AI	◊ TI	
			5 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC272AI	◊ TI	
	0.03	0.005	10	5	13	200	86			MB47082	◊ Fujitsu	55
		0.015	7	0.30	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD2706B	◊°† AdvLinear	
		0.02		4	10	50	94			CA3260A	Harris	
			6 *	4 *	10 *	50 *	70	0	Dual 3160	CA3260AE	Harris	
										CA3260AT	† Harris	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Dual Units (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
											(Cont'd)	
5	0.03											
		0.025	7	0.4	0.7 *	15	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD2701B	◊°† AdvLinear	
	0.04	0.02	15 *	45 *	9 *	20	70	0	Dual 3140A, MOS FET	CA3240A	Harris	
	0.05	0.03	15 *	1	1.6	80	70	0	Low Power, Dual 1458	ICL7621BC	Harris	
										ICL7621BM	† Harris	
										ICL7621BC	Maxim	5
										ICL7621BM	† Maxim	
									Low Power, Dual 747	ICL7622BC	Maxim	
										ICL7622BM	† Maxim	
	0.1	0.05	10 *	1 *	1 *	25	70	0	Low Power JFET	LF442	National	
			10	2	0.6	25	70		Low Power J-FET Input	LF442C	Motorola	10
		0.07	10 *	4 *	13 *	25	80	0	JFET Input	MC34002B	Motorola	
		0.1	10 *	3 *	13 *	50	80	0	Bipolar JFET	µA772BC	National	
										µA772BM	† National	
	0.2	0.1	10 *	4 *	13 *	25	70	0	Bipolar-JFET	MC35002B	† Motorola	
			30	4 *	13 *	50	80	0	Dual 0351B	LF353B	SGS-Thomson	15
	4	2	10	4	8	25	80		Wide Bandwidth	LF453C	National	
	7.5	3	3 *	1 *	15 *	200	70	0	Multi-Purpose Programmable	µA776M	† National	
	10	10	—	1	1	100	100	0	Low Noise	NE5512	Signetics	
										NE5517	Signetics	
										NE5517A	Signetics	20
	25	4	15		0.45		80		With Dual Comparators	LM613M	† National	
		13	10 *	3	10 *	25	70	2	Wideband	MC35182	† Motorola	
	30	12	20		10	30	80		JFET Input	LF412M	† LinearTech	
	100	25	10	0.8	0.25	50	70	0	Dual Matched	**OP04B**	**† AD (3245)**	
			20	0.8	0.25	25	70	0	Dual Matched, High Performance	**OP14D**	**AD (3245, 3248)**	25
		40	—	0.8 *	0.5 *	4	60	0	Low Power	TL022M	† TI	
		50	20	0.8	0.25	25	70	0	Dual Matched, High Performance	**OP14B**	**AD (3245, 3248)**	
	150	30	7 *	1 *	—	50	70	0	Half LM124	CA158	† Harris	
										CA258	Harris	
										LM158	† Motorola	30
										LM158	† National	
										LM258	National	
										LM158	† SGS-Thomson	
										LM158	† Signetics	
										LM258	Signetics	35
										SE532	† Signetics	
										LM158	◊† TI	
			15			50	50		Selectable gain of 10, 100, 400	LM258	◊ Samsung	
	200	80	—	0.8 *	0.5 *	1	60	0	Low Power	TL022C	TI	
		100			1.2	100	70		Single-Supply	**NJM3404A**	**◊ NJR (3570)**	40
	250	50	—	—	—	25	65	0	2 Op Amp/Comparators	LM392	National	
		80			0.5		60		Low Power	NJM022	◊ NJR	
					1		60		Low Power	**NJM022B**	**◊ NJR (3570)**	
			—	0.8 *	0.5 *	1	60	0	Low Power	IR9022	Sharp	
	500	50	10 *	1 *	0.6 *	50	70	0	Single Supply	MC3558	† Motorola	45
		200			1.0 *	20	70		Dual 741I	MC4558I	◊ Samsung	
			—	—	10	50	70	0	High Slew Rate 1558	MC1558S	† Motorola	
				1 *	0.5 *	50	70	0	Dual 741	SFC2747M	† SGS-Thomson	
					0.8 *	50	70	0	Dual 741	LM1458M	† SGS-Thomson	
				1.0	0.5	50	94			LM1558	Harris	50
				1.3	1		80		High Output	NJM3414	◊ NJR	
										NJM3415	**◊ NJR (3570)**	
			—	2	0.8	20	70	0	Low noise	LS4558N	† SGS-Thomson	
					1.5 *	50	70	0	Dual Wideband 741	RM4558	† Raytheon	
										RM4558	◊† TI	55
			—	2.5	1	20	70	0	General Purpose	SE4558	† Signetics	
				2.5 *	1.5 *	20	70	0	Dual Wideband 741C	MC4558	Samsung	
				2.5	1.5	50	70	0	Dual Wideband 741	MC4558	† SGS-Thomson	
					1.5 *	50	70	0	Dual Wideband 741	GL4558	† GoldStar	
										MC4558	† Motorola	60
										MC4558A	Motorola	
				3	1.5 *	50	70	0	3 MHz Min. Bandwidth	RM4559	† Raytheon	
					1.5	50	70	0	3 MHz Min. BW	RM4559	◊† TI	
			2–15 *	1 *	0.5 *	50	70	0	Dual 741	CA1558	† Harris	
										CA747	† Harris	65
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
5	500	200	2–15 *	1 *	0.5 *	50	70	0	Dual 741		(Cont'd)	
										MC1558	† Motorola	
										MC1747	† Motorola	
										µA747M	† National	
										LM1558	† National	
										LM747	† National	5
										RM747	† Raytheon	
										MC1558	† SGS-Thomson	
										MC1558	† Signetics	
										µA747-1M	◊† TI	
										µA747M	◊† TI	10
										MC1558	◊† TI	
										TA75458	Toshiba	
				3 *	0.25	25	70	3	Dual MC1709	MC1537	† Motorola	
			5						Low Noise	**BA15218**	**ROHM (3583)**	
	1000	200	—	0.12	7 *	30	80	0	Low Noise, High Speed	LM833	National	15
			2 *	15 *	7 *	25	100 *	0	Low Noise, Audio	LM833	Motorola	
	2000		8	90	1000		62	0	Current Feedback Operational Amplifier	**OP260F**	**AD (3241, 3248)**	
	7000	8000	6000	—	2 *	50	80	0	Transconductance Amplifier	LM13600	National	
6	0.2	0.05	10 *	3 *	13 *	35	80	0	Low Noise, Bipolar JFET	TL072M	◊† SGS-Thomson	
						50	80	0	Low Noise, Bipolar JFET	TL072AC	◊ SGS-Thomson	20
										TL072I	◊ SGS-Thomson	
									Low Noise Bipolar-JFET	TL072M	◊† TI	
				4 *	10	35	70	0	Low Noise Bipolar JFET	TL072M	† Motorola	
					13 *	50	80	0	Low Noise Bipolar-JFET	TL072AC	Motorola	
										TL072AC	◊ TI	25
		0.1	10 *	1	3.5	4	80	0	BiFET, Low Power	TL062I	◊ TI	
				1 *	3.5 *	4	80	0	Low Power, Bipolar JFET	TL062AC	◊ SGS-Thomson	
										TL062I	◊ SGS-Thomson	
										TL062M	◊† SGS-Thomson	
									Low Power Bipolar-JFET	TL062AC	◊ TI	30
										TL062M	◊† TI	
				2 *	2	4	80	0	Low-Power J-FET	TL062AC	Motorola	
										TL062M	† Motorola	
				3	13	50	80	0	BiFET, General Purpose	TL082I	◊ TI	
									BiFET General Purpose	TL083I	TI	35
									BiFET, Low Noise	TL072I	◊ TI	
				3 *	13 *	50	80	0	Bipolar JFET	XR082	◊ Exar	
										XR082M	◊† Exar	
										XR083	◊ Exar	
										XR083M	◊† Exar	40
										TL082A	Motorola	
										TL082AC	SGS-Thomson	
										TL082I	◊ SGS-Thomson	
										TL082M	◊† SGS-Thomson	
										TL082AC	◊ TI	45
										TL082M	◊† TI	
										TL083AC	TI	
					13	50	80	0	Bipolar-JFET	TL082A	◊ SGS-Thomson	
				4 *	13 *	25	80	0	JFET Input	TL082M	† Motorola	
	10	6	3 *	1 *	15 *	50	70	0	Multi-Purpose Programmable	µA776C	National	50
	30	5	15		0.45		75		With Dual Comparators	LM613AI	National	
										LM613I	National	
	100	10	3 *	0.4	1	100 *	77	0	Ultra-Low Power	HA5142	Harris	
	150	40	6 *	1 *	10	50	70	0	High Slew Rate	NE5535	Signetics	
	200	500			2 *				Low Noise, Dual Power Supply	AN6556	Panasonic	55
	250	50	7 *	1 *	0.6 *	25	65	0	Half LM244/324	LM258	Motorola	
										LM358	Motorola	
										NE532	Signetics	
		75	10 *	1 *	0.6 *	20	70	0	Single Supply, I/O Operates to Ground	µA798C	National	
	500	120		8	3		70		High Current	**NJM4556**	**◊ NJR (3570)**	60
		200				20	60			MC1458N	◊ Samsung	
							70			NJM4562	◊ NJR	
			—	—	—	20	70	0	General Purpose	IR91458	Sharp	
					2 *				Low Noise, Dual Power Supply	AN6555	Panasonic	
					2	20	70			**NJM4558**	**◊ NJR (3570)**	65
										NJM4559	◊ NJR	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
6	500	200									(Cont'd)	
					4	20	70			**NJM4560**	◊ **NJR (3570)**	
				1	0.25	100	70	0		MB3607	◊ Fujitsu	
			—	1 *	0.5 *	20	70	0	Dual 741C	MC1458	Samsung	
				1	0.5	20	70	0	General Purpose	MC1458	TI	
			—	1 *	0.5 *	20–50	70	0	Dual 741C	XR1458	Exar	5
										CA747C	Harris	
										MC1458	Motorola	
										MC1747C	Motorola	
										µA747C	National	
										LM1458	National	10
										LM747C	National	
										AN6550	Panasonic	
										AN6551	Panasonic	
										AN6552	Panasonic	
										RC747	Raytheon	15
										MC1458	Signetics	
										µA747C	TI	
						25	70	0	Dual 741	SFC2747C	SGS-Thomson	
					0.8 *	20	70	0	Dual 741	LM1458C	SGS-Thomson	
				1.0	0.5	20	86			LM1458	Harris	20
			—	2	0.5 *	20	70	0	Dual Wideband 741C	MC4558C	Motorola	
					1	20	70	0	Dual Wideband 741	MC4558C	SGS-Thomson	
						50	70	0	General Purpose	NE4558	Signetics	
				2 *	1.0 *	20	70	0	Dual Wideband 741C	MC4558C	◊ Samsung	
				3 *	1	20	70	0	Low Noise	XR4739	Exar	25
					1 *	20	70	0	Low Noise	IR94558	Sharp	
					1	20	70	0	Wideband 741	XR4558	◊ Exar	
										RC4558	Raytheon	
										RC4558	TI	
				3	1.5	20	70	0	3 MHz Min. Bandwidth	RC4559	Raytheon	30
										RC4559	TI	
				6 *	2 *	20	70	0	Low Noise	IR94559	Sharp	
				10 *	2.8 *	20	70	0	Wideband 741	XR4560	Exar	
				15 *	5 *	20	70	0	High Slew Rate	IR3F02	Sharp	
			3		150				Low Noise	**BA4558**	**ROHM (3583)**	35
			6 *	0.8 *	0.3	20	70	0	Dual 741C	MC1458	◊ SGS-Thomson	
			10 *	1 *	0.5 *	25	70	0	Automotive Temperature Range (–40°C to 85°C)	SA747C	Signetics	
					10	20	70	0	High Slew Rate 1458	MC1458S	Motorola	
			12 *	1 *	0.8 *	20	70	0	Automotive Temperature Range (–40°C to 85°C)	SA1458	Signetics	
	650	35	20	100	90	10	70	1	High Speed, Fast Settling	MAX428C	◊ Maxim	40
										MAX428M	† Maxim	
		120	10	40 *	30	4	60	0		**VA2705K**	**VTC (3713)**	
	1000	300	6 *	—	9 *	10	65	0	General Purpose, OC Output	TEC1761C	SGS-Thomson	
	1500	500	10	1 *	0.5 *	50	70	0	Dual 741	µA747	◊† Signetics	
	2800	500		41	0.5		86			CA1458	Harris	45
	6000	800	10	4.5	200	0.3	74		High Slew Rate	LH4162	† National	
		1900	10	4.5	200	0.35	70		High Slew Rate	LH4162C	National	
6.3	0.002	0.001	1.3	1.4	0.7	150	62	0		LMC662AC	National	
	0.004	0.002	1.3	1	0.11	200	61			LPC662I	National	
7	–250	50	7 *	0.6	0.2	25	65	0	Low Power, High Gain Bipolar	LM358	TI	50
			7	0.6	0.2	100 *	50	0	Bipolar, High Gain, Low Power	LM2904	TI	
	40	5	15		0.45		70		With Dual Comparators	LM613C	National	
	100	30				25	65		Selectable gain of 10, 100, 400	LM358A	◊ Samsung	
	200	50	—	—	—	25	65	0	Single Supply	TL321C	TI	
	250	50				25	65		Selectable gain of 10, 100, 400	LM358	◊ Samsung	55
						100 *	50			LM2904	◊ Samsung	
						100	85		Single-Supply	**NJM2904**	◊ **NJR (3570)**	
					0.3 *				General Purpose	AN1358	Panasonic	
										AN6562	Panasonic	
									General Purpose, Dual Power Supply	AN6561	Panasonic	60
				1.0		25	88			LM358	Harris	
						100	100			LM2904	Harris	
			7 *	—	—	100 *	50	0	Single Supply	LM2904	SGS-Thomson	
			7	0.2	0.25	25	65	0	Dual Internal Compensation	GL358A	GoldStar	
											(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
											(Cont'd)	
7	250	50										
			7 *	1 *	—	25	65	0	Half LM224	LM358	SGS-Thomson	
					0.3 *	25	65	0	Automotive Temperature Range (−40°C to 85°C)	SA532	Signetics	
	1200	250		1			100			CA2904	Harris	
	3000	-	8	90	1000		62	0	Current Feedback Operational Amplifier	**OP260G**	◊ **AD (3241, 3248)**	
7.5	7	1	15			25	80		Dual 108 Type	LH2308	National	5
	250	50	30	0.4	10	15	70			LH2301A	National	
	800	300	10	1 *	0.5 *	25	70	0	Dual 741C	µA747C	◊† Signetics	
	1500	500	1.5 *	1 *	0.25 *	15	65	3	Matched Dual MC1709C	MC1437	Motorola	
8	−500	75	10 *	1	0.6	20	70	0	Low Power	TL322I	TI	
	500	75	10 *	1 *	0.6 *	20		0	Split Supplies	MC3358	Motorola	10
10	0.0007	0.0001	1 *	0.11	0.05	50	65	0	LinCMOS, Low Bias	TLC27L4I	◊ TI	
	0.001	0.001		0.1	0.5		60		Low voltage	**NJU7002**	◊ **NJR (3571)**	
				0.4	0.4		60		Low Voltage	NJU7022	◊ NJR	
				1.5	3.5		60		Low Voltage	NJU7032	◊ NJR	
	0.001 *	0.001 *	0.7 *	—	0.04 *	10	70	0		TLC27L2M	◊† TI	15
				0.1 *	0.04 *	60	65	0	LinCMOS, Low Bias	TS27L2C	◊ SGS-Thomson	
										TS27L2I	◊ SGS-Thomson	
										TS27L2M	◊† SGS-Thomson	
			2 *	—	0.6 *	10	70	0		TLC27M2M	◊† TI	
				1 *	0.6 *	30	65	0	LinCMOS, Medium Bias	TS27M2C	◊ SGS-Thomson	20
										TS27M2I	◊ SGS-Thomson	
										TS27M2M	◊† SGS-Thomson	
			5 *	—	4.5 *	10	70	0		TLC272C	◊ TI	
										TLC272M	◊† TI	
				3.5 *	5.5 *	10	65	0	LinCMOS, High Bias	TS272C	◊ SGS-Thomson	25
										TS272I	◊ SGS-Thomson	
										TS272M	◊† SGS-Thomson	
		0.005 *	0.7	0.11	0.05	30	70	0	LinCMOS, Low Power, Low Bias Mode	TLC25L2C	TI	
			2	0.635	0.62	20	70	0	LinCMOS, Low Power, Medium Bias Mode	TLC25M2C	TI	
	0.005	0.001 *	0.7 *	0.1	0.04 *	20		0	LinCMOS, Low Bias	TLC27L2C	◊ TI	30
		0.001	0.7 *	0.1	0.05	30	70	0	LinCMOS, Low Bias	TLC27LI	TI	
										TLC27L2I	◊ TI	
		0.001 *	2 *	0.6	0.6 *	20		0	LinCMOS, Medium Bias	TLC27M2C	◊ TI	
		0.001	2 *	0.6	0.6	20	70	0	LinCMOS, Medium Bias	TLC27M2I	◊ TI	
			5 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC272I	◊ TI	35
	0.03	0.015	7	0.30	0.01	100	65	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD2706	◊°† AdvLinear	
		0.03	7	0.7 *	0.7 *	10	60	0	CMOS, Rail to Rail, Single/Dual 5V Supply	ALD4701	◊°† AdvLinear	
	0.05	0.03	7	0.7 *	0.7 *	10	60	0.0	CMOS, Rail to Rail, SIngle/Dual 5V Supply	ALD2701	◊°† AdvLinear	
			40	1.6	6		95	0		**OPA2541A**	**Burr-Brown (3333)**	
	0.1	0.03	10	3	10	40	90	1	JFET Input	MA336	AnalogSys	40
		0.1	10 *	4 *	13 *	25		0	JFET Input	MC35002	† Motorola	
							80	0	JFET Input	MC34002	Motorola	
	0.2			3	13	25		0	BiFET, General Purpose	LF353	TI	
		0.05			13	3	70		J-FET Input	njm072b	NJR	
			10 *	4 *	13 *	25	70	0	Low Noise Bipolar-FET	TL072C	Motorola	45
										TL072C	SGS-Thomson	
										TL072C	◊ TI	
										TC072	Toshiba	
						50	80	0	Low Noise Bipolar-JFET	TL072BC	◊ TI	
		0.1	10 *	3 *	13 *	50	70	0	Bipolar JFET	µA772C	National	50
				4 *	13 *	25	70	0	Dual 351	LF353	SGS-Thomson	
									Dual 351, Wide Band	LF353	Motorola	
										LF353	National	
		0,05			20	3	70		J-FET Input	NJM072	◊ NJR	
	0.4	0.2			20		70		J-FET	**NJM2082**	◊ **NJR (3570)**	55
	500	50	7	1	0.6	20		0	Low Crossover Distortion	MC3458	Motorola	
			10 *	1 *	0.6 *	20	70	0	Low Power	IR3F01	Sharp	
		75	10 *	1 *	0.6 *	20	70	0	Low Power	TL322C	TI	
	650	120		500	150*	10	60	0		**VA2707J**	**VTC (3713)**	
	700	50	20	40 *	150 *	10	58			**VA2707**	**VTC (3713)**	60
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Dual Units											**(Cont'd)**	
											(Cont'd)	
10	700											
		300	—	1 *	0.5 *	20	60	0	Dual 741C	MC1458C	◊ Samsung	
			6 *	0.8 *	0.3	20	60	0	Dual 741C	MC1458C	◊ SGS-Thomson	
			15 *	1.1 *	0.5 *	20	60	0	General Purpose	MC1458C	Motorola	
	1000		15 *	0.014	0.5		60			PA25	† Apex	
		100	15 *	0.8 *	0.8 *	100	60	0	± 3.5A Peak Output	**ULN3755**	**Allegro Micro (3206)**	5
					5	100 *	60	2	± 3.5 A Peak Output	**ULN3753**	**Allegro Micro (3206)**	
12	650	120	20	40 *	30	2	60	0		**VA2705J**	**VTC (3713)**	
	1000	400	5		150				Low Noise	**BA4560**	**ROHM (3583)**	
15	0.015	0.01		4	10	10	80			CA5260	Harris	
	0.05	0.03	25 *	0.48 *	0.16 *	10	70	0	Low Power	ICL7621DM	† Maxim	10
				1 *	1.6	80 *	70	0	Low Power, Dual 1458	ICL7621DC	◊ Harris	
										ICL7621DC	Maxim	
									Low Power, Dual 747	ICL7622DC	Maxim	
	0.2	0.1	10 *	3 *	13 *	50	70	0	Bipolar JFET	µA772LC	National	
		0.2	10 *	2 *	2	3	70	0	Low-Power J-FET	TL062C	Motorola	15
	0.4	0.2			3.5	3	70		J-FET Input	**NJM062**	◊ **NJR (3570)**	
					13	3	70		J-FET Input	NJM082B	NJR	
					20	3	70		J-FET Input	NJM082	◊ NJR	
			10 *	1 *	3.5 *	3	70	0	Low Power Bipolar-JFET	TL062C	SGS-Thomson	
										TL062C	◊ TI	20
				3 *	13 *	25	70	0	Bipolar-JFET	XR082C	◊ Exar	
										XR083C	◊ Exar	
										TL082C	Motorola	
					13	25	70	0	Bipolar-JFET	TL082	◊ SGS-Thomson	
					13 *	25	70	0	Bipolar-JFET	TL082C	SGS-Thomson	25
										TL082C	◊ TI	
										TL083C	TI	
										TC082	Toshiba	
				4 *	13 *	25	70	0	Bipolar-JFET	TL082C	National	
	500	50	20 *	1.1 *	1.4 *	30	70	0		TCA0372	Motorola	30
	700	50	33	40 *	38	2	58	0		**VA2706K**	**VTC (3713)**	
15 *	2500	250	—	0.35 *	1 *	3 *	70 *	0	Output current to 1A	L272	SGS-Thomson	
										L272M	SGS-Thomson	
19	650	120		110	100	5	60	2		**VA2708**	**† VTC (3713)**	
20	0.05	0.1	15 *	0.5	0.6	2	45	0	Low Power	HI8575	† Holt	35
	850	100	40	40 *	38	1	58	0		**VA2706J**	**VTC (3713)**	
75	10	5	1.3	1.5	0.3	400	100		Dual Low Noise	RC4207F	Raytheon	
	30	10	1.3	8	2.7	500	104		Dual Low Noise	RC4227F	Raytheon	
150	20	10	0.7 *	1.5	0.3	250	94		Dual Low Noise	RC4207G	Raytheon	
	50	15	0.4 *	8	2.7	400	100		Dual Low Noise	RC4227G	Raytheon	40
300	0.010			1	1.8 *		86		Precision Low-Power BiFET	**AD648C**	**AD (3244, 3248)**	
410	0.2	0.1	10		13	425	70		J-FET Input	**NJM353**	◊ **NJR (3570)**	
Triple Units												
5	0.05	0.03	10 *	1	1.6	80 *	70	0	Low Power	ICL7631BC	Harris	
										ICL7631BM	† Harris	
										ICL7631BC	◊ Maxim	45
										ICL7631BM	◊† Maxim	
								1	Low Power	ICL7632BC	◊ Maxim	
										ICL7632BM	◊† Maxim	
7	150	50		1*	0.3	20	70	0	Micropower	**CA144**	**Newbridge (3569)**	
10	0.05	0.03	20 *	1	1.6	80	70	0	Low Power	ICL7631CC	Harris	50
										ICL7631CM	† Harris	
										ICL7631CC	◊ Maxim	
										ICL7631CM	◊† Maxim	
								1	Low Power	ICL7632CC	◊ Maxim	
										ICL7632CM	◊† Maxim	55
20	0.05	0.03	30 *	1	1.6	80	70	0	Low Power	ICL7631EC	Harris	
										ICL7631EC	◊ Maxim	
								1	Low Power	ICL7632EC	◊ Maxim	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Triple Units											**(Cont'd)**	
											(Cont'd)	
20	0.05	0.03	30 *	1.4 *	1.6 *	10	70	0	CMOS, Low Power, Programmable Bias	ICL7631EM	◊† Maxim	
										ICL7632EM	◊† Maxim	
Quad Units												
—	200			2.5	0.5	1.2		0	Single Supply, Bipolar Norton Amplifier	LM3900	TI	
0.015	0.05	0.1	0.15	0.8	2	1000	120	0	CMOS, Chopper Stabilized	TSC904C	TeledyneS	
	0.09	0.02	0.15	1.5	2.5	500	110	0	Auto-Zeroed	TSC914A	TeledyneS	5
										TSC914AC	TeledyneS	
0.03	0.12	0.04	0.25	1.5	2.5	300	100	0	Auto-Zeroed	TSC914B	TeledyneS	
										TSC914BC	TeledyneS	
0.1	1.0	0.2		1.0	0.3	2000	115			**OP400A**	**◊† AD (3243, 3246)**	
										OP400E	**AD (3243, 3246)**	10
	5	0.25	2.2		0.13	70	87			LT1179AM	† LinearTech	
						105	90			LT1179AC	LinearTech	
	25	25	1.2	4	0.75	1500	115	0	Precision, Wideband	HA5134A	◊† Harris	
0.12	8	0.25	1.8	0.2	0.04	20	97	0	Single Supply	LT1079AC	LinearTech	
										LT1079AM	† LinearTech	15
0.15	3	1	1.2		0.1	2000	120	0	Low Offset, Low Power	**OP400/883**	**† AD (3243, 3246)**	
	6	0.35	3		0.13	55	84			LT1179M	† LinearTech	
						80	86			LT1179C	LinearTech	
	10	0.35	2.5	0.2	0.04	20	94	0	Single Supply	LT1079C	LinearTech	
										LT1079M	† LinearTech	20
0.18	20	0.8	2	1 *	0.2	1500	100	0	Precision	LT1014AC	LinearTech	
										LT1014AM	† LinearTech	
0.2	50	50	2	4	0.75	1200	100	0	Precision, Low Noise	HA5134	◊† Harris	
0.25	20	20	10	0.3	0.2	1	80	0	Instrumentation Amplifier	INA258W	◊† Burr-Brown	
			15	0.3	0.2	1	80	0	Instrumentation Amplifier	INA258V	◊† Burr-Brown	25
			45	0.3	0.2	1	80	0	Instrumentation Amplifier	INA258U	◊† Burr-Brown	
0.3	3.0	0.5		1.0	0.3	1000	115			**OP400B**	**† AD (3243, 3246)**	
										OP400F	**AD (3243, 3246)**	
	7.0	3.5	2.5	1	0.3	7000	110	0	Low-Offset, Low Power Op Amp	**OP400G**	**◊ AD (3243, 3246)**	
	30	1.5	2.5	1 *	0.2	1200	97	0	Precision	LT1014C	LinearTech	30
										LT1014M	† LinearTech	
	1000	200	15	10		100	80		Low Noise	LM837	National	
0.4	25	10	2		1.4	1000	110			**OP470A**	**† AD (3240, 3247)**	
										OP470E	**AD (3240, 3247)**	
0.45	0.05	0.04	10	3.5	10	150	84			LT1058AC	LinearTech	35
										LT1058AM	† LinearTech	
0.5		0.15	20	4	20					**AD713**	**AD (3247)**	
	0.075	0.025	10 *	4 *	13 *	50	80	0	Precision BIFET	MC35004A	† Motorola	
	0.1	0.05	5	30	12	50		0	Low Input Offset JFET	MC33284	Motorola	
	10	5		3	3	100			Single-Supply	OP492	AD	40
	15	3	5	0.02	0.005	700	90	0		**OP490E**	**AD (3246)**	
									Low Voltage	**OP490A**	**† AD (3246)**	
	50	4	2	2.8 *	0.8 *		97			TLE2024BC	TI	
										TLE2024BI	TI	
	80	100	10	20	8			0		**VA4701J**	**VTC (3713)**	45
				90	40			0		**VA4711J**	**VTC (3713)**	
	300	20	10	1.5	0.7	100	100	0	Symmetrical, Matched	**OP09A**	**◊† AD (3245)**	
										OP09E	**AD (3245)**	
										OP11A	**◊† AD (3245, 3247)**	
										OP11E	**AD (3245, 3247)**	50
0.7	50	4	2 *	2.8 *	0.7	1000	93	0	Low Power Precision	TLE2024BM	◊† TI	
0.75	20	5	4 *	0.02	0.005	500	80	0		**OP490F**	**AD (3246)**	
	55	5	2	2.8 *	0.8 *		94			TLE2024AC	TI	
										TLE2024AI	TI	
0.8	0.075	0.05	15	3.0	8	100	80			LT1058C	LinearTech	55
										LT1058M	† LinearTech	
	25	10	4	6.5 *	6.5	500	105	0	Low Noise	**OP471A**	**† AD (3240, 3247)**	
										OP471E	**AD (3240, 3247)**	
	50	20	4		1.4	800	100			**OP470F**	**AD (3240, 3247)**	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
0.9	0.03	0.025	7	0.3	0.17	100	65	0	Rail-to-Rail, CMOS	ALD4706	◊°† AdvLinear	
0.95	55	5	2 *	2.8 *	0.7	800	90	0	Low Power Precision	TLE2024AM	◊† TI	
1	1µA	500	10	200	350	40	80	1	Wideband	EL2423	‡ Elantec	
										EL2423C	◊ Elantec	
	10	2		20	20	50	80		Includes Multiplexer	SP2400	† Sipex-HSD	5
	25	5	4 *	0.02	0.005	400	80	0		**OP490G**	**AD (3246)**	
	60	6	2	2.8 *	0.8 *		92			TLE2024C	TI	
										TLE2024I	TI	
		10	5		100	100	100			**BA14741A**	**ROHM (3583)**	
			15		0.9	40	75			LM614AI	National	10
										LM614I	National	
1.2	0.0007	0.0001	1 *	0.11	0.05	50	65	0	LinCMOS, Low Bias	TLC27L9C	TI	
	0.0007 *	0.0001 *	1.4 *	0.11	0.05 *	50	65	0	LinCMOS, Low Bias Precision	TLC2769M	◊† TI	
	0.0007	0.0001	2 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC279C	TI	
										TLC279I	TI	15
										TLC279M	† TI	
			2.1 *	0.635	0.62	25	65	0	LinCMOS, Medium Bias	TLC27M9C	TI	
	0.0007 *	0.0001 *	2.1	0.635	0.62	25	65	0	LinCMOS, Precision, Medium Bias Mode	TLC27M9I	TI	
	60	6	2 *	2.8 *	0.7	400	88	0	Low Power Precision	TLE2024M	◊† TI	
1.5	50	20	7	6.5 *	6.5	300	95	0	Low Noise	**OP471F**	**AD (3240, 3247)**	20
2	0.0007	0.0001	1 *	0.1	0.04	50	65	0	LinCMOS, Low Input Offset and Bias Currents	TLC27L4BC	◊ TI	
			2 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC274BI	◊ TI	
	0.0007 *	0.0001 *	2.1	0.635	0.62	25	65	0	LinCMOS, Precision, Medium Bias Mode	TLC27M4BI	TI	
	0.001 *	0.001 *	0.7 *	0.1 *	0.04 *	60	65	0	LinCMOS, Low Bias	TS27L4BC	◊ SGS-Thomson	
	0.001	0.001	0.7 *	0.1	0.05	30	70	0	LinCMOS, Low Bias	TLC27L4BI	◊ TI	25
	0.001 *	0.001 *	1	0.1	0.04	30	77	0	LinCMOS, Low Power, Low Bias Mode	TLC25L4BC	◊ TI	
			2 *	1 *	0.6 *	30	65	0	LinCMOS, Medium Bias	TS27M4BC	◊ SGS-Thomson	
	0.001	0.001	5	2.3	4.5	10	77	0	Low Input Offset and Bias Currents	TLC274BC	◊ TI	
									Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC254BC	TI	
	0.001 *	0.001 *	5 *	3.5 *	5.5 *	10	65	0	LinCMOS, High Bias	TS274BC	◊ SGS-Thomson	30
	0.004 *	0.002 *	6 *	2 *	2.6 *	30	72	0	J-FET Low Power, High Drive	TLE2064BM	◊† TI	
	0.03	0.025	7	0.4	0.7 *	15	65	0	CMOS, Rail-to-Rail	ALD4701A	◊°† AdvLinear	
	0.2	2	10 *	4 *	13 *	50	80	0	High Speed, JFET Input	TDB0347A	SGS-Thomson	
	2	0.8	6	1.8 *	3.4 *		65			TLE2064BC	TI	
	4	2	6	1.8 *	3.4 *		65			TLE2064BI	TI	35
2*	11*	0.3*	15	2	0.45	40	80		With Adjustable Reference	LM614AC	National	
										LM614AM	† National	
										LM614C	National	
										LM614M	† National	
2	30	5			0.6		85		Single Power Supply	M5223	◊ Mitsubishi	40
										M5224	◊ Mitsubishi	
					2		76		Low Noise	M5128A	Mitsubishi	
									Low Noise Bi-FET	M5238	◊ Mitsubishi	
	45	5	5		100	100	100			**BA10324**	**ROHM (3583)**	
	50	10	7 *	1 *	—	50	70	0	Low Power	LM124A	† SGS-Thomson	45
			20	1 *	—	50	70	0	Low Power	LM124A	† National	
	80	15	7 *	1 *	—	50	70	0	Low Power	LM224A	◊ SGS-Thomson	
	150	30	5	2.5	0.5	100	100		Matched Quad Low Voltage, Rail-to-Rail Operation	NE5234	◊† Signetics	
	400	200	5	5.5	3.0	25	100	0	± 5 V power supplies.	**VA4741**	**† VTC (3713)**	
										VA4742	**† VTC (3713)**	50
	500	50	10 *	3 *	8	50	80	0	High Performance Bipolar	MC33074A	Motorola	
										MC34074A	Motorola	
										MC35074A	† Motorola	
2.5	20	1.5	10	0.15	0.05	600000	83	0	Micropower	**OP420F**	**‡ AD (3246)**	
				0.15*	0.05*	6000000	83	0	Micropower	**OP420B**	**‡ AD (3246)**	55
	50	5	10	750 *	0.25 *	400 *	100	0	Quad Micropower OP-21	**OP421B**	**† AD (3246)**	
										OP421F	**AD (3246)**	
	75	10		0.8 *	0.4 *	50	80	0	Quad 741	PM148	AD	
										PM248	**AD (3247)**	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
2.5											(Cont'd)	
	200	40	5 *	1.8	0.8	30	90	0	High Performance	LS404	◊ SGS-Thomson	
		75	3 *	8 *	1	100	86	0	Low Noise, High Performance	HA5104-2	◊† Harris	
										HA5104-5	◊ Harris	
				60 *	12	100	86	1	Wideband	HA5114-2	◊† Harris	
										HA5114-5	◊ Harris	5
	500	50	15	1.5	0.7	100	100	0	Symmetrical, Matched	**OP09B**	**† AD (3245)**	
										OP09F	**AD (3245)**	
										OP11B	**† AD (3245, 3247)**	
										OP11F	**AD (3245, 3247)**	
	750	150	2 *	16 *	5		100 *			MC33079	Motorola	10
3	-100	30	—	0.6	0.3	25	65	0	Bipolar, General Purpose	LM324A	TI	
	0.03	0.005		1	3.5		70			TA75064	Toshiba	
				3	13		70			TA75074	Toshiba	
						200	76			IR9084	Sharp	
	0.2	0.05	10 *	4 *	13 *	25	70	0	Low Noise Bipolar-JFET	TL074BC	◊ TI	15
		0.1	10 *	1 *	3.5 *	4	80	0	Low Power Bipolar-JFET	TL064BC	◊ TI	
						44	80	0	Low Power, Bipolar JFET	TL064BC	◊ SGS-Thomson	
				2 *	2	4	80	0	Low-Power J-FET	TL064BC	Motorola	
				3 *	3	50	80	0	JFET	TL084B	SGS-Thomson	
										TL084BC	SGS-Thomson	20
										TL084BC	TI	
	80	15	20	1 *	—	50	70	0	Low Power	LM224A	National	
	100	30	30			25	65			LM324A	◊ Samsung	
				—	—	100	65	0	High Gain, Single Supply	LM324A	SGS-Thomson	
				1 *	—	25	65	0	Low Power	LM324A	National	25
	200	20		2.5	0.5	1.		0	Norton Amplifier, Bipolar	LM2900	◊ TI	
		30	5 *	3	1.2	25	80	0	Noise 2µV Max	RM4156	† Raytheon	
					1.6 *	50	80	0	Quad 741	XR4741M	◊† Exar	
				3.5 *	1.6 *	50	80	0	Quad 741	HA4741	◊† Harris	
										RC4741	† Raytheon	30
										RM4741-2	† Raytheon	
				19 *	8 *	25	80	0	Uncompensated 4156	RC4157	Raytheon	
										RM4157	† Raytheon	
	250	50	3 *	1.3	6 *	100	80	0	Low Power	HA5154	Harris	
	500	50	2	2.5	1.2	50	80	0		MC33179	◊ Motorola	35
	1000	300		0.6	1	40			General Purpose, Radiation Hardened	HS5104RH	‡ Harris	
3.3	0.004	0.002	1.3		0.11	300	68			LPC660AI	National	
				1.4	0.6	440	68			LMC660AI	National	
3.5	0.1	0.1	1.3		0.11	250	68			LPC660AM	† National	
				1.4	0.5	300	68			LMC660AM	† National	40
	20	4	25	0.79	0.55	100000	85	0	Includes Voltage Reference	TDC4614	◊† TRWLSI	
4	0.004 *	0.002 *	6 *	2 *	2.6 *	30	72	0	J-FET Low Power, High Drive	TLE2064AM	◊† TI	
	0.2	0.1	10.9 *	1.1 *	2	4	70	0	Low Power Bipolar J-FET	TL034M	◊† TI	
			20 *	2.7 *	10	50	75	0	Bipolar J-FET	TL054M	◊† TI	
	2	0.8	6	1.8 *	3.4 *		65			TLE2064AC	TI	45
	4	2	6	1.8 *	3.4 *		65			TLE2064AI	TI	
	125	12	15	750 *	0.25 *	200	96 *	0	Quad, Micropower OP-21	**OP421C**	**† AD (3246)**	
										OP421G	**AD (3246)**	
4.0	30	2.5	15	0.15*	0.05	400000	80	0	Micropower	**OP420G**	**‡ AD (3246)**	
4.5	100	2		1.8	2.1	50	80		Low Power, Single Supply	MC33174	Motorola	50
										MC35174	† Motorola	
	500	75	10 *	3 *	10	25	70	0	High Performance Bipolar	MC33074	Motorola	
										MC34074	† Motorola	
										MC35074	Motorola	
5	-150	30		0.6	0.3	50	70	0	Bipolar, General Purpose	LM224	TI	55
	0.0007	0.0001	2 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC274AI	◊ TI	
			2.1 *	0.635	.62	25	65	0	LinCMOS, Medium Bias	TLC27M4AC	◊ TI	
	0.0007 *	0.0001 *	2.1	0.635	0.62	25	65	0	LinCMOS, Precision, Medium Bias Mode	TLC27M4AI	TI	
	0.001	0.001	0.7	0.1	0.04	20	77	0	Low Input Offset and Bias Currents	TLC27L4AC	◊ TI	
									Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC25L4AC	◊ TI	60
	0.001 *	0.001 *	0.7 *	0.1 *	0.04 *	60	65	0	LinCMOS, Low Bias	TS27L4AC	◊ SGS-Thomson	
	0.001	0.001	0.7 *	0.1	0.05	30	70	0	LinCMOS, Low Bias	TLC27L4AI	◊ TI	

(Continued)

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
											(Cont'd)	
5	0.001	0.001										
			2	0.7	0.6	20	77	0	Low Input Offset and Bias Currents	TLC27M4BC	◊ TI	
									Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC25M4BC	TI	
	0.001 *	0.001 *	2 *	1 *	0.6 *	30	65	0	LinCMOS, Medium Bias	TS27M4AC	◊ SGS-Thomson	
	0.001	0.001	5	2.3	4.5	10	70	0	Low Input Offset and Bias Currents	TLC274AM	◊† TI	
							77	0	Low Input Offset and Bias Currents	TLC274AC	◊ TI	5
									Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC254AC	TI	
	0.001 *	0.001 *	5 *	3.5 *	5.5 *	10	65	0	LinCMOS, High Bias	TS274AC	◊ SGS-Thomson	
	0.005			0.1	0.05				LinCMOS, Low Bias	TLC27L9I	TI	
		0.001	2 *	0.6	0.6	20	70	0	LinCMOS, Medium Bias	TLC25M4AC	TI	
	0.03	0.025	7	0.4	0.7 *	15	65	0	CMOS, Rail-to-Rail	ALD4701B	◊°† AdvLinear	10
	0.05	0.03	10 *	1	1.6	80 *	70	0	High Bias	ICL7641BC	◊ Maxim	
			15 *	1	1.6	80	70	0	Low Power	ICL7641BC	Harris	
										ICL7641BM	† Harris	
										ICL7642BC	Harris	
										ICL7642BM	† Harris	15
										ICL7642BC	◊ Maxim	
										ICL7642BM	◊† Maxim	
				1.4 *	1.6 *	20	76	0	High Bias	ICL7641BM	◊† Maxim	
		0.05	10	1	1	50	80	0	Low Power BIFET	LF444A	National	
	0.1	0.05	10 *	4 *	13 *	50	80	0	Precision BIFET	MC35004B	† Motorola	20
		0.1	10 *	3 *	13 *	50	80	0	Bipolar JFET	µA774BC	National	
										µA774BM	† National	
	0.2	0.05	10 *	10 *	40 *	50		0	High Speed, JFET Input	MC34084A	Motorola	
									High-Speed, JFET Input	MC35084A	† Motorola	
				20 *	80 *	50		0	Decompensated MC34084 for Gain >2	MC34085A	Motorola	25
									Decompensated MC35084 for Gain >2	MC35085A	† Motorola	
		0.1	10	3	13	50	80	0	BIFET, High Performance	LF347B	TI	
			10 *	4 *	13 *	50	80	0	Precision BIFET	MC34004B	Motorola	
									Wideband, Quad 351B	LF347B	Motorola	
										LF347B	National	30
		4	10 *	4 *	13 *	50	80	0	High Speed, JFET Input	TDB0347B	SGS-Thomson	
	100	20	—	0.8	0.4 *	1000	70	0	High Gain, Programmable	LM146	† SGS-Thomson	
		25	—	1 *	0.5 *	50	70	0	High Gain, Programmable	LM148	† SGS-Thomson	
										TDC0149	† SGS-Thomson	
									Quad 741 with Standard npn Input Stage	LM148	† Motorola	35
										LM148	‡ National	
										LM148	† Raytheon	
										LM148	◊† TI	
				4 *	2 *	50	70	0	Wideband Quad 741 for Gains >5	LM149	‡ National	
		40	—	0.8 *	0.5 *	4	60	0	Low Power	TL044M	† TI	40
	150	30	7 *	—	—	100	70	0	High Gain, Single Supply	LM124	† SGS-Thomson	
				1 *	—	50	70	0	Low Power	LM224	◊ SGS-Thomson	
									Low Power, Single Supply	LM258	◊ SGS-Thomson	
		100		0.6 *	0.3 *	50	70	0	Bipolar General Purpose	LM124	◊† TI	
	200	100			1.2	100	70		Single-Supply	**NJM3403A**	◊ **NJR**	**(3570)** 45
	250	80	—	0.8 *	0.5 *	1	60	0	Low Power	TL044C	TI	
	300	50			1.6 *				Low Noise, Dual Power Supply	AN6554	◊ Panasonic	
					1.6	20	70		Single-Supply	NJM4741	◊ NJR	
			5 *	3	1.2	25	80	0	Noise 2 µV Max	RC4156	Raytheon	
				3.5 *	1.6 *	25	80	0	Quad 741	XR4741C	◊ Exar	50
	500	50	—	2 *	1.6 *	20	70	0	Low Noise, Low Power	XR4212M	† Exar	
			7 *	1 *	0.6 *	50	70	0	Low Power	MC3503	† SGS-Thomson	
			10		0.6	50	70			LM3503	† National	
			10 *	1 *	0.6 *	—	70	0	Low Power, Single Supply	TDC3403	† SGS-Thomson	
			10	1	0.6	200	90	0	Low Power	MC3503	Signetics	55
		200	—	3 *	1.5 *	50	70	0	Quad 741, High Gain	XR4136M	◊† Exar	
										µA4136M	† National	
										RM4136	† Raytheon	
									Quad 747, High Gain	RM4136	◊† TI	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
											(Cont'd)	
5	500	200										
			—	3.5	1.5	96	110	0	Programmable	TAB1042	Plessey	
										TAB1043	◊ Plessey	
			4 *	1.5	0.7	50	70	0	Quad Matched 741	**OP11C**	**† AD (3245, 3247)**	
										OP11G	**AD (3245, 3247)**	
			15 *	1	0.5 *	50	70	0	Quad 741	MC4741	† Motorola	5
	2000	150		1			94			CA124	Harris	
6	0.004 *	0.002 *	6 *	2 *	2.6 *	30	72	0	J-FET Low Power, High Drive	TLE2064M	◊† TI	
	0.2	0.05	10 *	3 *	13 *	35	80	0	Low Noise, Bipolar JFET	TL074M	◊† SGS-Thomson	
						50	80	0	Low Noise, Bipolar JFET	TL074I	◊ SGS-Thomson	
									Low Noise Bipolar-JFET	TL074M	◊† TI	10
				4 *	13 *	25	70	0	Low Noise Bipolar-JFET	TL074AC	◊ TI	
						50	80	0	Low Noise Bipolar JFET	TL074BC	Motorola	
										TL074BC	SGS-Thomson	
									Low Noise Bipolar-JFET	TL074AC	Motorola	
										TL074AC	SGS-Thomson	15
		0.1	10 *	1	2.5	4	80	0	BiFET, Low Noise	TL064I	◊ TI	
				1 *	3.5 *	4	80	0	Low Power, Bipolar JFET	TL064AC	◊ SGS-Thomson	
										TL064I	◊ SGS-Thomson	
										TL064M	◊† SGS-Thomson	
									Low Power Bipolar-JFET	TL064AC	◊ TI	20
				2 *	2	4	80	0	Low-Power J-FET	TL064AC	Motorola	
										TL064M	† Motorola	
				3	13	50	80	0	BiFET, General Purpose	TL084I	TI	
										TL084I	TI	
									BiFET, Low Noise	TL074I	◊ TI	25
				3 *	13 *	50	80	0	Bipolar JFET	XR084	Exar	
										XR084M	† Exar	
										TL084A	Motorola	
										TL084A	SGS-Thomson	
										TL084I	◊ SGS-Thomson	30
										TL084M	◊† SGS-Thomson	
										TL084AC	TI	
										TL084M	† TI	
									Indiv. Program	XR096	Exar	
										XR096M	† Exar	35
									Programmable, Bipolar - JFET	XR094	Exar	
										XR094M	† Exar	
										XR095	Exar	
										XR095M	† Exar	
	2	0.8	6	1.8 *	3.4 *		65			TLE2064C	TI	40
	4	2	6	1.8 *	3.4 *		65			TLE2064I	TI	
	100	10	3 *	0.4	1.5	100 *	77	0	Ultra-Low Power	HA5144	Harris	
	200	0.1	10 *	3 *	13 *	50	80	0	High Speed, JFET Input	TL084AC	SGS-Thomson	
		50	—	1	0.5	25	70	0	Bipolar, Low Power, Precision µA741	MC3403	TI	
									Bipolar, Precison (u)A741	LM348	TI	45
				1 *	0.5 *	25	70	0	High Gain, Programmable	LM348	SGS-Thomson	
										TDB0149	SGS-Thomson	
									Quad 741 with Standard npn Input Stage	GL348	GoldStar	
										LM248	Motorola	
										LM348	Motorola	50
										µA248C	National	
										LM248	National	
										LM348	National	
				1.0 *	0.5 *	25	70	0	Quad 741	LM348	◊ Samsung	
			—	4 *	2 *	25	70	0	Wideband Quad for Gains >5	LM349	National	55
	250	20	25	750 *	0.25 *	200 *	90 *	0	Quad OP-21	**OP421H**	**AD (3246)**	
		100	—	0.5	0.4 *	1000	70	0	High Gain, Programmable	LM346	SGS-Thomson	
	500	50	—	1 *	1.2 *	25	70	0	LM324 with Improved Output	RC3403A	◊† Raytheon	
				2	1.6	5	70	0	Quad 741	XR4212C	Exar	
		100	—	1	0.4 *	20	70	0	346 with separate bias resistor for each pair	XR346-2	Exar	60
		200			1	20	70			**NJM2058**	**◊ NJR (3570)**	
					2	20	70			NJM2059	◊ NJR	
			—	1 *	0.5 *	20	70	0	Quad 741	MC4741C	Motorola	
				3 *	1 *	20	60–70	0	Quad 741	XR4136C	◊ Exar	
											(Continued)	

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LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
6	500	200	—	3 *	1 *	20	60–70	0	Quad 741		(Cont'd)	
										µA4136C	National	
										RC4136	Raytheon	
				3	1.7	20	70	0	High Performance Quad µA741	RC4136	TI	
					2	20	70	0	High Performance Bipolar	TL136C	TI	
				10	4	20	70			**NJM2060**	◊ **NJR** **(3570)**	5
			10		1	15	70			LM4136	National	
	650	35	20	100	90	10	70	1	High Speed, Fast Settling	MAX448C	◊ Maxim	
										MAX448M	† Maxim	
		120	10	40 *	30	4	60	0		**VA4705K**	**VTC** **(3713)**	
6.0	40	6.0	25	0.15*	0.05	200000	76	0	Micropower	**OP420H**	◊‡ **AD** **(3246)**	10
6.3	0.002	0.001	1.3	1.4	0.7	300	62			LMC660C	National	
	0.004	0.002	1.3		0.11	200	61			LPC660I	National	
7						25	65	0	Quad Internal Compensation	GL324A	GoldStar	
	–250	50		0.6	0.3	25	65	0	General Purpose	LM324	TI	
						100	50	0	Extended Temperature Range LM324	LM2902	TI	15
	8	2	7 *	0.1	0.05	60	75	0	Wide Supply Range	LP124	National	
	150	30	—	—	—	20	60	0	Single Supply	TA75902	Toshiba	
	250	50			0.3 *				General Purpose	AN1324	Panasonic	
										AN6564	Panasonic	
					13	3	65		Single-Supply	**NJM324**	◊ **NJR** **(3570)**	20
				1		100	85			MB3614	◊ Fujitsu	
										MB3615	◊ Fujitsu	
				1.0		20	86			LM324	Harris	
			7 *	—	—	100 *	50	0	Single Supply	LM2902	SGS-Thomson	
						100	65	0	High Gain, Single Supply	LM324	SGS-Thomson	25
				1 *	0.3 *	25	65	0	Automotive Temperature Range (–40°C to 85°C)	SA534	Signetics	
			30			25	65			LM324	◊ Samsung	
	500	50	—	—	0.6 *	10	70	0	General Purpose	IR3702	Sharp	
	2000	250		1			86			CA324	Harris	
							88			CA224	Harris	30
8		75				20	70			MC3303	◊ Samsung	
	–500	75	10 *	1	0.6	20	70	0	Low Power, Bipolar	MC3303	◊ TI	
	0.030	0.010		5.4	10	20	80		VICR to Negative Rail	CA3410A	Harris	
	500	75	10		0.6	20	70			LM3303	National	
										LM3403	National	35
			10 *	1 *	0.6 *	20	70	0	Single Supply: I/O Operates to Ground	TDF3403	SGS-Thomson	
			10	1	0.6	200	90	0	Low Power	MC3303	Signetics	
9	0.2	0.05	10 *	4 *	10	35	70	0	Low Noise Bipolar JFET	TL074M	† Motorola	
		0.1	10 *	1 *	3.5 *	4	80	0	Low Power Bipolar-JFET	TL064M	◊† TI	
			10	2	6	4		0	Low Power JFET Input	TL064V	Motorola	40
			10 *	4 *	13 *	25	80	0	JFET Input	TL084M	† Motorola	
	20	4	10 *	0.1	0.05	40	75	0	Wide Supply Range	LP324	National	
	500	150	7	1	0.3		70		Low Power Quad Op Amp	LM324A	◊† Signetics	
10		50				20	70			MC3403	◊ Samsung	
	0.0007	0.0001	2 *	2.2	5.3	10	70	0	LinCMOS, High Bias	TLC274I	◊ TI	45
			2.1 *	0.635	0.6	25	65	0	LinCMOS, Low Input Offset and Bias Currents	TLC27M4C	◊ TI	
	0.0007 *	0.0001 *	2.1	0.635	0.62	25	65	0	LinCMOS, Precision, Medium Bias Mode	TLC27M4I	TI	
	0.001	0.001		0.1	0.5		60		Low Voltage	**NJU7004**	◊ **NJR** **(3570)**	
				0.4	0.4		60		Low Voltage	NJU7024	◊ NJR	
				1.5	3.5		60		Low Voltage	NJU7034	◊ NJR	50
			0.7 *	0.01	0.05	30	70	0	LinCMOS, Low Bias	TLC27L4I	◊ TI	
			0.7	0.1	0.04	20	77	0	Low Input Offset and Bias Currents	TLC27L4C	◊ TI	
									Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC25L4C	◊ TI	
						30	70	0	Low Input Offset and Bias Currents	TLC27L4M	◊† TI	
	0.001 *	0.001 *	0.7 *	0.1 *	0.04 *	60	65	0	LinCMOS, Low Bias	TS27L4C	◊ SGS-Thomson	55
										TS27L4I	◊ SGS-Thomson	
										TS27L4M	◊† SGS-Thomson	
	0.001	0.001	2	0.7	0.6	20	70	0	Low Input Offset and Bias Currents	TLC27M4M	◊† TI	
							77	0	Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC25M4C	TI	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
10											(Cont'd)	
	0.001 *	0.001 *	2 *	1 *	0.6 *	30	65	0	LinCMOS, Medium Bias	TS27M4C	◊ SGS-Thomson	
										TS27M4I	◊ SGS-Thomson	
										TS27M4M	◊† SGS-Thomson	
	0.001	0.001	5	2.3	4.5	10	70	0	Low Input Offset and Bias Currents	TLC274C	◊ TI	
										TLC274M	◊† TI	5
							77	0	Low Input Offset and Bias Currents, VDD = 1 to 16 V	TLC254C	TI	
	0.001 *	0.001 *	5 *	3.5 *	5.5 *	10	65	0	LinCMOS, High Bias	TS274C	◊ SGS-Thomson	
										TS274I	◊ SGS-Thomson	
										TS274M	◊† SGS-Thomson	
	0.03	0.03	7	0.7 *	0.7 *	10	60	0	CMOS, Rail to Rail Single/Dual 5V supply	ALD4701	◊°† AdvLinear	10
	0.05	0.03	20 *	1 *	1.6 *	80	70	0	Low Power	ICL7641CC	Harris	
										ICL7641CM	† Harris	
										ICL7642CC	Harris	
										ICL7642CM	† Harris	
										ICL7642CC	◊ Maxim	15
										ICL7642CM	◊† Maxim	
				1.4 *	1.6 *	10	70	0	High Bias	ICL7641CC	◊ Maxim	
										ICL7641CM	◊† Maxim	
	0.1	0.03	10	3	10	40	90	1	JFET Input	MA374	AnalogSys	
		0.05	10	1	1	25	70	0	Low Power BIFET	LF444	National	20
				2	0.6	25	70		Low-Power J-FET Input	LF444C	Motorola	
	0.2	0.05			13	3	70		J-FET Input	**NJM074**	**◊ NJR (3570)**	
			10 *	3 *	13 *	25	70	0	Low Noise, Bipolar JFET	TL074C	◊ SGS-Thomson	
				4 *	13 *	25	70	0	Low Noise Bipolar-JFET	TL074C	Motorola	
										TL074C	◊ TI	25
										TL075C	TI	
										TC075	Toshiba	
				10 *	40 *	25		0	High Speed, JFET Input	MC34084	Motorola	
									High-Speed, JFET Input	MC35084	† Motorola	
				20 *	80 *	25		0	Decompensated MC34084 for Gain >2	MC34085	Motorola	30
									Decompensated MC35084 for Gain >2	MC35085	† Motorola	
		0.1				100	80		Quad JFET input	KF347	◊ Samsung	
			10 *	3	13	25	70	0	BiFET, General Purpose	LF347	TI	
				3 *	13 *	50	70	0	Bipolar JFET	µA774C	National	
				4 *	13 *	25	70	0	Bipolar-JFET	MC34004	Motorola	35
										MC35004	† Motorola	
									Bipolar-JFET, Quad 351	LF347	Motorola	
										LF347	National	
		4	10 *	4 *	13 *	25	70	0	High Speed, JFET Input	TDB0347	SGS-Thomson	
	40	8	10 *	0.1	0.05	30	75	0	Wide Supply Range	LP2902	National	40
	200	100			20		70		Single-Supply	NJM2900	◊ NJR	
										NJM3900	◊ NJR	
	500	50				100	85		Single-Supply	NJM2902	◊ NJR	
			—	1 *	0.6 *	20	70	0	Low Power	IR93403	Sharp	
			10 *	1 *	0.6 *	—	70	0	Low Power, Single Supply	MC3403	SGS-Thomson	45
		200		23		100	50			LM2902	◊ Samsung	
	650	120		110	100	5	60	2		**VA4708**	**† VTC (3713)**	
				500	150*	10	60	0		**VA4707J**	**VTC (3713)**	
	700	50	20	40 *	150 *	10	58	0		**VA4707**	**VTC (3713)**	
11	2	1	10 *	3	10 *	25	70	2	Wideband	MC34184	Motorola	50
11.5	4	2	10 *	3	10 *	25	70	2	Wideband	MC33184	Motorola	
12	650	120	20	40 *	30	2	60	0		**VA4705J**	**VTC (3713)**	
12.5	25	13	10 *	3	10 *	25	70	2	Wideband	MC35184	† Motorola	
15	0.040	0.030		5.4	10	20	70		VICR to Negative Rail	CA3410	Harris	
	0.2	0.1	10 *	3 *	13 *	50	70	0	Bipolar-JFET	µA774LC	National	55
		0.2	10 *	2 *	2	3	70	0	Low-Power J-FET	TL064C	Motorola	
	0.4	0.2			3.5	3	70		J-FET Input	**NJM064**	**◊ NJR (3570)**	
					13	3	70		J-FET Input	NJM084	◊ NJR	
			10 *	1 *	3.5 *	3	70	0	Low Power Bipolar-JFET	TL064C	SGS-Thomson	
										TL064C	◊ TI	60
											(Continued)	

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LINEAR

LINEAR—Operational Amplifiers-Characteristics (Cont'd)

Offset Voltage mV (25°C)	Bias Current nA (25°C)	Offset Current nA (25°C)	Voltage Drift µV/°C	Band-width MHz	Slew Rate V/µs	Voltage Gain V/mV	CMRR dB	Comp.	Comments	Device	Source	Line
Quad Units											**(Cont'd)**	
											(Cont'd)	
15	0.4	0.2	10 *									
				3 *	13 *	25	70	0	Bipolar-FET	XR084C	Exar	
										TL084	Motorola	
										TL084	SGS-Thomson	
										TL084C	TI	
										TL085C	TI	5
									Indiv. Program.	XR096C	Exar	
									Programmable Bipolar-JFET	XR094C	Exar	
										XR095C	Exar	
				25 *	13 *	25		0	JFET Input	TL084C	Motorola	
	400	0.2	10 *	3 *	13 *	25	70	0	High Speed, JFET Input	TL084C	SGS-Thomson	10
	650	120	40	40 *	38	1	60	0		**VA4706J**	**VTC (3713)**	
20	0.01	0.005		10	4		55			CA5470	Harris	
	0.05	0.03	30 *	0.044 *	0.016 *	10	70	0	Low Bias	ICL7642M ◊†	Maxim	
				1	1.6	80	70	0	Low Power	ICL7641EC	Harris	
										ICL7642EC	Harris	15
										ICL7642EC ◊	Maxim	
				1.4 *	1.6 *	10	70	0	High Bias	ICL7641EC ◊	Maxim	
										ICL7641EM ◊†	Maxim	
	0.050	0.100	15*	0.5	0.6	2	45	0	Low Power	HI8573	Holt	
30	0.05	0.1	15 *	1 *	0.8 *	1 *	70 *	0	Low Power	MC14573	Motorola	20
	1.0	0.2		0.8*	1.0 *	1000		0	Telecom	MC143404	Motorola	
					1.5 *	200		0	Telecom	MC143403	Motorola	

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LINEAR

LINEAR—Phase Locked Loops/Synthesizers

Function	Device	Source
AM/FM Digital PLL Frequency Synthesizer	DS8908B	National
Count Extender, ÷4, ÷10/11 becomes ÷40/41	SP8790A	† Plessey
	SP8790B	Plessey
Count Extender, ÷8 (extends division ratio of a two modulus prescaler while retaining the difference, ie ÷10/11 becomes ÷80/81)	SP8794A	† Plessey
	SP8794B	Plessey
Counter Logic Control	SP8790	Plessey
Counter Logic Control (use with MC12012 for high frequency programming)	MC12014	Motorola
Crystal Controlled Frequency Synthesizer (50 to 600 MHz)	PIN604	OnChip Sys
Crystal Oscillator (2 to 20 MHz)	MC12061	Motorola
Crystal Oscillator (250 kHz to 60 MHz)	CK1100A	Solarise
	CK1114A	Solarise
	CK1144A	Solarise
	CK1145A	Solarise
Filter, Digital PLL	CD54HCT297	† Harris
	CD54HC297	† Harris
	CD74HCT297	Harris
	CD74HC297	Harris
	74HC297	Signetics
Frequency Synthesizer, Low Power	TDD1742T	Signetics
Frequency Synthesizer with Prescaler (0.45 to 1.15 GHz)	**UMA1010**	**Signetics (3590)**
FSK Modulator/Demodulator (See also Telecommunications)	XR210	Exar
	XR210M	† Exar
	XR2211C	Exar
	XR2211M	† Exar
	XR2212M	† Exar
	XR2211C	Raytheon
	XR2211M	† Raytheon
Intercarrier Frequency Modulator (internal PLL and Comparator)	4002Y-A	NCM
Mixer, Double Balanced Analog Mixer	MC12002	Motorola
Phase Comparator	MM54C932	† National
	MM74C932	National
Phase Comparator and Programmable Counter	MC14568BA	† Motorola
	MC14568BC	Motorola
Phase Detector- (CMOS)	IMI4345	IMI
Phase Locked Frequency Controller	UC1633	Unitrode
	UC1633/883	Unitrode
	UC1634	Unitrode
	UC1634/883	Unitrode
	UC2633	Unitrode
	UC2634	Unitrode
	UC3633	Unitrode
	UC3634	Unitrode
Phase Locked Loop	XR215	Exar
	XR215M	† Exar
	MX406	MX-COM
	μPD2833	† NEC
	μPD2834	† NEC
	SL652	Plessey
	SDA2112-2	Siemens
	NE564	Signetics
	NE568	Signetics

(Continued)

Function	Device	Source
Phase Locked Loop (Cont'd)	SE564	† Signetics
	SN74LS297	TI
Phase Locked Loop (CMOS)	CD4046B	† Harris
	CD4046BE	Harris
	MC14046BA	† Motorola
	MC14046BC	Motorola
	CD4046BC	National
	CD4046BM	† National
	74HCT7046A	Signetics
	74HC4046A	Signetics
	74HC7046A	Signetics
Phase Locked Loop, High Frequency	NE564	Allegro Micro
	SE564	† Allegro Micro
Phase Locked Loop, Programmable Divider (binary 10-bit counter)	MB87086A	Fujitsu
Phase Locked Loop, Programmable Divider (binary 14-bit counter)	MB87087	Fujitsu
Phase Locked Loop Synthesizer, (AM/FM/TV sound)	DS8911	National
Phase Locked Loop System (multiplier, VCO and Op Amp)	XRS200	Exar
Phase Locked Loop, with Constant Curent Output Charge Pump	MB87090	Fujitsu
Phase Locked Loop, with 1.1 GHz Prescaler, Two Modulus (1) 64/65 or 128/129)	**MB1501L**	**Fujitsu (3409)**
Phase Locked Loop, with 2,5 GHz Prescaler (BS tunes and CATV applications)	MB1518	Fujitsu
Phase Locked Loop, Two Modulus (1 64/65 or 128/129)	MB87014A	Fujitsu
Phase-Frequency Detector	MC12040	Motorola
Phase-Locked Loop (demodulates FM/FSK signals)	LMC568	National
Phase-Locked Loop Synthesizer (1.5 GHz)	Q3036	◊† Qualcomm
Phase-Locked Loop (to 50 MHz)	LB1125AF	AT&T
Phase-Locked Oscillator	ML405	MicroLinear
PIF Processor/PLL	μPC1820	NEC
PIF/SIF Processor/PLL	μPC1821	NEC
PLL + Prescaler	μPD2835/6	NEC
PLL, Controller, LCD Driver for Radio Receiver (CMOS)	LC7230	Sanyo
PLL for Radio Receiver (CMOS)	LC7217	Sanyo
	LC7218	Sanyo
PLL for Radio Receiver (NMOS)	LM7001	Sanyo
PLL Frequency Synthesizer	TBB200	Siemens
PLL Frequency Synthesizer Controller (for AM/FM radio)	NJU3200	◊ NJR
PLL Frequency Synthesizer (for CB Transceiver)	NJU6103	◊ NJR
PLL Frequency Synthesizer (for DTS)	NJU6104	◊ NJR
PLL Frequency Synthesizer (parallel input)	IMI145151	IMI

Function	Device	Source
PLL Frequency Synthesizer (4-bit data bus input)	IMI145145	IMI
	IMI145146	IMI
PLL Peripheral (VCO, mixer, amp for CB)	TA7310	Toshiba
PLL, Ranges to UHF Receiver (NMOS)	LM7005	Sanyo
PLL Stereo Decoder	TCA4511-2	Siemens
PLL Synthesizer (100 MHz)	HD153202	Hitachi
PLL Tuning Circuit, 1.3 GHz Prescaler	MC44802	Motorola
PLL with Prescaler, 1.1 GHz (÷64/65, 128/129)	**MB1501**	**Fujitsu (3409)**
PLL with Prescaler, 520 MHz (÷32/33, 64/65)	MB1504	Fujitsu
Prescaler ÷ 2 (500 MHz), 4, 8, 64 (1 GHz)	μPB565	NEC
Prescaler ÷ 8/9, 16/17, 32/33 (150 MHz)	μPB555	NEC
Prescaler ÷ 8 (1 GHz)	μPB567	NEC
Prescaler ÷ 10/11, 20/22, 40/44 (150 MHz)	μPB551	NEC
Prescaler ÷ 10/11 (50 MHz), 20/22, 40/44, (150 MHz)	μPB552	NEC
	μPB554	NEC
Prescaler ÷ 32/33, 64/65 (550 MHz)	μPB569	NEC
Prescaler ÷ 64/68, (500 MHz), 128/136 (1 GHz)	μPB568	NEC
Prescaler ÷ 64, 128, 256 (1.3 GHz)	μPB564	NEC
Prescaler, for FM Radio	DS8629	National
	SP8629	Plessey
Prescaler for Safety Counter	SLE4502	Siemens
Prescaler, Low Power (÷ 64/65) 520 MHz	MC12025	Motorola
Prescaler, Low Power (÷16/17), 150 MHz	μPB556	NEC
Prescaler, Low Power, (÷64/65/128/136), 1 GHz	μPB562	NEC
Prescaler, Low Power (÷64), 1.1 GHz	MC12073	Motorola
Prescaler, Low Power (÷64), 225 MHz	MC12023	Motorola
Prescaler, Low Power (÷256), 1.1 GHz	MC12074	Motorola
Prescaler, Low Power VHF/UHF (divide by 64/256)	DS8673	National
	DS8674	National
Prescaler/PLL, 1.3 GHz (÷256)	MC12076	Motorola
	MC12078	Motorola
Prescaler, to 2.4 GHz	SDA3203	Siemens
Prescaler, UHF (÷2), 740 MHz	MC12090	Motorola
Prescaler, Dual Modulus	TBB102	Siemens
Prescaler, Two Modulus GaAs (1 64/65, 128/129, or 256/257)	MB50202	Fujitsu
Prescaler, Two Modulus GaAs (1 64/65, 128/129, or 256/257)	MB50201	Fujitsu

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LINEAR

LINEAR—Phase Locked Loops/Synthesizers (Cont'd)

Function	Device	Source	Line
Prescaler, Two Modulus Selectable ÷64/65 or ÷128/129 (for positive edge-triggered synthesizers)			
	MC12022A	Motorola	
	MC12022B	Motorola	
Prescaler, Two Modulus with VCO (1) 128/129)			
	MB551	Fujitsu	
Prescaler, 0.05 to 1.3 GHz, Divide by 256			
	SP4742	Plessey	
Prescaler, 0.05 to 1.3 GHz, Divide by 4056 and 8192			
	SP4780	Plessey	5
Prescaler, 0.08 to 1 GHz, Divide by 256			
	SP4642	Plessey	
	SP4652	Plessey	
	SP4653	Plessey	
Prescaler, 0.08 to 1 GHz, Divide by 64			
	SP4632	Plessey	
Prescaler, 1 GHz (1 1, 2, or 8)			
	MB511	Fujitsu	10
Prescaler, 1.1 GHz (÷64/65, 128/129)			
	MB501LV	Fujitsu	
	MB501SL	Fujitsu	
	MB509	Fujitsu	
Prescaler, 1.6 GHz (÷128/129)			
	MB505-16	Fujitsu	
Prescaler, 1.6 GHz (÷128/129, 256/257)			
	MB507	Fujitsu	15
Prescaler, 2.2 GHz, Divide by 2			
	U822	AEG Corp	
Prescaler, 2.2 GHz, Divide by 4			
	U824	AEG Corp	
Prescaler, 2.3 GHz (÷128/130/256/258/512/514)			
	MB508	Fujitsu	
Prescaler, 2.4 GHz (÷64/128/256)			
	MB506	Fujitsu	
Prescaler, 2.7 GHz (÷128/144/256/272)			
	MB510	Fujitsu	20
Prescaler, 150 MHz, Divide by 16/17			
	μPB553A	NEC	
Prescaler, 200 MHz (÷10/20)			
	MB467	Fujitsu	
Prescaler, 200 MHz (÷16/17, 32/33)			
	MB503	Fujitsu	
Prescaler, 520 MHz (÷32/33, 64/65)			
	MB504	Fujitsu	
	MB504L	Fujitsu	25
	MB504LV	Fujitsu	
Serial Input PLL System Block (10 MHz, 3–5V, 3.5 mA)			
	MB87006A	Fujitsu	
Serial Input PLL System Block (15 MHz, 3–5V, 3 mA)			
	MB87073	Fujitsu	
	MB87076	Fujitsu	
Serial Input PLL System Block (95 MHz, 5V, 10 mA)			
	MB87086	Fujitsu	30
Serial Input PLL System Block (180 MHz, 5V, 8 mA)			
	MB87014	Fujitsu	
Synthesizer, Mobile Radio (2 device set)			
	NJ8811	Plessey	
	NJ8812	Plessey	
	SP8901	Plessey	
	SP8906	Plessey	35
Synthesizer, PLL			
	IMI145155	IMI	
	IMI145156	IMI	
	IMI145157	IMI	
	IMI145158	IMI	
	MC145106	◊ Motorola	40
	MC145145	◊ Motorola	
	MC145146	◊ Motorola	
	MC145151-2	◊ Motorola	
	MC145152-2	◊ Motorola	
	MC145155-2	◊ Motorola	45
	MC145156-2	◊ Motorola	
		(Continued)	

Function	Device	Source	Line
Synthesizer, PLL		(Cont'd)	
	MC145157-2	◊ Motorola	
	MC145158-2	◊ Motorola	
	MC145159	◊ Motorola	
	DS8906	National	50
	DS8907	National	
	DS8908	National	
	HEF4750	Signetics	
	SAA1057	Signetics	
	TC9106B	Toshiba	55
	TC9109B	Toshiba	
	TC9111B	Toshiba	
	TC9300-003A	Toshiba	
	TC9300-008	Toshiba	
Synthesizer, PLL (reference oscillator, two-output phase detector, 10-bit prog. divide-by-N counter)			
	IMI145152	IMI	60
Synthesizer, PLL Serial Input System Block (13 MHz, 5V, 3 mA)	MB87001A	Fujitsu	
Synthesizer (programmable divider, to 1021 channels, adder, phase comparator)			
	HC0320	Hughes	
Synthesizer, 25 MHz			
	ST1172A	STEL	
Tone Decoder	XRL567C	◊ Exar	
	XRL567M	◊† Exar	65
	XR2211C	Exar	
	XR2211M	† Exar	
	XR2213C	◊ Exar	
	XR2213M	◊† Exar	
	XR567AC	◊ Exar	70
	XR567AM	◊† Exar	
	LM567	† National	
	LM567C	National	
	XR2211C	Raytheon	
	XR2211M	† Raytheon	75
	LM567C	Samsung	
	NE567	Signetics	
	SE567	† Signetics	
Tone Decoder/Phase-Locked Loop			
	NJM567	NJR	
VCO	SP1658	Plessey	80
	SN74LS624	TI	
	SN74LS628	TI	
VCO and Phase Comparator			
	LM565	Motorola	
	LM565	National	
	LM565C	† National	85
	SE565	† Signetics	
	TA7133	Toshiba	
VCO Function Generator, (Includes square and triangular waveforms - but not sine.)			
	XR2207	Exar	
	XR2207C	Exar	
	XR2209C	Exar	90
	XR2209M	† Exar	
	LM566	National	
	LM566C	† National	
	XR2207C	Raytheon	
	XR2207M	† Raytheon	95
	NE566	Signetics	
	SE566	† Signetics	
VCO Phase Comparator, Multiplier			
	SL651	Plessey	
VCO Phase Comparator, Multiplier, with Auxiliary Amplifier	SL650	† Plessey	
VCO Waveform Generator (includes sinewave output among its functions)			
	XR205	Exar	100
	XR2206	† Exar	
	XR2206	Exar	
	XR2206C	Exar	
	XR2206M	† Exar	
	XR8038	◊ Exar	105
	XR8038A	◊ Exar	
		(Continued)	

Function	Device	Source	Line
VCO Waveform Generator (includes sinewave output among its functions)		(Cont'd)	
	XR8038M	◊† Exar	
	ICL8038C	Harris	
	ICL8038M	† Harris	
VCO, Dual	SN54S124	† TI	110
	SN74LS625	TI	
	SN74LS629	TI	
	SN74S124	TI	
VHF/UHF Prescaler (÷4)			
	CA3199E	Harris	
Video Dot Clock Generator			
	ICS1394	IntCirSys	115
Dual (for 46/49 MHz cordless phone)			
	MC145160	Motorola	
	MC145166	Motorola	
	MC145167	Motorola	
Dual Tone Decoder			
	XR2567C	Exar	
	XR2567M	† Exar	120
Two Modulus Control and Phase Comparator (for SP8793)	MJ8820	Plessey	
Two Modulus Prescaler (÷4/8)			
	11C91C	National	
	11C91M	† National	
	SP8740	Plessey	
Two Modulus Prescaler (÷5/6)			
	MC12009	Motorola	125
Two Modulus Prescaler (÷6/7)			
	SP8741	Plessey	
Two Modulus Prescaler (÷8/9)			
	MC12011	Motorola	
	SP8743	Plessey	
Two Modulus Prescaler (÷10/11)			
	11C90C	National	
	11C90M	† National	130
	SP8643	Plessey	
	SP8647	Plessey	
	SP8685	Plessey	
	SP8690	Plessey	
Two Modulus Prescaler (÷40/41)			
	SP8793	Plessey	135
	SP8793A	Plessey	
Two Modulus Prescaler (÷64/65/128/129), 900 MHz			
	μPB566	NEC	
Two Modulus Prescaler (÷64/65, 128/129)			
	MB501	Fujitsu	
	MB501L	Fujitsu	
Two Modulus Prescaler (÷64/256)			
	CA3163	Harris	140
	CA3179	Harris	
Two Modulus Prescaler (÷80/81)			
	SP8792	Plessey	
	SP8792A	Plessey	
Two Modulus Prescaler (÷3/4)			
	SP8720	Plessey	
Two Modulus Prescaler (÷10/11)			
	MC12013	Motorola	145
Two Modulus Prescaler (÷20/21), 225 MHz			
	MC12019	Motorola	
Two Modulus Prescaler (÷32/33), 225 MHz			
	MC12015	Motorola	
Two Modulus Prescaler (÷40/41), 225 MHz			
	MC12016	Motorola	
Two Modulus Prescaler (÷64/65/32/33/16/17), 500 MHz	μPB571	NEC	
Two Modulus Prescaler (÷64/65), 225 MHz			
	MC12017	Motorola	150
Two Modulus Prescaler (÷64/256)			
	MC12071	Motorola	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Phase Locked Loops/Synthesizers (Cont'd)

Function	Device	Source	Line
Two Modulus Prescaler (÷80/81/40/41/20/21), 500 MHz	μPB572	NEC	
Two Modulus Prescaler (÷128/129), 520 MHz	MC12018	Motorola	
Four Modulus Prescaler (÷239,240/255/256)	SP8906	Plessey	
Four Modulus Prescaler (÷478/480/510/512)	SP8901	Plessey	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Power Supply Circuits

Voltage Regulators

Fixed, Positive

Output Voltage, V	Output Current (mA)	Device	Source	Line
1.1	3	**S81211**	**Seiko Instr (3586)**	
2	100	**NJM78L02A**	**NJR (3570)**	
	180	TK11420	Toko	
2.2	35	LBR022BS	AT&T	
2.5	25	**S81225**	**Seiko Instr (3586)**	5
	180	TK11425	Toko	
		TK11625	Toko	
2.6	100	μA78L02AC ◊	TI	
		μA78L02C ◊	TI	
		TA7316	Toshiba	10
3	30	**S81230**	**Seiko Instr (3586)**	
	180	TK11430	Toko	
		TK11630	Toko	
3.5	180	TK11435	Toko	
		TK11635	Toko	15
4	100	AN78L04	Panasonic	
	180	TK11440	Toko	
		TK11640	Toko	
4.5	180	TK11445	Toko	
		TK11645	Toko	20
4.6	35	LBR046AS	AT&T	
5	35	LBR050AB	AT&T	
		LBR050AC	AT&T	
		LBR050AK	AT&T	
		LBR050AS	AT&T	25
	40	**S81350**	**Seiko Instr (3586)**	
	50	LM2936	National	
		S81250	**Seiko Instr (3586)**	
	100	M5278L05	Mitsubishi	
		LM2931-5	Motorola	30
		LM2931A-5.0	Motorola	
		MC78L05AC	Motorola	
		MC78L05C	Motorola	
		μA78L05C	National	
		LM140LA-5	National	35
		LM78L05A	National	
		LM78L05C	National	
		LP2950A	National	
		LP2950C	National	
		LP2951A ◊	National	40
		LP2951C ◊	National	
		NJM2930	NJR	
		NJM78L05A	**NJR (3570)**	
		AN78L05	Panasonic	
		MC78L05	Samsung	45
		MC78L05AC	Samsung	
		μA78L05AC ◊	TI	
		μA78L05C ◊	TI	
		TA78L005	Toshiba	
		TA78L005A	Toshiba	50
	150	LM2930-5	TI	
		LM330-5	TI	
	180	TK11450	Toko	
		TK11650	Toko	
	200	LM109H	Motorola	55
		LM209H	Motorola	
		LM309H	Motorola	
		LM109H †	National	
		LM2930-5	National	
		LM309H	National	60
		LM330-5	National	
		SFC2109 †	SGS-Thomson	

(Continued)

Output Voltage, V	Output Current (mA)	Device	Source	Line
5	200		(Cont'd)	
		SFC2209	SGS-Thomson	
		SFC2309	SGS-Thomson	
	250	LM342-5	National	65
	300	AN78N05	Panasonic	
	400	L4805	SGS-Thomson	
	500	M5F78M05	Mitsubishi	
		MC78M05C	Motorola	
		μA78M05C	National	70
		μA78M05M †	National	
		LM341-5	National	
		LM78M05	National	
		NJM78M05A	**NJR (3570)**	
		MC78M05C	Samsung	75
		L2605	SGS-Thomson	
		L4705	SGS-Thomson	
		L487	SGS-Thomson	
		L78M05C	SGS-Thomson	
		TEA7034	SGS-Thomson	80
		μA78M05C	TI	
		μA78M05M †	TI	
	750	CS925	Cherry Semi	
		CS935	Cherry Semi	
		LM2935T	Motorola	85
		LM2925	National	
		LM2935	National	
		LM2935	SGS-Thomson	
	1000	M5F7805	Mitsubishi	
		LM109K †	Motorola	90
		LM209K	Motorola	
		LM309K	Motorola	
		LM109K ‡	National	
		LM1575-5.0 †	National	
		LM2575-5.0	National	95
		LM2940C-12	National	
		LM2940C-15	National	
		LM2940C-5.0	National	
		LM2940T-5	National	
		LM309K	National	100
		NJM7805A	**NJR (3570)**	
		AN7805	Panasonic	
		MC7805C	Samsung	
		μA7805 †	SGS-Thomson	
		L7805 †	SGS-Thomson	105
		L7805C	SGS-Thomson	
		SFC2109M	SGS-Thomson	
		SG109 †	**SiliconG (3642)**	
		SG309	**SiliconG (3642)**	
		μA7805C	TI	110
		TA78005A	Toshiba	
		UC7805A †	Unitrode	
		UC7805AC	Unitrode	
	1500	GL7805	GoldStar	
		LAS15A05	Lambda	115
		LAS1505	Lambda	
		LT1086-5C	LinearTech	
		LT1086-5M †	LinearTech	
		42094-005	Micropac	
		LM140-5 †	Motorola	120
		LM340-5	Motorola	
		MC7805 †	Motorola	
		MC7805A †	Motorola	
		MC7805AC	Motorola	
		MC7805C	Motorola	125
		TL780-5C	Motorola	
		μA7805C	National	
		μA7805M †	National	
		LM140-5 †	National	
		LM140A-5 †	National	130
		LM2931-5	National	
		LM2940-5	National	
		LM340-5	National	
		LM340A-5	National	
		LM7805	National	135
		L7805AC	SGS-Thomson	
		SG140-05 †	**SiliconG (3642)**	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators

Fixed, Positive (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
5	1500		(Cont'd)	
		SG340-05	**SiliconG (3642)**	
		SG7805	**† SiliconG (3642)**	
		SG7805A	**† SiliconG (3642)**	
		SG7805AC	**SiliconG (3642)**	
		SG7805C	**SiliconG (3642)**	5
		LM340-5	TI	
		TL780-05C	TI	
		UC7805	† Unitrode	
		UC7805C	Unitrode	
	2000	LAS16A05	Lambda	10
		LAS1605	Lambda	
		LAS1605B	Lambda	
		L78S05	† SGS-Thomson	
		L78S05C	SGS-Thomson	
	2200	TL780-05	TI	15
	3000	LAS14A05	Lambda	
		LAS1405	Lambda	
		LAS1405B	Lambda	
		LM123	† LinearTech	
		LM323	LinearTech	20
		LM323A	† LinearTech	
		LT123A	† LinearTech	
		LT323A	† LinearTech	
		LM123	† Motorola	
		LM123A	† Motorola	25
		LM223	Motorola	
		LM223A	Motorola	
		LM323	Motorola	
		LM323A	Motorola	
		MC78T05	† Motorola	30
		MC78T05A	† Motorola	
		MC78T05AC	Motorola	
		MC78T05C	Motorola	
		LM123	† National	
		LM137HV	† National	35
		LM323	National	
		LM323A	National	
		KA78T05C	Samsung	
		LM323	Samsung	
		LM123	† SGS-Thomson	40
		LM323	SGS-Thomson	
		CJSE033	Solitron	
		CJSE034	Solitron	
		CJSE035	Solitron	
	5000	LAS19A05	Lambda	45
		LAS1905	Lambda	
		LAS1905B	Lambda	
		LT1003C	LinearTech	
		LT1003M	† LinearTech	
		42050-055	Micropac	50
		42052-055	Micropac	
		μA78H05	National	
		μA78H05A	National	
		CJSE806	Solitron	
		CJSE807	Solitron	55
		CJSE808	Solitron	
	8000	LAS39A05	Lambda	
		LAS39A05K	Lambda	
		LAS3905	Lambda	
		LAS3905K	Lambda	60
	10000	MLM196-05	Micropac	
		MLM396-05	Micropac	
		42050-510	Micropac	
		42052-510	Micropac	
		μA78P05	National	65
	20000	42055-520	Micropac	
5 (dual output)	50	CA3276E	Harris	
5/5 (dual)	750	**SG29055**	**SiliconG (3642)**	
		SG29055A	**SiliconG (3642)**	

Output Voltage, V	Output Current (mA)	Device	Source	Line
5.1	35	LBR051AB	AT&T	70
5.2	35	LBR052AS	AT&T	
6	100	**NJM78L06A**	**NJR (3570)**	
		AN78L06	Panasonic	
		TA78L006	Toshiba	
		TA78L006A	Toshiba	75
	300	AN78N06	Panasonic	
	500	M5F78M06	Mitsubishi	
		MC78M06C	Motorola	
		μA78M06C	National	
		μA78M06M	† National	80
		LM78M06	National	
		NJM78M06A	NJR	
		AN78M06	Panasonic	
		MC78M06C	Samsung	
		L78M06C	SGS-Thomson	85
		μA78M06C	TI	
	1000	M5F7806	Mitsubishi	
		LM7806	National	
		NJM7806A	**NJR (3570)**	
		AN7806	† Panasonic	90
		MC7806C	Samsung	
		μA7806	SGS-Thomson	
	1500	GL7806	GoldStar	
		LAS15A06	Lambda	
		LAS1506	Lambda	95
		LM340-6	Motorola	
		MC7806	† Motorola	
		MC7806A	† Motorola	
		MC7806AC	Motorola	
		MC7806C	Motorola	100
		μA7806C	National	
		L7806	† SGS-Thomson	
		L7806AC	SGS-Thomson	
		L7806C	SGS-Thomson	
		SG140-06	**† SiliconG (3642)**	105
		SG340-06	**SiliconG (3642)**	
		SG7806	**† SiliconG (3642)**	
		SG7806A	**† SiliconG (3642)**	
		SG7806AC	**SiliconG (3642)**	
		SG7806C	**SiliconG (3642)**	110
		μA7806C	TI	
	2000	CJSE017	Solitron	
		CJSE019	Solitron	
		CJSE021	Solitron	
	3000	KA78T06C	Samsung	115
	5000	CJSE800	Solitron	
		CJSE801	Solitron	
		CJSE802	Solitron	
	10000	42050-610	Micropac	
		42052-610	Micropac	120
	20000	42055-620	Micropac	
6.2	100	μA78L62C	National	
		LM78L62	National	
		MC78L62AC	Samsung	
		μA78L06AC	◊ TI	125
		μA78L06C	◊ TI	
7	100	AN78L07	Panasonic	
		TA78L007	Toshiba	
		TA78L007A	Toshiba	
	300	AN78N07	Panasonic	130
	500	M5F78M07	Mitsubishi	
		AN78M07	Panasonic	
	1000	M5F7807	Mitsubishi	
		AN7807	Panasonic	
	10000	42050-710	Micropac	135
		42052-710	Micropac	
	20000	42055-720	Micropac	
7.5	100	TA78L075	Toshiba	
		TA78L075A	Toshiba	

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators

Fixed, Positive (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
7.5			(Cont'd)	
	1000	L78S75	† SGS-Thomson	
		L7875	† SGS-Thomson	
		L7875C	SGS-Thomson	
8	100	MC78L08AC	Motorola	
		MC78L08C	Motorola	5
		NJM78L08A	**NJR (3570)**	
		AN78L08	Panasonic	
		MC78L08AC	Samsung	
		μA78L08AC	◊ TI	
		μA78L08C	◊ TI	10
		TA78L008	Toshiba	
		TA78L008A	Toshiba	
	150	LM2930-8	TI	
	200	LM2930-8	National	
	300	AN78N08	Panasonic	15
	500	M5F78M08	Mitsubishi	
		MC78M08C	Motorola	
		μA78M08C	National	
		μA78M08M	† National	
		LM78M08	National	20
		NJM78M08A	**NJR (3570)**	
		AN78M08	Panasonic	
		MC78M08C	Samsung	
		μA2808	SGS-Thomson	
		L78M08C	SGS-Thomson	25
		μA78M08C	TI	
	1000	M5F7808	Mitsubishi	
		LM2940T-8	National	
		LM7808	National	
		NJM7808A	**NJR (3570)**	30
		AN7808	Panasonic	
		MC7808C	Samsung	
	1500	GL7808	GoldStar	
		LM140-8	† Motorola	
		LM340-8	Motorola	35
		MC7808	† Motorola	
		MC7808A	† Motorola	
		MC7808AC	Motorola	
		MC7808C	Motorola	
		μA7808C	National	40
		μA7808M	† National	
		L7808	† SGS-Thomson	
		L7808AC	SGS-Thomson	
		L7808C	SGS-Thomson	
		SG140-08	**† SiliconG (3642)**	45
		SG340-08	**SiliconG (3642)**	
		SG7808	**† SiliconG (3642)**	
		SG7808A	**† SiliconG (3642)**	
		SG7808AC	**SiliconG (3642)**	
		SG7808C	**SiliconG (3642)**	50
		μA7808C	TI	
	3000	MC78T08	Motorola	
		MC78T08C	Motorola	
		KA78T08C	Samsung	
	5000	μA78H08C	National	55
	10000	42052-810	Micropac	
	20000	42055-820	Micropac	
8.2	100	MB3756	Fujitsu	
		μA78L82C	National	
		LM78L82	National	60
8.2/5 (dual)	750	**SG29085**	**SiliconG (3642)**	
		SG29085A	**SiliconG (3642)**	
8.5	400	L4885	SGS-Thomson	
	500	L2685	SGS-Thomson	
		L4785	SGS-Thomson	65
	1000	μA7885C	National	
		MC7885C	Samsung	
		μA7885C	TI	

Output Voltage, V	Output Current (mA)	Device	Source	Line
9	100	μA78L09C	National	
		LM78L09	National	70
		NJM78L09A	**NJR (3570)**	
		AN78L09	Panasonic	
		MC78L9AC	Samsung	
		μA78L09AC	◊ TI	
		μA78L09C	◊ TI	75
		TA78L009	Toshiba	
		TA78L009A	Toshiba	
	300	AN78N09	Panasonic	
	500	M5F78M09	Mitsubishi	
		NJM78M09A	NJR	80
	1000	M5F7809	Mitsubishi	
		NJM7809A	**NJR (3570)**	
		AN7809	Panasonic	
		MC7809C	Samsung	
	1500	GL7809	GoldStar	85
		L78S09	† SGS-Thomson	
		L7809	SGS-Thomson	
		SL78S09C	SGS-Thomson	
	10000	42052-910	Micropac	
	20000	42055-920	Micropac	90
10	100	M5278L10	Mitsubishi	
		AN78L10	Panasonic	
		AN78M10	Panasonic	
		μA78L10AC	◊ TI	
		μA78L10C	◊ TI	95
		TA78L010	Toshiba	
		TA78L010A	Toshiba	
	200	LH0075	◊ National	
	300	AN78N10	Panasonic	
	400	L4810	SGS-Thomson	100
	500	M5F78M10	Mitsubishi	
		MC78M10C	Samsung	
		L2610	SGS-Thomson	
		L4710	SGS-Thomson	
		μA78M10C	TI	105
	1000	M5F7810	Mitsubishi	
		LM2940T-10	National	
		AN7810	Panasonic	
		MC7810C	Samsung	
	1500	μA7810C	TI	110
	2000	L78S10	† SGS-Thomson	
		L78S10C	SGS-Thomson	
	9000	42050-109	Micropac	
		42052-109	Micropac	
	20000	42055-1020	Micropac	115
10.3	35	LBR103DB	AT&T	
11	1000	MC7811C	Samsung	
12	35	LBR120AB	AT&T	
	100	M5278L12	Mitsubishi	
		MC78L12AC	† Motorola	120
		MC78L12C	Motorola	
		μA78L12C	National	
		LM140LA-12	† National	
		LM340LA-12	National	
		LM78L12A	National	125
		LM78L12C	National	
		NJM78L12A	**NJR (3570)**	
		AN78L12	Panasonic	
		MC78L12	† Samsung	
		MC78L12AC	Samsung	130
		μA78L12AC	◊ TI	
		μA78L12C	◊ TI	
		TA78L012	Toshiba	
		TA78L012A	Toshiba	
	250	LM342-12	National	135
	300	52051-012	Micropac	
		AN78N12	Panasonic	
	500	M5F78M12	Mitsubishi	
		MC78M12C	Motorola	
		μA78M12C	National	140

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LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators

Fixed, Positive (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
12	500		(Cont'd)	
		μA78M12M †	National	
		LM341-12	National	
		LM78M12	National	
		NJM78M12A	**NJR (3570)**	
		AN78M12	Panasonic	5
		MC78M12C	Samsung	
		L78M12C	SGS-Thomson	
		μA78M12C	TI	
		μA78M12M †	TI	
	1000	M5F7812	Mitsubishi	10
		NJM7812A	**NJR (3570)**	
		MC7812C	Samsung	
		μA2812	SGS-Thomson	
		TA78012A	Toshiba	
		UC7812 †	Unitrode	15
		UC7812C	Unitrode	
	1500	GL7812	GoldStar	
		LAS15A12	Lambda	
		LAS1512	Lambda	
		LT1086-12C	LinearTech	20
		LT1086-12M †	LinearTech	
		42094-012	Micropac	
		LM140-12 †	Motorola	
		LM140A-12 †	Motorola	
		LM340-12	Motorola	25
		LM340A-12	Motorola	
		MC7812 †	Motorola	
		MC7812A †	Motorola	
		MC7812AC	Motorola	
		MC7812C	Motorola	30
		TL780-12C	Motorola	
		μA7812C	National	
		μA7812M †	National	
		LM140-12 †	National	
		LM140A-12 †	National	35
		LM2940-12	National	
		LM340-12	National	
		LM340A-12	National	
		LM7812	National	
		L7812 †	SGS-Thomson	40
		L7812AC	SGS-Thomson	
		L7812C	SGS-Thomson	
		SG140-12 †	**SiliconG (3642)**	
		SG340-12	**SiliconG (3642)**	
		SG7812 †	**SiliconG (3642)**	45
		SG7812A †	**SiliconG (3642)**	
		SG7812AC	**SiliconG (3642)**	
		SG7812C	**SiliconG (3642)**	
		μA7812C	TI	
		LM340-12	TI	50
		TL780-12C	TI	
		UC7812A †	Unitrode	
		UC7812AC	Unitrode	
	2000	LAS16A12	Lambda	
		LAS1612	Lambda	55
		LAS1612B	Lambda	
		L78S12C	SGS-Thomson	
		L7812 †	SGS-Thomson	
		L7812C	SGS-Thomson	
	2200	TL780-12	TI	60
	3000	LAS14A12	Lambda	
		LAS1412	Lambda	
		LAS1412B	Lambda	
		52053-012	Micropac	
		MC78T12 †	Motorola	65
		MC78T12A †	Motorola	
		MC78T12AC	Motorola	
		MC78T12C	Motorola	
		KA78T12C	Samsung	
		CJSE036	Solitron	70
			(Continued)	

Output Voltage, V	Output Current (mA)	Device	Source	Line
12	3000		(Cont'd)	
		CJSE037	Solitron	
		CJSE038	Solitron	
	5000	LAS19A12	Lambda	
		LAS1912	Lambda	
		LAS1912B	Lambda	75
		μA78H12A	National	
		CJSE092	Solitron	
		CJSE093	Solitron	
		CJSE094	Solitron	
	8000	42050-128	Micropac	80
		42052-128	Micropac	
	10000	MLM196-12	Micropac	
		MLM396-12	Micropac	
		μA78P12	National	
	16000	42055-1216	Micropac	85
12/5 (dual)	750	**SG29125**	**SiliconG (3642)**	
		SG29125A	**SiliconG (3642)**	
13.2	100	TA78L132	Toshiba	
		TA78L132A	Toshiba	
14	8000	42050-148	Micropac	90
		42052-148	Micropac	
	16000	42055-1416	Micropac	
15	35	LBR150AS	AT&T	
	100	MC78L15AC	Motorola	
		MC78L15C	Motorola	95
		μA78L15C	National	
		LM140LA-15 †	National	
		LM340LA-15	National	
		LM78L15A	National	
		LM78L15C	National	100
		NJM78L15A	**NJR (3570)**	
		AN78L15	Panasonic	
		MC78L15	Samsung	
		MC78L15AC	Samsung	
		μA78L15AC ◊	TI	105
		μA78L15C ◊	TI	
		TA78L015	Toshiba	
		TA78L015A	Toshiba	
	250	LM342-15	National	
	300	52051-015	Micropac	110
		AN78N15	Panasonic	
	500	M5F78M15	Mitsubishi	
		MC78M15C	Motorola	
		μA78M15C	National	
		μA78M15M †	National	115
		LM341-15	National	
		LM78M15	National	
		NJM78M15A	**NJR (3570)**	
		AN78M15	Panasonic	
		MC78M15C	Samsung	120
		L78M15C	SGS-Thomson	
		μA78M15C	TI	
	1000	M5F7815	Mitsubishi	
		MC7815C	Samsung	
		L7815 †	SGS-Thomson	125
		L7815C	SGS-Thomson	
		TA78015A	Toshiba	
		UC7815 †	Unitrode	
		UC7815A †	Unitrode	
		UC7815AC	Unitrode	130
		UC7815C	Unitrode	
	1500	GL7815	GoldStar	
		LAS15A15	Lambda	
		LAS1515	Lambda	
		42094-015	Micropac	135
		LM140-15 †	Motorola	
		LM340-15	Motorola	
		MC7815 †	Motorola	
		MC7815A †	Motorola	
		MC7815AC	Motorola	140
		MC7815C	Motorola	
			(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators
Fixed, Positive (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
15	1500		(Cont'd)	
		μA7815C	National	
		μA7815M	† National	
		LM140-15	† National	
		LM140A-15	† National	
		LM2940-15	National	5
		LM340-15	National	
		LM340A-15	National	
		LM7815	National	
		L7815AC	SGS-Thomson	
		SG140-15	**† SiliconG (3642)**	10
		SG7815	**† SiliconG (3642)**	
		SG7815A	**† SiliconG (3642)**	
		SG7815AC	**SiliconG (3642)**	
		SG7815C	**SiliconG (3642)**	
		μA7815C	TI	15
		LM340-15	TI	
		TL780-15C	TI	
	2000	LAS16A15	Lambda	
		LAS1615	Lambda	
		LAS1615B	Lambda	20
		L78S15	† SGS-Thomson	
		L78S15C	SGS-Thomson	
		CJSE001	Solitron	
		CJSE003	Solitron	
		CJSE005	Solitron	25
	2200	TL780-15	TI	
	3000	LAS14A15	Lambda	
		LAS1415	Lambda	
		LAS1415B	Lambda	
		52053-015	Micropac	30
		MC78T15	† Motorola	
		MC78T15A	† Motorola	
		MC78T15AC	Motorola	
		MC78T15C	Motorola	
		KA78T15C	Samsung	35
	5000	LAS19A15	Lambda	
		LAS1915	Lambda	
		LAS1915B	Lambda	
		CJSE086	Solitron	
		CJSE087	Solitron	40
		CJSE088	Solitron	
	8000	42050-158	Micropac	
		42052-158	Micropac	
	10000	MLM196-15	Micropac	
		MLM396-15	Micropac	45
	16000	42055-1516	Micropac	
16	8000	42050-168	Micropac	
		42052-168	Micropac	
	12000	42055-1612	Micropac	
18	100	MC78L18AC	Motorola	50
		MC78L18C	Motorola	
		NJM78L18A	**NJR (3570)**	
		AN78L18	Panasonic	
		MC78L18AC	Samsung	
		TA78L018	Toshiba	55
		TA78L018A	Toshiba	
	300	52051-018	Micropac	
		AN78N18	Panasonic	
	500	M5F78M18	Mitsubishi	
		MC78M18C	Motorola	60
		NJM78M18A	NJR	
		AN78M18	Panasonic	
		MC78M18C	Samsung	
		L78M18C	SGS-Thomson	
		SG7818AC	**SiliconG (3642)**	65
	1000	M5F7818	Mitsubishi	
		LM7818	National	
		AN7818	† Panasonic	
			(Continued)	

Output Voltage, V	Output Current (mA)	Device	Source	Line
18	1000		(Cont'd)	
		MC7818C	Samsung	
		μA2818	SGS-Thomson	70
		L7818	† SGS-Thomson	
		L7818C	SGS-Thomson	
	1500	42094-018	Micropac	
		LM340-18	Motorola	
		MC7818	† Motorola	75
		MC7818A	† Motorola	
		MC7818AC	Motorola	
		MC7818C	Motorola	
		μA7818C	National	
		μA7818M	† National	80
		L7818AC	SGS-Thomson	
		SG140-18	**† SiliconG (3642)**	
		SG340-18	**SiliconG (3642)**	
		SG7818	**† SiliconG (3642)**	
		SG7818A	**† SiliconG (3642)**	85
		SG7818C	**SiliconG (3642)**	
		μA7818C	TI	
	2000	L78S18	† SGS-Thomson	
		L78S18C	SGS-Thomson	
	3000	52053-018	Micropac	90
		KA78T18C	Samsung	
	8000	42050-188	Micropac	
		42052-188	Micropac	
	12000	42055-1812	Micropac	
		42055-1812	Toshiba	95
20	100	**NJM78L20A**	**NJR (3570)**	
		AN78L20	Panasonic	
		TA78L020	Toshiba	
		TA78L020A	Toshiba	
	300	AN78N20	Panasonic	100
	500	M5F78M20	Mitsubishi	
		MC78M20C	Motorola	
		NJM78M20A	**NJR (3570)**	
		AN78M20	Panasonic	
		MC78M20C	† Samsung	105
		L78M20C	SGS-Thomson	
		SG7820A	**† SiliconG (3642)**	
		SG7820AC	**SiliconG (3642)**	
		SG7820C	**SiliconG (3642)**	
		μA78M20C	TI	110
	1000	M5F7820	Mitsubishi	
		AN7820	Panasonic	
		SG140-20	**† SiliconG (3642)**	
		SG340-20	**SiliconG (3642)**	
		SG7820	**† SiliconG (3642)**	115
	2000	CJSE009	Solitron	
		CJSE011	Solitron	
		CJSE013	Solitron	
	5000	CJSE080	Solitron	
		CJSE081	Solitron	120
		CJSE082	Solitron	
	8000	42050-208	Micropac	
		42052-208	Micropac	
		42055-2010	Micropac	
22	4000	42050-224	Micropac	125
		42052-224	Micropac	
	10000	42055-2210	Micropac	
24	100	MC78L24AC	Motorola	
		MC78L24C	Motorola	
		NJM78L24A	**NJR (3570)**	130
		AN78L24	Panasonic	
		MC78L24AC	Samsung	
		TA78L024	Toshiba	
		TA78L024A	Toshiba	
	300	52051-024	Micropac	135
		AN78N24	Panasonic	
	500	M5F78M24	Mitsubishi	
		MC78M24C	Motorola	
			(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators

Fixed, Positive (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
24	500		(Cont'd)	
		μA78M24C	National	
		μA78M24M	† National	
		LM78M24	National	
		NJM78M24A	NJR	
		AN78M24	Panasonic	5
		MC78M24C	Samsung	
		L78M24C	SGS-Thomson	
		μA78M24C	TI	
	1000	M5F7824	Mitsubishi	
		LM7824	National	10
		AN7824	† Panasonic	
		MC7824C	Samsung	
		μA2824	SGS-Thomson	
		L7824	† SGS-Thomson	
		L7824C	SGS-Thomson	15
	1500	GL7824	GoldStar	
		42094-024	Micropac	
		LM340-24	Motorola	
		MC7824	† Motorola	
		MC7824A	† Motorola	20
		MC7824AC	Motorola	
		MC7824C	Motorola	
		μA7824C	National	
		μA7824M	† National	
		SG140-24	**† SiliconG (3642)**	25
		SG340-24	**SiliconG (3642)**	
		SG7824	**† SiliconG (3642)**	
		SG7824A	**† SiliconG (3642)**	
		SG7824AC	**SiliconG (3642)**	
		SG7824C	**SiliconG (3642)**	30
		μA7824C	TI	
	2000	L78S24	† SGS-Thomson	
		L78S24C	SGS-Thomson	
	3000	52053-024	Micropac	
		KA78T24C	Samsung	35
		CJSE039	Solitron	
		CJSE040	Solitron	
		CJSE041	Solitron	
	4000	42050-244	Micropac	
		42052-244	Micropac	40
	5000	CJSE074	Solitron	
		CJSE075	Solitron	
		CJSE076	Solitron	
	10000	42055-2410	Micropac	
26	4000	42050-264	Micropac	45
		42052-264	Micropac	
	8000	42055-2608	Micropac	
28	4000	42050-284	Micropac	
		42052-284	Micropac	
	8000	42055-2808	Micropac	50
30	300	52051-030	Micropac	
	1500	42094-030	Micropac	
	3000	52053-030	Micropac	
	4000	42050-304	Micropac	
		42052-304	Micropac	55
32	4000	42050-324	Micropac	
		42052-324	Micropac	
34	4000	42050-344	Micropac	
		42052-344	Micropac	
75	10	TL780-15C	Motorola	60

Fixed, Negative

Output Voltage, V	Output Current (mA)	Device	Source	Line
2	1000	MC7902C	Samsung	
3	30	**S80230**	**Seiko Instr (3586)**	
	100	**NJM79L03A**	**NJR (3570)**	
4	100	AN79L04	Panasonic	
	300	AN79N04	Panasonic	65
5	50	**S80250**	**Seiko Instr (3586)**	
	100	MC79L05AC	Motorola	
		MC79L05C	Motorola	
		LM79L05	National	
		LM79L05A	National	70
		NJM70L05A	NJR	
		AN79L05	Panasonic	
		MC79L05AC	Samsung	
		MC79L05C	Samsung	
		MC79L05	TI	75
		MC79L05A	TI	
	300	AN79N05	Panasonic	
	500	M5F79M05	Mitsubishi	
		MC79M05	Motorola	
		μA79M05AC	National	80
		μA79M05M	† National	
		LM120H5	† National	
		LM320H5	National	
		LM320MP5	National	
		LM79M05	National	85
		NJM79M05A	**NJR (3570)**	
		MC79M05C	Samsung	
		μA79M05C	TI	
		μA79M05M	† TI	
	1000	M5F7905	Mitsubishi	90
		LM2990-5	National	
		AN7905	Panasonic	
		MC7905C	Samsung	
	1500	GL7905	GoldStar	
		LAS18A05	Lambda	95
		LAS1805	Lambda	
		42095-005	Micropac	
		MC7905C	Motorola	
		μA7905C	National	
		μA7905M	† National	100
		LM120K5	† National	
		LM320K5	National	
		LM320T5	National	
		LM7905	National	
		μA7905	SGS-Thomson	105
		L7905C	SGS-Thomson	
		SG120-05	**† SiliconG (3642)**	
		SG220-05	SiliconG	
		SG320-05	**SiliconG (3642)**	
		SG7905A	**† SiliconG (3642)**	110
		SG7905C	**SiliconG (3642)**	
		μA7905C	TI	
		UC7905	† Unitrode	
		UC7905A	† Unitrode	
		UC7905AC	Unitrode	115
		UC7905C	Unitrode	
	3000	CJSE042	Solitron	
		CJSE043	Solitron	
		CJSE044	Solitron	
	5000	42051-055	Micropac	120
		CJSE809	Solitron	
		CJSE810	Solitron	
		CJSE811	Solitron	
5.2	500	**SG120-5.2**	**† SiliconG (3642)**	
		SG320-5.2	**SiliconG (3642)**	125
		SG7905.2	**† SiliconG (3642)**	
		SG7905.2A	**† SiliconG (3642)**	
		SG7905.2AC	**SiliconG (3642)**	
		SG7905.2C	**SiliconG (3642)**	
	1000	MC7905-2C	Samsung	130
	1500	MC7905	Motorola	
		MC7905.2C	Motorola	
		L7952C	SGS-Thomson	
		SG7905	**† SiliconG (3642)**	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators
Fixed, Negative (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
5.2			(Cont'd)	
	2100	μA7952	TI	
	3000	LM145K5	† National	
		LM345K5	National	
6	100	**NJM79L06A**	**NJR (3570)**	
		AN79L06	Panasonic	5
	300	AN79N06	Panasonic	
	500	M5F79M06	Mitsubishi	
		NJM79M06A	**NJR (3570)**	
		MC79M06C	Samsung	
		μA79M06C	TI	10
	1000	M5F7906	Mitsubishi	
		NJM7906A	**NJR (3570)**	
		AN7906	Panasonic	
		MC7906C	Samsung	
	1500	MC7906C	Motorola	15
		μA7906C	TI	
	2000	CJSE018	Solitron	
		CJSE020	Solitron	
	5000	42051-065	Micropac	
		CJSE803	Solitron	20
		CJSE804	Solitron	
		CJSE805	Solitron	
7	300	AN79N07	Panasonic	
	500	M5F79M07	Mitsubishi	
	1000	M5F7907	Mitsubishi	25
		AN7907	Panasonic	
	5000	42051-075	Micropac	
8	100	**NJM79L08A**	**NJR (3570)**	
	300	AN79N08	Panasonic	
	500	M5F79M08	Mitsubishi	30
		μA79M08AC	National	
		μA7908M	† National	
		NJM79M08A	**NJR (3570)**	
		MC79M08C	Samsung	
		μA79M08C	TI	35
	1000	M5F7908	Mitsubishi	
		MC7908C	Motorola	
		μA7908C	National	
		LM7908	National	
		NJM7908A	**NJR (3570)**	40
		MC7908C	Samsung	
		L7908C	SGS-Thomson	
		SG120-08	**† SiliconG (3642)**	
		SG320-08	**SiliconG (3642)**	
		SG7908	**† SiliconG (3642)**	45
		SG7908A	**† SiliconG (3642)**	
		SG7908AC	**SiliconG (3642)**	
		SG7908C	**SiliconG (3642)**	
		μA7908C	TI	
	5000	42051-085	Micropac	50
9	100	**NJM79L09A**	**NJR (3570)**	
	300	AN79N09	Panasonic	
	500	M5F79M09	Mitsubishi	
		NJM79M09A	**NJR (3570)**	
	1000	M5F7909	Mitsubishi	55
		NJM7909A	**NJR (3570)**	
		AN7909	Panasonic	
	1500	42051-095	Micropac	
10	300	AN79N10	Panasonic	
	500	M5F79M10	Mitsubishi	60
		MC79M10	Samsung	
	1000	M5F7910	Mitsubishi	
		AN7910	Panasonic	
	5000	42051-105	Micropac	
12	100	MC79L12AC	Motorola	65
		MC79L12C	Motorola	
			(Continued)	

Output Voltage, V	Output Current (mA)	Device	Source	Line
12	100		(Cont'd)	
		LM79L12	National	
		LM79L12A	National	
		NJM79L12A	**NJR (3570)**	
		AN79L12	Panasonic	70
		MC79L12AC	Samsung	
		MC79L12C	Samsung	
		MC79L12	TI	
		MC79L12A	TI	
	200	LM120H12	† National	75
		LM320H12	National	
	300	52052-012	Micropac	
		AN79N12	Panasonic	
	500	M5F79M12	Mitsubishi	
		MC79M12	Motorola	80
		MC79M12C	Motorola	
		μA79M12AC	National	
		μA79M12M	† National	
		LM320MP12	National	
		LM79M12	National	85
		NJM79M12A	**NJR (3570)**	
		MC79M12C	Samsung	
		μA79M12C	TI	
		μA79M12M	† TI	
	1000	M5F7912	Mitsubishi	90
		LM120K12	† National	
		LM2990-12	National	
		LM320K12	National	
		LM320T12	National	
		NJM7912A	NJR	95
		AN7912	Panasonic	
		MC7912C	Samsung	
	1500	GL7912	GoldStar	
		LAS18A12	Lambda	
		LAS1812	Lambda	100
		42095-012	Micropac	
		MC7912AC	Motorola	
		MC7912C	Motorola	
		μA7912C	National	
		μA7912M	† National	105
		LM7912	National	
		μA7912	SGS-Thomson	
		L7912C	SGS-Thomson	
		SG120-12	**† SiliconG (3642)**	
		SG220-12	SiliconG	110
		SG320-12	**SiliconG (3642)**	
		SG7912	**† SiliconG (3642)**	
		SG7912A	**† SiliconG (3642)**	
		SG7912AC	**SiliconG (3642)**	
		SG7912C	**SiliconG (3642)**	115
		μA7912C	TI	
		UC7912	† Unitrode	
		UC7912A	† Unitrode	
		UC7912AC	Unitrode	
		UC7912C	Unitrode	120
	3000	52054-012	Micropac	
		CJSE045	Solitron	
		CJSE046	Solitron	
		CJSE047	Solitron	
	4000	42051-124	Micropac	125
	5000	CJSE095	Solitron	
		CJSE096	Solitron	
		CJSE097	Solitron	
14	4000	42051-144	Micropac	
15	100	MC79L15AC	Motorola	130
		MC79L15C	Motorola	
		LM79L15	National	
		LM79L15A	National	
		AN79L15	Panasonic	
		MC79L15AC	Samsung	135
		MC79L15C	Samsung	
		MC79L15	TI	
		MC79L15A	TI	
			(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators
Fixed, Negative (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
15		(Cont'd)		
	200	LM120H15	† National	
		LM320H15	National	
	300	52052-015	Micropac	
		AN79N15	Panasonic	
	500	GL7909	GoldStar	5
		M5F79M15	Mitsubishi	
		MC79M15	Motorola	
		MC79M15C	Motorola	
		μA79M15AC	National	
		μA79M15M	† National	10
		LM320MP15	National	
		LM79M15	National	
		NJM79M15A	**NJR (3570)**	
		MC79M15C	Samsung	
		μA79M15C	TI	15
	1000	M5F7915	Mitsubishi	
		MC79L15A	Motorola	
		LM120K15	† National	
		LM2990-15	National	
		LM320K15	National	20
		LM320T15	National	
		NJM7915A	**NJR (3570)**	
		AN7915	Panasonic	
		MC7915C	Samsung	
	1500	GL7915	GoldStar	25
		LAS18A15	Lambda	
		LAS1815	Lambda	
		42095-015	Micropac	
		MC7915AC	Motorola	
		MC7915C	Motorola	30
		μA7915C	National	
		μA7915M	† National	
		LM120-15	‡ National	
		LM7915	National	
		μA7915	SGS-Thomson	35
		L7915C	SGS-Thomson	
		SG120-15	**† SiliconG (3642)**	
		SG220-15	SiliconG	
		SG320-15	**SiliconG (3642)**	
		SG7915	**† SiliconG (3642)**	40
		SG7915A	**† SiliconG (3642)**	
		SG7915AC	**SiliconG (3642)**	
		SG7915C	**SiliconG (3642)**	
		μA7915C	TI	
		UC7915	† Unitrode	45
		UC7915A	† Unitrode	
		UC7915AC	Unitrode	
		UC7915C	Unitrode	
	2000	42051-154	Micropac	
		CJSE002	Solitron	50
		CJSE004	Solitron	
		CJSE006	Solitron	
	3000	52054-015	Micropac	
	5000	CJSE089	Solitron	
		CJSE090	Solitron	55
		CJSE091	Solitron	
16	4000	42051-164	Micropac	
18	100	MC79L18C	Motorola	
		AN79L18	Panasonic	
		MC79L18AC	Samsung	60
	300	52052-018	Micropac	
		AN79N18	Panasonic	
	500	M5F79M18	Mitsubishi	
		NJM79M18A	**NJR (3570)**	
		MC79M18	Samsung	65
		MC79M18C	† Samsung	
	1000	M5F7918	Mitsubishi	
		NJM7918A	**NJR (3570)**	
			(Continued)	

Output Voltage, V	Output Current (mA)	Device	Source	Line
18	1000		(Cont'd)	
		AN7918	Panasonic	
		MC7918C	Samsung	70
	1500	42095-018	Micropac	
		MC79L18AC	Motorola	
		MC7918C	Motorola	
		L7918C	SGS-Thomson	
		SG120-18	**† SiliconG (3642)**	75
		SG320-18	**SiliconG (3642)**	
		SG7918	**† SiliconG (3642)**	
		SG7918A	**† SiliconG (3642)**	
		SG7918AC	**SiliconG (3642)**	
		SG7918C	**SiliconG (3642)**	80
		μA7918C	TI	
	3000	52054-018	Micropac	
	4000	42051-184	Micropac	
20	100	AN79L20	Panasonic	
	300	AN79N20	Panasonic	85
	500	M5F79M20	Mitsubishi	
		μA79M20C	TI	
	1000	M5F7920	Mitsubishi	
		AN7920	Panasonic	
	1500	L7920C	SGS-Thomson	90
		SG120-20	**† SiliconG (3642)**	
		SG7920	**† SiliconG (3642)**	
		SG7920A	**† SiliconG (3642)**	
		SG7920AC	**SiliconG (3642)**	
		SG7920C	**SiliconG (3642)**	95
	2000	CJSE010	Solitron	
		CJSE012	Solitron	
		CJSE014	Solitron	
	3000	42051-204	Micropac	
	5000	CJSE083	Solitron	100
		CJSE084	Solitron	
		CJSE085	Solitron	
22	3000	42051-223	Micropac	
24	100	MC79L24AC	Motorola	
		MC79L24C	Motorola	105
		AN79L24	Panasonic	
		MC79L24AC	Samsung	
	300	52052-024	Micropac	
		AN79N24	Panasonic	
	500	M5F79M24	Mitsubishi	110
		NJM79M24A	**NJR (3570)**	
		MC79M24C	Samsung	
		μA79M24C	TI	
	1000	M5F7924	Mitsubishi	
		NJM7924A	**NJR (3570)**	115
		AN7924	Panasonic	
		MC7924C	Samsung	
	1500	GL7924	GoldStar	
		42095-024	Micropac	
		MC7924C	Motorola	120
		L7924C	SGS-Thomson	
		μA7924C	TI	
	3000	42051-243	Micropac	
		52054-024	Micropac	
		CJSE048	Solitron	125
		CJSE049	Solitron	
		CJSE050	Solitron	
	5000	CJSE077	Solitron	
		CJSE078	Solitron	
		CJSE079	Solitron	130
26	3000	42051-263	Micropac	
28	3000	42051-283	Micropac	
30	300	52052-030	Micropac	
	1500	42095-030	Micropac	
	3000	42051-303	Micropac	135
		52054-030	Micropac	
32	3000	42051-323	Micropac	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators

Fixed, Negative (Cont'd)

Output Voltage, V	Output Current (mA)	Device	Source	Line
36	3000	42051-363	Micropac	

Fixed, Dual

Output Voltage, V	Output Current (mA)	Device	Source	Line
±6	5000	42051	Micropac	
±12	100	LM126	† National	
		LM326	National	
±15	100	XR1468	Exar	5
		XR1568	† Exar	
		XR4195	◊ Exar	
		MC1468	Motorola	
		MC1568	† Motorola	
		LM125	† National	10
		LM325	National	
		RC4195	Raytheon	
		RM4195	† Raytheon	
		SG1468	SiliconG	
		SG1568	**† SiliconG (3642)**	15
		SG4501	SiliconG	
	200	**SG1501A**	**† SiliconG (3642)**	
		SG2501A	**SiliconG (3642)**	
		SG3501A	**SiliconG (3642)**	
5,5	750,10	LM2935	National	20
		LM2935	SGS-Thomson	
	1000,50	LT1005C	LinearTech	
		LT1005M	LinearTech	
12,5	3000,75	LT1036C	LinearTech	
		LT1036M	† LinearTech	25

Adjustable, Positive

Output Voltage Hi	Low	Output Current (mA)	Device	Source	Line
16	1.3	40	ICL7663S	Harris	
	1.5	40	ICL7663	◊ Maxim	
	2	40	ICL7663A	◊ Maxim	
			MAX663C	Maxim	
			MAX663M	† Maxim	30
	4	8000	LAS39U	Lambda	
18	3.1	150	TK10681M	Toko	
			TK10682M	Toko	
20	1.2	10000	LM196	National	
			LM396	National	35
	2	20	SFC2300	SGS-Thomson	
	5	1000	LM2941	National	
			LM2941C	National	
		3500	LT1085C	LinearTech	
			LT1085M	† LinearTech	40
		5000	LT1084C	LinearTech	
			LT1084M	† LinearTech	
		7500	LT1083C	LinearTech	
			LT1083M	† LinearTech	
24	3	150	LM2931	National	45
26	1.8	12	CA3085	† Harris	
27	0	200	LH0075	◊† National	
			LH0075C	◊ National	
30	1.2	1500	LT1086C	LinearTech	
			LT1086M	† LinearTech	50
	2	20	SFC2100	† SGS-Thomson	
			SFC2200	SGS-Thomson	
	3	Shunt	TL430C	TI	
		1800	L200	SGS-Thomson	
	4	1500	LAS15U	Lambda	55
		2000	LAS16U	Lambda	
		3000	LAS14AU	Lambda	
		5000	LAS19U	Lambda	
	4.5	12	LM305	National	
		SG305	**SiliconG (3642)**		60

(Continued)

Output Voltage Hi	Low	Output Current (mA)	Device	Source	Line
30				(Cont'd)	
	5	500	μA78MGC	National	
			LM78MG	National	
		1000	μA78GC	National	
			LM78G	National	
32	1.2	100	TL317	TI	65
		1000	LT1038C	LinearTech	
			LT1038M	† LinearTech	
		3000	LLM350	Lambda	
			LM150	† LinearTech	
			LM350	LinearTech	70
			LT150A	† LinearTech	
			LT350A	LinearTech	
			LM150	† Motorola	
			LM250	Motorola	
			LM350	Motorola	75
			LM150	† National	
			LM350	National	
			SG150	**† SiliconG (3642)**	
			SG150A	**SiliconG (3642)**	
			SG250	**SiliconG (3642)**	80
			SG250A	**SiliconG (3642)**	
			SG350	**SiliconG (3642)**	
			SG350A	**SiliconG (3642)**	
			UC150	† Unitrode	
			UC250	Unitrode	85
			UC350	Unitrode	
		5000	LLM338	Lambda	
			LM138	† LinearTech	
			LM338	LinearTech	
			LT138A	† LinearTech	90
			LT338A	LinearTech	
			μA338	National	
			LM138	† National	
			LM338	National	
			SG138	**† SiliconG (3642)**	95
			SG138A	**† SiliconG (3642)**	
			SG238	**SiliconG (3642)**	
			SG238A	**SiliconG (3642)**	
			SG338	**SiliconG (3642)**	
			SG338A	**SiliconG (3642)**	100
33	1.2	3000	KA350	Samsung	
36	1.7	100	CA3085A	† Harris	
	2.5	100	TL431C	Motorola	
			TL431M	† Motorola	
			μA431AC	National	105
			LM431A	National	
			NJM431	NJR	
			TL431C	◊ TI	
			TL431M	◊† TI	
	2.85	2000	TDA200	SGS-Thomson	110
37	1.2	100	LM117L	† Motorola	
			LM217L	Motorola	
			LM317L	Motorola	
			LM317L	National	
		500	**SG117**	**† SiliconG (3642)**	115
			SG217	**SiliconG (3642)**	
			SG217A	**SiliconG (3642)**	
			SG317	**SiliconG (3642)**	
			SG317A	**SiliconG (3642)**	
		1000	M5N317L	Mitsubishi	120
		1500	GL317	GoldStar	
			LLM117	Lambda	
			LLM317	Lambda	
			LM117	† LinearTech	
			LM317	LinearTech	125
			LT117A	† LinearTech	
			LT317A	LinearTech	
			MN5317	Mitsubishi	
			M5236	Mitsubishi	
			M5237	Mitsubishi	130
			LM117	† Motorola	
			LM217	Motorola	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators

Adjustable, Positive (Cont'd)

Output Voltage Hi	Low	Output Current (mA)	Device	Source	Line
37	1.2	1500		(Cont'd)	
			LM317	Motorola	
			LM117	‡ National	
			LM317	National	
			LM317	Samsung	
			LM117	† SGS-Thomson	5
			LM217	SGS-Thomson	
			LM317	† SGS-Thomson	
			SG117A	**† SiliconG (3642)**	
			LM317	TI	
			UC117	† Unitrode	10
			UC217	Unitrode	
			UC317	Unitrode	
		3000	LLM150	Lambda	
		5000	LLM138	Lambda	
	2	150	MB3752	Fujitsu	15
			CA723	† Harris	
			CA723C	Harris	
			LM723	† Harris	
			LM723C	Harris	
			MC1723	† Motorola	20
			MC1723C	Motorola	
			LM723	‡ National	
			LM723C	National	
			NJM723	NJR	
			LM723	† Samsung	25
			LM723	◊† SGS-Thomson	
			LM723C	◊ SGS-Thomson	
			SFC2723C	† SGS-Thomson	
			SFC2723EC	SGS-Thomson	
			μA723	† Signetics	30
			μA723C	Signetics	
			SA723C	Signetics	
			SG723	**† SiliconG (3642)**	
			SG723C	**SiliconG (3642)**	
			μA723	TI	35
			μA723C	TI	
			μA723M	◊† TI	
	2.5	250	LM317M	Motorola	
	5	25	LM376	National	
38	2	100	**SG3532**	**SiliconG (3642)**	40
		150	LAS1000	Lambda	
			LAS723	Lambda	
40	4.5	12	LM105	‡ National	
			LM205	National	
			SG105	**† SiliconG (3642)**	45
			SG205	**SiliconG (3642)**	
		45	LM305A	National	
			SG305A	**SiliconG (3642)**	
46	1.7	100	CA3085B	† Harris	
48	2	100	**SG1532**	**† SiliconG (3642)**	50
			SG2532	**SiliconG (3642)**	
		150	LAS1100	Lambda	
			LAS723B	Lambda	
56	8	1000	CJCA001	Solitron	
			CJCA007	Solitron	55
57	1.2	500	LM117HV	† LinearTech	
			LM317HV	LinearTech	
			LT317AHV	LinearTech	
		1500	LT117AHV	† LinearTech	
			LM117HV	‡ National	60
			SG117AHV	**† SiliconG (3642)**	
			SG117HV	**† SiliconG (3642)**	
77	2	150	TDB1146	SGS-Thomson	
125	1.25	700	TL783C	TI	
1000	0	100	MC1466	Motorola	65

Adjustable, Negative

Output Voltage Hi	Low	Output Current (mA)	Device	Source	Line
15	1.25	10000	MLM196N	† Micropac	
			MLM396N	Micropac	
16	2	40	ICL7664	◊ Maxim	
			MAX664C	Maxim	
			MAX664M	† Maxim	70
24	2.2	5000	μA79HG	National	
27	0	200	LH0076	◊† National	
			LH0076C	◊ National	
30	0.035	20	LM304	National	
			SG304	**SiliconG (3642)**	75
	2.2	500	μA79MGC	National	
			LM79MG	National	
		1000	μA79GC	National	
	2.55	1000	LM79G	National	
	2.6	1500	LAS18U	Lambda	80
		5000	LAS79HG	Lambda	
32	1.0	3000	LT1033C	LinearTech	
			LT1033M	† LinearTech	
	1.2	3000	LM133	† National	
			LM333	National	85
37	1.2	100	LH7001	National	
		500	LM337M	Motorola	
		1000	M5N337L	Mitsubishi	
		1500	LM137	† LinearTech	
			LM337	LinearTech	90
			LT137A	† LinearTech	
			LT337A	LinearTech	
			LM137	† Motorola	
			LM237	Motorola	
			LM337	Motorola	95
			LM137	‡ National	
			LM337	National	
			LM137	† SGS-Thomson	
			LM337	SGS-Thomson	
			SG137	**† SiliconG (3642)**	100
			SG137A	**† SiliconG (3642)**	
			SG237	**SiliconG (3642)**	
			SG237A	**SiliconG (3642)**	
			SG337	**SiliconG (3642)**	
			SG337A	**SiliconG (3642)**	105
			LM337	TI	
			UC137	† Unitrode	
			UC237	Unitrode	
			UC337	Unitrode	
40	0.015	20	LM104	‡ National	110
			LM204	National	
			LM104	† SGS-Thomson	
			SG104	**† SiliconG (3642)**	
			SG204	**SiliconG (3642)**	
47	1.2	500	LM137HV	† LinearTech	115
			LM337HV	LinearTech	
			LT137AHV	† LinearTech	
			LT337AHV	LinearTech	
		1500	LM137HV	† LinearTech	
			LM337HV	LinearTech	120
			LT137AHV	† LinearTech	
			LT337AHV	LinearTech	
			LM337HV	National	
56	8	1000	CJCA002	Solitron	
			CJCA008	Solitron	125
57	1.2	100	LM337L	National	
		1500	LM137	‡ National	
			LM337	National	
			LM137	† SGS-Thomson	
			LM337	SGS-Thomson	130
			UC137	† Unitrode	
			UC237	Unitrode	
			UC337	Unitrode	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Voltage Regulators (Cont'd)

Adjustable, Dual

Output Voltage Hi	Output Voltage Low	Output Current (mA)	Device	Source	Line
±15.5	±14.5	100	MC1468	Motorola	
			MC1568	† Motorola	
±20	±8	100	MC1468	Motorola	
			MC1568	† Motorola	
			SG1568	**† SiliconG (3642)**	5
±28	±10	100	**SG1502**	**† SiliconG (3642)**	
			SG2502	**SiliconG (3642)**	
			SG3502	**SiliconG (3642)**	
			SG4501	SiliconG	
±42	±0.01	100	XR4194M	† Exar	10
		200	MCE4194	MCE	
			RC4194	Raytheon	
			RM4194	† Raytheon	

LINEAR

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LINEAR—Power Supply Circuits

Switching Regulators

Function	Device	Source	Line
DC-to-DC Converter (Output:1.25 to 40V, 1.5 A)			
	KA7507	Samsung	
Offline Switching Regulator			
	STK7458	Sanyo	
Power Supply Regulator, Switching Regulator Control			
	M5T494	Mitsubishi	
	M51978	Mitsubishi	
	M57494	Mitsubishi	5
Power Switching Regulators, 3A			
	MC33163	Motorola	
	MC34163	Motorola	
Pulse Width Modulated Control Circuit			
	LM494	National	
PWM Controller, Current Mode			
	KA7505	Samsung	
	UC1842	Signetics	10
	UC2842	Signetics	
	UC3842	Signetics	
PWM Controller, Voltage Mode			
	KA7500	Samsung	
	KA7506	Samsung	
Resonant Mode Controller			
	MC33066	Motorola	15
	MC34066	Motorola	
Switch Mode Regulator, Dual Output (5 V to ± 15 V or ± 12 V)	MAX743C	Maxim	
	MAX743M	† Maxim	
Switching Regulator Circuit			
	LM1578A	† National	
	LM2578A	National	20
	LM2579	National	
	LM3578A	National	
	NJM2048	**NJR (3570)**	
	NJM2049	NJR	
	NJM2352	**NJR (3570)**	25
	NJM2355	**NJR (3570)**	
	NJM3524	NJR	
Switching Regulator Circuit (with on-board MOSFET)			
	Si9101	Siliconix	
	Si9102	Siliconix	
Switching Regulator Circuit (150 mA)			
	RC4190	Raytheon	30
	RM4190	Raytheon	
Switching Regulator Circuits			
	CS2842A	Cherry Semi	
	CS2843A	Cherry Semi	
	CS3524	Cherry Semi	
	CS3524A	Cherry Semi	35
	CS3843A	Cherry Semi	
	CS593C	Cherry Semi	
	CS594C	Cherry Semi	
	CS595C	Cherry Semi	
	RL3525A	Ericsson	40
	RL3846	Ericsson	
	XR1524	† Exar	
	XR1525A	† Exar	
	XR1527A	† Exar	
	XR2230	◊ Exar	45
	XR2235	Exar	
	XR2524	◊ Exar	
	XR2525A	Exar	
	XR2527A	Exar	
	XR3524	◊ Exar	50
	XR3525A	Exar	
	XR3527A	Exar	
	XR494	◊ Exar	
	XR495	◊ Exar	
	MB3759	Fujitsu	55
	GL494	GoldStar	
	CA1523	Harris	
	CA1524	† Harris	
	CA2524	Harris	
	CA3524	Harris	60
		(Continued)	

Function	Device	Source	Line
Switching Regulator Circuits		(Cont'd)	
	HA17524	Hitachi	
	LAS3800	Lambda	
	LAS3840	Lambda	
	LAS4082	Lambda	
	LAS6320	Lambda	65
	LAS6321P	Lambda	
	LAS6330A	Lambda	
	LAS6331A	Lambda	
	LAS6350	Lambda	
	LAS6351	Lambda	70
	LAS6380	Lambda	
	LAS6381	Lambda	
	LT1524	† LinearTech	
	LT1525A	† LinearTech	
	LT1526	† LinearTech	75
	LT1527A	† LinearTech	
	SG1524	† LinearTech	
	SG1525A	LinearTech	
	SG1527A	LinearTech	
	SG3524	LinearTech	80
	SG3525A	LinearTech	
	SG3527A	LinearTech	
	UC1846	† LinearTech	
	UC1847	† LinearTech	
	UC3846	LinearTech	85
	UC3847	LinearTech	
	MAX4193	Maxim	
	MAX4391C	Maxim	
	MAX4391M	† Maxim	
	MAX630C	Maxim	90
	MAX630M	† Maxim	
	MAX634C	Maxim	
	MAX634M	† Maxim	
	μA78S40	Motorola	
	MC34060	Motorola	95
	MC34129	Motorola	
	MC35060	Motorola	
	SG1525A	† Motorola	
	SG1526	Motorola	
	SG1527A	† Motorola	100
	SG2525A	Motorola	
	SG2526	Motorola	
	SG2527A	Motorola	
	SG3525A	Motorola	
	SG3526	Motorola	105
	SG3527A	Motorola	
	TL494C	Motorola	
	TL494M	† Motorola	
	μA494C	National	
	μA494M	† National	110
	μA78S40C	National	
	μA78S40M	† National	
	LH1605	† National	
	LH1605C	National	
	LM1524	† National	115
	LM1525A	† National	
	LM1527A	† National	
	LM1578	† National	
	LM2524	National	
	LM3524	National	120
	LM3525A	National	
	LM3527A	National	
	LM3578	National	
	SH1605A	National	
	ZN1060E	† Plessey	125
	ZN1066E	Plessey	
	ZN1066J	† Plessey	
	RC4191	Raytheon	
	RC4192	Raytheon	
	RC4193	Raytheon	130
	RC4391	Raytheon	
	RM4191	† Raytheon	
	RM4192	† Raytheon	
	RM4193	Raytheon	
	RM4391	Raytheon	135
	KS78S40	Samsung	
	L296	SGS-Thomson	
	L296P	SGS-Thomson	
		(Continued)	

Function	Device	Source	Line
Switching Regulator Circuits		(Cont'd)	
	L4960	SGS-Thomson	
	L4962	SGS-Thomson	140
	L4964	SGS-Thomson	
	SG2524	SGS-Thomson	
	SG2525A	SGS-Thomson	
	SG2527A	SGS-Thomson	
	SG3525A	SGS-Thomson	145
	SG3527A	SGS-Thomson	
	TEA1001	SGS-Thomson	
	TEA2018	SGS-Thomson	
	TEA2019	SGS-Thomson	
	UC1840	SGS-Thomson	150
	UC2840	SGS-Thomson	
	UC3840	SGS-Thomson	
	IR3M01	Sharp	
	IR3M02A/AN	Sharp	
	IR9494	Sharp	155
	TDA4600-2	Siemens	
	TDA4601	Siemens	
	TDA4700A	Siemens	
	TDA4718A	Siemens	
	NE5560	Signetics	160
	NE5561	Signetics	
	NE5562	Signetics	
	NE5568	Signetics	
	SE5560	† Signetics	
	SE5561	† Signetics	165
	SE5562	† Signetics	
	SG1524	**◊† SiliconG (3642)**	
	SG1524B	**◊† SiliconG (3642)**	
	SG1525A	**◊† SiliconG (3642)**	
	SG1526	**◊† SiliconG (3642)**	170
	SG1527A	**◊† SiliconG (3642)**	
	SG2524	**◊ SiliconG (3642)**	
	SG2524B	**◊ SiliconG (3642)**	
	SG2525A	**◊ SiliconG (3642)**	
	SG2526	**◊ SiliconG (3642)**	175
	SG2527A	**◊ SiliconG (3642)**	
	SG3524	**◊ SiliconG (3642)**	
	SG3524B	**◊ SiliconG (3642)**	
	SG3525A	**◊ SiliconG (3642)**	
	SG3526	**◊ SiliconG (3642)**	180
	SG3527A	**◊ SiliconG (3642)**	
	SM600	**SiliconG (3642)**	
	SM601	**SiliconG (3642)**	
	SM602	**SiliconG (3642)**	
	SM610	**SiliconG (3642)**	185
	SM611	**SiliconG (3642)**	
	SM612	**SiliconG (3642)**	
	PWM127C	Siliconix	
	Si9110	Siliconix	
	Si9111	Siliconix	190
	SI9100	Siliconix	
	SI9115	Siliconix	
	SI9116	Siliconix	
	TL493C	TI	
	TL494C	TI	195
	TL494M	† TI	
	TL495C	TI	
	TL497AC	TI	
	TL594C	TI	
	TL595C	TI	200
	L296	Unitrode	
	UC1524	Unitrode	
	UC1524/883B	† Unitrode	
	UC1524A	Unitrode	
	UC1524A/883B	† Unitrode	205
	UC1525A	Unitrode	
	UC1525A/883B	† Unitrode	
	UC1526/883B	† Unitrode	
	UC1526A	Unitrode	
	UC1527A	Unitrode	210
	UC1527A/883B	† Unitrode	
	UC1535	Unitrode	
	UC1840	Unitrode	
	UC1840/883B	† Unitrode	
	UC1842/883B	† Unitrode	215
	UC2524	Unitrode	
		(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Switching Regulators (Cont'd)

Function	Device	Source	Line
Switching Regulator Circuits (Cont'd)			
	UC2524A	Unitrode	
	UC2525A	Unitrode	
	UC2526A	Unitrode	
	UC2527A	Unitrode	
	UC2840	Unitrode	5
	UC3524	Unitrode	
	UC3524A	Unitrode	
	UC3525A	Unitrode	
	UC3526A	Unitrode	
	UC3527A	Unitrode	10
	UC3840	Unitrode	
	UC493A	† Unitrode	
	UC493AC	Unitrode	
	UC494A	† Unitrode	
	UC494AC	Unitrode	15
	UC495	Unitrode	
	UC495A	† Unitrode	
	UC495AC	Unitrode	
	UC495B	† Unitrode	
	UC495BC	Unitrode	20
Switching Regulator, Hybrid (5 A positive and negative power stages)			
	PIC600	Solitron	
	PIC601	Solitron	
	PIC602	Solitron	
	PIC610	Solitron	
	PIC611	Solitron	25
	PIC612	Solitron	
	PIC625	Solitron	
	PIC626	Solitron	
	PIC627	Solitron	
	PIC635	Solitron	30
	PIC636	Solitron	
	PIC637	Solitron	
	PIC645	Solitron	
	PIC646	Solitron	
	PIC647	Solitron	35
	PIC655	Solitron	
	PIC656	Solitron	
	PIC657	Solitron	
Switching Regulator (off-line, 100W)			
	STK7310	Sanyo	
Switching Regulator (off-line, 40W)			
	STK7404	Sanyo	40
Switching Regulator (off-line, 80W)			
	STK7308	Sanyo	
	STK7309	Sanyo	
	STK7408	Sanyo	
Switching Regulator Power Output Stage			
	SM600HR	**SiliconG (3642)**	
	SM601HR	**SiliconG (3642)**	45
	SM602HR	**SiliconG (3642)**	
	SM610HR	**SiliconG (3642)**	
	SM611HR	**SiliconG (3642)**	
	SM612HR	**SiliconG (3642)**	
	SM625HR	**SiliconG (3642)**	50
	SM627HR	**SiliconG (3642)**	
	SM635HR	**SiliconG (3642)**	
	SM636HR	**SiliconG (3642)**	
	SM637HR	**SiliconG (3642)**	
	SM645HR	**SiliconG (3642)**	55
	SM646HR	**SiliconG (3642)**	
	SM647HR	**SiliconG (3642)**	
	SM655HR	**SiliconG (3642)**	
	SM656HR	**SiliconG (3642)**	
	SM657HR	**SiliconG (3642)**	60
	SM660HR	**SiliconG (3642)**	
	SM661HR	**SiliconG (3642)**	
	SM662HR	**SiliconG (3642)**	
	SM670HR	**SiliconG (3642)**	
	SM671HR	**SiliconG (3642)**	65
	SM672HR	**SiliconG (3642)**	
Switching Regulator Subsystem, Universal			
	LM78S40	National	

Function	Device	Source	Line
Switching Regulator, 1 A			
	MC33129	Motorola	
	UC2842A	Motorola	
	UC2843A	Motorola	70
	UC3842A	Motorola	
	UC3843A	Motorola	
Switching Regulator, 1.25 A			
	LT1072C	LinearTech	
	LT1072M	† LinearTech	
Switching Regulator, 1.25A			
	LT1072HVC	LinearTech	75
	LT1072HVM	† LinearTech	
Switching Regulator (2 A, 40 V)			
	LAS6420	Lambda	
	LAS6421	Lambda	
Switching Regulator, 2.5 A			
	LT1071C	LinearTech	
	LT1071M	† LinearTech	80
Switching Regulator, 2.5A			
	LT1071HVC	LinearTech	
	LT1071HVM	† LinearTech	
Switching Regulator (3 A, 40 V)			
	LAS6430	Lambda	
Switching Regulator (3 A, 40 V, adj. current limit)			
	LAS6431	Lambda	
Switching Regulator, 5 A			
	LT1070C	LinearTech	85
	LT1070M	† LinearTech	
Switching Regulator (5 A, 40 V)			
	LAS6450	Lambda	
Switching Regulator (5 A, 40 V, adj. current limit)			
	LAS6451	Lambda	
Switching Regulator, 5A			
	LT1070M	TI	
Switching Regulator (8 A, 40 V)			
	LAS6480	Lambda	90
Switching Regulator (8 A, 40 V, adj. current limit)			
	LAS6481	Lambda	
Switching Regulator, 1.25A			
	LT1172C	LinearTech	
	LT1172HVC	LinearTech	
	LT1172HVM	† LinearTech	
	LT1172M	† LinearTech	95
Switching Regulator, 2.5A			
	LT1171C	LinearTech	
	LT1171M	† LinearTech	
Switching Regulator, 5A			
	LT1070HVC	LinearTech	
	LT1070HVM	† LinearTech	
	LT1170C	LinearTech	100
	LT1170M	† LinearTech	

Miscellaneous

Function	Device	Source	Line
BANG-BANG Controller (turns control element fully on or off to regulate average value of current)			
	LTC1041C	LinearTech	
	LTC1041M	† LinearTech	
Battery Backup Circuit (monitors and switches to alternate power when abnormal conditions arise)			
	MB3780A	Fujitsu	
Battery Charger IC			
	L6310/U	SGS-Thomson	105
Chopper + Chopper Parallel 2-Output Voltage Regulator	STK7563F	Sanyo	
	STK7563G	Sanyo	
Chopper Regulator (voltage regulator, dual, 5V/12V at 2—5A)	STK7561	Sanyo	
	STK7562	Sanyo	
Chopper Regulator (voltage regulator, dual, 5V/24V at 2—5A)	STK7563	Sanyo	110
Chopper Regulator (voltage regulator, dual, 5V/36V at 2—3A)	STK7565	Sanyo	
Control Circuit (for switch-mode power supply)			
	GL8905	GoldStar	
Current Mode PWM Controller			
	GL3842	GoldStar	
	LAS4030	Lambda	
	LAS4031	Lambda	115
Current Mode PWM Controller (current mode or voltage mode control)			
	SG1528	**† SiliconG (3642)**	
	SG1530	**† SiliconG (3642)**	
	SG2528	**SiliconG (3642)**	
	SG2530	**SiliconG (3642)**	
	SG3528	**◊ SiliconG (3642)**	120
	SG3530	**◊ SiliconG (3642)**	
Current-Mode PWM Controller (for switching power supplies)	**SG1844**	**† SiliconG (3642)**	
	SG1845	**† SiliconG (3642)**	
	SG2844	**SiliconG (3642)**	
	SG2845	**SiliconG (3642)**	125
	SG3844	**SiliconG (3642)**	
	SG3845	**◊ SiliconG (3642)**	
DC/DC Converter (± 15 Vdc, ± 15mA output			
	PWR70	Burr-Brown	
DC/DC Converter (± 15 Vdc, ± 25mA output)			
	PWR71	Burr-Brown	
	PWR74	Burr-Brown	130
DC/DC Converter (± 15Vdc, 100 mA output)			
	PWR72	Burr-Brown	
DC/DC Converter, 12V (single output)			
	ATW2812S	Adv Analog	
DC/DC Converter, 12V (triple output)			
	ATO2812T	Adv Analog	
DC/DC Converter, 15V (dual output)			
	ATW2812D	Adv Analog	
	ATW2815D	Adv Analog	135
DC/DC Converter, 15V (single output)			
	ATW2815S	Adv Analog	
DC/DC Converter, 15V (triple output)			
	ATO2815T	Adv Analog	
DC to DC Converter			
	PWR13XX	Burr-Brown	
	PWR53XX	Burr-Brown	
DC to DC Converter (+ 5V ± 15V outputs)			
	PWR5038	Burr-Brown	140
DC to DC Converter (± 12V, ± 15V outputs from + 5V	PWR5104	Burr-Brown	
DC to DC Converter (± 12V, ± 15V outputs from + 5V)	POWR5105	Burr-Brown	
DC to DC Converter (± 5–16V to dual outputs)			
	722	Burr-Brown	
DC to DC Converter (± 5–16V to four outputs)			
	724	Burr-Brown	
DC to DC Converter (four channel, dual output)			
	PWR1017	Burr-Brown	145
DC to DC Converter (1 mV p-p noise max)			
	PWR1546A	Burr-Brown	
DC to DC Converter, 1500V isolation (± 7V, ± 18V			
	PWS740	Burr-Brown	
DC to DC Converter, 1500V isolation(± 7V, ± 18V outputs)	PWS725	Burr-Brown	
DC to DC Converter, 3500V isolation (± 7V, ± 18V)			
	PWS726	Burr-Brown	
DC to DC Converter (8kVpk isolation)			
	PWR1726	Burr-Brown	150
DC-to-DC Charge Ramp Converter (+ 50 V to ± 10 V)			
	MAX681	Maxim	
DC-to-DC Converter (± 5V output/ ± 75 mA)			
	HPR103	Burr-Brown	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source	Line
DC-to-DC Converter, ± 12V	AHE2812D	Adv Analog	
DC-to-DC Converter (± 12V output/ ± 30 mA)	HPR110	Burr-Brown	
	HPR116	Burr-Brown	
DC-to-DC Converter (± 12V output/30 mA)	HPR104	Burr-Brown	
DC-to-DC Converter, ± 15V	AHE2815D	Adv Analog	5
DC-to-DC Converter (± 15V output/ ± 25 mA)	HPR105	Burr-Brown	
	HPR111	Burr-Brown	
	HPR117	Burr-Brown	
	HPR123	Burr-Brown	
DC-to-DC Converter, (k2424V to 5V, 3000mA)	UPS-5/3000-D24	Datel	10
DC-to-DC Converter, Dual (5 to ± 12V, ± 40mA)	BPS-12/40-D5	Datel	
DC-to-DC Converter, Dual (5 to ± 15 V, ± 25 mA)	BPM15/25-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 12 V, ± 125 mA)	BPS12/125-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 12 V, ± 230 mA)	BPS12/230-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 12 V, ± 25 mA)	BPM12/25-D5	Datel	15
DC-to-DC Converter, Dual (5 V to ± 12 V, ± 420 mA)	BPM12/420-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 15 V, ± 100 mA)	BPS15/100-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 15 V, ± 150 mA)	BPM15/150-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 15 V, ± 190 mA)	BPS15/190-D5	Datel	
DC-to-DC Converter, Dual (5 V to ± 15 V, ± 412 mA)	BPS15/412-D5	Datel	20
DC-to-DC Converter, Dual (5V to ± 15V, ± 33mA)	BPS-15/33-D5	Datel	
DC-to-DC Converter, Dual (12 V to ± 12 V, ± 125 mA)	BPS12/125-D12	Datel	
DC-to-DC Converter, Dual (12 V to ± 12 V, ± 25 mA)	BPM12/25-D12	Datel	
DC-to-DC Converter, Dual (12 V to ± 12 V, ± 420 mA)	BPM12/420-D12	Datel	
DC-to-DC Converter, Dual (12 V to ± 12 V, 230 mA)	BPS12/230-D12	Datel	25
DC-to-DC Converter, Dual (12 V to ± 15 V, ± 100 mA)	BPS15/100-D12	Datel	
DC-to-DC Converter, Dual (12 V to ± 15 V, ± 190 mA)	BPS15/190-D12	Datel	
DC-to-DC Converter, Dual (12 V to ± 15 V, ± 25 mA)	BPM15/25-D12	Datel	
DC-to-DC Converter, Dual (12 V to ± 15 V, ± 412 mA)	BPS15/412-D12	Datel	
DC-to-DC Converter, Dual (12V to ± 12V, ± 1250mA)	BPS-12/1250-D12	Datel	30
DC-to-DC Converter, Dual (12V to ± 12V, ± 625mA)	BPS-12/625-D12	Datel	
DC-to-DC Converter, Dual (12V to ± 15V, ± 1000mA)	BPS-15/1000-D12	Datel	
DC-to-DC Converter, Dual (24 V to ± 12 V, ± 230 mA)	BPS12/230-D24	Datel	
DC-to-DC Converter, Dual (24 V to ± 12 V, ± 420 mA)	BPM12/420-D24	Datel	
DC-to-DC Converter, Dual (24 V to ± 15 V, ± 150 mA)	BPM15/150-D24	Datel	35
DC-to-DC Converter, Dual (24 V to ± 15 V, ± 190 mA)	BPS15/190-D24	Datel	
DC-to-DC Converter, Dual (24 V to ± 15 V, ± 412 mA)	BPS15/412-D24	Datel	
DC-to-DC Converter, Dual (24V to ± 12V, ± 1250mA)	BPS-12/1250-D24	Datel	
DC-to-DC Converter, Dual (24V to ± 12V, ± 625mA)	BPS-12/625-D24	Datel	
DC-to-DC Converter, Dual (24V to ± 15V, ± 1000mA)	BPS-15/1000-D24	Datel	40
DC-to-DC Converter, Dual (28 V to ± 12 V, ± 125 mA)	BPS12/125-D28	Datel	
DC-to-DC Converter, Dual (28 V to ± 12 V, ± 230 mA)	BPS12/230-D28	Datel	
DC-to-DC Converter, Dual (28 V to ± 12 V, ± 25 mA)	BPM12/25-D28	Datel	
DC-to-DC Converter, Dual (28 V to ± 15 V, ± 100 mA)	BPS15/100-D28	Datel	
DC-to-DC Converter, Dual (28 V to ± 15 V, ± 150 mA)	BPM15/150-D28	Datel	45
DC-to-DC Converter, Dual (28 V to ± 15 V, ± 190 mA)	BPS15/190-D28	Datel	
DC-to-DC Converter, Dual (28 V to ± 15 V, ± 25 mA)	BPM15/25-D28	Datel	
DC-to-DC Converter, Dual (28 V to ± 15 V, ± 412 mA)	BPS15/412-D28	Datel	
DC-to-DC Converter, Dual (48 V to 15 V, ± 190 mA)	BPS15/190-D48	Datel	
DC-to-DC Converter, Triple (12V to 5/12/–5V, 1500/310/500mA)	TPS-12/310-5/1500-D12	Datel	50
DC-to-DC Converter, Triple (24V to 5/12/–5V, 1500/310/500mA)	TPS-12/310-5/1500-D24	Datel	
DC-to-DC Converter, Triple (12V to 5/ ± 12V, 1500/ ± 310mA)	TPS-5/1500-12/310-D12	Datel	
DC-to-DC Converter, Triple (12V to 5/ ± 15V, 1500/ ± 250mA)	TPS-5/1500-15/250-D12	Datel	
DC-to-DC Converter, Triple (24V to 5/ ± 12V, 1500/ ± 310mA)	TPS-5/1500-12/310-D24	Datel	
DC-to-DC Converter, Triple (24V to 5/ ± 15V,1500/ ± 250mA)	TPS-5/1500-15/250-D24	Datel	55
DC-to-DC Converter (1 V to 3 V stepup)	MAX647	Maxim	
DC-to-DC Converter (5 V to 12 V@250 mA)	UPS12/250-D5	Datel	
DC-to-DC Converter (5 V to 12 V@470 mA)	UPS12/470-D5	Datel	
DC-to-DC Converter (5 V to 12 V@80 mA)	UPM12/80-D5	Datel	
DC-to-DC Converter (5 V to 24 V@210 mA)	UPM24/210-D5	Datel	60
DC-to-DC Converter (5 V to 24 V@40 mA)	UPM24/40-D5	Datel	
DC-to-DC Converter (5 V to 28 V@100 mA)	UPM28/100-D5	Datel	
DC-to-DC Converter (5 V to 28 V@25 mA)	UPM28/25-D5	Datel	
DC-to-DC Converter (5 V to 5 V@600 mA)	UPS5/600-D5	Datel	
DC-to-DC Converter, 5V	AHE2805S	Adv Analog	65
DC-to-DC Converter (5V input to ± 12V output at ± 150 mA)	941	AD	
	960	AD	
DC-to-DC Converter (5V input to ± 15V output at ± 150 mA)	940	AD	
	949	AD	
	951	AD	70
	962	AD	
	965	AD	
DC-to-DC Converter (5V input to 5V output at 1000 mA)	943	AD	
	958	AD	
DC-to-DC Converter (5V output/150 mA)	HPR100	Burr-Brown	75
DC-to-DC Converter, 5V (single output)	ATW2805S	Adv Analog	
DC-to-DC Converter, (5V ti 15Vo 15V, 65mA)	UPS-15/65-D5	Datel	
DC-to-DC Converter (5V to –5.2V @ 1000 mA)	PWR6200	Burr-Brown	
DC-to-DC Converter (5V to ± 12V @ ± 104 mA)	PWR1105	Burr-Brown	
DC-to-DC Converter (5V to ± 12V @ ± 125 mA)	PWR404	Burr-Brown	80
DC-to-DC Converter (5V to ± 12V @ ± 19 mA)	PWR104	Burr-Brown	
DC-to-DC Converter (5V to ± 12V @ ± 209 mA)	PWR704	Burr-Brown	
DC-to-DC Converter (5V to ± 12V @ ± 42 mA)	PWR1303	Burr-Brown	
	PWR304	Burr-Brown	
	PWR504	Burr-Brown	85
DC-to-DC Converter (5V to ± 12V @ ± 63 mA)	PWR204	Burr-Brown	
DC-to-DC Converter (5V to ± 12V @ ± 83 mA)	PWR5905	Burr-Brown	
DC-to-DC Converter (5V to ± 12V @ ± 84 mA)	PWR604	Burr-Brown	
DC-to-DC Converter (5V to ± 12V, 2W reg.)	PWR6004	Burr-Brown	
DC-to-DC Converter (5V to ± 12V, 3W reg.)	PWR7304	Burr-Brown	90
DC-to-DC Converter (5V to ± 12V, 3W unreg.)	PWR1204	Burr-Brown	
DC-to-DC Converter (5V to ± 12V, 4W unreg.)	PWR4004	Burr-Brown	
DC-to-DC Converter (5V to ± 12V, 5–6W unreg.)	PWR1604	Burr-Brown	
DC-to-DC Converter (5V to ± 12V, 5W reg.)	PWR7004	Burr-Brown	
DC-to-DC Converter (5V to ± 15V @ ± 100 mA)	PWR405	Burr-Brown	95
DC-to-DC Converter (5V to ± 15V @ ± 15 mA)	PWR105	Burr-Brown	
DC-to-DC Converter (5V to ± 15V @ ± 167 mA)	PWR705	Burr-Brown	
DC-to-DC Converter (5V to ± 15V @ ± 34 mA)	PWR1304	Burr-Brown	
	PWR305	Burr-Brown	
	PWR505	Burr-Brown	100
DC-to-DC Converter (5V to ± 15V @ ± 50 mA)	PWR205	Burr-Brown	
DC-to-DC Converter (5V to ± 15V @ ± 66 mA)	PWR5906	Burr-Brown	
DC-to-DC Converter (5V to ± 15V @ ± 67 mA)	PWR605	Burr-Brown	
DC-to-DC Converter (5V to ± 15V @ ± 83 mA)	PWR1106	Burr-Brown	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
DC-to-DC Converter (5V to ± 15V, 2W reg.)	PWR6005	Burr-Brown
DC-to-DC Converter (5V to ± 15V, 3W reg.)	PWR7305	Burr-Brown
DC-to-DC Converter (5V to ± 15V, 3W unreg.)	PWR1205	Burr-Brown
DC-to-DC Converter (5V to ± 15V, 4W unreg.)	PWR4005	Burr-Brown
DC-to-DC Converter (5V to ± 15V, 5–6W unreg.)	PWR1605	Burr-Brown
DC-to-DC Converter (5V to ± 15V, 5W reg.)	PWR7005	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 100 mA)	PWR303	Burr-Brown
	PWR503	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 150 mA)	PWR203	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 200 mA)	PWR5904	Burr-Brown
	PWR603	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 250 mA)	PWR1104	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 300 mA)	PWR403	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 45 mA)	PWR103	Burr-Brown
DC-to-DC Converter (5V to ± 5V @ ± 500 mA)	PWR703	Burr-Brown
DC-to-DC Converter (5V to ± 5V, 3W unreg.)	PWR1203	Burr-Brown
DC-to-DC Converter (5V to 12V @ 125 mA)	PWR201	Burr-Brown
DC-to-DC Converter (5V to 12V @ 167 mA)	PWR601	Burr-Brown
DC-to-DC Converter (5V to 12V @ 208 mA)	PWR1102	Burr-Brown
DC-to-DC Converter (5V to 12V @ 250 mA)	PWR401	Burr-Brown
DC-to-DC Converter (5V to 12V @ 38 mA)	PWR101	Burr-Brown
DC-to-DC Converter (5V to 12V @ 417 mA)	PWR701	Burr-Brown
DC-to-DC Converter (5V to 12V @ 83 mA)	PWR1301	Burr-Brown
	PWR5902	Burr-Brown
DC-to-DC Converter (5V to 12V @ 84 mA)	PWR301	Burr-Brown
	PWR501	Burr-Brown
DC-to-DC Converter (5V to 12V, 3W unreg.)	PWR1201	Burr-Brown
DC-to-DC Converter, (5V to 12V, 80mA)	UPS-12/80-D5	Datel
DC-to-DC Converter (5V to 15V @ 100 mA)	PWR202	Burr-Brown
DC-to-DC Converter (5V to 15V @ 134 mA)	PWR602	Burr-Brown
DC-to-DC Converter (5V to 15V @ 166 mA)	PWR1103	Burr-Brown
DC-to-DC Converter (5V to 15V @ 200 mA)	PWR402	Burr-Brown
DC-to-DC Converter (5V to 15V @ 30 mA)	PWR102	Burr-Brown
DC-to-DC Converter (5V to 15V @ 334 mA)	PWR702	Burr-Brown
DC-to-DC Converter (5V to 15V @ 66 mA)	PWR5903	Burr-Brown
DC-to-DC Converter (5V to 15V @ 67 mA)	PWR1302	Burr-Brown
	PWR302	Burr-Brown
	PWR502	Burr-Brown
DC-to-DC Converter (5V to 15V@30 mA)	**PWS728**	**Burr-Brown (3337)**
DC-to-DC Converter (5V to 15V, 3W unreg.)	PWR1202	Burr-Brown
DC-to-DC Converter (5V to 5V @ 1000 mA)	PWR700	Burr-Brown
DC-to-DC Converter (5V to 5V @ 200 mA)	PWR1300	Burr-Brown
	PWR300	Burr-Brown
	PWR500	Burr-Brown
	PWR5900	Burr-Brown
DC-to-DC Converter (5V to 5V @ 250 mA)	PWR800	Burr-Brown
	PWR801	Burr-Brown
DC-to-DC Converter (5V to 5V @ 300 mA)	PWR200	Burr-Brown
DC-to-DC Converter (5V to 5V @ 400 mA)	PWR600	Burr-Brown
DC-to-DC Converter (5V to 5V @ 500 mA)	PWR1100	Burr-Brown
DC-to-DC Converter (5V to 5V @ 600 mA)	PWR400	Burr-Brown
DC-to-DC Converter (5V to 5V @ 90 mA)	PWR100	Burr-Brown
DC-to-DC Converter (5V to 5V, 1.5W unreg.)	PWR1140	Burr-Brown
DC-to-DC Converter (5V to 5V, 2W reg.)	PWR6000	Burr-Brown
DC-to-DC Converter (5V to 5V, 3W reg.)	PWR7300	Burr-Brown
DC-to-DC Converter (5V to 5V, 3W unreg.)	PWR1200	Burr-Brown
DC-to-DC Converter (5V to 5V, 4W unreg.)	PWR4000	Burr-Brown
DC-to-DC Converter (5V to 5V, 5–6W unreg.)	PWR1600	Burr-Brown
DC-to-DC Converter (5V to 5V, 5W reg.)	PWR7000	Burr-Brown
DC-to-DC Converter (5V to 9V @ 111 mA)	PWR5901	Burr-Brown
DC-to-DC Converter (5V to 9V @ 277 mA)	PWR1101	Burr-Brown
DC-to-DC Converter (5V to 9V, 3W unreg.)	PWR1240	Burr-Brown
DC-to-DC Converter (9–18 to ± 12V @ 625 mA)	PWR5310	Burr-Brown
DC-to-DC Converter (9–18 to ± 15V @ 500 mA)	PWR5311	Burr-Brown
DC-to-DC Converter (9–18 to ± 5V @ 1500 mA)	PWR5309	Burr-Brown
DC-to-DC Converter (9–18V to 12V @ 1250 mA)	PWR5301	Burr-Brown
DC-to-DC Converter (9–18V to 15V @ 1000 mA)	PWR5302	Burr-Brown
DC-to-DC Converter (9–18V to 5/ ± 12V @ 1500/ ± 310 mA)	PWR5318	Burr-Brown
DC-to-DC Converter (9–18V to 5/ ± 15V @ 1500/ ± 250 mA)	PWR5319	Burr-Brown
DC-to-DC Converter (9–18V to 5/12/–5V @ 1500/310/–500 mA)	PWR5320	Burr-Brown
DC-to-DC Converter (9–18V to 5V @ 3000 mA)	PWR5300	Burr-Brown
DC-to-DC Converter (12 to ± 5V @ ± 300 mA)	PWR409	Burr-Brown
DC-to-DC Converter (12 V ti 24 V@210 mA)	UPM24/210-D12	Datel
DC-to-DC Converter (12 V to 24 V@125 mA)	UPM24/125-D12	Datel
DC-to-DC Converter (12 V to 28 V@100 mA)	UPM28/100-D12	Datel
DC-to-DC Converter (12 V to 28 V@25 mA)	UPM28/25-D12	Datel
DC-to-DC Converter (12 V to 5 V@1000 mA)R	UPS5/1000-D12	Datel
DC-to-DC Converter (12 V to 5 V@200 mA)	UPM5/200-D12	Datel
DC-to-DC Converter (12 V to 5 V@600 mA)	UPS5/600-D12	Datel
DC-to-DC Converter, 12V	AHE2812S	Adv Analog
DC-to-DC Converter (12V input to ± 15V output at ± 150 mA)	953	AD
	964	AD
	966	AD
DC-to-DC Converter (12V to –5.2V @ 1000 mA)	PWR6201	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 104 mA)	PWR1112	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 125 mA)	PWR410	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 19 mA)	PWR110	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 209 mA)	PWR710	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 42 mA)	PWR1308	Burr-Brown
	PWR310	Burr-Brown
	PWR510	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 63 mA)	PWR210	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 83 mA)	PWR5912	Burr-Brown
DC-to-DC Converter (12V to ± 12V @ ± 84 mA)	PWR610	Burr-Brown
DC-to-DC Converter (12V to ± 12V, 2W reg.)	PWR6010	Burr-Brown
DC-to-DC Converter (12V to ± 12V, 3W reg.)	PWR7310	Burr-Brown
DC-to-DC Converter (12V to ± 12V, 3W unreg.)	PWR1210	Burr-Brown
DC-to-DC Converter (12V to ± 12V, 4W unreg.)	PWR4010	Burr-Brown
DC-to-DC Converter (12V to ± 12V, 5–6W unreg.)	PWR1610	Burr-Brown
DC-to-DC Converter (12V to ± 12V, 5W reg.)	PWR7010	Burr-Brown
DC-to-DC Converter (12V to ± 15V @ ± 100 mA)	PWR411	Burr-Brown
DC-to-DC Converter (12V to ± 15V @ ± 15 mA)	PWR111	Burr-Brown
DC-to-DC Converter (12V to ± 15V @ ± 167 mA)	PWR711	Burr-Brown
DC-to-DC Converter (12V to ± 15V @ ± 34 mA)	PWR1309	Burr-Brown
	PWR311	Burr-Brown
	PWR511	Burr-Brown
DC-to-DC Converter (12V to ± 15V @ ± 50 mA)	PWR211	Burr-Brown
DC-to-DC Converter (12V to ± 15V @ ± 66 mA)	PWR5913	Burr-Brown

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
DC-to-DC Converter (12V to ±15V @ ±67 mA)	PWR611	Burr-Brown
DC-to-DC Converter (12V to ±15V @ ±83 mA)	PWR1113	Burr-Brown
DC-to-DC Converter (12V to ±15V, 2W reg.)	PWR6011	Burr-Brown
DC-to-DC Converter (12V to ±15V, 3W Reg.)	PWR7311	Burr-Brown
DC-to-DC Converter (12V to ±15V, 3W unreg.)	PWR1211	Burr-Brown
DC-to-DC Converter (12V to ±15V, 4W unreg.)	PWR4011	Burr-Brown
DC-to-DC Converter (12V to ±15V, 5–6W unreg.)	PWR1611	Burr-Brown
DC-to-DC Converter (12V to ±5V @ ±100 mA)	PWR309	Burr-Brown
	PWR509	Burr-Brown
DC-to-DC Converter (12V to ±5V @ ±150 mA)	PWR209	Burr-Brown
DC-to-DC Converter (12V to ±5V @ ±200 mA)	PWR5911	Burr-Brown
	PWR609	Burr-Brown
DC-to-DC Converter (12V to ±5V @ ±250 mA)	PWR1111	Burr-Brown
DC-to-DC Converter (12V to ±5V @ ±45 mA)	PWR109	Burr-Brown
DC-to-DC Converter (12V to ±5V @ ±500 mA)	PWR709	Burr-Brown
DC-to-DC Converter (12V to ±5V, 3W unreg.)	PWR1209	Burr-Brown
DC-to-DC Converter (12V to ±5V, 5W reg.)	PWR7011	Burr-Brown
DC-to-DC Converter (12V to 12V @ 125 mA)	PWR207	Burr-Brown
DC-to-DC Converter (12V to 12V @ 167 mA)	PWR607	Burr-Brown
DC-to-DC Converter (12V to 12V @ 208 mA)	PWR1109	Burr-Brown
DC-to-DC Converter (12V to 12V @ 250 mA)	PWR407	Burr-Brown
DC-to-DC Converter (12V to 12V @ 38 mA)	PWR107	Burr-Brown
DC-to-DC Converter (12V to 12V @ 417 mA)	PWR707	Burr-Brown
DC-to-DC Converter (12V to 12V @ 83 mA)	PWR1306	Burr-Brown
	PWR5909	Burr-Brown
DC-to-DC Converter (12V to 12V @ 84 mA)	PWR307	Burr-Brown
	PWR507	Burr-Brown
DC-to-DC Converter (12V to 12V, 1.5W unreg.)	PWR1141	Burr-Brown
DC-to-DC Converter, (12V to 12V, 1250mA)	UPS-12/1250-D12	Datel
DC-to-DC Converter, (12V to 12V, 2500mA)	UPS-12/2500-D12	Datel
DC-to-DC Converter (12V to 12V, 3W unreg.)	PWR1207	Burr-Brown
DC-to-DC Converter (12V to 12V/4W unreg.)	PWR4007	Burr-Brown
DC-to-DC Converter (12V to 15V @ 100 mA)	PWR208	Burr-Brown
DC-to-DC Converter (12V to 15V @ 134 mA)	PWR608	Burr-Brown
DC-to-DC Converter (12V to 15V @ 166 mA)	PWR1110	Burr-Brown
DC-to-DC Converter (12V to 15V @ 200 mA)	PWR408	Burr-Brown
DC-to-DC Converter (12V to 15V @ 30 mA)	PWR108	Burr-Brown
DC-to-DC Converter (12V to 15V @ 334 mA)	PWR708	Burr-Brown
DC-to-DC Converter (12V to 15V @ 66 mA)	PWR5910	Burr-Brown
DC-to-DC Converter (12V to 15V @ 67 mA)	PWR1307	Burr-Brown
	PWR308	Burr-Brown
	PWR508	Burr-Brown
DC-to-DC Converter, (12V to 15V, 1000mA)	UPS-15/1000-D12	Datel
DC-to-DC Converter, (12V to 15V, 2000mA)	UPS-15/2000-D12	Datel
DC-to-DC Converter (12V to 15V, 3W unreg.)	PWR1208	Burr-Brown
DC-to-DC Converter, (12V to 24V, 40mA)	UPM-24/40-D12	Datel
DC-to-DC Converter (12V to 5V @ 1000 mA)	PWR706	Burr-Brown
DC-to-DC Converter (12V to 5V @ 200 mA)	PWR1305	Burr-Brown
	PWR306	Burr-Brown
	PWR506	Burr-Brown
	PWR5907	Burr-Brown
DC-to-DC Converter (12V to 5V @ 250 mA)	PWR802	Burr-Brown
DC-to-DC Converter (12V to 5V @ 300 mA)	PWR206	Burr-Brown
DC-to-DC Converter (12V to 5V @ 400 mA)	PWR606	Burr-Brown
DC-to-DC Converter (12V to 5V @ 500 mA)	PWR1107	Burr-Brown
DC-to-DC Converter (12V to 5V @ 600 mA)	PWR406	Burr-Brown
DC-to-DC Converter (12V to 5V @ 90 mA)	PWR106	Burr-Brown
DC-to-DC Converter (12V to 5V, 2W reg.)	PWR6006	Burr-Brown
DC-to-DC Converter (12V to 5V/250 mA)	PWR803	Burr-Brown
DC-to-DC Converter (12V to 5V, 3W reg.)	PWR7306	Burr-Brown
DC-to-DC Converter (12V to 5V, 3W unreg.)	PWR1206	Burr-Brown
DC-to-DC Converter, (12V to 5V, 3000mA)	UPS-5/3000-D12	Datel
DC-to-DC Converter (12V to 5V, 4W unreg.)	PWR4006	Burr-Brown
DC-to-DC Converter (12V to 5V, 5–6W unreg.)	PWR1606	Burr-Brown
DC-to-DC Converter (12V to 5V, 5W reg.)	PWR7006	Burr-Brown
DC-to-DC Converter, (12V to 5V, 5000mA)	UPS-5/5000-D12	Datel
DC-to-DC Converter (12V to 9V @ 111 mA)	PWR5908	Burr-Brown
DC-to-DC Converter (12V to 9V @ 277 mA)	PWR1108	Burr-Brown
DC-to-DC Converter (12V to 9V, 3W unreg.)	PWR1241	Burr-Brown
DC-to-DC Converter (14V to ±15V, 2W reg.)	PWR6017	Burr-Brown
DC-to-DC Converter, 15V	AHE2815S	Adv Analog
DC-to-DC Converter (15V to −5.2V @ 1000 mA)	PWR6202	Burr-Brown
DC-to-DC Converter (15V to ±12V @ ±125 mA)	PWR416	Burr-Brown
DC-to-DC Converter (15V to ±12V @ ±19 mA)	PWR116	Burr-Brown
DC-to-DC Converter (15V to ±12V @ ±209 mA)	PWR716	Burr-Brown
DC-to-DC Converter (15V to ±12V @ ±42 mA)	PWR1313	Burr-Brown
	PWR316	Burr-Brown
	PWR516	Burr-Brown
DC-to-DC Converter (15V to ±12V @ ±84 mA)	PWR616	Burr-Brown
DC-to-DC Converter (15V to ±12V, 1.5W)	PWR1316	Burr-Brown
DC-to-DC Converter (15V to ±12V, 2W reg.)	PWR6016	Burr-Brown
DC-to-DC Converter (15V to ±12V, 3W unreg.)	PWR1216	Burr-Brown
DC-to-DC Converter (15V to ±12V, 4W unreg.)	PWR4016	Burr-Brown
DC-to-DC Converter (15V to ±12V, 5–6W unreg.)	PWR1616	Burr-Brown
DC-to-DC Converter (15V to ±12V, 5W reg.)	PWR7016	Burr-Brown
DC-to-DC Converter (15V to ±15V @ ±100 mA)	PWR417	Burr-Brown
DC-to-DC Converter (15V to ±15V @ ±15 mA)	PWR117	Burr-Brown
DC-to-DC Converter (15V to ±15V @ ±167 mA)	PWR717	Burr-Brown
DC-to-DC Converter (15V to ±15V @ ±34 mA)	PWR1314	Burr-Brown
	PWR317	Burr-Brown
	PWR517	Burr-Brown
DC-to-DC Converter (15V to ±15V @ ±50 mA)	PWR217	Burr-Brown
DC-to-DC Converter (15V to ±15V @ ±67 mA)	PWR617	Burr-Brown
DC-to-DC Converter (15V to ±15V, 3W reg.)	PWR7317	Burr-Brown
DC-to-DC Converter (15V to ±15V, 3W unreg.)	PWR1217	Burr-Brown
DC-to-DC Converter (15V to ±15V, 4W unreg.)	PWR4017	Burr-Brown
DC-to-DC Converter (15V to ±15V, 5–6W unreg.)	PWR1617	Burr-Brown
DC-to-DC Converter (15V to ±15V, 5W reg.)	PWR7017	Burr-Brown
DC-to-DC Converter (15V to ±5V @ ±100 mA)	PWR315	Burr-Brown
	PWR515	Burr-Brown
DC-to-DC Converter (15V to ±5V @ ±150 mA)	PWR215	Burr-Brown
DC-to-DC Converter (15V to ±5V @ ±200 mA)	PWR615	Burr-Brown
DC-to-DC Converter (15V to ±5V @ ±300 mA)	PWR415	Burr-Brown
DC-to-DC Converter (15V to ±5V @ ±45 mA)	PWR115	Burr-Brown
DC-to-DC Converter (15V to ±5V @ ±500 mA)	PWR715	Burr-Brown
DC-to-DC Converter (15V to ±5V, 3W unreg.)	PWR1215	Burr-Brown
DC-to-DC Converter (15V to ±5V, 5W reg.)	PWR7012	Burr-Brown
DC-to-DC Converter (15V to 12V @ 125 mA)	PWR213	Burr-Brown
DC-to-DC Converter (15V to 12V @ 167 mA)	PWR613	Burr-Brown

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
DC-to-DC Converter (15V to 12V @ 250 mA)	PWR413	Burr-Brown
DC-to-DC Converter (15V to 12V @ 38 mA)	PWR113	Burr-Brown
DC-to-DC Converter (15V to 12V @ 417 mA)	PWR713	Burr-Brown
DC-to-DC Converter (15V to 12V @ 83 mA)	PWR1311	Burr-Brown
DC-to-DC Converter (15V to 12V @ 84 mA)	PWR313	Burr-Brown
	PWR513	Burr-Brown
DC-to-DC Converter (15V to 12V, 3W reg.)	PWR7316	Burr-Brown
DC-to-DC Converter (15V to 12V, 3W unreg.)	PWR1213	Burr-Brown
DC-to-DC Converter (15V to 15V @ 100 mA)	PWR214	Burr-Brown
DC-to-DC Converter (15V to 15V @ 134 mA)	PWR614	Burr-Brown
DC-to-DC Converter (15V to 15V @ 200 mA)	PWR414	Burr-Brown
DC-to-DC Converter (15V to 15V @ 30 mA)	PWR114	Burr-Brown
DC-to-DC Converter (15V to 15V @ 334 mA)	PWR714	Burr-Brown
DC-to-DC Converter (15V to 15V @ 67 mA)	PWR1312	Burr-Brown
	PWR314	Burr-Brown
	PWR514	Burr-Brown
DC-to-DC Converter (15V to 15V@30 mA)	PWS727	Burr-Brown
DC-to-DC Converter (15V to 15V, 1.5W unreg.)	PWR1142	Burr-Brown
DC-to-DC Converter (15V to 15V, 3W unreg.)	PWR1214	Burr-Brown
DC-to-DC Converter (15V to 5V @ 1000 mA)	PWR712	Burr-Brown
DC-to-DC Converter (15V to 5V @ 200 mA)	PWR1310	Burr-Brown
	PWR312	Burr-Brown
	PWR512	Burr-Brown
DC-to-DC Converter (15V to 5V @ 250 mA)	PWR804	Burr-Brown
	PWR805	Burr-Brown
DC-to-DC Converter (15V to 5V @ 300 mA)	PWR212	Burr-Brown
DC-to-DC Converter (15V to 5V @ 400 mA)	PWR612	Burr-Brown
DC-to-DC Converter (15V to 5V @ 600 mA)	PWR412	Burr-Brown
DC-to-DC Converter (15V to 5V @ 90 mA)	PWR112	Burr-Brown
DC-to-DC Converter (15V to 5V, 2W reg.)	PWR6012	Burr-Brown
DC-to-DC Converter (15V to 5V, 3W reg.)	PWR7312	Burr-Brown
DC-to-DC Converter (15V to 5V, 3W unreg.)	PWR1212	Burr-Brown
DC-to-DC Converter (15V to 5V, 4W unreg.)	PWR4012	Burr-Brown
DC-to-DC Converter (15V to 5V, 5–6W unreg.)	PWR1612	Burr-Brown
DC-to-DC Converter (15V to 9V, 3W unreg.)	PWR1242	Burr-Brown
DC-to-DC Converter (15V to ± 15V, 1.5W)	PWR1317	Burr-Brown
DC-to-DC Converter (18–36V to ± 12V @ 625 mA)	PWR5313	Burr-Brown
DC-to-DC Converter (18–36V to ± 15V @ 500 mA)	PWR5314	Burr-Brown
DC-to-DC Converter (18–36V to ± 5V @ 1500 mA)	PWR5312	Burr-Brown
DC-to-DC Converter (18–36V to 12V @ 1250 mA)	PWR5304	Burr-Brown
DC-to-DC Converter (18–36V to 15V @ 1000 mA)	PWR5305	Burr-Brown
DC-to-DC Converter (18–36V to 5/ ± 12V @ 1500/ ± 310 mA)	PWR5321	Burr-Brown
DC-to-DC Converter (18–36V to 5/ ± 15V @ 1500/ ± 250 mA)	PWR5322	Burr-Brown
DC-to-DC Converter (18–36V to 5/12/–5V @ 1500/310/–500 mA)	PWR5323	Burr-Brown
DC-to-DC Converter (18–36V to 5V @ 3000 mA)	PWR5303	Burr-Brown
DC-to-DC Converter (24 V to 12 V@470 mA)	UPS12/470-D24	Datel
DC-to-DC Converter (24 V to 5 V@1000 mA)	UPS5/1000-D24	Datel
DC-to-DC Converter (24 V to 5 V@2000 mA)	UPS5/2000-D24	Datel
DC-to-DC Converter (24V input to ± 15V output at ± 190 mA)	967	AD
DC-to-DC Converter (24V to –5.2V @ 1000 mA)	PWR6203	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 104 mA)	PWR1119	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 125 mA)	PWR422	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 19 mA)	PWR122	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 209)	PWR722	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 42)	PWR322	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 42 mA)	PWR522	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 63 mA)	PWR222	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 83 mA)	PWR5919	Burr-Brown
DC-to-DC Converter (24V to ± 12V @ ± 84 mA)	PWR622	Burr-Brown
DC-to-DC Converter (24V to ± 12V, 3W reg.)	PWR7322	Burr-Brown
DC-to-DC Converter (24V to ± 12V, 3W unreg.)	PWR1222	Burr-Brown
DC-to-DC Converter (24V to ± 12V, 4W unreg.)	PWR4022	Burr-Brown
DC-to-DC Converter (24V to ± 12V, 5–6W unreg.)	PWR1622	Burr-Brown
DC-to-DC Converter (24V to ± 12V, 5W reg.)	PWR7022	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 100 mA)	PWR423	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 15 mA)	PWR123	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 167)	PWR723	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 34 mA)	PWR323	Burr-Brown
	PWR523	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 50 mA)	PWR223	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 66 mA)	PWR5920	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 67 mA)	PWR623	Burr-Brown
DC-to-DC Converter (24V to ± 15V @ ± 83 mA)	PWR1120	Burr-Brown
DC-to-DC Converter (24V to ± 15V, 3W reg.)	PWR7323	Burr-Brown
DC-to-DC Converter (24V to ± 15V, 3W unreg.)	PWR1223	Burr-Brown
DC-to-DC Converter (24V to ± 15V, 4W unreg.)	PWR4023	Burr-Brown
DC-to-DC Converter (24V to ± 15V, 5–6W unreg.)	PWR1623	Burr-Brown
DC-to-DC Converter (24V to ± 15V, 5W reg.)	PWR7023	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 100 mA)	PWR321	Burr-Brown
	PWR521	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 150 mA)	PWR221	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 200 mA)	PWR5918	Burr-Brown
	PWR621	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 250 mA)	PWR1118	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 300)	PWR421	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 45 mA)	PWR121	Burr-Brown
DC-to-DC Converter (24V to ± 5V @ ± 500 mA)	PWR721	Burr-Brown
DC-to-DC Converter (24V to ± 5V, 1.5W unreg.)	PWR1143	Burr-Brown
DC-to-DC Converter (24V to ± 5V, 3W unreg.)	PWR1221	Burr-Brown
DC-to-DC Converter (24V to ± 5V, 5W reg.)	PWR7018	Burr-Brown
DC-to-DC Converter (24V to 12V @ 125 mA)	PWR219	Burr-Brown
DC-to-DC Converter (24V to 12V @ 167 mA)	PWR619	Burr-Brown
DC-to-DC Converter (24V to 12V @ 208 mA)	PWR1116	Burr-Brown
DC-to-DC Converter (24V to 12V @ 250 mA)	PWR419	Burr-Brown
DC-to-DC Converter (24V to 12V @ 38 mA)	PWR119	Burr-Brown
DC-to-DC Converter (24V to 12V @ 417 mA)	PWR719	Burr-Brown
DC-to-DC Converter (24V to 12V @ 83 mA)	PWR5916	Burr-Brown
DC-to-DC Converter (24V to 12V @ 84 mA)	PWR319	Burr-Brown
	PWR519	Burr-Brown
DC-to-DC Converter, (24V to 12V, 1250mA)	UPS-12/1250-D24	Datel
DC-to-DC Converter (24V to 12V, 2500mA)	UPS-12/2500-D24	Datel
DC-to-DC Converter (24V to 12V, 3W unreg.)	PWR1219	Burr-Brown
DC-to-DC Converter (24V to 15V @ 100 mA)	PWR220	Burr-Brown
DC-to-DC Converter (24V to 15V @ 134 mA)	PWR620	Burr-Brown
DC-to-DC Converter (24V to 15V @ 166 mA)	PWR1117	Burr-Brown

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
DC-to-DC Converter (24V to 15V @ 200 mA)	PWR420	Burr-Brown
DC-to-DC Converter (24V to 15V @ 30 mA)	PWR120	Burr-Brown
DC-to-DC Converter (24V to 15V @ 334 mA)	PWR720	Burr-Brown
DC-to-DC Converter (24V to 15V @ 66 mA)	PWR5917	Burr-Brown
DC-to-DC Converter (24V to 15V @ 67 mA)	PWR320	Burr-Brown
	PWR520	Burr-Brown
DC-to-DC Converter, (24V to 15V, 1000mA)	UPS-15/1000-D24	Datel
DC-to-DC Converter, (24V to 15V, 2000mA)	UPS-15/2000-D24	Datel
DC-to-DC Converter (24V to 15V, 3W unreg.)	PWR1220	Burr-Brown
DC-to-DC Converter (24V to 5V @ 1000 mA)	PWR718	Burr-Brown
DC-to-DC Converter (24V to 5V @ 200 mA)	PWR318	Burr-Brown
	PWR518	Burr-Brown
	PWR5914	Burr-Brown
DC-to-DC Converter (24V to 5V @ 250 mA)	PWR806	Burr-Brown
	PWR807	Burr-Brown
DC-to-DC Converter (24V to 5V @ 300 mA)	PWR218	Burr-Brown
DC-to-DC Converter (24V to 5V @ 400 mA)	PWR618	Burr-Brown
DC-to-DC Converter (24V to 5V @ 500 mA)	PWR1114	Burr-Brown
DC-to-DC Converter (24V to 5V @ 600 mA)	PWR418	Burr-Brown
DC-to-DC Converter (24V to 5V @ 90 mA)	PWR118	Burr-Brown
DC-to-DC Converter (24V to 5V, 3W reg.)	PWR7318	Burr-Brown
DC-to-DC Converter (24V to 5V, 3W unreg.)	PWR1218	Burr-Brown
DC-to-DC Converter (24V to 5V, 4W unreg.)	PWR4018	Burr-Brown
DC-to-DC Converter (24V to 5V, 5–6W unreg.)	PWR1618	Burr-Brown
DC-to-DC Converter, (24V to 5V, 5000mA)	UPS-5/5000-D24	Datel
DC-to-DC Converter (24V to 9V @ 111 mA)	PWR5915	Burr-Brown
DC-to-DC Converter (24V to 9V @ 277 mA)	PWR1115	Burr-Brown
DC-to-DC Converter (24V to 9V, 3W unreg.)	PWR1243	Burr-Brown
DC-to-DC Converter (28 V to 12 V@250 mA)	UPS12/250-D28	Datel
DC-to-DC Converter (28 V to 5 V@1000 mA)	UPS5/1000-D28	Datel
DC-to-DC Converter (28 V to 5 V@200 mA)	UPM5/200-D28	Datel
DC-to-DC Converter (28 V to 5 V@2000 mA)	UPS5/2000-D28	Datel
DC-to-DC Converter (28 V to 5 V@600 mA)	UPS5/600-D28	Datel
DC-to-DC Converter (28V input to ± 15V output at ± 150 mA)	945	AD
DC-to-DC Converter (28V to –5.2V @ 1000 mA)	PWR6204	Burr-Brown
DC-to-DC Converter (28V to ± 12V @ ± 125 mA)	PWR428	Burr-Brown
DC-to-DC Converter (28V to ± 12V @ ± 19 mA)	PWR128	Burr-Brown
DC-to-DC Converter (28V to ± 12V @ ± 209)	PWR728	Burr-Brown
DC-to-DC Converter (28V to ± 12V @ ± 42 mA)	PWR328	Burr-Brown
	PWR528	Burr-Brown
DC-to-DC Converter (28V to ± 12V @ ± 63 mA)	PWR228	Burr-Brown
DC-to-DC Converter (28V to ± 12V @ ± 84 mA)	PWR628	Burr-Brown
DC-to-DC Converter (28V to ± 15V @ ± 100 mA)	PWR429	Burr-Brown
DC-to-DC Converter (28V to ± 15V @ ± 15 mA)	PWR129	Burr-Brown
DC-to-DC Converter (28V to ± 15V @ ± 167 mA)	PWR729	Burr-Brown
DC-to-DC Converter (28V to ± 15V @ ± 34 mA)	PWR329	Burr-Brown
	PWR529	Burr-Brown
DC-to-DC Converter (28V to ± 15V @ ± 50 mA)	PWR229	Burr-Brown
DC-to-DC Converter (28V to ± 15V @ ± 67 mA)	PWR629	Burr-Brown
DC-to-DC Converter (28V to ± 5V @ ± 100 mA)	PWR327	Burr-Brown
	PWR527	Burr-Brown
DC-to-DC Converter (28V to ± 5V @ ± 150 mA)	PWR227	Burr-Brown
DC-to-DC Converter (28V to ± 5V @ ± 200 mA)	PWR627	Burr-Brown
DC-to-DC Converter (28V to ± 5V @ ± 300 mA)	PWR427	Burr-Brown
DC-to-DC Converter (28V to ± 5V @ ± 45 mA)	PWR127	Burr-Brown
DC-to-DC Converter (28V to ± 5V @ ± 500 mA)	PWR727	Burr-Brown
DC-to-DC Converter (28V to 12V @ 125 mA)	PWR225	Burr-Brown
DC-to-DC Converter (28V to 12V @ 167 mA)	PWR625	Burr-Brown
DC-to-DC Converter (28V to 12V @ 250 mA)	PWR425	Burr-Brown
DC-to-DC Converter (28V to 12V @ 38 mA)	PWR125	Burr-Brown
DC-to-DC Converter (28V to 12V @ 84 mA)	PWR325	Burr-Brown
	PWR525	Burr-Brown
DC-to-DC Converter (28V to 15V @ 100 mA)	PWR226	Burr-Brown
DC-to-DC Converter (28V to 15V @ 134 mA)	PWR626	Burr-Brown
DC-to-DC Converter (28V to 15V @ 200 mA)	PWR426	Burr-Brown
DC-to-DC Converter (28V to 15V @ 30 mA)	PWR126	Burr-Brown
DC-to-DC Converter (28V to 15V @ 334 mA)	PWR726	Burr-Brown
DC-to-DC Converter (28V to 15V @ 67 mA)	PWR326	Burr-Brown
	PWR526	Burr-Brown
DC-to-DC Converter (28V to 5V @ 1000 mA)	PWR724	Burr-Brown
DC-to-DC Converter (28V to 5V @ 200 mA)	PWR324	Burr-Brown
	PWR524	Burr-Brown
DC-to-DC Converter (28V to 5V @ 250 mA)	PWR808	Burr-Brown
	PWR809	Burr-Brown
DC-to-DC Converter (28V to 5V @ 300 mA)	PWR224	Burr-Brown
DC-to-DC Converter (28V to 5V @ 400 mA)	PWR624	Burr-Brown
DC-to-DC Converter (28V to 5V @ 600 mA)	PWR424	Burr-Brown
DC-to-DC Converter (28V to 5V @ 90 mA)	PWR124	Burr-Brown
DC-to-DC Converter (35 V to 27 V)	LSH6335	Lambda
	LSH6355	Lambda
	LSH6389	Lambda
DC-to-DC Converter (36–72 to 12V @ 1250 mA)	PWR5307	Burr-Brown
DC-to-DC Converter (36–72 to 15V @ 1000 mA)	PWR5308	Burr-Brown
DC-to-DC Converter (36–72V to ± 12V @ 625 mA)	PWR5316	Burr-Brown
DC-to-DC Converter (36–72V to ± 15V @ 500 mA)	PWR5317	Burr-Brown
DC-to-DC Converter (36–72V to ± 5V @ 1500 mA)	PWR5315	Burr-Brown
DC-to-DC Converter (36–72V to 5/ ± 12 @ 1500/ ± 310 mA)	PWR5324	Burr-Brown
DC-to-DC Converter (36–72V to 5/ ± 15V @ 1500/ ± 250 mA)	PWR5325	Burr-Brown
DC-to-DC Converter (36–72V to 5/12/–5V @ 1500/310/–500 mA)	PWR5326	Burr-Brown
DC-to-DC Converter (36–72V to 5V @ 3000 mA)	PWR5306	Burr-Brown
DC-to-DC Converter (40 V to 31 V)	LSH6425	Lambda
	LSH6435	Lambda
	LSH6455	Lambda
	LSH6489	Lambda
DC-to-DC Converter (40 V to 5 V@2000 mA)	UPS5/2000-D48	Datel
DC-to-DC Converter (48V to –5.2V @ 1000 mA)	PWR6205	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 104 mA)	PWR1126	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 125 mA)	PWR434	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 19 mA)	PWR134	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 209 mA)	PWR734	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 42 mA)	PWR334	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 63 mA)	PWR234	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 83 mA)	PWR5926	Burr-Brown
DC-to-DC Converter (48V to ± 12V @ ± 84 mA)	PWR634	Burr-Brown
DC-to-DC Converter (48V to ± 12V to @ ± 42 mA)	PWR534	Burr-Brown
DC-to-DC Converter (48V to ± 15V @ ± 100 mA)	PWR435	Burr-Brown
DC-to-DC Converter (48V to ± 15V @ ± 15 mA)	PWR135	Burr-Brown
DC-to-DC Converter (48V to ± 15V @ ± 167 mA)	PWR735	Burr-Brown

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
DC-to-DC Converter (48V to ±15V @ ±34 mA)	PWR335	Burr-Brown
	PWR535	Burr-Brown
DC-to-DC Converter (48V to ±15V @ ±50 mA)	PWR235	Burr-Brown
DC-to-DC Converter (48V to ±15V @ ±66 mA)	PWR5927	Burr-Brown
DC-to-DC Converter (48V to ±15V @ ±67 mA)	PWR635	Burr-Brown
DC-to-DC Converter (48V to ±15V @ ±83 mA)	PWR1127	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±100 mA)	PWR333	Burr-Brown
	PWR533	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±150 mA)	PWR233	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±200)	PWR5925	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±200 mA)	PWR633	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±250 mA)	PWR1125	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±300 mA)	PWR433	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±45 mA)	PWR133	Burr-Brown
DC-to-DC Converter (48V to ±5V @ ±500 mA)	PWR733	Burr-Brown
DC-to-DC Converter (48V to 12V @ 125 mA)	PWR231	Burr-Brown
DC-to-DC Converter (48V to 12V @ 167 mA)	PWR631	Burr-Brown
DC-to-DC Converter (48V to 12V @ 208 mA)	PWR1123	Burr-Brown
DC-to-DC Converter (48V to 12V @ 250 mA)	PWR431	Burr-Brown
DC-to-DC Converter (48V to 12V @ 38 mA)	PWR131	Burr-Brown
DC-to-DC Converter (48V to 12V @ 417 mA)	PWR731	Burr-Brown
DC-to-DC Converter (48V to 12V @ 83 mA)	PWR5923	Burr-Brown
DC-to-DC Converter (48V to 12V @ 84 mA)	PWR331	Burr-Brown
	PWR531	Burr-Brown
DC-to-DC Converter (48V to 15V @ 100 mA)	PWR232	Burr-Brown
DC-to-DC Converter (48V to 15V @ 134 mA)	PWR632	Burr-Brown
DC-to-DC Converter (48V to 15V @ 166 mA)	PWR1124	Burr-Brown
DC-to-DC Converter (48V to 15V @ 200 mA)	PWR432	Burr-Brown
DC-to-DC Converter (48V to 15V @ 30 mA)	PWR132	Burr-Brown
DC-to-DC Converter (48V to 15V @ 334 mA)	PWR732	Burr-Brown
DC-to-DC Converter (48V to 15V @ 66 mA)	PWR5924	Burr-Brown
DC-to-DC Converter (48V to 15V @ 67 mA)	PWR332	Burr-Brown
	PWR532	Burr-Brown
DC-to-DC Converter (48V to 5V @ 1000 mA)	PWR730	Burr-Brown
DC-to-DC Converter (48V to 5V @ 200 mA)	PWR330	Burr-Brown
	PWR530	Burr-Brown
	PWR5921	Burr-Brown
DC-to-DC Converter (48V to 5V @ 250 mA)	PWR810	Burr-Brown
	PWR811	Burr-Brown
DC-to-DC Converter (48V to 5V @ 300 mA)	PWR230	Burr-Brown
DC-to-DC Converter (48V to 5V @ 400 mA)	PWR630	Burr-Brown
DC-to-DC Converter (48V to 5V @ 500 mA)	PWR1121	Burr-Brown
DC-to-DC Converter (48V to 5V @ 600 mA)	PWR430	Burr-Brown
DC-to-DC Converter (48V to 5V @ 90 mA)	PWR130	Burr-Brown
DC-to-DC Converter (48V to 9V @ 111 mA)	PWR5922	Burr-Brown
DC-to-DC Converter (48V to 9V @ 277 mA)	PWR1122	Burr-Brown
DC-to-DC Converter (10 to 24 Vdc output)	TK11821	Toko
DC-to-DC Converter (5V to −5V)	ICL7660S	◊ Harris
DC-to-DC Converter (9.3 to 32 Vdc output)	TK11806	Toko
DCto-DC Converter (15V to ±12V @ ±63 mA)	PWR216	Burr-Brown
Discontinuous Switching Power Supply IC	L4963	SGS-Thomson
EMI Filter, (1.75A input current)	AF461	Adv Analog
EMI Filter, (3.80A INPUT CURRENT)input current)	AFA461	Adv Analog
Magnetic Amplifier Controller (provides control for mag. amp. regulators)	**SG1557**	**† SiliconG (3642)**
	SG1559	**† SiliconG (3642)**
	SG1560	**† SiliconG (3642)**
	SG2557	**SiliconG (3642)**
	SG2559	**SiliconG (3642)**
	SG2560	**SiliconG (3642)**
	SG3557	**SiliconG (3642)**
	SG3559	**SiliconG (3642)**
	SG3560	**SiliconG (3642)**
Micropower Regulator with Comparator and Shutdown	LT1120C	LinearTech
Over/Under Current Limit Diagnostic Circuit	LM1946	National
Over/Under Voltage Detector (1.6 to 16V range)	ICL7665S	◊ Harris
Over-Voltage Sensing Circuit	**SG3423**	**SiliconG (3642)**
	SG3423A	**SiliconG (3642)**
	SG3523	SiliconG
	SG3523A	SiliconG
Overvoltage Protector	L20V12	Lambda
	L20V15	Lambda
	L20V24	Lambda
	L20V5	Lambda
	L60V12	Lambda
	L60V15	Lambda
	L60V24	Lambda
	L60V5	Lambda
	MC34062	Motorola
	MC3423	Motorola
	MC3523	† Motorola
Overvoltage Protector (up to 35 V, 10 A)	42092-1010	Micropac
	42092-1210	Micropac
		(Continued)
Overvoltage Protector (up to 35 V, 10 A) (Cont'd)	42092-1410	Micropac
	42092-1610	Micropac
	42092-1810	Micropac
	42092-2010	Micropac
	42092-510	Micropac
	42092-610	Micropac
	42092-710	Micropac
	42092-810	Micropac
	42092-910	Micropac
Overvoltage Protector (up to 35 V, 15 A)	42092-1015	Micropac
	42092-1215	Micropac
	42092-1415	Micropac
	42092-1615	Micropac
	42092-1815	Micropac
	42092-2015	Micropac
	42092-515	Micropac
	42092-615	Micropac
	42092-715	Micropac
	42092-815	Micropac
	42092-915	Micropac
Overvoltage Protector (up to 35 V, 20 A)	42093-0520	Micropac
	42093-0620	Micropac
	42093-0720	Micropac
	42093-0820	Micropac
	42093-0920	Micropac
	42093-1020	Micropac
	42093-1220	Micropac
	42093-1420	Micropac
	42093-1620	Micropac
	42093-1820	Micropac
	42093-2020	Micropac
Overvoltage Protector (up to 35 V, 25 A)	42093-0525	Micropac
	42093-0625	Micropac
	42093-0725	Micropac
	42093-0825	Micropac
	42093-0925	Micropac
	42093-1025	Micropac
	42093-1225	Micropac
	42093-1425	Micropac
	42093-1625	Micropac
	42093-1825	Micropac
	42093-2025	Micropac
Overvoltage Protector (up to 35 V, 30 A)	42093-0530	Micropac
	42093-0630	Micropac
	42093-0730	Micropac
	42093-0830	Micropac
	42093-0930	Micropac
	42093-1030	Micropac
	42093-1230	Micropac
	42093-1430	Micropac
	42093-1630	Micropac
	42093-1830	Micropac
	42093-2030	Micropac
Overvoltage Protector (up to 35 V, 35 A)	42093-0535	Micropac
	42093-0635	Micropac
	42093-0735	Micropac
	42093-0835	Micropac
	42093-0935	Micropac
	42093-1035	Micropac
	42093-1235	Micropac
	42093-1435	Micropac
	42093-1635	Micropac
	42093-1835	Micropac
	42093-2035	Micropac
Overvoltage Protector (up to 35 V, 6 A)	42092-056	Micropac
	42092-066	Micropac
	42092-076	Micropac
	42092-086	Micropac
	42092-096	Micropac
		(Continued)

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source	Line
Overvoltage Protector (up to 35 V, 6 A) (Cont'd)			
	42092-106	Micropac	
	42092-126	Micropac	
	42092-146	Micropac	
	42092-166	Micropac	
	42092-186	Micropac	5
	42092-206	Micropac	
Peak Detector (senses and holds peak)			
	PKD01	**AD (3252)**	
	PKD01A	**† AD (3252)**	
	PKD01B	**† AD (3252)**	
	4085	Burr-Brown	10
	4085M	† Burr-Brown	
	AH503	◊ OEI	
	AH504	◊ OEI	
	5030A	OEI	
	5032A	OEI	15
	5902	† OEI	
Phase Control	TLE3101	Siemens	
	TLE3102	Siemens	
	TLE3103	Siemens	
	TLE3104	Siemens	20
Power Control Zero Voltage Switch			
	SL445A	Plessey	
Power Controller, Resonant Frequency			
	NE5580	Signetics	
Power Factor Controller			
	SG3561	SiliconG	
Power Factor Preregulator			
	UC3854	Unitrode	
Power Failure Detector and Reset Generator (trips at 4.75V)	PCF1252-0	Signetics	25
	PCF1252-1	Signetics	
	PCF1252-2	Signetics	
	PCF1252-3	Signetics	
	PCF1252-4	Signetics	
	PCF1252-5	Signetics	30
	PCF1252-6	Signetics	
	PCF1252-7	Signetics	
	PCF1252-8	Signetics	
	PCF1252-9	Signetics	
Power Fault Monitor, Quad (monitors 4 dc voltages and the ac line)	**SG1548**	**† SiliconG (3642)**	35
	SG2548	**SiliconG (3642)**	
	SG3548	**◊ SiliconG (3642)**	
Power Monitor and Watchdog Timer			
	CS1232	◊ Crystal	
Power Supply Control (voltage reference, over and under voltage sensing)			
	XR1543	Exar	
	XR2543	Exar	40
	XR3543	Exar	
	SG1543	**◊† SiliconG (3642)**	
	SG1544	**◊† SiliconG (3642)**	
	SG2543	**◊ SiliconG (3642)**	
	SG2544	**◊ SiliconG (3642)**	45
	SG3543	**◊ SiliconG (3642)**	
	SG3544	**◊ SiliconG (3642)**	
	UC1543	† Unitrode	
	UC1543/883B	† Unitrode	
	UC1544	† Unitrode	50
	UC1544/883B	† Unitrode	
	UC1901	† Unitrode	
	UC1901/883B	† Unitrode	
	UC1903	† Unitrode	
	UC2543	Unitrode	55
	UC2544	Unitrode	
	UC2901	Unitrode	
	UC2903	Unitrode	
	UC3543	Unitrode	
	UC3544	Unitrode	60
	UC3901	Unitrode	
	UC3903	Unitrode	

Function	Device	Source	Line
Power Supply Control (voltage reference, quad over and under voltage sensing)			
	ULN8130A	Allegro Micro	
	ULN8131A	Allegro Micro	
Power Supply Controller			
	GP6141	**Gennum (3429)**	65
Power Supply Controller Controller, Quasi Resonant, ZVS Controller			
	GP6140	**Gennum (3429)**	
Power Supply Controller (negative switch-mode)			
	RC4292	Raytheon	
	RM4292	Raytheon	
Power Supply Controller (resonant mode)			
	CS3805	Cherry Semi	
	GP605	**Gennum (3429)**	70
Power Supply Controller (resonant mode 10 kHz to 1 MHz)	**LD405**	**Gennum (3429)**	
Power Supply Controller (voltage reference, pulse generator and timing circuitry, error amp)			
	TL496C	TI	
Power Supply, Linear Regulator, High Efficiency			
	UC1834	† Unitrode	
	UC1834/883B	† Unitrode	
	UC2834	Unitrode	75
	UC3834	Unitrode	
Power Supply Monitor			
	MB3771	Fujitsu	
Power Supply Monitor (w/timer)			
	MB3773	Fujitsu	
Power Supply Monitoring IC (monitors independent voltages)	TDA4917A	Siemens	
Power Supply Overvoltage Sensing Circuit, Pin Programmable			
	MC35062	Motorola	80
Power Supply Overvoltage Sensing Circuit, Three-Terminal			
	MC34061	Motorola	
	MC34061A	Motorola	
	MC35061A	Motorola	
Power Supply Supervisory Circuit			
	TL7702A	◊ TI	
	TL7705A	◊ TI	85
	TL7709A	◊ TI	
	TL7712A	◊ TI	
	TL7715A	◊ TI	
Power Supply Supervisory Circuit, Over-Voltage Monitor			
	MC3423	TI	
Power Supply Supervisory Circuit (triple over/under voltage transient supervision)			
	CA2862	**Newbridge (3569)**	90
Power Supply Supervisory Input Comparator			
	LAS4810	Lambda	
	LAS4820	Lambda	
Power Supply Supervisory/Over-Under Voltage Protection Circuit			
	MC3425	Motorola	
Power-On Reset and Watchdog Controllers (for Computers, Controllers, Automotive)			
	MAX698C	Maxim	
Power-On Reset and Watchdog Controllers (for Computers,Controllers, Automotive)			
	MAX699C	Maxim	95
Precision Low Dropout Linear Controller			
	UC1832	Unitrode	
	UC1833	Unitrode	
	UC2832	Unitrode	
	UC2833	Unitrode	
	UC3832	Unitrode	100
	UC3833	Unitrode	
Precision Reference, 10V.			
	TDC4169	◊† TRWLSI	

Function	Device	Source	Line
Programmable, Off-Line, PWM Controller			
	UC1851	Unitrode	
	UC2851	Unitrode	
Pulse Width Control Circuit			
	MB3759	Fujitsu	105
Pulse Width Modualtor (PWM) Control Circuit with On-Chip 5 Volt Precision Reference			
	TL5941	Motorola	
Pulse Width Modulator			
	HS3761RH	‡ Harris	
	SLE4520	Siemens	
Pulse Width Modulator Control Circuit (current mode)			
	CS2844	Cherry Semi	
	CS2845	Cherry Semi	110
	CS3844	Cherry Semi	
	CS3845	Cherry Semi	
Pulse Width Modulator Controller			
	UC3843	SGS-Thomson	
	UC3844	SGS-Thomson	
Pulse Width Modulator Controller, Programmable, Off-Line	**SG1840**	**† SiliconG (3642)**	115
	SG2840	**SiliconG (3642)**	
	SG3840	**SiliconG (3642)**	
Pulse Width Modulator, Current Mode			
	SG1825	**† SiliconG (3642)**	
	SG2825	**SiliconG (3642)**	
	SG3825	**◊ SiliconG (3642)**	120
Pulse Width Modulator, Primary Side			
	XRT469	Exar	
	UC3842A	Unitrode	
	UC3843A	Unitrode	
	UC3844A	Unitrode	
	UC3845A	Unitrode	125
Pulse Width Modulator, Programmable Off-Line			
	UC3851	Unitrode	
Pulse Width Modulator (PWM) Control Circuit with On-Chip 5 Volt Precision Reference			
	MC33060A	Motorola	
	MC34060A	Motorola	
	MC35060A	† Motorola	
	TL594C	Motorola	130
	TL594M	† Motorola	
Pulse Width Modulator, Regulating			
	SG1526B	**† SiliconG (3642)**	
	SG2526B	**SiliconG (3642)**	
	SG3526B	**◊ SiliconG (3642)**	
Pulse Width Modulator, Single Uncommitted			
	TL496	TI	135
	TL497A	TI	
Pulse Width Modulator, Single-Ended			
	UC1823	Unitrode	
	UC1823/883B	Unitrode	
	UC2823	Unitrode	
	UC3823	Unitrode	140
Pulse-Width Modulator Control System (for switching regulators, motor-speed controllers)			
	XR2230	◊ Exar	
Pulse-Width Modulator, Switched-Mode (adjustable to 500 kHz)	LB1132AC	AT&T	
Pulse-Width Modulator, Single Uncommitted			
	LT1070	TI	
	MC34060	TI	
Pulse-Width Modulator, Dual Uncommitted			
	SG2524	TI	145
	SG3525A	TI	
	SG3527A	TI	
	TL493	TI	
	TL494	TI	
	TL495	TI	150
	TL594	TI	
	TL595	TI	
	UC3846	TI	
	UC3847	TI	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source	Line
PWM Control Circuit, Dual			
	MB3775	Fujitsu	
PWM Controller, Programmable, Off Line			
	UC1841	Unitrode	
	UC2841	Unitrode	
	UC3841	Unitrode	
PWM Power Supply IC (120 Vac input, isolated and regulated DC output)			
	PWR-SMP3	Power Integ	5
Reference and OP-AMP, 1.2V–6.3V			
	TDC4611	◊† TRWLSI	
Reference Voltage, –10 V			
	REF08A	**† AD (3238)**	
	REF08G	**AD (3238)**	
	REF08H	**AD (3238)**	
	VRE101C	Thaler	10
	VRE101M	† Thaler	
Reference Voltage, –10V			
	HS2701	Sipex-HSD	
Reference Voltage, –10V/10.24V			
	REF08	**AD (3238)**	
Reference Voltage, ± –10V			
	VRE121C	Thaler	
	VRE121M	† Thaler	15
Reference Voltage, ± 1.5V			
	VRE200C	Thaler	
	VRE200M	† Thaler	
Reference Voltage, (± 5 V)			
	LT1029AC	LinearTech	
	LT1029AM	† LinearTech	
	LT1029C	LinearTech	20
	LT1029M	† LinearTech	
	VRE107C	Thaler	
	VRE107M	† Thaler	
Reference Voltage, ± 5V			
	VRE125C	Thaler	
	VRE125M	† Thaler	25
	VRE127C	Thaler	
	VRE127M	† Thaler	
Reference Voltage, ± 10 V			
	AD2702J	**AD (3238)**	
	AD2702L	**AD (3238)**	
	AD2702S	**† AD (3238)**	30
	AD2702U	**AD (3238)**	
	AD2712K	**AD (3238)**	
	AD2712L	**AD (3238)**	
	AD2720	AD	
	REF01	◊† TeledyneS	35
	VRE102C	Thaler	
	VRE102M	† Thaler	
Reference Voltage, ± 10V			
	AD688	**AD (3286)**	
	52101	† Micropac	
	VRE104C	Thaler	40
	VRE104M	† Thaler	
	VRE120C	Thaler	
	VRE120M	† Thaler	
	VRE122C	Thaler	
	VRE122M	† Thaler	45
	VRE130M	† Thaler	
Reference Voltage, ± 15 V			
	VRE135	Thaler	
Reference Voltage, ± 15V			
	VRE135M	† Thaler	
Reference Voltage, Adjustable to 36V			
	KA431	Samsung	
Reference Voltage (available in 13 ranges form 1.8 to 5.6V)	**SG103**	**† SiliconG (3642)**	50
Reference Voltage (high temperature)			
	VRE120	Thaler	
Reference Voltage, Pin-Programmable Outputs (± ± 5V, 5V and 10V, –5V and –10V dual outputs or 5V, –5V, 10V, –10V single outputs			
	AD588A	**AD (3238)**	
Reference Voltage, Pin-Programmable Outputs (± 5V, 5V and 10V, –5V and –10V dual outputs or 5V, –5V, 10V, –10V single outputs)			
	AD588B	**AD (3238)**	
	AD588C	**AD (3238)**	
	AD588S	**† AD (3238)**	55
	AD588T	**† AD (3238)**	
Reference Voltage, Programmable			
	TL430	TI	
	TL431	◊ TI	
Reference Voltage (two terminal active circuit 1.220 V ± 5%)	MP5010	† MicroPwr	
	MP5010A	† MicroPwr	60
	LM113	† National	
	LM113-1	† National	
	LM113-2	National	
	LM313	National	
	9491AM	† TeledyneS	65
	9491B	TeledyneS	
	9491BM	TeledyneS	
Reference Voltage (two terminal active circuit) 1.235 V ± 2%	LT1004C	LinearTech	
	LT1004M	† LinearTech	
	LM285-1	Motorola	70
	LM385-1	Motorola	
	LM385B-1	Motorola	
	LM185	† National	
	LM285	National	
	LM385	◊ National	75
Reference Voltage (two terminal active circuit) 1.8 to 5.6 V	LM103	‡ National	
Reference Voltage, 1.2 V			
	SR12D	Plessey	
Reference Voltage, 1.23 V			
	AD589J	**AD (3238)**	
	AD589K	**AD (3238)**	
	AD589L	**AD (3238)**	80
	AD589M	**AD (3238)**	
	AD589S	**† AD (3238)**	
	AD589T	**† AD (3238)**	
	AD589U	**† AD (3238)**	
	ICL8069	Harris	85
	ICL8069	Maxim	
	ICL8069M	† Maxim	
	LM185-1	† National	
	LM285-1	National	
	LM385-1	◊ National	90
	TSC8069	TeledyneS	
Reference Voltage, 1.26 V (two terminal active circuit)			
	ZN423	Plessey	
Reference Voltage, 1.8V			
	SG103-1.8	**◊ SiliconG (3642)**	
	SG303-1.8	◊ SiliconG	
Reference Voltage, 2.2V			
	SG103-2.2	**† SiliconG (3642)**	95
	SG303-2.2	SiliconG	
Reference Voltage, 2.4V			
	SG103-2.4	**† SiliconG (3642)**	
	SG303-2.4	SiliconG	
Reference Voltage, 2.45 V (two terminal active circuit)			
	VR182A	Datel	
	VR182B	Datel	100
	VR182C	Datel	
	ZN404	Plessey	
	ZN458	Plessey	
	ZN458A	Plessey	
	ZN458B	Plessey	105
Reference Voltage, 2.5 V			
	AD1403	AD	
	AD1403A	AD	
	AD580J	**AD (3238)**	
		(Continued)	
Reference Voltage, 2.5 V		(Cont'd)	
	AD580K	**AD (3238)**	
	AD580L	**AD (3238)**	110
	AD580S	**† AD (3238)**	
	AD580T	**† AD (3238)**	
	AD580U	**† AD (3238)**	
	REF03G	**◊ AD (3238)**	
	REF43B	**† AD (3238)**	115
	REF43F	**AD (3238)**	
	REF43G	**AD (3238)**	
	AD580J	LinearTech	
	AD580K	LinearTech	
	AD580L	LinearTech	120
	AD580S	† LinearTech	
	AD580T	† LinearTech	
	AD580U	† LinearTech	
	MX580J	Maxim	
	MX580K	Maxim	125
	MX580L	Maxim	
	MX580M	Maxim	
	MX580S	† Maxim	
	MX580T	† Maxim	
	MX580U	† Maxim	130
	LM285-2	Motorola	
	LM385-2	Motorola	
	LM385B-2	Motorola	
	MC1403	Motorola	
	MC1403A	Motorola	135
	MC1503	† Motorola	
	MC1503A	† Motorola	
	LM136-2	† National	
	LM136A-2	† National	
	LM185-2	† National	140
	LM236-2	National	
	LM236A-2	National	
	LM285-2	National	
	LM336-2	◊ National	
	LM368-2	National	145
	LM385-2	◊ National	
	TDB0136	SGS-Thomson	
	TDC0136	† SGS-Thomson	
	SG1503	**† SiliconG (3642)**	
	SG2503	**SiliconG (3642)**	150
	SG3503	SiliconG	
	LM236-25	TI	
	LM336-25	TI	
	LT1004MLDB-2	† TI	
	LT1009M	TI	155
Reference Voltage, 2.5 V (trimmable output)			
	ZNREF025	Plessey	
Reference Voltage, 2.5 (1% Tolerence)			
	REF25	Plessey	
Reference Voltage, 2.5, 5.0, 7.5, and 10.0 V			
	AD584J	**◊ AD (3238)**	
	AD584K	**◊ AD (3238)**	
	AD584L	**◊ AD (3238)**	160
	AD584S	**◊† AD (3238)**	
	AD584T	**◊† AD (3238)**	
	AD584U	**◊† AD (3238)**	
	MX584J	Maxim	
	MX584K	Maxim	165
	MX584L	Maxim	
	MX584S	† Maxim	
	MX584T	† Maxim	
	MX584U	† Maxim	
Reference Voltage, 2.5, 5.0, 7.5, and 10.0V			
	MX584	Maxim	170
Reference Voltage, 2.5V			
	AD680	AD	
	REF03	**AD (3238)**	
	REF43	**AD (3238)**	
	LM136-25	† TI	
Reference Voltage, 2.5V (1% tolerance)			
	REF25Z	Plessey	175
Reference Voltage, 2.7V			
	SG103-2.7	**† SiliconG (3642)**	
	SG303-2.7	SiliconG	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source	Line
Reference Voltage, 2V			
	SG103-2.0	**† SiliconG (3642)**	
	SG303-2.0	SiliconG	
Reference Voltage, 3.3V			
	SG103-3.3	**† SiliconG (3642)**	
	SG303-3.3	SiliconG	
Reference Voltage, 3.6V			
	SG103-3.6	**† SiliconG (3642)**	5
	SG303-3.6	SiliconG	
Reference Voltage, 3.9V			
	SG103-3.9	**† SiliconG (3642)**	
	SG303-3.9	SiliconG	
Reference Voltage, 3V			
	SG103-3.0	**† SiliconG (3642)**	
	SG303-3.0	SiliconG	10
Reference Voltage, 4 to 6V Adjustable			
	KA336	Samsung	
Reference Voltage, 4 V (trimmable output)			
	ZNREF040	Plessey	
Reference Voltage, 4.3V			
	SG103-4.3	**† SiliconG (3642)**	
	SG303-4.3	SiliconG	
Reference Voltage, 4.7V			
	SG103-4.7	**† SiliconG (3642)**	15
	SG303-4.7	SiliconG	
Reference Voltage, 5 V			
	ADREF02H	AD	
	ADREF02A	† AD	
	ADREF02E	AD	
	ADREF02E	AD	20
	AD586	**AD (3238)**	
	REF02	**◊‡ AD (3238)**	
	REF02A	**◊‡ AD (3238)**	
	REF02C	**◊‡ AD (3238)**	
	REF02D	**◊ AD (3238)**	25
	REF02E	**◊ AD (3238)**	
	REF02H	**◊ AD (3238)**	
	REF05A	**AD (3238)**	
	REF05B	**† AD (3238)**	
	REF02	† LinearTech	30
	REF02A	† LinearTech	
	REF02C	LinearTech	
	REF02D	LinearTech	
	REF02E	LinearTech	
	REF02H	LinearTech	35
	MAX675C	Maxim	
	MAX675M	† Maxim	
	REF02	◊ Maxim	
	REF02A	◊ Maxim	
	REF02C	◊ Maxim	40
	REF02D	◊ Maxim	
	REF02E	◊ Maxim	
	REF02H	◊ Maxim	
	LM136-5	† National	
	LM136A-5	† National	45
	LM168-5	† National	
	LM236-5	National	
	LM236A-5	National	
	LM268-5	National	
	LM336-5	◊ National	50
	LM336B-5	◊ National	
	LM368-5	National	
	REF02	Raytheon	
	REF02A	Raytheon	
	REF02C	Raytheon	55
	REF02D	Raytheon	
	REF02E	Raytheon	
	REF02H	Raytheon	
	REF02	◊† TeledyneS	
	TSC9495C	TeledyneS	60
	VRE105C	Thaler	
	VRE105M	† Thaler	
Reference Voltage, 5 V (trimmable output)			
	ZNREF050	Plessey	
Reference Voltage, 5.1V			
	SG103-5.1	**† SiliconG (3642)**	
	SG303-5.1	SiliconG	65
Reference Voltage, 5.6V			
	SG103-5.6	**† SiliconG (3642)**	
	SG303-5.6	SiliconG	
Reference Voltage, 5V			
	REF05	**AD (3238)**	
Reference Voltage, 5V (1% Tolerance)			
	REF50	Plessey	
	REF50Z	Plessey	70
Reference Voltage, 6.2 V			
	LM168-6	† National	
	LM268-6	National	
	LM368-6	National	
Reference Voltage, 6.2V (trimmable output)			
	ZNREF062	Plessey	
Reference Voltage, 6.9 V Temperature Stabilized			
	LM199A	† LinearTech	75
	LM399A	LinearTech	
	LM129	† National	
	LM199	† National	
	LM199A	† National	
	LM299	National	80
	LM299A	National	
	LM329	National	
	LM399	National	
	LM399A	National	
	LM3999	National	85
Reference Voltage, 6.95 V			
	LM199	† LinearTech	
	LM399	LinearTech	
Reference Voltage, 8.192V (precision)			
	AD689	**AD (3238)**	
Reference Voltage, 10 V			
	ADREF01A	† AD	
	ADREF01E	AD	90
	ADREF01H	AD	
	AD587	**AD (3238)**	
	MAX674C	Maxim	
	MAX674M	Maxim	
	MX581J	Maxim	95
	MX581K	Maxim	
	MX581L	Maxim	
	MX581S	† Maxim	
	MX581T	† Maxim	
	MX581U	† Maxim	100
	LM169	† National	
	LM369	National	
	VRE100C	Thaler	
	VRE100M	† Thaler	
Reference Voltage, 10 V, Kelvin Sensed Output (1 mV accuracy)	MAX671C	Maxim	105
	MAX671M	Maxim	
Reference Voltage, 10 V, Kelvin Sensed Output (2.5 mV accuracy)	MAX670C	Maxim	
	MAX670M	Maxim	
Reference Voltage, 10 V (trimmable output)			
	REF101J	**Burr-Brown (3340)**	
	REF101S	**† Burr-Brown (3340)**	110
	ZNREF100	Plessey	
Reference Voltage, 10 V(or −10 V)			
	AD2700J	AD	
	AD2700L	AD	
	AD2700S	† AD	
	AD2700U	† AD	115
	AD2701J	**AD (3238)**	
	AD2701L	**AD (3238)**	
	AD2701S	**† AD (3238)**	
	AD2701U	**† AD (3238)**	
	AD2710K	AD	120
	AD2710L	AD	
	AD2720C	AD	
Reference Voltage, 10 V(or −10 V) (Cont'd)			
	AD581J	**AD (3238)**	
	AD581K	**AD (3238)**	
	AD581L	**AD (3238)**	125
	AD581S	**† AD (3238)**	
	AD581T	**† AD (3238)**	
	AD581U	**† AD (3238)**	
	REF01	**◊‡ AD (3238)**	
	REF01A	**◊‡ AD (3238)**	130
	REF01C	**◊‡ AD (3238)**	
	REF01E	**◊ AD (3238)**	
	REF01H	**◊ AD (3238)**	
	REF10A	**† AD (3238)**	
	REF10B	**† AD (3238)**	135
	REF10	**Burr-Brown (3340)**	
	REF101	**Burr-Brown (3340)**	
	AD581J	LinearTech	
	AD581K	LinearTech	
	AD581L	LinearTech	140
	AD581S	† LinearTech	
	AD581T	† LinearTech	
	AD581U	† LinearTech	
	REF01	† LinearTech	
	REF01A	† LinearTech	145
	REF01C	LinearTech	
	REF01E	LinearTech	
	REF01H	LinearTech	
	MX2700J	Maxim	
	MX2700L	Maxim	150
	MX2700S	Maxim	
	MX2700U	Maxim	
	MX2701J	Maxim	
	MX2701K	Maxim	
	MX2701L	Maxim	155
	MX2701S	† Maxim	
	MX2701U	† Maxim	
	MX2710L	Maxim	
	REF01	◊ Maxim	
	REF01A	◊ Maxim	160
	REF01C	◊ Maxim	
	REF01D	◊ Maxim	
	REF01E	◊ Maxim	
	REF01H	◊ Maxim	
	LH0070	† National	165
	LM168-10	† National	
	LM268-10	National	
	LM368-10	National	
	REF01	Raytheon	
	REF01A	Raytheon	170
	REF01C	Raytheon	
	REF01D	Raytheon	
	REF01E	Raytheon	
	REF01H	Raytheon	
	R675B-1	† Sipex-HSD	175
	TSC9496C	TeledyneS	
Reference Voltage, 10.24 V			
	LH0071	National	
	LH0071-0	National	
	LH0071-1	National	
	LH0071-2	‡ National	180
Reference Voltage, 10V			
	REF10	**AD (3238)**	
	REF102	**Burr-Brown (3340)**	
	HS2700	Sipex-HSD	
	HS2702	Sipex-HSD	
Reference Voltage (10V precision)			
	MX581	Maxim	185
Reference Voltage, 1.26 V (1% tolerance)			
	REF12	† Plessey	
	REF12Z	Plessey	
Reference Voltage, 10 V			
	MAX672	Maxim	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source	Line
Reference Voltage, 10V (trimmable output)			
	52065	† Micropac	
	52098	† Micropac	
Reference Voltage, 2.5 V			
	SR25D	Plessey	
	LT1009	TI	
Reference Voltage, 5 V			
	MAX673	Maxim	5
Regulating Pulse width Modulator			
	LM1524D	† National	
	LM2524D	National	
	LM3524D	National	
Regulating Pulse Width Modulator (7 to 40V operation)			
	SG1529	**† SiliconG (3642)**	
	SG2529	**SiliconG (3642)**	10
	SG3529	**◊ SiliconG (3642)**	
Regulator Controller (for high current low dropout regulator)	UC1835	Unitrode	
	UC1836	† Unitrode	
	UC2835	Unitrode	
	UC2836	Unitrode	15
	UC3835	Unitrode	
	UC3836	Unitrode	
Regulator Diode with Amplifier (6.8 to 11 V)			
	MCA Series	Motorola	
Regulator Pulse Width Modulator			
	KA3524	Samsung	
Reset IC/Low-Reset Input Voltage Detection			
	M51945A	Mitsubishi	20
	M51945B	Mitsubishi	
Reset IC/Low-Reset Supply Voltage Detection w/Delay			
	M51951A	Mitsubishi	
	M51951B	Mitsubishi	
	M51953A	Mitsubishi	
	M51953B	Mitsubishi	25
	M51954A	Mitsubishi	
	M51954B	Mitsubishi	
Resonant mode power supply controller, (active high driver output)	**GP6041**	**Gennum (3429)**	
Resonant mode power supply controller, (active low driver output)	**GP6040**	**Gennum (3429)**	
Resonant-Mode Controller			
	UC1860	Unitrode	30
	UC2860	Unitrode	
	UC3860	Unitrode	
RMS to DC Converter			
	AD536AJ	**AD (3252)**	
	AD536AK	**AD (3252)**	
	AD536AS	**† AD (3252)**	35
	AD636J	**AD (3252)**	
	AD636K	**AD (3252)**	
	AD637J	**AD (3252)**	
	AD637K	**AD (3252)**	
	4340	Burr-Brown	40
	4341	**Burr-Brown (3339)**	
	LH0091	† National	
	LH0091C	National	
RMS to DC Converter (true RMS)			
	AD737A	**AD (3252)**	
	AD737B	**AD (3252)**	45
	AD737J	**AD (3252)**	
	AD737K	**AD (3252)**	
RMS-to-DC Converter			
	AD536A	**AD (3252)**	
	AD736	**AD (3252)**	
Sample and Hold Circuits.			
	SHMHUMM	**Datel (3359)**	50
	SHM2	Datel	
	SHM2E	Datel	
	SHM42	Datel	
	SHM45MM	Datel	

(Continued)

Function	Device	Source	Line
Sample and Hold Circuits.		(Cont'd)	
	SHM4860MM	**Datel (3359)**	55
	SHM6MM	**Datel (3359)**	
	SHM9MM	Datel	
	SHM945	**Datel (3359)**	
Series Precision Binary Buffered Reference			
	LH7071	National	
Series Precision BCD Buffered Reference			
	LH7070	National	60
Series Regulator (positive/negative output, up to 200 mA)	**NJM2351**	**NJR (3570)**	
Shunt Regulator			
	IR9431	Sharp	
Shunt Regulator (adjustable precision)			
	HA17431	Hitachi	
Smart Power Switch			
	UC3720	Unitrode	
SMPS Controller			
	GL8901	GoldStar	65
SMPS Controller, Current Mode			
	TSC170C	TeledyneS	
	TSC170M	† TeledyneS	
	TSC171C	TeledyneS	
	TSC171M	† TeledyneS	
SMPS Controller, High Voltage			
	TSC9110	TeledyneS	70
	TSC9111	TeledyneS	
SMPS Controller (1 watt)			
	TSC9100	TeledyneS	
	TSC9101	TeledyneS	
	TSC9102	TeledyneS	
Start-Up Controller, Off-Line			
	SG1540	**† SiliconG (3642)**	75
	SG2540	**SiliconG (3642)**	
	SG3540	**◊ SiliconG (3642)**	
Supervisory Power Supply Circuit (non-inverting voltage detector)	MAX8211	Maxim	
	MAX8212	Maxim	
Supply Voltage Supervisor			
	TL7702AM	◊† TI	80
	TL7705AM	◊† TI	
Switch Mode Power Supply Circuit (Switches up to 300 kHz)	TDA4918A	Siemens	
Switched Mode Power Supply Control Circuit (for single-ended and push-pull supplies)			
	TDA4700	Siemens	
	TDA4718	Siemens	
	TDA4718A	Siemens	85
Switched Mode Power Supply Control Circuit (push-pull output)	TDA4714A	Siemens	
	TDA4714B	Siemens	
	TDA4716	Siemens	
	TDA4716A	Siemens	
Switching Regulator Power Output Stages, Negative Inputs (60 V)	**SM635**	**† SiliconG (3642)**	90
	SM636	**† SiliconG (3642)**	
	SM637	**† SiliconG (3642)**	
	SM655	**† SiliconG (3642)**	
	SM656	**† SiliconG (3642)**	
	SM657	**† SiliconG (3642)**	95
Switching Regulator Power Output Stages, Positive Inputs (60 V)	**SM625**	**† SiliconG (3642)**	
	SM626	**† SiliconG (3642)**	
	SM627	**† SiliconG (3642)**	
	SM645	**† SiliconG (3642)**	
	SM646	**† SiliconG (3642)**	100
	SM647	**† SiliconG (3642)**	
Switching Regulator Power Output Stages (10 amp negative)	**SM670**	**† SiliconG (3642)**	
	SM671	**† SiliconG (3642)**	
	SM672	**† SiliconG (3642)**	

Function	Device	Source	Line
Switching Regulator Power Output Stages (10 amp positive)	**SM660**	**† SiliconG (3642)**	105
	SM661	**† SiliconG (3642)**	
	SM662	**† SiliconG (3642)**	
Switching Regulator, PWM Controller			
	HA16664	Hitachi	
	HA16666	Hitachi	
Switching Regulator (5 A)			
	CS1070	Cherry Semi	110
Track and Hold Amplifier			
	THC4940	TRWLSI	
Track and Hold Amplifier, 12-Bit			
	LH4860	National	
Transient Protection Circuit (up to ± 125 V)			
	MC3397T	Motorola	
Transient Suppressor			
	L3121	SGS-Thomson	
	L3122	SGS-Thomson	115
Transient Voltage/Current Suppressor			
	L3101	SGS-Thomson	
Transient Voltage Suppressor			
	LS5018	SGS-Thomson	
	LS5060	SGS-Thomson	
	LS5120	SGS-Thomson	
Transient Voltage Suppressor, 270 V, 1.3W			
	TPA270	SGS-Thomson	120
Transient Voltage Suppressor, 270 V, 20W			
	TPC270	SGS-Thomson	
Transient Voltage Suppressor, 270 V, 5W			
	TPB270	SGS-Thomson	
Transient Voltage Suppressor, 62 V, 1.3W			
	TPA62	SGS-Thomson	
Transient Voltage Suppressor, 62 V, 20W			
	TPC62	SGS-Thomson	
Transient Voltage Suppressor, 62 V, 5W			
	TPB62	SGS-Thomson	125
Undervoltage Sensing Circuit (for 3V or 5V power supplies)	MC33164	Motorola	
	MC34164	Motorola	
Voltage Converter, + 5 V to ± 5 V			
	VI7660-1	Datel	
	VI7660-2	Datel	
	LTC1044C	LinearTech	130
	LTC1044M	† LinearTech	
	ICL7660C	◊ Maxim	
	ICL7660M	◊ Maxim	
	SI7660B	Siliconix	
	SI7660C	Siliconix	135
Voltage Converter, + 5V to –5V			
	ICL7660	◊ Harris	
Voltage Converter, converts + 4.5 to + 20V to –4.5 to –20V	ICL7662C	Harris	
	ICL7662M	Harris	
Voltage Converter, Inverting, –5V or Programmable			
	MAX635C	Maxim	
	MAX635M	† Maxim	140
Voltage Converter, Inverting, –12V or Programmable			
	MAX636C	Maxim	
	MAX636M	† Maxim	
Voltage Converter, Inverting, –15V or Programmable			
	MAX637C	Maxim	
	MAX637M	† Maxim	
Voltage Converter (positive to negative)			
	MAX660C	Maxim	145
	MAX660M	† Maxim	
Voltage Converter, Step-Down, 5V or Programmable			
	MAX638C	Maxim	
	MAX638M	† Maxim	
Voltage Converter, Step-Up, + 5V or Programmable			
	MAX631C	Maxim	
	MAX631M	† Maxim	150

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Miscellaneous (Cont'd)

Function	Device	Source
Voltage Converter, Step-Up, + 5V or Programmable (Cont'd)		
	MAX641C	Maxim
	MAX641M	† Maxim
Voltage Converter, Step-Up, + 12V or Programmable		
	MAX632C	◊ Maxim
	MAX632M	† Maxim
	MAX642C	Maxim
	MAX642M	† Maxim
Voltage Converter, Step-Up, + 15V or Programmable		
	MAX633C	Maxim
	MAX633M	† Maxim
	MAX643C	Maxim
	MAX643M	† Maxim
Voltage Converter, Switched Capacitor		
	LTC1044M	TI
Voltage Converter, 5 to ± 10V		
	MAX680C	Maxim
	MAX680E	Maxim
	MAX680M	† Maxim
Voltage Detector		
	MB3761	Fujitsu
Voltage Detector, Indicator, Regulator, (programmable zener)	ICL8211C	◊ Harris
	ICL8211M	◊† Harris
	ICL8212C	◊ Harris
	ICL8212M	◊† Harris
Voltage Detector, 0.995 to 1.105		
	S8051AB	**Seiko Instr (3586)**
Voltage Detector, 1.095 to 1.205		
	S8051AR	**Seiko Instr (3586)**
Voltage Detector, 1.795 to 2.005		
	S8051H	**Seiko Instr (3586)**
Voltage Detector, 1.995 to 2.205		
	S8052AB	**Seiko Instr (3586)**
Voltage Detector, 2.195 to 2.405		
	S8052AR	**Seiko Instr (3586)**
Voltage Detector, 2.395 to 2.605		
	S8052AO	**Seiko Instr (3586)**
Voltage Detector, 2.595 to 2.805		
	S8052AY	**Seiko Instr (3586)**
Voltage Detector, 2.795 to 3.105		
	S8053AB	**Seiko Instr (3586)**
Voltage Detector, 2.895 to 3.105		
	S8053HB	**Seiko Instr (3586)**
Voltage Detector, 3.095 to 3.405		
	S8053AR	**Seiko Instr (3586)**
Voltage Detector, 3.395 to 3.705		
	S8053AO	**Seiko Instr (3586)**
Voltage Detector, 3.80 to 4.20		
	S8054H	**Seiko Instr (3586)**
Voltage Detector, 3.995 to 4.305		
	S8054AB	**Seiko Instr (3586)**
Voltage Detector, 4.295 to 4.605		
	S8054AR	**Seiko Instr (3586)**
Voltage Detector, 4.595 to 4.905		
	S8054AO	**Seiko Instr (3586)**
Voltage Detector, 4.895 to 5.205		
	S8054AY	**Seiko Instr (3586)**
Voltage Doubler/Inverter, 1.5–10V to 3 to 20V or –1.5 to –10V.	ICL7660	Maxim
	SI7660A	Siliconix
	SI7660B	Siliconix
	SI7660C	Siliconix
	SI7661A	Siliconix
	SI7661B	Siliconix
	SI7661C	Siliconix
	TSC7660	TeledyneS
Voltage Level Alarm		
	3041	Adv Analog
Voltage Level Alarm, Quad		
	3040	Adv Analog
Voltage Monitor (battery manager)		
	DS1259	◊ Dallas
Voltage Monitor (battery manager with lithium cell)		
	DS1260	Dallas
Voltage Monitor (power monitor)		
	DS1231	◊ Dallas
Voltage Monitor (with watchdog or activity timer)		
	DS1232	◊ Dallas
Voltage Regulator (low drop out)		
	MAX667C	Maxim
	MAX667M	† Maxim
Voltage Regulator (low power)		
	MAX666C	Maxim
	MAX666M	† Maxim
Voltage Regulator (3-terminal positive)		
	LM323	Samsung
Voltage Regulator, 5 V (w/fail detection, watchdog timer and reset)	HA1835	Hitachi
Voltage Regulator, 110/220 Vac to 5Vdc, Adjustable output 1.3V to 10V at 50mA Over/under Voltage Detection, Full-wave Rectification		
	MAX600	Maxim
	MAX602	Maxim
	MAX610C	Maxim
	MAX610M	† Maxim
	MAX612C	Maxim
	MAX612M	† Maxim
Voltage Regulator, 110/220 Vac to 5Vdc, Fixed output, Variable Microprocessor Reset Half-wave rectification		
	MAX601	Maxim
	MAX611C	Maxim
	MAX611M	† Maxim
Voltage Sensing Circuit		
	SG1542	**† SiliconG (3642)**
	SG2542	**SiliconG (3642)**
	SG3542	**◊ SiliconG (3642)**
Voltage Supervisor IC		
	TL7705/A	SGS-Thomson
Voltage to Frequency Converter		
	VFC3802	Adv Analog
	VFC3805	Adv Analog
	VFC3810	Adv Analog
	ADVFG32	AD
	AD537J	**AD (3232)**
	AD537K	**AD (3232)**
	AD537S	**† AD (3232)**
	AD651	AD
	AD651A	AD
	AD651B	AD
	AD651J	AD
	AD651K	AD
	AD651S	† AD
	AD654	**AD (3232)**
	VFC100	**Burr-Brown (3348)**
Voltage to Frequency Converter (Cont'd)		
	VFC32	**Burr-Brown (3348)**
	VFC320	**Burr-Brown (3348)**
	TDB0131	SGS-Thomson
	IR9331	Sharp
	4731	† TeledyneS
	4731HR	† TeledyneS
	4732	TeledyneS
	4732HR	† TeledyneS
	4733	† TeledyneS
	4733HR	TeledyneS
	4734	TeledyneS
	4734HR	† TeledyneS
	4735	† TeledyneS
	4735HR	† TeledyneS
	4736HR	† TeledyneS
	4739	TeledyneS
	4743	TeledyneS
Voltage to Frequency Converter (2 MHz)		
	AD652A	**AD (3232)**
	AD652B	**AD (3232)**
	AD652J	**AD (3232)**
	AD652K	**AD (3232)**
	AD652S	**† AD (3232)**
Voltage to Frequency/Frequency to Voltage Converter		
	A8400	Adv Analog
	A8402	Adv Analog
	AD650J	**AD (3232)**
	AD650K	**AD (3232)**
	AD650S	**† AD (3232)**
	VFC42	**Burr-Brown (3348)**
	VFC42M	**† Burr-Brown (3348)**
	VFC52	Burr-Brown
	VFC52M	† Burr-Brown
	VFC62	**Burr-Brown (3348)**
	XR4151	◊ Exar
	LM131	† National
	LM131A	‡ National
	LM231	National
	LM231A	National
	LM331	National
	LM331A	National
	RC4151	Raytheon
	RC4152	Raytheon
	RC4153	Raytheon
	RM4151	† Raytheon
	RM4152	† Raytheon
	RM4153	† Raytheon
	TSC9400	TeledyneS
	TSC9401	TeledyneS
	TSC9402	TeledyneS
	4780	TeledyneS
	4781	TeledyneS
	4782	TeledyneS
	9400	TeledyneS
	9401	TeledyneS
	9402	TeledyneS
Voltage-to-Current Converter/Transmitter		
	XTR110	**Burr-Brown (3335)**
Voltage-to-Frequency and Frequency-to-Voltage Converter	MX650	Maxim
	VFC32	Maxim
Voltage-to-Frequency Converter		
	ADVFC32	**AD (3232)**
	VFC110	**Burr-Brown (3348)**
	VFC121	**Burr-Brown (3348)**
	VFQ1C	Datel
	VFQ1R	Datel
	VFQ2C	Datel
	VFQ3C	Datel

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LINEAR

LINEAR—Power Supply Circuits (Cont'd)

Function	Device	Source	Line
Miscellaneous (Cont'd)			
Voltage-to-Frequency Converter (synchronized to external clock)			
	VFC101J	**Burr-Brown (3348)**	
	VFC101K	**Burr-Brown (3348)**	
Voltage-to-Frequency Converter (1 MHz precision)			
	4705	TeledyneS	
Voltage-to-Frequency Converter (5 MHz precision)			
	4707	TeledyneS	
Voltage-to-Frequency Converter (10 kHz)			
	4701	TeledyneS	5
	4713	TeledyneS	
	4721	TeledyneS	
	4723	TeledyneS	
	4725	TeledyneS	
Voltage-to-Frequency Converter (10 kHz precision)			
	4715	TeledyneS	10
Voltage-to-Frequency Converter (100 kHz precision)			
	4709	TeledyneS	
Voltage-to-Frequency Converter (4100 kHz)			
	4703	TeledyneS	
Zero Voltage Switch			
	KA2804	Samsung	
Single Chip Power Supply, 5V to 24V output			
	HV2405E	Harris	
Single-Chip Power Supply (120 Vac input, 5V output@50 mA)			
	HV1205	Harris	15
Dual Over/Under-Voltage Detector			
	ICL7665	◊ Maxim	
	ICL7665A	◊ Maxim	
	ICL7665B	◊ Maxim	
Quad OP-AMP and reference, 1.2V–6.3V			
	TDC4614	◊† TRWLSI	
Three-Phase PWM Waveform Generator			
	MA818	Marconi	20
10A Switchmode Power Supply IC			
	L4970	SGS-Thomson	
12 Bit, 1.25 MHz A/D Evaluation Board			
	ADCB500-1	Datel	
2A Switchmode Power Supply IC			
	L4972	SGS-Thomson	
	L4972D	SGS-Thomson	
3.5A Switchmode Power Supply IC			
	L4974	SGS-Thomson	25
5A Switchmode Power Supply IC			
	L4975	SGS-Thomson	
7A Switchmode Power Supply IC			
	L4977	SGS-Thomson	

LINEAR

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LINEAR—Telecommunication Circuits

Function	Device	Source	Line
Microcontroller, 8-Bit (for cellular radio chipset)	**S80C552**	**Signetics (3590)**	
Adaptive Differential Pulse Code Modulation Transcoder (ADPCM)	T7280	AT&T	
Address Selector	MX103	MX-COM	
ADPCM Circuit (for process control)	NCR64C72	NCR	
ADPCM Digital Signal Processor provdes coding/decoding functions required to process Adaptive Pulse Code Modulation Signals)	MB87068	Fujitsu	5
ADPCM Digital Signal Processor (provides coding/decoding functions required to process Adaptive Pulse Code Modulation Signals)	MB87067	Fujitsu	
ADPCM Processor (transcoding PCM and ADPCM)	DS2168	◊ Dallas	
ADPCM Transcoder	MC145532	Motorola	
ADPCM-PCM Transcoder	DS2167	◊ Dallas	
	TEL721	STC	10
Amplifier, Telephone Audio	MC34119	Motorola	
Analog, Front End	MSM6950	OKI	
Analog Processor, for DSP V.22bis Modems	**SSI73M214**	**SiliconSys (3647)**	
Answering Machine Circuit, Full Digital Cordless Processor	DSPG6004	DSP Group	
Answering Machine Circuit, Full Digital Processor	DSPG6005	DSP Group	15
Answering Machine Circuit, Full Digital System	DSPG6003	DSP Group	
Answering Machine/Digital Memo Pad Circuit	DSPG5007	DSP Group	
Answering Machine Digital OGM Processor/Speech Synthesis	DSPG6002	DSP Group	
Asynchronous Receiver and Transmitter (UART)	XR16C450	Exar	
Asynchronous Receiver/Transmitter Interface	T7112	AT&T	20
Audio Processor	MX806	MX-COM	
Audio Processor, Companding and Amplifier (for cellular radio chipset)	NE5750	Signetics	
Audio Processor, Filter and Control Section (for cellular radio chipset)	**NE5751**	**Signetics (3590)**	
Audio Signaling Processor	MX803	MX-COM	
Battery Feed (–48V)	LB1011AB	AT&T	25
	LB1012AD	AT&T	
Bit Synchronizer/PSK Demodulator	**STEL2110**	**STEL (3664)**	
Bit-Slice Multiplier (for public-key cryptography)	T7002	AT&T	
Block Phase Estimator (provides a phase reference for demodulating binary PSK or quadrature PSK data in the presence of phase roll)	**STEL2210**	**STEL (3664)**	
B82S Transcoder	XRT5670	Exar	30
Call Progress and Tone Detector (detects special information tones and error tones)	M984	Teltone	
Call Progress Tone Detector	NE5900	Signetics	
	SSI75T980	**SiliconSys (3647)**	
	SSI75T981	**SiliconSys (3647)**	
	SSI75T982	**SiliconSys (3647)**	35
	M980	Teltone	
	M981	Teltone	
	M982	Teltone	
Call Progress Tone Generator (generates standard tones)	M991	Teltone	
CCITT, S-Bus Interface Circuit	PEB2080	Siemens	40
CCITT Signalling System Controller	MK5027	SGS-Thomson	
Cellular Telephone Audio Processor	DSPG5001T	DSP Group	
Cellular Telephone Echo Cancellation Circuit	DSPG5002	DSP Group	
	DSPG5003	DSP Group	
	DSPG5005	DSP Group	45
Cellular Telephone Echo Control Device	DSPG5004	DSP Group	
Cellular Telephone Speech Processor	DSPG5101	DSP Group	
	DSPG5102	DSP Group	
CEPT Transceiver	DS2181	◊ Dallas	
Clock Extraction Module	EF7332	SGS-Thomson	50
Clock Recovery Circuit	T7032	AT&T	
	T7033	AT&T	
CMOS CCITT, X.25 LAPB/LAPD Controller	MK5025	SGS-Thomson	
Codec. A-Law wtih Filters (synchronous/asynchronous opration)	MB6022A	Fujitsu	
Codec, μ-Law	CD22354A	Harris	55
	TP3020	National	
	TP3061	National	
Codec, μ-Law with Filters (synchronous/asynchronous operation)	MB6021A	Fujitsu	
	MB6051A	Fujitsu	
	MB6055A	Fujitsu	60
Codec, μ-Law with Filters (synchronous operation)	MB6025A	Fujitsu	
Codec, A-Law	CD22357	Harris	
	CD22357A	Harris	
	2911A-1	Intel	
	TP3021	National	65
	TP3062	National	
	TP5156A	National	
	M5156	SGS-Thomson	
Codec, A-Law with Filters (synchronous operation)	MB6026A	Fujitsu	
	MB6052A	Fujitsu	70
	MB6056A	Fujitsu	
Codec, Audio Ringing Codec Filter (ARCOFI)	AM2160	AMD	
Codec Combination Controller (controls up to eight combo codec/filters)	KT8555	Samsung	
Codec Combination (D3/D4 and CCITT spec)	KT8554	Samsung	
	KT8557	Samsung	75
	KT8564	Samsung	
Codec, Continuously Variable Slope Delta Codec	MA367	Marconi	
CODEC, Data/Voice Storage and Retrieval	MX802	MX-COM	
Codec, Feature-Control PCM with Transmit/Receive Filters	T7548	AT&T	
Codec/Filter	MC1403	Motorola	80
	M5913	SGS-Thomson	
	M5914	SGS-Thomson	
	M5917	SGS-Thomson	
	TCM29C18	TI	
	TCM29C19	TI	85
Codec/Filter, μ-Law	S3507	◊ Gould AMI	
	29C16	Intel	
	2916	Intel	
	MT8960	Mitel	
	MT8962	◊ Mitel	90
	MT8964	Mitel	
	F30S54	National	
	F30S64	National	
	F3054	National	
	TP3052-1	National	95
	TP3053-1	National	
	MSM6963	OKI	
	SC11301	Sierra	
Codec/Filter, μ-Law Companding	T7516	AT&T	
Codec/Filter, μ-Law or A-Law	MC145501	Motorola	100
	MC145502	Motorola	
	MC145503	Motorola	
	MC145505	Motorola	
Codec/Filter, μ-Law or A-Law Companding	TS5070	SGS-Thomson	
	TS5071	SGS-Thomson	105
Codec/Filter, μ-Law or A-Law (Pin Selectable)	T7500	AT&T	
	T7510	AT&T	
	29C13	Intel	
	29C50	Intel	
	29C51	Intel	110
	2913	Intel	
	2914	Intel	
	MC145500	Motorola	
Codec/Filter, μ-Law, Parallel Interface	SC11305	Sierra	
Codec/Filter, μ-Law, Serial Interface, High Output Drive	SC11311	Sierra	115
Codec/Filter, μ-Law Synchronous	MB6025	Fujitsu	
Codec/Filter, μLaw	ETC5054	SGS-Thomson	
Codec/Filter, μLaw, Serial Output with Power Amplifiers	ETC5064	SGS-Thomson	
Codec/Filter, A-Law	MB6022	Fujitsu	
	S3506	Gould AMI	120
	MT8961	Mitel	
	MT8963	◊ Mitel	
	MT8965	Mitel	
	F30S67	National	
	TP3057	National	125
	TP3057-1	National	
	TP3067	National	
	MSM6962RS	OKI	
	ETC5057	SGS-Thomson	
	SC11302	Sierra	130
	TCM29C17	TI	
	TCM2917	TI	
Codec/Filter, A-Law Companding	T7517	AT&T	
Codec/Filter, A-Law, Parallel Interface	SC11306	Sierra	
Codec/Filter, A-Law, Serial Interface, High Output Drive	SC11312	Sierra	135
Codec/Filter, A-Law, Serial Output with Power Amplifiers	ETC5067	SGS-Thomson	

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LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source
Codec/Filter, A-Law Synchronous	MB6026	Fujitsu
Codec Filter (D3/D4 ans CCITT spec)	KT3040	Samsung
	KT3040A	Samsung
Codec/Filter, PCM	T7513A	AT&T
Codec/Filter, Pin Selectable μ-Law or A-Law	TCM29C13	TI
Codec/Filter, μ-Law	MB6021	Fujitsu
	TP3051	National
	TP3052	National
	TP3053	National
	TP3054	National
	TP3054-1	National
	TP3056	National
	TP3064	National
	TCM29C16	TI
	TCM2916	TI
Codec/Filter, μ-Law or A-Law (pin selectable)	PEB2060	Siemens
	TCM29C14	TI
	TCM2913	TI
	TCM2914	TI
Codec/Filter, Dual, μ-Law or A-Law (Pin Selectable)	T7512	AT&T
CODEC, Military Delta Modulation	MX629	MX-COM
Codec, PCM with Filter	TCM29C13M	TI
Codec, PCM with Filters	T7522A	AT&T
Codec, Pin Selectable μ-Law or A-Law	ZNPCM1	Plessey
Codec, Pin Selectable μ-Law or A-Law	S291	Siemens
Codec, Transition Encoded Modulation	MT8950	◊ Mitel
Codec, μ-Law	2910A	Intel
	TP5116A	National
	MSM6917	OKI
	M5116	SGS-Thomson
	TCM2910A	TI
Codec, μ-255 Law (Companding)	TCM2909	TI
Coded Data Transceiver (Manchester format)	AM7960	AMD
Communication Terminal Module	EF7333	SGS-Thomson
Compandor (signal expander/compressor)	XR2216	Exar
	NE570	Signetics
	NE571	Signetics
	NE572	Signetics
	SA571	Signetics
	SA572	Signetics
Comparator Circuit (noice reduction for cellular phones)	TK10651	Toko
Compression/Expansion Processor (with image bit-boundary processing)	AM7971	AMD
	AM7971A	AMD
Conference Trunk, Serial PCM Interface (for six telephones/persons)	S3547	Gould AMI
Control Unit with Parallel Interface	L3090	SGS-Thomson
Control Unit with Parallel/Serial Interface	L3030	SGS-Thomson
Control Unit with Serial Interface	L3010	SGS-Thomson

Function	Device	Source
Convolutional Encoder and Viterbi Decoder	STI5268	STEL
Convolutional Encoder/Viterbi Decoder, 20 Mb/s, K = 7	**STEL2020**	**STEL (3664)**
Convolutional Encoder/Viterbi Decoder, 256 kb/s, K = 7	**STEL5269**	**STEL (3664)**
Cordless Telephone Base Subsystem (audio processing and tone signalling on one chip)	PCT13	OnChip Sys
Cordless Telephone Handset Subsystem (audio processing and tone signalling on one chip)	PCT14	OnChip Sys
Correlator/Accumulator, High Rate	**STEL2410**	**STEL (3664)**
Crosspoint Matrix Analog Switch (12x8)	M093	SGS-Thomson
Crosspoint Matrix Analog Switch (12x8) CMOS	M34930	◊ SGS-Thomson
Crosspoint Matrix Analog Switch (16x8) CMOS	M3494	◊ SGS-Thomson
Crosspoint Matrix Analog Switch(12x8) CMOS	M3493	◊ SGS-Thomson
Crosspoint Switch, CCITT G732	MA811	Marconi
Crosspoint Switch (double 4x4 matrix)	RC4444	Raytheon
	RM4444	Raytheon
Crosspoint Switch for PBX	U145M	AEG Corp
Crosspoint Switch (2x8 matrix)	M089	SGS-Thomson
Crosspoint Switch (4x4 matrix with control memory)	CD22100	Harris
	MC142100	Motorola
	MC145100	† Motorola
	μPD22100	NEC
	M22100	SGS-Thomson
Crosspoint Switch (4x4x2 with control memory)	CD22101	Harris
	CD22102	Harris
Crosspoint Switch (8x4 matrix)	MT8804A	Mitel
Crosspoint Switch (8x8x1 expandable, 2 Gb/s)	10G050	GigaBit
Crosspoint Switch, 8x8x1 (with control memory)	CD54HC22106	† Harris
	CD74HCT22106	Harris
	CD74HC22106	Harris
Crosspoint Switch (8x12 matrix)	MT8812	Mitel
Crosspoint Switch, 12x8	CD22M093	Harris
Crosspoint Switch (12x8 with control memory)	**SSI78A093**	**SiliconSys (3647)**
Crosspoint Switch, 16x8	CD22M3493	Harris
	CD22M3494	Harris
Crosspoint Switch (16x16x1, 2 Gb/s)	10G051	GigaBit
Crosspoint Switch (32x32 matrix)	SC11320	Sierra
Crosspoint Switch (8x8 matrix)	129EH-P	AT&T
CTCSS (continuous tone-controlled squelch system) Encoder/Decoder	MC4137	NEC
	MC4138	NEC
CTCSS Encoder	MX315	MX-COM

Function	Device	Source
CTCSS Encoder/Decoder	MX365	MX-COM
DASL, Digital Adaptor for Subscriber Loops	TP3402	National
Data Access Arrangement Circuit (BABT approved)	CH1828	Cermetek
	CH1830	Cermetek
Data Access Arrangement Circuit (DAA)	CH1810	Cermetek
	CH1818	Cermetek
	CH1832	Cermetek
Data Access Arrangement Circuit, Voice Data	CH1811	Cermetek
Data Access Arrangement (DAA), Telephone Line Interface	XE0002	XECOM
	XE1112	XECOM
Data Access Arrangement, Direct Connect Telephone Line Interface	CH1816	Cermetek
Data Access Arrangement (provides a direct connect telephone line interface)	XE0004	XECOM
Data Access Arrangement, Wide Band	XE0005	XECOM
	XE0006	XECOM
Data Buffer, 212A	XR2125	Exar
Data Link Controller (controls link level for CCITT X.25 protocol)	WD2512	Western
Data Link Controller (synchronous for HDLC, SDLC, ADCCP, CCITT X.25, ISDN,and LAPD protocols)	WD25C17	Western
Data Processor for Cellular Radio (part of chipset)	**UMA1000**	**Signetics (3590)**
Data Set Interface, Asynchronous/Synchronous Converter	MC145428	Motorola
Decoder, Forward Error Correction (decodes convolutional codes with Viterbi decoding algorithm, 2.1 Mbps)	SCOM2001B	† Spancom
	SCOM2001C1	Spancom
	SCOM2001C2	Spancom
Dejitter Buffer, Quad (processes four DS1 signals)	TXC-03351	TranSwitch
Delta Modulation Codec	MX609	MX-COM
Delta Modulation System, Continuously Variable Slope	HC55536	Harris
	HC55564	◊ Harris
	MC3417	Motorola
	MC3418	Motorola
	MC3517	† Motorola
	MC3518	† Motorola
Delta Modulation System, Exponentially Variable Stepsize Algorithm	**CA2842**	**Newbridge (3569)**
Delta Sigma Modulator/Demodulator	ZNPCM2	Plessey
Dial Pulse Counter and Hook Monitor	M959	Teltone
Dialer, Combined with Matched Speech Circuit	MA554	Marconi
Dialer, DTMF/Pulse	MB87008A	Fujitsu
	MB87009	Fujitsu
	MB87029	Fujitsu
	KS58A19	Samsung
	KS58B19	Samsung
	KS58C19	Samsung
	KS58D19	Samsung
Dialer, DTMF/Pulse with Redial	PCD3310	Signetics

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source	Line
Dialer, DTMF/Pulse (with 10 number memory)			
	KS58A23	Samsung	
	KS58B23	Samsung	
	KS58C23	Samsung	
	KS58D23	Samsung	
	KS5822	Samsung	5
Dialer Modem Peripheral, Bell 212A Compatible (1200/300 bps full duplex)			
	AM79C12	AMD	
Dialer, Pulse	XRT5992	Exar	
	S2560G	Gould AMI	
	AY5-9151A	Microchip	
	AY5-9151B	Microchip	10
	MC14408	Motorola	
	MC14409	Motorola	
	MV4320	Plessey	
	MV4322	Plessey	
	MV4323	Plessey	15
	MV4325	Plessey	
	MV4326	Plessey	
	MV4327	Plessey	
	STC2560	S-MOS	
	STC2565	S-MOS	20
	M761	SGS-Thomson	
Dialer, Pulse and DTMF with Redial			
	PCD3310A	Signetics	
Dialer, Pulse Repertory, 10 Number			
	MA5271	Marconi	
Dialer, Pulse Repertory, 20 Number			
	STC2570C	S-MOS	
Dialer, Pulse/Tone			
	XRT5990	Exar	25
	MB87003	Fujitsu	
	MB87004	Fujitsu	
	S7230	Seiko Instr	
	S7235	**Seiko Instr (3585)**	
	S7237	**Seiko Instr (3586)**	30
Dialer, Pulse Tone and DTMF			
	PSB8510	Siemens	
Dialer, Pulse/Tone (CMOS)			
	LR48061	Sharp	
	LR48221	Sharp	
	LR48222	Sharp	
	LR48231	Sharp	35
	LR48232	Sharp	
Dialer, Pulse/Tone for Binary Code Input			
	LR4809	Sharp	
Dialer, Pulse/Tone Keypad Switchable with Matched Speech Circuit			
	MA550	Marconi	
Dialer, Pulse/Tone Keypad Switchable with Redial			
	MA552	Marconi	
Dialer, Pulse/Tone Repertory (nine 18-digit memory)			
	MC145412	Motorola	40
	MC145413	Motorola	
Dialer, Pulse/Tone Repertory, 4 Number			
	LR4807A	Sharp	
Dialer, Pulse/Tone Repertory, 10 Number			
	PBM3915	Ericsson	
	MA5272	Marconi	
	MA5273	Marconi	45
	MA5274	Marconi	
	STC2580C	S-MOS	
	MK5375	SGS-Thomson	
	MK5376	SGS-Thomson	
	LR4803	Sharp	50
	TEL5453	STC	
Dialer, Pulse/Tone Repertory, 21 Number			
	LR48066	Sharp	
Dialer, Pulse/Tone Repertory, 24 Number			
	MA5452	Marconi	
	MA5453	Marconi	
	MA547	Marconi	55
Dialer, Pulse/Tone Switchable (CMOS)			
	LC7363N	Sanyo	
Dialer, Pulse/Tone with Microprocessor Interface			
	MA525	Marconi	
Dialer, Pulse/Tone (with four memories, one touch/three touch/dial)			
	LR48202	Sharp	
Dialer, Pulse/Tone with Last Number Redial			
	MB87007	Fujitsu	
	MA5262	Marconi	60
	MA5263	Marconi	
	MA5402	Marconi	
	MA5403	Marconi	
	MA5412	Marconi	
	MA5413	Marconi	65
	MK5370	SGS-Thomson	
	MK5371	SGS-Thomson	
	MK53721	SGS-Thomson	
	MK53731	SGS-Thomson	
	MK53762	SGS-Thomson	70
	TEL5048	STC	
	TEL5413	STC	
Dialer, Pulse/Tone (with LCD driver)			
	LR48106	Sharp	
Dialer, Pulse/Tone (with 10 number memory)			
	LR4801D	Sharp	
	LR4802A	Sharp	75
	LR4802I	Sharp	
Dialer, Pulse/Tone (with 16 number memory)			
	LR48211	Sharp	
Dialer, Pulse/Tone with 20 Memories (one-touch/two-touch dial)			
	LR48063	Sharp	
	LR48064	Sharp	
Dialer, Pulse/Tone with 20 One Touch Dial Memories			
	LR48067	Sharp	80
Dialer, Pulse with Last Number Redial			
	MA522	Marconi	
	MA542	Marconi	
	52981	Marconi	
	LR40981A	Sharp	
	LR40982	Sharp	85
	LR40991	Sharp	
	LR40992	Sharp	
	LR40993	Sharp	
	LR40994	Sharp	
	UM9151	UMC	90
Dialer, Pulse with Last Number Redial and Speech Network	MA528	Marconi	
Dialer, Pulse with Redial (pin 2 is tone output)			
	KS58D05	Samsung	
Dialer, Pulse with Redial (pin 2 is Vref)			
	KS58C05	Samsung	
Dialer, Pulse with Redial (32 digit redial)			
	KS58E05	Samsung	
Dialer, Pulse (with 16-bit FIFO)			
	M969	Teltone	95
Dialer, Repertory			
	MK53761	SGS-Thomson	
Dialer, Repertory, 10 Number			
	LR4173	Sharp	
	LR4174	Sharp	
Dialer, Repertory, 20 Number, 9/18 Digit LCD Display Driver	RM9901	Ericsson	
Dialer, Switchable One-Touch Dialer			
	S7241	Seiko Instr	100
Dialer, Tone	LC7365N	Sanyo	
	LR4087B	Sharp	
	LR4089B	Sharp	
		(Continued)	
Dialer, Tone		(Cont'd)	
	LR4091	Sharp	
	LR4092	Sharp	105
Dialer, Tone/Pulse Switchable (with redial)			
	GM6390	**GoldStar (3438)**	
Dialer, Tone/Pulse Switchable (15 number memory)			
	GM6388	**GoldStar (3438)**	
Dialer, Tone with Last Number Redial			
	MA531	Marconi	
Dialer, Tone with Last Number Redial and Speech Network	MA530	Marconi	
Dialer, Tone with Speech Network and DC Line Voltage Regulator	LB1008AE	AT&T	110
	MC34010A	Motorola	
	MC34011A	Motorola	
Dialer, One-Key			
	UM95080	UMC	
Dialer, One-Touch Dial Control Circuit (10 repertory memory)	S7283A	Seiko Instr	
Dialer, One-Touch Dial Controller			
	S7283	Seiko Instr	115
Dialer, 10 Memory Pulse			
	UM91611	UMC	
Dialwer, Pulse with Redial			
	KS5805A	Samsung	
	KS5805B	Samsung	
Digital Exchange Controller (ISDN access)			
	AM79C31A	AMD	
Digital Line Interface Controller			
	TP3120	National	120
	TP3122	National	
Digital Loop Controller, CCITT I.430 S-Interface Compatible	T7253	AT&T	
Digital Network Interface Circuit (DNIC)			
	MT8972A	◊ Mitel	
Digital Network Interface Circuit (ISDN compatible)			
	MT8971	Mitel	
	MT8972	Mitel	125
Digital Signal Processor			
	S77C20	Gould AMI	
	S7720	Gould AMI	
Digital Signalling Interface (fully integrated DS1 line interface)	LC1046C	AT&T	
Digital Subscriber Controller			
	AM79C30	AMD	
	AM79C30A	AMD	130
Digital Switching Matrix (128x128)			
	M044	SGS-Thomson	
Digital Switching Matrix (256x256)			
	M088	SGS-Thomson	
Digital Telephone Circuit (D-Phone)			
	MT8994	Mitel	
	MT8995	Mitel	
Digital Telephone (D-Phone)			
	IMP8994/5B	IMP	135
Digital Telephone with HDLC (H-Phone)			
	IMP8992/3B	IMP	
Digital Time/Space Crosspoint Switch			
	IMP8980	IMP	
	MT8981D	Mitel	
Digital Timer/Space Switch			
	MT8980D	◊ Mitel	
Digital Trunk Interface (CEPT)			
	MH89790	Mitel	140
	MT8979	Mitel	
Digital Trunk Interface Circuit, CEPT			
	MT8978	◊ Mitel	
Digital Trunk Interface Circuit, DS1/ESF			
	MH89760	Mitel	

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LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source	Line
Digital Trunk Interface, T1/ESF	MT8976	Mitel	
Digital Trunk PLL, T1/CEPT	MT8940	◊ Mitel	
Digital Trunk Transmit Equalizer, T1	MH89761	Mitel	
Driver/Receiver Combination, RS-232C, V-28	MC145406	Motorola	
DS1 Chip Set, Framer (provides line and frame format for DS1 and CEPT digital carrier systems)	T7229	AT&T	5
	229GB	AT&T	
DS1 Chip Set, Maintenance Buffer (provides microprocessor interface for 229GB Frame Buffer)	229FB	AT&T	
DS1 Chip Set, Receive Synchronizer (performs serial to parallel conversion on the serial data received from the framer)	257AU	AT&T	
DS1 Chip Set, Transmit Formatter (converts 14 bits of parallel data into a serial stream)	257AL	AT&T	
DS1 Line Interface	CS6152	Crystal	10
	SSI78P233	**SiliconSys (3647)**	
DS1 Line Interface (provides a line interface between the DS1 or DS1C cross-connect and terminal equipment circuits)	T7289	AT&T	
DS1 to VTI.5 Asynchronous Bus Interface (works at STS-1 or STS-3 byte rates)	TXC-04001	TranSwitch	
DS3 Framer (provides all processing to format a DS3 signal)	TXC-03401	TranSwitch	
DS3 Integrated Line Receiver	T7295	AT&T	15
DTMF/MF Channel Filter/Limiter (hybrid)	AMS3023	Aptek	
DTMF/MF Detector/Timer (hybrid)	AMS3020	Aptek	
DTMF/MF Reference Reset (hybrid)	AMS3024	Aptek	
DTMF Oscillator	MB4507A	Fujitsu	
DTMF Receiver	MB87017A	Fujitsu	20
	UM9203	UMC	
	UM9204	UMC	
DTMF Receiver (CMOS)	LC7385	Sanyo	
DTMF Receiver with Dial Tone Suppression	KT3170	Samsung	
DTMF Receiver (with supervisory tone detection)	MT3070	Mitel	25
	MT3071	Mitel	
DTMF Tone Transceiver (with early detect and call-progress detection)	**SSI75T2091**	**SiliconSys (3647)**	
DTMF Transceiver (call progress mode)	MT8880-1	Mitel	
Encoder/Decoder, Manchester (conforms to StarLAN specifications)	MK5033N	SGS-Thomson	
Encoder 8 of 8 Keyboard to Binary Encoder (4x4 key input to 4 line output)	MC14419	Motorola	30
Ethernet Controller	NE86950	Signetics	
	NE86950B	**Signetics (3593)**	
Ethernet Encoder/Decoder	**NE502A**	**Signetics (3592)**	

Function	Device	Source	Line
Ethernet Twisted Pair Receiver (implements IEEE 802.3 10 Base - T Media Attachment Unit)	NCR92C02	NCR	
Exchange Power Controller, Quad (supplies power for up to four digital phone lines)	AM7938	AMD	35
Facsimile/Data Modem Analog Front End (complete CODEC and filter)	NS32FX210	National	
FAX Controller, Band Compression and Expansion	M66330	Mitsubishi	
FAX Controller, Graphic Processing Controller	M66332	Mitsubishi	
FAX Modem and Compression/Expansion Processor, 9600 bps Half-Duplex	DSPG4001	DSP Group	
	DSPG4002	DSP Group	40
Fax Modern Device Set (V.17 with EIA 578 user interface)	SSI73D2331	SiliconSys	
	SSI73D2332	SiliconSys	
Fax Modern Device Set (with TIA/EIA user interface)	SSI73D2291	SiliconSys	
	SSI73D2292	SiliconSys	
FAX Pixel Processor (performs shading correction and image processing)	TC35180	Toshiba	45
FDDI Basic Media Access Controller	DP83261	National	
FDDI Clock Distribution Device	DP83241	National	
FDDI Physical Layer Controller	DP83251	National	
Filter, Band Pass, Sixth Order	TS8550	SGS-Thomson	
Filter, Band Pass, Eighth Order	TS8551	SGS-Thomson	50
Filter, Bandpass (DTMF)	AMS3044	Aptek	
	AMS3045	Aptek	
	CH1295	Cermetek	
	CH1296	Cermetek	
	MT8865	◊ Mitel	55
Filter, Bandsplit (DTMF)	MV8865	Plessey	
	TT6177	Teltone	
Filter, C-Message (notch/program weighting)	RF5651A	EG&G-Reticon	
Filter, CAFIR (Cascadable Adaptive Finite Impulse Response)	DSP56200	Motorola	
Filter, High Pass, Programmable	S3529	Gould AMI	60
Filter, High Pass, Third Order	TS8530	SGS-Thomson	
Filter, High Pass, Sixth Order	TS8531	SGS-Thomson	
	TS8532	SGS-Thomson	
Filter, Low Pass	RF5613A	EG&G-Reticon	
Filter, Low Pass Butterworth, Eighth Order	TS8514	SGS-Thomson	65
Filter, Low Pass Chebychev, Eight Order	TS8513	SGS-Thomson	
Filter, Low Pass, Fifth Order	TS8510	SGS-Thomson	
Filter, Low Pass Linear Phase, Dual	MC145415	Motorola	
Filter, Low Pass Programmable	S3528	◊ Gould AMI	
Filter, Low Pass Speech (dual, tunable)	MC145414	Motorola	70

Function	Device	Source	Line
Filter, Low Pass, Seventh Order	TS8511	SGS-Thomson	
	TS8512	SGS-Thomson	
Filter, Notch	RF5612A	EG&G-Reticon	
Filter, Notch, Sixth Order	TS8540	SGS-Thomson	
Filter, PCM Receive	AMS3065	Aptek	75
Filter, PCM Transmit	AMS3064	Aptek	
Filter, PCM Transmit/Receive	G8912B	◊ CMD Micro	
	2912A	Intel	
	TP3040	National	
	TP3040-1	National	80
	TP3040A	National	
	TP3040A-1	National	
	MSM6912	OKI	
	ETC5040	SGS-Thomson	
	TCM2912B	TI	85
	TCM2912C	TI	
Filter, Second-Order Switched Capacitor	XR1010	Exar	
Filter, Switched Capacitor (triple telephone/communications filter)	RF6651A	EG&G-Reticon	
Filter, Telecom/Datacom Instrumentation	XR1020	Exar	
Filter/Tone Generator, Single Frequency Tunable Bandpass/Notch	S3526B	◊ Gould AMI	90
Filter Tone Signaling, 2600 Hz	MC145432	Motorola	
Filter, Dual Switched Capacitor	LMF100	National	
Filter, Fourth Order Switched Capacitor (Stand Alone Mode with RC or Crystal)	XR1001	Exar	
	XR1003	Exar	
	XR1004	Exar	95
	XR1007	Exar	
	XR1008	Exar	
Filter, Fourth-Order Switched Capacitor (Stand Alone Mode with RC or Crystal)	XR1002	Exar	
Filter, Sixth Order Switched Capacitor Butterworth (low pass)	MF6	National	
Filter, Seventh Order, Programmable (medical telemetry)	HSCF24040	Signal Proc	100
Filter, Seventh-Order Elliptic Low Pass	XR1015	Exar	
	XR1016	Exar	
FM System (for cellular radio chipset)	**NE605**	**Signetics (3590)**	
FM Transmitter (for cordless phones)	MC2831	Motorola	
Format Converter, 8-Bit	MA803	Marconi	105
Frame Aligner/Time Slot Zero Receiver	MA808	Marconi	
Frequency Discriminator (disconnects or switches phone upon detection of a specific tone)	**LS7501**	**LSI Comp (3526)**	
	LS7502	**LSI Comp (3526)**	
	LS7503	**LSI Comp (3526)**	
	LS7504	**LSI Comp (3526)**	110
	LS7505	**LSI Comp (3526)**	
	LS7506	**LSI Comp (3526)**	
	LS7507	**LSI Comp (3526)**	
	LS7508	**LSI Comp (3526)**	
	LS7509	**LSI Comp (3526)**	115
	LS7510	**LSI Comp (3526)**	

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LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source	Line
FSK Demodulator/Tone Decoder	NJM2211	NJR	
FSK IF Amplifier, Detector	MC13055	Motorola	
FSK Receiver, Wideband	MC3356	Motorola	
Gain Control Circuit with Balance Impedance Switching	MA571	Marconi	
Hands-Free Circuit for All Range Sets	TEA7540	SGS-Thomson	5
HDB3/AMI Encoder/Decoder	TCM2202	TI	
	TCM2222	TI	
HDB3/AMI Equipment Line Interface	TCM2203	TI	
	TCM2204A	TI	
HDB3 Encoder	MJ1440	Plessey	10
HDB3 to NRZ Binary Encoder/Decoder	MA815	Marconi	
HDB3 Transcoder, with Error Detection (10 kb/s to 2.048 Mb/s)	CD22103A	Harris	
HDLC Interface for ISDN	T7121	◊ AT&T	
High Compression Voice Module for Telecoms - 8 and 16 KBits/Sec Voice Compression and Expansion	CA16M801	Newbridge	
HLDC Controller	MK5021	◊ SGS-Thomson	15
HSC Selective Calling Decoder	MX1103	MX-COM	
HSC Tone Encoder	MX013	MX-COM	
IEEE 802.3 StarLAN Hub Controller	MK5030	SGS-Thomson	
IEEE 802.3 StarLAN Manchester Encoder/Decoder	MK5035	SGS-Thomson	
Integrated Data Protocol Controller (supports HDLC, SDLC, LAPB, LAPD and DMI)	AM79C401	AMD	20
Integrtaed Local Area Communications Controller (ILACC)	AM79C900	AMD	
ISDN ANSI Standard U-Interface Basic Access Transceiver Chip Set (144 kb/s)	T7262	AT&T	
	T7263	AT&T	
ISDN Basic Access Controller (full duplex, 4-wire operation)	YM7303	Yamaha	
ISDN Basic Access Echo-Cancelling 2B1Q U Transceiver	TP3410	National	25
ISDN Burst Transceiver Circuit	PEB2095	Siemens	
ISDN, Burst Transceiver Circuit (full duplex for 2-wire transmission line)	AM2095	AMD	
ISDN Communications Controller (for LAPD protocol)	PEB2070	Siemens	
ISDN Data Controller	AM79C32A	AMD	
ISDN Data Controller (provides digital customer access to the ISDN)	AM79C32	AMD	30
ISDN Digital Exchange Controller (IDEC)	AM2075	AMD	
ISDN, Digital Multiplexed Interface (DMI) Link Layer Controller	R8071	Rockwell	
	R8071A	Rockwell	
ISDN Echo Cancellation Circuit (IEC)	AM20901	AMD	
	AM20902	AMD	35

Function	Device	Source	Line
ISDN Echo Cancellation Circuit (IEC-Q)	AM2091	AMD	
ISDN, Line Interface Unit (interfaces to the R8070 T-1/CEPT PCM transceiver)	R8069	Rockwell	
ISDN R Interface USART	TP3460	National	
ISDN S Interface Device	TP3420	National	
ISDN, S/T Bus Interface Circuit (implements the 4-wire S/T interface used to link voice/data ISDN terminals)	AM2081	AMD	40
ISDN S/T Interface Device with GCI (General Circuit Interface)	TP3421	National	
ISDN Subscriber Access Controller	PEB2085	Siemens	
ISDN Subscriber Access Controller (ISAC-S)	AM2085	AMD	
ISDN, T-1/CEPT PCM Transmitter	R8070	Rockwell	
ISDN Terminal Adapter Circuit (ITAC)	AM2110	AMD	45
ISDN, U Interface Chip	MC145472	Motorola	
ISDN, U-Interface Basic Access Transceiver, 144 kb/s Full Duplex (part ofchip set)	T7260	AT&T	
	T7261	AT&T	
ISDN, User-Network Interface for ISDN Terminal Endpoints (supports CCITT I.430/ANSI T1.605 standard for ISDN basic access)	T7250B	AT&T	
ISDN Dual Data Link Controller (DDLC)	MC145488	Motorola	50
ISDN, Four-Port ISDN User-Network Interface Termination for Switches (NT/LT)	T7254	AT&T	
LAN, Advanced CSMA/CD Local Area Network Controller with 16-Bit Data Path	T7302	AT&T	
LAN, ARCNET Chipset	NCR90C26	NCR	
	NCR90C32	NCR	
LAPD Controller, Multichannel (full implementation of CCITT Q.291 Link Access Procedure)	T7130	AT&T	55
Limiter (limits voltage on two-wire speech)	U225B	AEG Corp	
Line Detector (detects cut line of local loop, for alarm systems)	CH1809	Cermetek	
Line Interface, CEPT1	T7288	AT&T	
Line Interface Circuit	L3000	SGS-Thomson	
Line Interface Circuit, Duplex DS3 (B3ZS codec)	TXC-02001	TranSwitch	60
Line Interface (data access arrangement)	SSI73M376	SiliconSys	
Line Interface, DS1/T1/CEPT	T7290	AT&T	
Line Interface (DS3)	SSI78P236	SiliconSys	
Line Interface, Receiver (for CEPT and T1 networks)	DS2187	◊ Dallas	
Line Interface (STS-1)	SSI78P2361	SiliconSys	65
Line Interface, Transmit (for CEPT and T1 networks)	DS2186	◊ Dallas	
Line Interface (34Mbit/s)	SSI78P2362	SiliconSys	

Function	Device	Source	Line
Line Sense Relay (senses telephone line current from 20 to 125 mA)	M949	Teltone	
Local Area Network Controller for ETHERNET	MK7990	SGS-Thomson	
Local Area Network Coprocessor (implements CMSA/CD medium access control functions independently of CPU)	T7300	AT&T	70
Loop Extender Circuit	MH89726	Mitel	
	MH89728	Mitel	
Loopback Control (2,713 Hz)	SC11330	Sierra	
Loopback (4-wire)	**SSI78A400**	**SiliconSys (3647)**	
Loopback (4-wire with gain)	**SSI78A420**	**SiliconSys (3647)**	75
Loud Speaker Amplifier	TEA7031	SGS-Thomson	
	TEA7531	◊ SGS-Thomson	
	TEA7532	◊ SGS-Thomson	
Manchester Decoder and Interface Chip	T7210A	AT&T	
Manchester Encoder/Decoder	NCR92C05	NCR	80
Master Digital-Loop Transceiver, 80 kb/s	MC145422	Motorola	
Master Digital-Loop Transceiver, 160 kb/s	MC145421	Motorola	
Metering Pulse Detector (12 to 16 kHz)	AMS3089	Aptek	
Metering Pulse Receiver (50 kHz common mode)	AMS3052	Aptek	
Military Delta Modulation Codec	MX619	MX-COM	85
Modem Circit, 1200 bps MSK (minimum shift keying)	MB87002	Fujitsu	
Modem Circuit, Analog Front End for FAX modems	SC11030	Sierra	
Modem Circuit, Analog Front End for G2 and G3 FAX Machines	TC35103	Toshiba	
Modem Circuit, Analog Front End for High-Speed V.26, V.27, V.29 and V.33 modems	SC11033	Sierra	
Modem Circuit, Analog Front End Receiver	TS68950	SGS-Thomson	90
	TS68951	SGS-Thomson	
Modem Circuit, Analog Front End XMIT/RCVR, Clock Generator	TS68952	SGS-Thomson	
Modem Circuit, Analog-Digital Interface LSI (part of 4800 bps chip set)	YM3022	Yamaha	
Modem Circuit, Bell 103	SC11002	Sierra	
Modem Circuit, Bell 103 (-5 volt)	SC11003	Sierra	95
Modem Circuit, Bell 103 and 212A, CCITT V.21 and V.22, 300/1200 bps (with programmable gain)	SC11015	Sierra	
Modem Circuit, Bell 103, Bell 212A and CCITT V.21/V.22	SC11014	Sierra	
Modem Circuit, Bell 103 with Power Down Mode (300 bps)	STC9424C	S-MOS	
Modem Circuit, Bell 103/113	CH1262	Cermetek	
	CH1267	Cermetek	100
	CH1280	Cermetek	
	MT3530	Mitel	
	MM74HC942	National	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source
Modem Circuit, Bell 103/113/108, Bell 202 and CCITT V.21/V.23	AM7911	AMD
Modem Circuit, Bell 103/212A	**SSI73K212**	**SiliconSys (3647)**
Modem Circuit, Bell 103/212A and CCITT V.21, V.22 and V.22 bis	SC11006	Sierra
Modem Circuit, Bell 103/212A, CCITT V.21 and V.22, 300/1200 bps	SC11016	Sierra
Modem Circuit, Bell 103/212A, CCITT V.21/V.22	SC11004	Sierra
Modem Circuit, Bell 103/212A with Integral 16C450 UART	**SSI73K212U**	**SiliconSys (3647)**
Modem Circuit, Bell 103 (300 bps)	STC9422C	S-MOS
Modem Circuit, Bell 103 (3300 baud)	MC145443	Motorola
Modem Circuit, Bell 202 or CCITT V.23	TCM3105	TI
Modem Circuit, Bell 212A	CH1760	Cermetek
	CH1763	Cermetek
	CH1765	Cermetek
	CH1770	Cermetek
	CD22212E	Harris
Modem Circuit, Bell 212A and CCITT V.22, DPSK	TS7515	SGS-Thomson
Modem Circuit, Bell 212A Demodulator	XR2122	Exar
Modem Circuit, Bell 212A Modulator	XR2121	Exar
Modem Circuit, Bell 212A or 103	F1212	National
Modem Circuit, Bell 300 Baud	MSM6946	OKI
Modem Circuit, Bell 1200 baud	MSM6947	OKI
Modem Circuit, Bell 201/CCITT V.26 Compatible (2400 bps filter combo)	RM5636B	EG&G-Reticon
Modem Circuit, Bell 212A, CCITT V.22	XR2130	Exar
Modem Circuit, CCITT	CH1263	Cermetek
	CH1268	Cermetek
Modem Circuit, CCITT V.21/V.23, Bell 103/113/202/140	EF7910	SGS-Thomson
Modem Circuit, CCITT V.21/V.23, Bell 103/113/202/148	AM7910	AMD
Modem Circuit, CCITT V.21 with Power Down Mode (300bps)	STC9423C	S-MOS
Modem Circuit, CCITT V.21 (300 baud)	MC145442	Motorola
Modem Circuit, CCITT V.21 (300 bps)	STC9421C	S-MOS
Modem Circuit, CCITT V.22/V.21, 1200 bps	**SSI73K222**	**SiliconSys (3647)**
Modem Circuit, CCITT V.22 (1200/600 baud)	μAV22	National
Modem Circuit, CCITT V.22bis	**XR2400**	**Exar (3391)**
Modem Circuit, CCITT V.23	**SSI73M223**	**SiliconSys (3647)**
Modem Circuit, CCITT V.23 (1200 baud)	CD22223	Harris
Modem Circuit, CCITT (1200 baud)	MSM3953	OKI
	MSM6927	OKI
Modem Circuit, CCITT (300 baud)	MSM6926	OKI
Modem Circuit, Controller for SC11004, SC11014and SC11015 300/1200 bps modems	SC11017	Sierra
Modem Circuit, Controller for SC11006, 300/1200/2400 bps	SC11011	Sierra
Modem Circuit, Controller for SC11016 300/1200 bps modem	SC11027	Sierra
	SC11028	Sierra
	SC11037	Sierra
Modem Circuit, Controller for Sierra SC11006 Modem (2400 baud, MNP service classes 2—4)	SC11013	Sierra
	SC11019	Sierra
	SC11020	Sierra
Modem Circuit, Controller for 300/1200 bps modem	SC11007	Sierra
	SC11008	Sierra
Modem Circuit, Data Over Voice	MT8840	Mitel
Modem Circuit, Device Set CCITT V.22 bis/21, Bell 212A 103 (with controller)	SSI73D2404	SiliconSys
Modem Circuit, FAX Modem (9600 bps)	YM7109	Yamaha
Modem Circuit, Filter, Switched Capacitor (V.26/Bell 201)	RF5636B	EG&G-Reticon
Modem Circuit, FSK Autodial Modem (Bell 103, 113, 108 and CCITT V.21 compatible)	AM79101	AMD
Modem Circuit, FSK Modulator/Demodulator	XR210	Exar
	XR210M	† Exar
Modem Circuit, Full Bell 212A/103 and CCITT V.21/V.22 Compatible, 1200/300bps	XE1212	XECOM
	XE1212L	XECOM
	XE1214	XECOM
Modem Circuit, Full Bell 212A/103 Compatible, 1200/300 bps	XE1201	XECOM
	XE1203	XECOM
Modem Circuit, Full Duplex 1200/300 bps (212A and 103 compatible)	PT212AT	OnChip Sys
Modem Circuit, Full Duplex 1200/600 bps (V.22 compatible)	μAV22	OnChip Sys
Modem Circuit, Full 2400/1200/300 bps Component Modem (CCITT V.22bis, V.22/V.21 and Bell 212A/103 compatible)	XE2400	XECOM
Modem Circuit, Group III FAX, 2400 bps Data Modem	XE9624FD	XECOM
Modem Circuit, Hart Modem	NCR20C12	NCR
Modem Circuit, Low Power K212	**SSI73K212L**	**SiliconSys (3647)**
Modem Circuit, Low Power K221	**SSI73K221L**	**SiliconSys (3647)**
Modem Circuit, Low Power K222	**SSI73K222L**	**SiliconSys (3647)**
Modem Circuit, Low Power K224	**SSI73K224L**	**SiliconSys (3647)**
	SSI73K324L	**SiliconSys (3647)**
Modem Circuit, Low Power (5 V with V.23 mode for European applications)	**SSI73K322L**	**SiliconSys (3647)**
Modem Circuit Minimum Shift Key (MSK) Modem	MX809	MX-COM
Modem Circuit, MNP Level 4 Error Correcting Module	CH1891	Cermetek
Modem Circuit, MNP Level 5 Error Correcting Module and Data Compression Module	CH1892	Cermetek
Modem Circuit, Modem Control Processor (Bell 103, 212A, CCIT V.21/22)	MP8104A	MicroPwr
Modem Circuit, MSK (1200 baud for cordless phones)	MB86460	Fujitsu
Modem Circuit, Power Line and Twisted Pair	NE5050	Signetics
Modem Circuit, PSK Modulator/Demodulator, Bell 201/212A, CCITT V.22/V.26	XR2123	Exar
	XR2123A	Exar
Modem Circuit, Signal Processing LSI (part of 4800bps chip set)	YM3405	Yamaha
Modem Circuit, Twisted Pair Modem (implements Manchester or level encoding)	MC68185	Motorola
Modem Circuit (UART, 16C450 compatible)	**SSI73M1450**	**SiliconSys (3647)**
	SSI73M2450	**SiliconSys (3647)**
Modem Circuit (up to 1200 baud)	**SSI73K302L**	**SiliconSys (3647)**
Modem Circuit (up to 1200 baud, V.23/V.21 modes)	**SSI73K321L**	**SiliconSys (3647)**
Modem Circuit, V.22bis, Provides the DSP Portion of the system,such as A/D, D/A (part of XR-2401/02 chip set)	**XR2402C**	**Exar (3391)**
Modem Circuit, V.22bis, 2400, 1200, 200 bps (part of XR-2401/02 chip set)	**XR2401C**	**Exar (3391)**
Modem Circuit, X.25 Error Correcting Module	CH1890	Cermetek
Modem Circuit (300 bps)	STC9420C	S-MOS
Modem Circuit, 1200 bps	STC9120C	S-MOS
Modem Circuit, 1200 bps Modem Module	CH1775	Cermetek
Modem Circuit, 1200/600/300 bps, Bell 212/103, CCITT V.22/V.21 with Integral 16C450 UART.	**SSI73K222U**	**SiliconSys (3647)**
Modem Circuit, 2400 bps Full Duplex Modem Data Pump (CCITT V.22 bis, V.22 A/B, V.21, Bell 212A and Bell 103)	RC2424DP/1	Rockwell
Modem Circuit, 2400 bps Modem Module	CH1780	Cermetek
Modem Circuit, 2400 bps Modem Module, V.22 bis, V.21, Bell 212A and Bell 103	CH1782	Cermetek
Modem Circuit, 2400 bps Modem Module with International Telephone Interface	CH1784	Cermetek
Modem Circuit, 9600 bps Half Duplex Modem (with error detection and DTMF reception)	R96DFX	Rockwell
Modem Circuit, 9600 bps Half-Duplex FAX Modem	TC35108	Toshiba

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LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source	Line
Modem Circuit (1200 baud for AT)	**SSI73D2180**	**SiliconSys (3647)**	
Modem Circuit (2400 baud for AT)	**SSI73D2240**	**SiliconSys (3647)**	
	SSI73D2407	**SiliconSys (3647)**	
	SSI73D2417	**SiliconSys (3647)**	
	SSI73D2420	**SiliconSys (3647)**	5
Modem Circuit, 2400 bps Modem	SC11024	Sierra	
Modem Circuit, 2400/1200/300 bps Component Modem with MNP Error Correcting Protocol Through Class 5 (module)	XE2400MNP	XECOM	
Modem Circuit, 300/1200 bps Full Duplex (Bell 212A/103/113)	MP212A	MicroPwr	
Modem Circuits, MSK Modem	MX439	MX-COM	
Modem Circuits, 1200 Baud Minimum Shift Key (MSK) Modem	MX419/519	MX-COM	10
Modem Circuits, 1200 Baud MSK Modem For Trunked Radio	MX429	MX-COM	
Modem Controller	CD22MOC6805	Harris	
Modem Controller, 2400 bps (uses Hayes-compatible commands)	CD22MOC6805E	Harris	
Modem (external DAA required) Circuit, Group III FAX, 2400 bps Data Modem	XE9624FD-E	XECOM	
Modem Filter, Bell 103 (300 baud)	RM5630A	EG&G-Reticon	15
Modem Filter, Bell 212A/CCITT V.22	XR2126	Exar	
	XR2129	Exar	
	S35212	◊ Gould AMI	
	S35212A	◊ Gould AMI	
	MT35212A	◊ Mitel	20
	SC11000	Sierra	
	SC11001	Sierra	
	SC11005	Sierra	
Modem Filter, Bell 212A/CCITT V.22	XR2127	Exar	
	XR2128	Exar	25
Modem Filter, CCITT V.21, V.23, V.26	XR1001	Exar	
Modem Filter Combination, V.27/Bell 208, Delay Equalizer, V.23/Bell 202 and 3 kHz Lowpass	RM5637A	EG&G-Reticon	
Modem Filter Combination, V.29/Bell 209, Delay Equalizer, and 3 kHz Lowpass	RM5638A	EG&G-Reticon	
Modem Filter, FSK Bell 103	XR2103	Exar	
	XR2103A	Exar	30
Modem Filter, PSK Bell 212A	XR2120	Exar	
Modem Filter with Equalizer, 212A/V.22	**SSI73M3522**	**SiliconSys (3647)**	
Modem Filter (300 baud)	RM5631A	EG&G-Reticon	
	MC145440	Motorola	
	MC145441	Motorola	35
Modem Filter (1200 baud)	CH1710	Cermetek	
	CH1720	Cermetek	
		(Continued)	

Function	Device	Source	Line
Modem Filter (1200 baud)		(Cont'd)	
	CH1730	Cermetek	
	CH1740	Cermetek	
Modem Filter (2400 baud), V.22 b/s	RM5635A	EG&G-Reticon	40
Modem, FSK Modulator	XR2206	† Exar	
	XR2206	Exar	
Modem Interface and Receiver Filter Circuit (300 baud modem)	CH1230	Cermetek	
Modem Receiver, FSK (IEEE 802.4)	NE5081	Signetics	
Modem System, FSK	XR14412V	Exar	45
	MC14412	Motorola	
Modem Transmitter, FSK (IEEE 802.4)	NE5080	Signetics	
Modern Analog Front End	SSI73M235	SiliconSys	
Multiplex/Demultiplex Circuit (AMI/B8ZS coded)	TXC-03301	TranSwitch	
Multiplexer, 3-to-1 (three STS-1 serial signals into one STS-3 parallel signal)	TXC-02201	TranSwitch	50
Musical Instrument Digital Interface Communication and Service Controller.	YM3802	Yamaha	
Optical Modem Circuit	CS8123	Crystal	
	CS8124	Crystal	
PCM CODEC/Filter for ISDN and Digital Phone Applications, Programmable	TP3075A	National	
	TP3076A	National	55
PCM CODEC/Filter, Programmable	TP3070	◊ National	
	TP3070-X	◊ National	
	TP3070A	National	
	TP3070A-X	National	
	TP3071	◊ National	60
	TP3071-X	◊ National	
	TP3071A	National	
	TP3071A-X	National	
PCM Codec-Filter	MC145554	Motorola	
	MC145557	Motorola	65
	MC145564	Motorola	
	MC145567	Motorola	
PCM Conference Call and Attenuation/Noise Suppresion Circuit	M116F1	SGS-Thomson	
PCM Conference Chip	MC145611	Motorola	
PCM Elastic Store	MJ1474	Plessey	70
PCM, Frame Aligner Circuit	PEB2035	Siemens	
PCM Interface Controller (controls up to 32 ISDN or 64 voice subscribers)	AM2055	AMD	
PCM Line Interface	CS61535	Crystal	
	CS6159	Crystal	
PCM Line Interface (1.544 or 2.048 MHz data rate)	CS61534	Crystal	75
PCM Line Interface (2048 kbps)	**SSI78P234**	**SiliconSys (3647)**	
PCM Line Receiver and Clock Recovery Circuit	**LIU01**	**AD (3263)**	
	XRT5650	Exar	
	XRT5750	Exar	

Function	Device	Source	Line
PCM Line Repeater, T1, T148C and 2 Mb/s (two-chip set)	XRT5600	Exar	80
	XRT5620	Exar	
	XRT5720	Exar	
PCM Line Repeater, T1, 1.544 Mb/s	CD22301	Harris	
	CD22641	Harris	
PCM, Memory Time Switch (for 2.048, 4.096, and 8.192 MHz PCM systems)	PEB2045	Siemens	85
PCM, Peripheral Board Controller	PEB2050	Siemens	
	PEB2051	Siemens	
PCM Receiver	MJ1472	Plessey	
	MJ1473	Plessey	
PCM Repeater	**RPT82**	**AD (3263)**	90
	RPT83	**AD (3263)**	
	RPT85	**AD (3263)**	
	RPT87	**AD (3263)**	
	XRC240	Exar	
	XRC262	Exar	95
	XRC277	Exar	
	TEL5221	STC	
PCM Repeater/Receiver	XRT56L22	Exar	
PCM Repeater, Two-Chip Set (TIC)	XRC587	Exar	
	XRC588	Exar	100
PCM Repeaters	**RPT86**	**AD (3263)**	
PCM Signal Monitor	SP1450B	Plessey	
	SP1455B	Plessey	
PCM Transceiver	XRT5681	Exar	
	TEL5220	STC	105
PCM Transceiver, Low Power	TEL5219L	STC	
	TEL5220L	STC	
PCM Transceiver, T1	**XRT5684**	**Exar (3394)**	
	XRT5690	**Exar (3394)**	
PCM Transceiver (8Mbit)	XRT5683	Exar	110
PCM Transcoder	HC5560	Harris	
PCM 8-bit Format Converter	MJ1410	Plessey	
Primary Access Framer/Controller	T7230	AT&T	
Private Squelch CTCSS Encoder/Decoder	MX375	MX-COM	
Pseudo-Random Noise Code Generator	**STEL1032**	**STEL (3664)**	115
Pulse Dialer	UM9151-3	UMC	
R-Interface Module (RIM), Implements the rate adaption function within a Terminal Adaptor.	MH89500	Exar	
	MH89500	Mitel	
Random Number Generator	T7001	AT&T	
RC Encoder, Programmable 7-Channel	NE5044	Signetics	120
Read Channel Filter	IMP42R53	IMP	
Receive Filter for 14-Bit ADC (programmable gain)	**AD7371**	**AD (3252)**	
Receiver, DTMF	MT8870CE	Mitel	
	MT8870CE-1	Mitel	

LINEAR

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LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source	Line
Relay Driver (for 48 V telephone relays)			
	UDN2585A	**Allegro Micro (3206)**	
	UDN2588A	**Allegro Micro (3206)**	
	UDN2957A	Allegro Micro	
	LS1014AB	AT&T	
	PBD3510	Ericsson	5
	PBD3511	Ericsson	
	PBD3513	Ericsson	
	PBD3515	Ericsson	
	PBD3520	Ericsson	
	DS1687	† National	10
	DS3686	National	
	DS3687	National	
Relay Driver (for 48 V telephone relays) See also Interface, Memory and Peripheral Drivers			
	UDN2580A	**Allegro Micro (3206)**	
Relay Driver, Quad Negative Voltage			
	DS3680	National	
Relays, High Voltage, Optically Coupled			
	LH1085AT	AT&T	15
Reverse Line Interface Circuit			
	AMS2044	Aptek	
Reverse Line Interface Circuit (performs 2-wire to 4-wire conversion while emulating telephone instrument electrical functions when co-located with switching system.)			
	AMS2039	Aptek	
	AMS2040	Aptek	
	AMS2041	Aptek	
	AMS2042	Aptek	20
Ring Detector	TCM1506B	TI	
	TCM1512B	TI	
Ring Detector (operates from 14 to 66 Hz)			
	ZN480E	Plessey	
	ZN480J	† Plessey	
Ring Detector (operates from 16 to 68 Hz)			
	LB1006AB	AT&T	25
Ring Driver	TCM1501B	TI	
S/T Interface Transceiver (for ISDN)			
	MC145474	Motorola	
	MC145475	Motorola	
S-Bus Interface Circuit (implements 4-wire S/T interface used to link voice/data terminals to an ISDN)			
	AM2080	AMD	
	AM2080B	AMD	30
SASSD Circuit with SL1 Codec Interface			
	MA857	Marconi	
Secure Serial Communications Card for PC XT/AT with Sync/Asyn communications, resident processor, secure bus, DES and DE encryptions protocoles.			
	NM830SSC	Newbridge	
Selective Call Codec			
	MX203	MX-COM	
Selective Call Tone Encoder			
	MX003	MX-COM	
Sequential Tone Encoder			
	MX503	MX-COM	35
Sequential Tone Transponder			
	MX403	MX-COM	
Serial Communications Controller, Enhanced (two independent full-duplex channels)			
	Z85C30	AMD	
Serial Communications Controller, High-Level (HSCX)			
	AM82525	AMD	
Serial Communications Controller (two independent HDLC channels)			
	SAB82520	Siemens	
Serial Interface Adapter for ETHERNET			
	MK68592	SGS-Thomson	40
	MK7992	SGS-Thomson	

Function	Device	Source	Line
Serial Packet Controller			
	SSI73M650	SiliconSys	
Serial Receiver (changes T1-D2 or T1-D3 input to parallel output)			
	R8060	Rockwell	
Serial Time Division Multiplexed (TDM) Voice/Data Interface	CHI	AT&T	
Serial Transmitter (generates 193-Bit data stream in T1-D2 or T1-D3 format)			
	R8050	Rockwell	45
Shift Register, Dual 1008 Bit			
	MA802	Marconi	
Slave Digital-Loop Transceiver, 80 kb/s			
	MC145426	Motorola	
Slave Digital-Loop Transceiver, 160 kb/s			
	MC145425	Motorola	
Solid State Relay (for telephone switchhook), 1 Form A			
	LH1056AT1	AT&T	
Solid State Relay, Form B (1500 Vrms isolation)			
	LH1298AAB	AT&T	50
	LH1298AT	AT&T	
Solid State Relay, Form B (3750 Vrms isolation)			
	LH1298AAB1	AT&T	
	LH1298AT1	AT&T	
Solid State Relay, 1 Form A (SPST)			
	LH1056A	AT&T	
	LH1056E	AT&T	55
Solid-State Relay, Form C Monolithic (for telecom switching)	LH1296AB	AT&T	
SONET Overhead Terminator–1 (SOT–1)			
	TXC-03001	TranSwitch	
Speakerphone Circuit			
	CS262	Cherry Semi	
	CS272	Cherry Semi	
	PBM3910	Ericsson	60
	PBM3911	Ericsson	
	XRT6420-2	Exar	
	XRT6425	Exar	
	IR3N81A	Sharp	
Speakerphone Circuit, Voice Switched			
	MC34018	Motorola	65
	MC34118	Motorola	
Speakerphone Circuit (volume pre-set)			
	IR3N84	Sharp	
Speakerphone Circuit (with speech network)			
	IR3N83	Sharp	
Speakerphone (two-chip set)			
	XRT6420	Exar	
	XRT6421	Exar	70
Speech Circuit for Electronic Telephones			
	U4056B	AEG Corp	
	U4056B1	AEG Corp	
	U454B	AEG Corp	
	PBL3726-X	Ericsson	
	PBL3781	Ericsson	75
	XRT5995	Exar	
	GL6901	**GoldStar (3438)**	
	MC34014	Motorola	
	TP5700	National	
	TP5700A	National	80
	LS356	SGS-Thomson	
	LS656	SGS-Thomson	
	IR3N31	Sharp	
	TEA1060	Signetics	
	TEA1061	Signetics	85
	TEA1067	Signetics	
	TEL3106	STC	
	TEL3107	STC	
Speech Circuit, for Telephone Set			
	MB4514	Fujitsu	

Function	Device	Source	Line
Speech Circuit, for Telephone Set (control and supervise all vocal interface requirements)			
	MB4514B	Fujitsu	90
	MB4514C	Fujitsu	
Speech Circuit, Telephone Speech Network (with dialer interface)	MC34114	Motorola	
Speech Circuit (very low drop)			
	L3280	SGS-Thomson	
Speech Circuit, Voice Scrambler (for communication transmitter and receiver)			
	LC8931	Sanyo	
Speech Circuit with DTMF Interface			
	PSB4500	Siemens	95
	PSB4501	Siemens	
Speech Circuit With Power Management			
	TEA7063	◊ SGS-Thomson	
Speech Circuit (2-wire to 4-wire)			
	LS285	SGS-Thomson	
Speech Network and Tone Dialer			
	MC34013	◊ Motorola	
Speech Network (for ECM receiver)			
	IR3N82	Sharp	100
Speech Network for Telephone			
	IR3N38	Sharp	
Speech Network, Low Voltage			
	GL6965	**GoldStar (3438)**	
	GL6981	**GoldStar (3438)**	
Speech Network (provides 2- to 4-wire interface between a telephone loop and a handset)			
	LB1071AC	AT&T	
Speech Network (transmitter/receiver amplifier, side tone control)	KA2412A	Samsung	105
Speech Network with Dialer Interface (Transmitter/receiver and side tone gain)			
	KA2425A	Samsung	
	KA2425B	Samsung	
Speech Processor, Provides Restoration for Variable-Speed Playback			
	DSPG7001	DSP Group	
	DSPG7002	DSP Group	
Speech Recognition System, Speaker Dependent			
	TC8861	Toshiba	110
	TC8862	Toshiba	
	TMP80C50AU	Toshiba	
StarLAN Coded Data Transceiver			
	AM7961	AMD	
StarLAN, Ethernet/Cheapernet LAN Controller			
	MK5032	SGS-Thomson	
StarLAN Hub (10-port stand-alone)			
	WDLAN-H10	Western	115
StarLAN Station (compatible with MK5032)			
	MK50351	SGS-Thomson	
Sub-Audio Signaling Processor			
	MX805	MX-COM	
Subscriber Line Audio Processing Circuit (SLAC)			
	AM7905A	AMD	
Subscriber Line Audio-Processing Circuit (combination codec/filter)	AM7901B	AMD	
Subscriber Line Audio-Processing Circuit, Dual (DSLAC)			
	AM79C02	AMD	120
	AM79C02A	AMD	
Subscriber Line Interface Circuit			
	AM7950	AMD	
	AM7953	AMD	
	AM7957	AMD	
	AMS2002	Aptek	125
	AMS2006	Aptek	
	AMS3081	Aptek	
	AMS3082	Aptek	
	PBL3736	Ericsson	
	PBL3762	Ericsson	130
	HC5502A	Harris	

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LINEAR

LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source	Line
Subscriber Line Interface Circuit (Cont'd)			
	HC5502B	Harris	
	HC5504	Harris	
	HC5504B	Harris	
	HC5509B	Harris	
	MH88500	Mitel	5
	MC3419	Motorola	
	MC3419A	Motorola	
	MC3419C	Motorola	
	TDB7711	SGS-Thomson	
	TDB7722	SGS-Thomson	10
	TCM4205A	TI	
Subscriber Line Interface Circuit (DAA)			
	TEA7868	SGS-Thomson	
Subscriber Line Interface Circuit, Digital Adaptor (a TCM ISDN compatible,two wire, short loop transceiver)			
	TP3401	National	
Subscriber Line Interface Circuit (performs 2-wire to 4-wire conversion)			
	TCM4204A	TI	
	TCM4207A	TI	15
Subscriber Line Interface Circuit Protector (lightning and power surges)			
	LB1221AA	AT&T	
	LB1221AB	AT&T	
Subscriber Line Interface Circuit (SLIC)			
	PBL3764	Ericsson	
	MC3419-1L	Motorola	
Subscriber Line Interface Circuit with Magnetic Compensation			
	TP3200	National	20
	TP3204	National	
Subscriber Line Interface Circuit (24 V)			
	AMS2406	Aptek	
	AMS2408	Aptek	
Subscriber Line Interface Circuit (2-wire to 4-wire conversion)	MH88610	Mitel	
Subscriber Line Interface Module			
	TP3210	National	25
	TP3211	National	
Subscriber Network Interface Circuit			
	IMP8930	IMP	
Subscriber Network Interface Circuit (CCITT 1.430 and T Interface Compatible)			
	MT8930	Mitel	
Subscriber Pulse Metering Detector			
	MX611	MX-COM	
Subscriber Pulse Metering Detector, Low Power			
	MX621	MX-COM	30
Supernet Chipset for the Fiber Distributed Data Interface (RAM buffer controller)			
	AM79C81	AMD	
	AM79C81A	AMD	
	AM79C82	AMD	
	AM79C82A	AMD	
	AM79C83	AMD	35
	AM7984	AMD	
	AM7984A	AMD	
	AM7985	AMD	
	AM7985A	AMD	
Switch, Bilateral (for remote subscriber line test unit)			
	LB1060AB	AT&T	40
Switched Capacitor Active Filter System, Mask Programmable			
	LMF120	National	
Switched Capacitor Butterworth Low-Pass Filter, 4th Order	MF4	National	
Switched Capacitor Filter (low-pass elliptical type)			
	RF6609ANC-015	EG&G-Reticon	
Switched Capacitor Filter (1010 Hz notch/program weighting)	RF6651ANP	EG&G-Reticon	

Function	Device	Source	Line
Switched-Capacitor Active Filter System (mask-programmable)			
	LMF121	◊ National	45
Switched-Capacitor Butterworth Low-Pass Filter, 4th Order	LMF40	National	
Switched-Capacitor Butterworth Low-Pass Filter, 6th Order	LMF60	National	
Synchronous to Asynchronous Converter			
	TS7538	◊ SGS-Thomson	
Telephone Amplifier/Tone Ringer (speech amplifier, noise rejection filter)			
	MB4513	Fujitsu	
Telephone Interface Circuit			
	LH1028BB	AT&T	50
Telephone Line Interface Circuit			
	CH1812	Cermetek	
	CH1815	Cermetek	
Telephone Line Interface Circuit (with correct detection)			
	CH1813	Cermetek	
Telephone Line Interface, International DAA Circuit			
	CH1814	Cermetek	
Telephone, Low Power FM IF Amplifier			
	IR3N06	Sharp	55
Telephone Power Supply Circuit			
	TEA1081	Signetics	
Telephone Ringer Circuit (with multiple programmable tones)	PCD3360	Signetics	
Telephone Tone Ringer (4 different ring tones)			
	MB4517	Fujitsu	
Telephone Transmission Circuit (dialer interface, and transmit level dynamic limiting)			
	TEA1064	Signetics	
Telephone, One-Chip Microcomputer			
	LR4820	Sharp	60
Teleset Audio Interface (CPU to audio control)			
	MC145429	Motorola	
Teletext, Color Video Display Generator (NAPLPS protocol)	**R6549**	**Rockwell (3576)**	
TI Interface Controller (between DSI and PCM digital voice and data system equipment)			
	RT9170	Rockwell	
Ti interface to VMEbus at T1 rates (1.544 Mb/s)			
	VMET1-105	Newbridge	
Time Division Switch, 1024-Channel CMOS (crosspoint switch for PBX systems)			
	μPD43501	NEC	65
Time Slot Access Circuit			
	MJ1446	Plessey	
Time Slot Assigner Circuit			
	MA5981	Marconi	
	MA5983	Marconi	
	MC14416	Motorola	
	MC14417	Motorola	70
	MC14418	Motorola	
Time Slot Assignment Circuit (TSAC)			
	GM6155	**GoldStar (3438)**	
Time Slot Interchange Circuit			
	MC145601	Motorola	
Time Slot Interchanger			
	T7270	AT&T	
Time Slot Zero Receiver			
	MJ1445	Plessey	75
Time Slot Zero Transmitter			
	MJ1444	Plessey	
Token Ring Jitter Attenuator (IEEE 802.5 network)			
	CS80600	Crystal	
Tone Decoder	XR2567	Exar	
	XR2567M	† Exar	
	MT8860	Mitel	80
	LMC567	National	
		(Continued)	

Function	Device	Source	Line
Tone Decoder (Cont'd)			
	MV8860	Plessey	
	MV8862	Plessey	
	MV8863	Plessey	
	IR3N05/N	Sharp	85
Tone Decoder, MF			
	SSI78A207	**SiliconSys (3647)**	
Tone Decoder (operates from 0.01 Hz to 500 kHz)			
	XR2211C	Exar	
	XR2211M	† Exar	
	XR567AC	◊ Exar	
	XR567AM	◊† Exar	90
	LM567C	National	
	XR2211C	Raytheon	
	XR2211M	† Raytheon	
	NE567	Signetics	
	SE567	† Signetics	95
Tone Decoder, PABX			
	MSM6920	OKI	
Tone Decoder, Terminal			
	MSM6945	OKI	
Tone Detector	MX105	MX-COM	
Tone Dialer	UM2559	UMC	
	UM95088	UMC	100
	UM95089	UMC	
	UM9559E	UMC	
	UM9559E/F	UMC	
Tone Geneerator (DTMF)			
	S2559E	◊ Gould AMI	
Tone Generator			
	MX205	MX-COM	105
Tone Generator (CCITT R1 tones)			
	M993	Teltone	
Tone Generator (DTMF)			
	PBD3535	Ericsson	
	PBD3551	Ericsson	
	GL6801	**GoldStar (3438)**	
	S25089	Gould AMI	110
	S2559F	◊ Gould AMI	
	CD22859	Harris	
	ICM7206A	Harris	
	ICM7206B	Harris	
	ICM7206C	Harris	115
	ICM7206D	Harris	
	MC14410	Motorola	
	TP5088	National	
	TP5089	National	
	μPC767	NEC	120
	EFG7189	SGS-Thomson	
	PCD3312	Signetics	
	STC5089	STC	
	STC5089L	STC	
	TCM5087	TI	125
	TCM5089	TI	
Tone Generator (multifrequency)			
	AMS3501	Aptek	
Tone/Pulse Dialer			
	UM91210	UMC	
	UM91214	UMC	
	UM91215	UMC	130
	UM91230C	UMC	
	UM91311	UMC	
Tone/Pulse Dialer, Prallel Input			
	UM91531	UMC	
Tone/Pulse Dialer (20 Memory)			
	UM91271	UMC	
	UM91272	UMC	135
Tone/Pulse Dialer, 10 Memory			
	UM91260	UMC	
	91261	UMC	
Tone/Pulse Dialer, 20 Memory			
	UM91270	UMC	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Telecommunication Circuits (Cont'd)

Function	Device	Source
Tone Receiver	G8870	◊ CMD Micro
Tone Receiver Circuit, Dual (with filters)		
	AMS3210	Aptek
	G8880	CMD Micro
Tone Receiver, DTMF		
	AMS3201	Aptek
	AMS88205-5NC	Aptek
	CS202	Crystal
	CS203	Crystal
	CS204	Crystal
	CS8870	Crystal
	CD22202	Harris
	CD22203	Harris
	CD22204E	Harris
	MH88305	Mitel
	SC11202	Sierra
	SC11203	Sierra
	SC11204	Sierra
	SC11270	Sierra
	SC11271	Sierra
	SSI75T201	**SiliconSys (3647)**
	SSI75T202	**SiliconSys (3647)**
	SSI75T203	**SiliconSys (3647)**
	SSI75T204	**SiliconSys (3687)**
	SSI75T957	**SiliconSys (3647)**
	M927	Teltone
	M937	Teltone
	M947	Teltone
	M948	Teltone
	M956	Teltone
	M967	Teltone
	TT6174	Teltone
Tone Receiver, MFR1 (hybrid)		
	AMS3101	Aptek
Tone Receiver, MFR2 Backward Tone Receiver (hybrid)		
	AMS3103	Aptek
Tone Receiver, MFR2 Forward Tone Receiver (hybrid)		
	AMS3104	Aptek
Tone Receiver, 12 kHz		
	AMS3050	Aptek
Tone Receiver, 16 kHz		
	AMS3051	Aptek
Tone Recever, DTMF		
	MT8880	◊ Mitel
Tone Ringer	**GL6840A**	**GoldStar (3438)**
	ZN488E	Plessey
	ML8204	SGS-Thomson
	ML8205	SGS-Thomson
	IR3N32/N	Sharp
	IR3N34/N	Sharp
Tone Ringer Driver		
	TCM1531	TI
	TCM1532	TI
	TCM1536	TI
	TCM1539	TI
Tone Ringer (operates from ring signal, drives piezoelectric element)		
	LB1004AC	AT&T
	LB1005AB	AT&T
	LB1005BB	AT&T
	LB1005CB	AT&T
	MC34012	Motorola
	MC34017	Motorola
Tone Ringer (operates from ring signal, drives speaker)		
	CS8204	Cherry Semi
	CS8205	Cherry Semi
	XRT8205	Exar
	MC34012-1	Motorola
	MC34012-2	Motorola
	MC34012-3	Motorola

(Continued)

Function	Device	Source
Tone Ringer (operates from ring signal, drives speaker) (Cont'd)		
	M764	SGS-Thomson
	PSB6520	Siemens
	PSB6521	Siemens
	TCM1520A	TI
Tone Ringer (2-tone)		
	L3240	SGS-Thomson
Tone Ringer (2-tone)		
	LS1240	SGS-Thomson
	LS1241	SGS-Thomson
Tone Transceiver (DTMF)		
	SSI75T2089	**SiliconSys (3647)**
Tone Transceiver (DTMF) with Call Progress Detection		
	SSI75T2090	**SiliconSys (3647)**
Transceiver, DTMF		
	SC11280	Sierra
	SC11289	Sierra
	SC11290	Sierra
Transcoder, ADPCM (32/24/16/8 kb/s)		
	SC11360	Sierra
Transcoder, B8ZS, B6ZS, and HDB3 to NRZ		
	MC145439	Motorola
Transcoder, HDB31/AMI to NRZ		
	MC142103	Motorola
Transmission Circuit w/ Dialer Interface, Low Voltage		
	TEA1068	Signetics
Transmitter, Two-Wire, 4 to 20 mA (DIE package designed to be Integrated into transducer hybrids)		
	XTR101 DIE	**Burr-Brown (3335)**
Tri-Port Memory (T1 carrier)		
	R8040	Rockwell
Trunk Interface		
	L3845	SGS-Thomson
Trunk Interface Circuit		
	AMS2051	Aptek
Twisted-Pair Medium Attachment Unit		
	T7220	AT&T
T1/CEPT Elastic Store		
	DS2175	◊ Dallas
T1/CEPT PCM Jitter Attenuator		
	CS61600	Crystal
T1/CEPT PCM Line Interface		
	CS61574	Crystal
	CS6158	Crystal
T1 interface to VMEbus at T1 rates - includes resident processor and synchronous and TDM bus.		
	VMET1-115	Newbridge
T1 Line Interface (line driver)		
	XRT5675	Exar
T1 Line Interface (1.544 MHz data rate)		
	CS61544	Crystal
T1 Network Interface Unit (for 1.544 Mbps T1 services)		
	DS2190	Dallas
T1 Optical Interface		
	CS8125	Crystal
	CS8126	Crystal
T1 Receiver Buffer		
	DS2176	◊ Dallas
T1, Serial T1 Transceiver (193E,S)		
	DS2180	◊ Dallas
UART for Peripheral/Modem Control		
	KS5812	Samsung
UNITS (User Network Interface for Switches)		
	T7252A	AT&T
Universal Synthesizer (for cellular radio chipset)		
	UMA1010	**Signetics (3590)**

Function	Device	Source
V.35 Interface Transmitter/Receiver		
	XRT3588	Exar
	XRT3589	Exar
V-22B,V-22,V-21,V-23,BELL-103,212 Modem Chip Set	TC75C25	◊ SGS-Thomson
V-32,V-22B,V-22,V-21,V-23,BELL-212,103 Modem Chip Set	TS75C32	◊ SGS-Thomson
Video Compression/Expansion Processor (VCEP)		
	AM95C71	AMD
Videotext, Error Correction		
	MSM6254	OKI
Viterbi Decoder (error correction device, 17 Mbp/s)		
	Q1401C	◊ Qualcomm
	Q1401M	◊† Qualcomm
Viterbi Decoder (for forward error correction)		
	STEL2015	STEL
	STEL2016	STEL
	STEL2017	STEL
	STI2010	STEL
Viterbi Decoder, 2 Mbps		
	Q1650-1	◊ Qualcomm
Viterbi Decoder, 10 Mbps		
	Q1650-2	◊ Qualcomm
Viterbi Decoder, 25 Mbps		
	Q1650-3	◊ Qualcomm
Viterbi Decoder, 256 kbps		
	Q0256	◊ Qualcomm
Voice Frequency Level Expander		
	LB1026AA	AT&T
	LB1026AB	AT&T
Voice Recognition Circuit (voice analysis, recognition and system control)		
	T6658A	Toshiba
Voice Recognition/Response Circuit		
	DSPG5006	DSP Group
Voice Recording/Playback Circuit, uses Adaptive Delta Modulation	TC8830A	Toshiba
	TC8831	Toshiba
	TC8832	Toshiba
Voice Transmission Privacy Circuit		
	DVS100	Marconi
Single Analog Front End- VC-22B,V-22		
	TS7542	◊ SGS-Thomson
Single Chip Tranceiver Provides AES/EBU Ansi s4.40 interface for digital audio data		
	CA16C440	Newbridge
Dual Tone Generator (touchtone frequencies)		
	PSB8593	Siemens
	PCD3311	Signetics
Dual SPDT Wideband Video T Switch		
	DG542A	† Siliconix
	DG542D	Siliconix
Quad SPST Wideband Video T Switch		
	DG540A	† Siliconix
	DG540D	Siliconix
	DG541A	† Siliconix
	DG541D	Siliconix

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Timers

Function	Device	Source	Line
Clock Circuit, Serial I/O Calendar and Clock			
	μPD4990	NEC	
CMOS Timer (dual)			
	KS556	Samsung	
CMOS Timer (high performance)			
	KS555H	Samsung	
Digital Clock Timer			
	LR3419	Sharp	
Event/Hour Meter, 5-1/2 Digit LCD Drive			
	ICM7249	Harris	5
Internal Current Source			
	XR320	Exar	
Long Period Timer (500 ms to 100 hrs.)			
	MB4214	Fujitsu	
Low Power Precision Timer			
	HI-7555	† Holt	
Low Voltage CR Timer			
	TC9160	Toshiba	
Micropower, Long Range (microseconds to days)			
	XR2243	Exar	10
Precision	LM122	† National	
	LM2905	National	
	LM322	National	
	LM3905	National	
Precision, Long Term (3 seconds to 1 week)			
	MW107	AnalogSys	15
Programmable (includes a counter for long time delays) Binary Control			
	XR2240C	Exar	
	XR2240M	† Exar	
	ICM7242	Harris	
	LS7210	**LSI Comp (3526)**	
	ICM7240	◊ Maxim	20
	ICM7242	◊ Maxim	
	ICM7250	◊ Maxim	
	ICM7260	◊ Maxim	
	MC14541BA	† Motorola	
	MC14541BC	Motorola	25
	μA2240C	TI	
Programmable Timer			
	ZN1036D	Plessey	
	ZN1036E	Plessey	
	LR3472	Sharp	
Programmable Timer (for 50 Hz line freq.)			
	SAE0530	Siemens	30
Programmable Timer (for 60 Hz line freq.)			
	SAE0531	Siemens	
Time Base Generator			
	SSI32D4661	SiliconSys	
Timer	XRL555	◊ Exar	
	XR555C	◊ Exar	
	XR555M	◊† Exar	35
	CA555	† Harris	
	CA555C	Harris	
	NE555	Harris	
	MC1455	Motorola	
	LM555C	National	40
	NJM555	NJR	
	NE555	Samsung	
	LM555	SGS-Thomson	
	NE555	Signetics	
	SE555	† Signetics	45
	SE555C	† Signetics	
	355A/C	TeledyneS	
	355B/M	† TeledyneS	
	NE555	TI	
	SA555	† TI	50
	SE555	† TI	
	TA7326	Toshiba	
	TA7327	Toshiba	
Timer, CMOS, Low Voltage, 2.5 MHz, 2%			
	ALD1504	◊°† AdvLinear	
Timer, CMOS, 2.5 MHz, 2%			
	ALD1502	◊°† AdvLinear	55
Timer (CMOS 555), Low Power			
	GLC555	GoldStar	
	ICM7555	◊ Harris	
	ICM7555M	◊† Harris	
	ICM7555	◊ Maxim	
	KS555	Samsung	60
Timer (CMOS 555), Low Power, 2.0 MHz			
	ALD555	◊°† AdvLinear	
Timer (CMOS 555), Low Voltage, 2.0 MHz			
	ALD555-1	◊°† AdvLinear	
Timer/Counter Timer (0.1 second to 50 hours)			
	M51849	Mitsubishi	
Timer, LinCMOS			
	TLC555C	◊ TI	
	TLC555I	◊ TI	65
	TLC555M	◊ TI	
Timer, LinCMOS, High Speed, Low Power			
	TLC551C	TI	
Timer, LinCMOS, 1-Volt Operation			
	TLC552C	TI	
Timer, Long Range			
	BU2300A	ROHM	
	BU2300AF	ROHM	70
Timer (pulse width from μs to hours for output)			
	BA222	ROHM	
Timer (TTL compatible)			
	LMC555	National	
	LM555	National	
Timer with ÷12 Counter (time constant 7200 RC)			
	ZN1034E	Plessey	
Timer with Counter, (time constant 128 RC)			
	XR2242C	Exar	75
	XR2242M	† Exar	
Dual, CMOS, Low Voltage, 2.0 MHz, 2%			
	ALD2504	◊°† AdvLinear	
Dual, CMOS, 2.5 MHz, 2%			
	ALD2502	◊°† AdvLinear	
Dual (CMOS 556) Low Power			
	GLC556	GoldStar	
	ICM7556	Harris	80
	ICM7556M	† Harris	
	ICM7556	◊ Maxim	
Dual (dual 555)			
	XRL556C	Exar	
	XRL556M	† Exar	
	XR556C	◊ Exar	85
	XR556M	◊† Exar	
	MC3456	Motorola	
	MC3556	† Motorola	
	μA556C	National	
	LM556	† National	90
	LM556C	National	
	NE556	Samsung	
	LM556	SGS-Thomson	
	NE556	Signetics	
	NE556-1	Signetics	95
	SA556	Signetics	
	SA556-1	Signetics	
	SE556	† Signetics	
	SE556-1	† Signetics	
	SE556-1C	† Signetics	100
	NE556	TI	
	SA556	TI	
Dual (dual 555), Pinout Variations			
	XR2556C	Exar	
	XR2556M	† Exar	
Dual (dual 555)			
	NJM556	NJR	105
Dual Monostable Multivibrator			
	BA225F	ROHM	
	BA226AF	ROHM	
	BA226F	ROHM	
Dual Precision Timers (microseconds to hours operation)			
	SE556	† TI	
	SE556C	† TI	110
Dual Timer, LinCMOS			
	TLC556C	◊ TI	
	TLC556I	◊ TI	
	TLC556M	◊† TI	
Quad, CMOS, Los Voltage, 2.0 MHz, 2%			
	ALD4503	◊°† AdvLinear	
Quad, CMOS, 2.0 MHz, 2%			
	ALD4501	◊°† AdvLinear	115
Quad, Current Sink Output			
	XR558C	Exar	
	XR558M	† Exar	
	NE558	Samsung	
	NE558	Signetics	
	SA558	Signetics	120
	SE558	† Signetics	
Quad, Current Source Output			
	XR559C	Exar	
	XR559M	† Exar	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Other Devices

Function	Device	Source	Line
Microprocessor Power Supply System Voltage Regulator	LM2984C	National	
Sine Wave Reference (for transducer excitation)	SWR200C	Thaler	
	SWR200M	† Thaler	
A/D Converter Subsystem, 6-Channel 8-Bit	MB4053	Fujitsu	
	MB4063	Fujitsu	5
AC Detector (Detects presence or absence of a/c signals, includes adjustable threshold and time delay.)	3050	Adv Analog	
AC, Line Current Consumption Circuit for Switch Mode Power Supplies	TDA4814	Siemens	
AC Phase Control	TEA1007	AEG Corp	
	U211B	AEG Corp	
AC Power Controller (external mechanical switch control, 10 levels of output power)	**LS7310**	**LSI Comp (3526)**	10
	LS7311	**LSI Comp (3526)**	
AC Power Controller (external touch control, 10 levels of output power)	**LS7312**	**LSI Comp (3526)**	
	LS7313	**LSI Comp (3526)**	
Active Filter, Adaptive High-Pass	LF581	Gennum	
Active Filter, Band-Pass Butterworth, Tunable 40 Hz to 1.6 kHz)	**FLJ-UR1BA1**	**Datel (3361)**	15
	FLJ-UR2BA1	**Datel (3361)**	
Active Filter, Band-Pass Butterworth, Tunable (400 Hz to 10 kHz)	**FLJ-UR1BA2**	**Datel (3361)**	
	FLJ-UR2BA2	**Datel (3361)**	
Active Filter, Band-Pass Cauer/Elliptical, Tunable (10 Hz to 2 kHz)	**FLJ-R3BA1**	**Datel (3361)**	
	FLJ-R3BA2	**Datel (3361)**	20
Active Filter, Band-Reject Butterworth, Tunable (40 Hz to 1.6 kHz)	**FLJ-UR2EA1**	**Datel (3361)**	
	FLJ-UR2EA2	**Datel (3361)**	
Active Filter, High-Pass Butterworth, Tunable (40 Hz to 1.6 kHz)	**FLJ-UR4HA1**	**Datel (3361)**	
Active Filter, High-Pass Butterworth, Tunable (400 Hz to 5 kHz)	**FLJ-UR4HA2**	**Datel (3361)**	
Active Filter, High-Pass Chebyshev, Tunable (40 Hz to 1.6 kHz)	**FLJ-UR4HB1**	**Datel (3361)**	25
Active Filter, High-Pass Chebyshev, Tunable (400 Hz to 5 kHz)	**FLJ-UR4HB2**	**Datel (3361)**	
Active Filter, Low-Pass Butterworth, Tunable (40 Hz to 1.6 kHz)	**FLJ-UR4LA1**	**Datel (3361)**	
Active Filter, Low-Pass Butterworth, Tunable 400 Hz to 20 kHz)	**FLJ-UR4LA2**	**Datel (3361)**	
Active Filter, Low-Pass Cauer/Elliptical, Tunable (10 Hz to 2 kHz)	**FLJ-D5LA1**	**Datel (3361)**	
	FLJ-D5LA2	**Datel (3361)**	30
	FLJ-D6LA1	**Datel (3361)**	
	FLJ-D6LA2	**Datel (3361)**	
	FLJ-R8LA1	**Datel (3361)**	
	FLJ-R8LA2	**Datel (3361)**	
	FLJ-R8LB1	**Datel (3361)**	35
	FLJ-R8LB2	**Datel (3361)**	
Active Filter, Low-Pass Chebyshev, Tunable (40 Hz to 1.6 kHz)	**FLJ-UR4LB1**	**Datel (3361)**	
Active Filter, Low-Pass Chebyshev, Tunable (400 Hz to 20 kHz)	**FLJ-UR4LB2**	**Datel (3361)**	
Active Filter, Low-Pass/High-Pass Butterworth, Tunable (40 Hz to 1.6 kHz)	**FLJ-UR2LH1**	**Datel (3361)**	
	FLJ-UR2LH2	**Datel (3361)**	40
Active Filter, Resistor Programmable	**FLJ-R3**	**Datel (3361)**	
	FLJ-R8	**Datel (3361)**	

Function	Device	Source	Line
Active filter, Resistor Programmable.	FLJUR1	Datel	
	FLJUR2	Datel	
	FLJUR4	Datel	45
Active Filter (resistor programmable)	**FLT-U2**	**Datel (3361)**	
Active filter, Resistor Programmable.	**FLTU2-M**	**Datel (3361)**	
Active Filter, Resistor Programmable	RU5621A	EG&G-Reticon	
	RU5622A	EG&G-Reticon	
Active Filter, Voltage Programmable	**FLJ-VB**	**Datel (3361)**	50
	FLJ-VH	**Datel (3361)**	
	FLJ-VL	**Datel (3361)**	
Active Filters	RU5620A	EG&G-Reticon	
Active Filters (See also Linear - Telecommunications Circuits)	UAF11	Burr-Brown	
	UAF11H	† Burr-Brown	55
	UAF21	**Burr-Brown (3340)**	
	UAF21H	**† Burr-Brown (3340)**	
	UAF31	Burr-Brown	
	UAF41	**Burr-Brown (3340)**	
	CH1290	Cermetek	60
	CH1295	Cermetek	
	CH1296	Cermetek	
	LTC1059C	LinearTech	
	LTC1059M	† LinearTech	
	LTC1060C	LinearTech	65
	LTC1061C	LinearTech	
	LTC1061M	† LinearTech	
	LTC1062C	LinearTech	
	LTC1062M	† LinearTech	
	LTC1064C	LinearTech	70
	LTC1064M	† LinearTech	
	MF10	◊ Maxim	
	AF100	† National	
	AF150	National	
	AF151	National	75
Active Load with Inhibit Mode (for semiconductor test systems, ATE)	AD1315	AD	
Air-Core Meter Driver	LM1819	National	
Alarm Circuits, Temperature	3030	Adv Analog	
Alarm Circuits, Tone Alarm (Comparator with AC output)	3010	Adv Analog	
Alarm Circuits, Tri-state Alert/Alarm (LED Driver)	3020	Adv Analog	80
Analog Current Input Isolation Module	SCM5B32	Burr-Brown	
Analog Delay Line (bucket brigade device, 1024 samples)	RD5108A	EG&G-Reticon	
Analog Delay Line (bucket brigade device, 256 samples)	RD5106A	EG&G-Reticon	
Analog Delay Line (bucket brigade device, 512 samples)	RD5107A	EG&G-Reticon	
Analog I/O Port (with 14-bit ADC and 14-bit DAC)	**AD7869**	**AD (3296)**	85
Analog I/O Port (with 4-channel, 8-bit ADC, 11-bit and two 8-bit DACs)	AD7774	AD	
Analog I/O Port (12-bit DAC, 8-bit ADC)	**AD7770**	**AD (3296)**	
Analog I/O System (two-channel, 8-bit ADC; two 8-bit DACs)	**AD7769**	**AD (3223, 3225, 3227)**	

Function	Device	Source	Line
Analog I/O System (12-bit ADC with T/H amplifier)	**AD7868**	**AD (3225, 3259, 3296)**	
Analog Multiplier	AD532SD/883B	† Burr-Brown	90
	AD534TD/883B	† Burr-Brown	
	AD632TD/883B	**† Burr-Brown (3338)**	
	MPY10056/883B	**† Burr-Brown (3338)**	
	4213VM/883B	† Burr-Brown	
Analog Multiplier/Divider, Four Quadrant	AD734	AD	95
Analog Multiplier (mult, div, squaring)	AD633	AD	
Analog Multiplier, Quad.	AH5890	OEI	
Analog Shift Register (Bucket Brigade Device) Dual 512 stage, acts as a variable delay line in the audio frequency range)	MN3001	Panasonic	
	MN3003	Panasonic	
	MN3010	Panasonic	100
Analog Shift Register (Bucket Brigade Device, 1024 stage)	MN3007	Panasonic	
	MN3204	Panasonic	
	MN3207	Panasonic	
Analog Shift Register (Bucket Brigade Device, 128 Stage)	MN3006	Panasonic	
Analog Shift Register (Bucket Brigade Device, 2048 stage)	MN3008	Panasonic	105
Analog Shift Register (Bucket Brigade Device, 256 Stage)	MN3009	Panasonic	
Analog Shift Register (Bucket Brigade Device, 3328 stage)	MN3011	Panasonic	
Analog Shift Register (Bucket Brigade Device) (3,5,190 stages)	MN3012	Panasonic	
Analog Shift Register (Bucket Brigade Device, 4096 stage)	MN3005	Panasonic	
Analog Shift Register (Bucket Brigade Device, 512 stage)	MN3002	Panasonic	110
	MN3004	Panasonic	
Analog Shift Register Clock Generator/Driver	MN3101	Panasonic	
Analog Switch Array (8x12 crosspoint array)	MT8814	Mitel	
Analog Video Switch and Amplifier (CMOS/BiMOS)	CA3256	Harris	
Attenuator, 3 1/2-Digit BCD, digitally controlled	AD7525K	◊ AD	115
	AD7525T	◊† AD	
Auto-Zero (reduces input offset voltage of an amplifier to 5 μV)	LMC669	National	
Balanced Mixer, Double balanced with oscillator	NE602	Signetics	
	SA602	† Signetics	
Balanced Modulator/Demodulator	**AD630**	**AD (3251)**	120
	MC1496	Motorola	
	MC1596	† Motorola	
	LM1496	National	
	LM1596	† National	
	SL640C	Plessey	125
	SL641C	Plessey	
	LS025	◊ SGS-Thomson	
	S042	Siemens	
	MC1496	Signetics	
	MC1596	† Signetics	130
	SG1496	**◊ SiliconG (3643)**	
	SG1596	**◊† SiliconG (3643)**	
	TA7320	Toshiba	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Bandgap Reference, 1.25 V			
	TSC04A	TeledyneS	
	TSC04AM	† TeledyneS	
Bandgap Reference, 2.5 V			
	TSC05A	TeledyneS	
	TSC05AM	† TeledyneS	
Battery Charger, Sealed Lead Acid			
	UC3906	Unitrode	5
Battery Monitor, Pulse-Load Type			
	CS2516	Cherry Semi	
Bit Rate Generator			
	MC145411	Motorola	
Blowout Resistant Transistor (simulates 40 V transistor with special protection)			
	LM195	† National	
	LM295	National	
	LM395	National	10
Boost Converter (1 V to 5 V @1 amp)			
	MAX646	Maxim	
Boost Converter (1 V to 5 V @40 mA)			
	MAX644	Maxim	
Boost Converter (2 V to 5 V @40 mA)			
	MAX645	Maxim	
Bridge Transducer Switch			
	UC3704	Unitrode	
Capacitive Touch Light Dimmer Circuit (3-levels of brightness and off)			
	HI2417	Holt	15
Carrier Current Transceiver			
	LM1893	National	
	LM2893	National	
CCD Area Sensor (260k pixels for 2/3" EIA b/w)			
	LZ22251	Sharp	
CCD Area Sensor, (260k pixels for 2/3" NTSC color)			
	LZ22250	Sharp	
CCD Area Sensor (360k pixels for 1/2" NTSC color)			
	LZ2131	Sharp	20
CCD Area Sensor (420k pixels for 1/2" PAL color)			
	LZ2141	Sharp	
CCD (1k)	μPD3575	NEC	
CCD (2.5k)	μPD3574	NEC	
CCD (2k)	μPD3573	NEC	
CCD (5k)	μPD3571	NEC	25
CDS (Correlated Double Sampling) Chip for CCD			
	IR3P66	Sharp	
	IR3P68	Sharp	
Clock and Data Recovery Circuit (2.0 GHz NRZ data rate)	16G040	GigaBit	
Comparator, Drives Lamps, Relays or Logic Loads			
	4082/03	Burr-Brown	
Comparator for Lamp Monitoring (continuous status checks for five bulbs)			
	AD22001	**AD (3297)**	30
Comparator, Programmable Quad, Micropower			
	LP365	National	
Comparator, Read Chain Data			
	TL712	◊ TI	
	TL721	◊ TI	
Comparator, Window			
	CMP100	**Burr-Brown (3339)**	
Comparator, Window (Internally set limits)			
	MK104	AnalogSys	35
	4115/04	Burr-Brown	
Comparator, Dual, ECL Compatible			
	μA6687M	† National	
	μA6687V	National	
Constant Current Source, 1 μA to 10 mA			
	LM334	LinearTech	

Function	Device	Source	Line
Constant Current Source, 1 μA to 10 mA			
	LM234	LinearTech	40
	LM134	† National	
	LM234	National	
	LM334	National	
Control Circuit for Switched-Mode Power Supply			
	TEA1039	Signetics	
Control, Power Supply			
	TDA2582	Signetics	45
Controller, Switch Mode Power Supply			
	UC2850	Unitrode	
	UC3850	Unitrode	
Converter, LVDT to digital, 14 bit			
	2S54	**AD (3233)**	
Converter, LVDT to digital, 16 bit			
	2S56	**AD (3233)**	
Converter, RMS to DC (300 MHz 3dB bandwidth)			
	LT1088	LinearTech	50
Coordinate Converter (polar to cartesian)			
	5090A	OEI	
Crosspoint Switch (4x1 video)			
	GX414	**Gennum (3426)**	
CRT Geometry/Focus Corrector			
	C310	Intronics	
	C311	Intronics	
	C312	Intronics	55
	C410	† Intronics	
	C411	† Intronics	
Current Loop Receiver (4–20 mA to 0–5 V conversion)			
	RCV420	**Burr-Brown (3334)**	
Current Mirror, Adjustable Ratio NPN			
	TL010	TI	
Current Mode Controller			
	UC2844	Motorola	60
	UC2845	Motorola	
	UC3844	Motorola	
	UC3845	Motorola	
Current Mode Controller, Dual Channel			
	MC33065	Motorola	
	MC34065	Motorola	65
Current Mode PWM Control Circuit			
	GP2842	Gennum	
Current Reference, 100μA			
	REF200A	**Burr-Brown (3340)**	
Current Sensing Latch			
	SG1549	**◊† SiliconG (3642)**	
	SG2549	**◊ SiliconG (3642)**	
	SG3549	**◊ SiliconG (3642)**	70
Current Source, Dual (two 100 μA sources and a current mirror)	**REF200**	**Burr-Brown (3340)**	
Current Source, 4-Bit			
	μA9650C	National	
Current Source, 7 A Constant			
	HS7067	National	
	HS7107	National	
Current Transmitter (4–20 mA)			
	AD694	AD	75
Current/Voltage Mode PWM Controller			
	UC1825	Unitrode	
	UC1825/883B	† Unitrode	
	UC2825	Unitrode	
	UC3825	Unitrode	
Current-Mode Control (1 MHz hysteretic)			
	CS320	Cherry Semi	80
	CS321	Cherry Semi	
Current-Mode PWM Controller			
	CS3842A	Cherry Semi	
	UC1842	† SGS-Thomson	
	UC2842	SGS-Thomson	
		(Continued)	

Function	Device	Source	Line
Current-Mode PWM Controller		(Cont'd)	
	UC3842	SGS-Thomson	85
	SG1842	**† SiliconG (3642)**	
	SG1843	**† SiliconG (3642)**	
	SG1846	**† SiliconG (3642)**	
	SG1847	**† SiliconG (3642)**	
	SG2842	**SiliconG (3642)**	90
	SG2843	**SiliconG (3642)**	
	SG2846	**SiliconG (3642)**	
	SG2847	**SiliconG (3642)**	
	SG3842	**◊ SiliconG (3642)**	
	SG3843	**◊ SiliconG (3642)**	95
	SG3846	**◊ SiliconG (3642)**	
	SG3847	**◊ SiliconG (3642)**	
	UC1842	† Unitrode	
	UC1843	† Unitrode	
	UC1844	Unitrode	100
	UC1845	Unitrode	
	UC1846	† Unitrode	
	UC1846/883B	† Unitrode	
	UC1847	† Unitrode	
	UC1847/883B	† Unitrode	105
	UC2842	Unitrode	
	UC2843	Unitrode	
	UC2844	Unitrode	
	UC2845	Unitrode	
	UC2846	Unitrode	110
	UC2847	Unitrode	
	UC3842	Unitrode	
	UC3843	Unitrode	
	UC3844	Unitrode	
	UC3845	Unitrode	115
	UC3846	Unitrode	
	UC3847	Unitrode	
Data Acquisition Controller for A/D Converter (ASCII Output)	CY600	Cybernetic	
Data Acquisition Shift Register			
	SDA8020	Siemens	
Data Acquisition Shift Register (125 MHz data rate)			
	SDA8020-125	Siemens	120
Data Acquisition Subsystem (ADC, DAC, bandgap reference)	**AD7669**	**AD (3223, 3225, 3259)**	
Data Acquisition Subsystem (ADC, sample and hold, instrumentation amplifier)			
	DAS1155	AD	
	DAS1156	AD	
Data Acquisition Subsystem (for measurement and control)	μMAC1050	AD	
Data Acquisition Subsystem, 16 Channel Analog Front-End for 12-Bit ADC			
	AD1362	**AD (3259)**	125
Data Acquisition System (converts 8 low-level differential analog input signals to 12-bit values)			
	AD75005	° AD	
Data Acquisition System (hybrid)			
	HDAS524	**Datel (3359)**	
	HDAS528	**Datel (3359)**	
	HDAS534	**Datel (3359)**	
	HDAS538	**Datel (3359)**	130
	HDAS75	**Datel (3359)**	
	HDAS76	**Datel (3359)**	
	HDAS950	**Datel (3359)**	
	HDAS951	**Datel (3359)**	
Data Acquisition System, Eight Channel (12-bit resolution)	**MN7150-8**	**MicroNet (3546)**	135
Data Acquisition System, 4 Channel Differential, 13-Bit A/D	ML2200	MicroLinear	
Data Acquisition System, 4-Channel 12-Bit (30 kHz sampling rate)			
	AD7874	AD	
Data Acquisition System, 6 Channel, Sample/Hold, Pulse Width Output			
	μA9708	National	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR

LINEAR—Other Devices (Cont'd)

Function	Device	Source	
Data Acquisition System, 8 Channel Differential, 16 Channel Single Ended, Sample/Hold, 12-Bit Conversion (2 device set)			
	AD363K	**AD**	**(3259)**
	AD363S	**† AD**	**(3259)**
	AD364J	**AD**	**(3259)**
	AD364K	**AD**	**(3259)**
	AD364S	**† AD**	**(3259)**
	AD364T	**† AD**	**(3259)**
	HDAS8MC	**Datel**	**(3359)**
	HDAS8MM	**† Datel**	**(3359)**
Data Acquisition System, 8 Channel (expandable), Sample/Hold, 8-Bit Conversion			
	MN7120	**MicroNet**	**(3546)**
	MN7120H	**† MicroNet**	**(3546)**
Data Acquisition System, 8 Channel, Sample/Hold, 12-Bit A/D	**MN7140**	**MicroNet**	**(3546)**
	MN7140H	**† MicroNet**	**(3546)**
Data Acquisition System (8 channel, 16-bit with mux, ref, clock and tri-state outputs)			
	SP9480	Sipex-HSD	
Data Acquisition System, 8 Channel, 8-Bit Conversion, Microprocessor Compatible			
	AD7581A	◊ AD	
	AD7581B	◊ AD	
	AD7581C	◊ AD	
	AD7581J	◊ AD	
	AD7581K	**◊ AD**	**(3227, 3231)**
	AD7581L	◊ AD	
	MP7581A	MicroPwr	
	MP7581B	MicroPwr	
	MP7581C	MicroPwr	
	MP7581J	MicroPwr	
	MP7581K	MicroPwr	
	MP7581L	MicroPwr	
	MP7581S	† MicroPwr	
	MP7581T	† MicroPwr	
	MP7581U	† MicroPwr	
	ADC0808	◊ National	
	ADC0809	◊ National	
	ZN437E	Plessey	
	ZN437J	† Plessey	
	SI8602	Siliconix	
Data Acquisition System (8 differential channels, 12-bit resolution)	SDM863	Burr-Brown	
	SDM873	Burr-Brown	
	MDAS8D	Datel	
	MDAS940	Datel	
Data Acquisition System, 8-Channel, 12-Bit A/D Converter with Reference, Clock, Three-State Outputs, Microprocessor Interface			
	HS9410J	Sipex-HSD	
	HS9410K	Sipex-HSD	
	HS9410S/B	† Sipex-HSD	
	HS9410T	† Sipex-HSD	
Data Acquisition System, 10-Bit			
	LTC1090AC	LinearTech	
	LTC1090AM	† LinearTech	
Data Acquisition System, 10-Bit Serial (2-channel			
	LTC1091AC	LinearTech	
	LTC1091AM	† LinearTech	
Data Acquisition System, 10-Bit Serial (6-channel)			
	LTC1093AC	LinearTech	
	LTC1093AM	† LinearTech	
	LTC1093C	LinearTech	
	LT1093M	† LinearTech	
Data Acquisition System, 10-Bit with Reference			
	LTC1095BC	LinearTech	
	LTC1095BM	† LinearTech	
	LTC1095CC	LinearTech	
	LTC1095CM	† LinearTech	
Data Acquisition System, 12 Bit			
	MN7150	**MicroNet**	**(3546)**

Function	Device	Source	
Data Acquisition System, 12-Bit A/D Converter (0.024 % FSR), 16 Single-Ended Inputs, and S/H Amplifier			
	SDM862A	Burr-Brown	
	SDM862B	Burr-Brown	
	SDM862J	Burr-Brown	
	SDM862K	◊ Burr-Brown	
	SDM862R	† Burr-Brown	
	SDM862S	† Burr-Brown	
	SDM863A	Burr-Brown	
	SDM863B	Burr-Brown	
	SDM863J	Burr-Brown	
	SDM863K	Burr-Brown	
	SDM863R	† Burr-Brown	
	SDM863S	† Burr-Brown	
Data Acquisition System (12-bit with 50k throughput, sample and hold, PGA with selectable gains from 1 to 16)	AD75003	° AD	
Data Acquisition System, 16 Channel or 8 Channel Differential, 12-Bit A/D			
	AD362K	AD	
	AD362S	† AD	
	AD369K	**AD**	**(3259)**
	AD369S	**† AD**	**(3259)**
	SDM854	Burr-Brown	
	SDM856	Burr-Brown	
	SDM857	Burr-Brown	
	HS362	Sipex-HSD	
Data Acquisition System, 16 Channel, Sample/Hold, 12-Bit Conversion			
	HDAS16MC	**Datel**	**(3359)**
	HDAS16MM	**† Datel**	**(3359)**
Data Acquisition System, 16 Channel 8-Bit Conversion			
	DAS952R	Datel	
	ADC0816C	National	
	ADC0817C	† National	
Data Acquisition System, 16 Element or 8 Channel Differential, Sample/Hold, 12-Bit Conversion			
	DAS5712	Adv Analog	
	DAS5714	Adv Analog	
	DAS5716	Adv Analog	
Data Acquisition System (16 SE channels, 12-bit resolution)	MDAS16	Datel	
Data Acquisition System (16 single-ended channels, 12-bit resolution)			
	SDM862	Burr-Brown	
	SDM872	Burr-Brown	
Data Acquisition System, 18-Bit Floating Point, Sampling Rate up to 100 kHz.			
	AD1330	AD	
Data Acquisition System (12-bit ADC with on-chip reference, 8/12-bit serial port)			
	AD79015	AD	
Data Acquisition System, 16 Channel (12-bit resolution)			
	MN7150-16	**MicroNet**	**(3546)**
Data Acquisition System, 4 Channel Differential (12-Bit, 250 KHz)	**HDAS534MC**	**Datel**	**(3359)**
	HDAS534MM	**† Datel**	**(3359)**
Data Acquisition System, 8 Channel Single-Ended (12-Bit, 250 KHz)			
	HDAS538MC	**Datel**	**(3359)**
	HDAS538MM	**† Datel**	**(3359)**
DC to DC Converter			
	IR3M03A	Sharp	
	IR3M03AN	Sharp	
DC to DC Converter (−15V to −5.2V)			
	PS9002	Adv Analog	
DC to DC Converter (5 V to −15, −10, −5, 10 and 15 V)			
	AD7560	AD	
DC to DC Converter (12V to 5V)			
	A970	† Adv Analog	
DC to DC Converter (28V to 5V)			
	A971	Adv Analog	
	A972	Adv Analog	
			(Continued)

Function	Device	Source	
DC to DC Converter (28V to 5V)			(Cont'd)
	PS2805	Adv Analog	
	PS2815	Adv Analog	
DC-DC Converter (0.9V–1.7V to 3V or 5.5V)			
	CA424	**Newbridge**	**(3569)**
DC-to-DC Converter			
	TSC7662A	TeledyneS	
	TSC962	TeledyneS	
DC-to-DC Converter Control Circuit			
	MC33063A	Motorola	
	MC34063A	Motorola	
	MC35063A	† Motorola	
DC-to-DC Converter (0.9V to 1.7V, 3V to 5.5V)			
	CA426	**Newbridge**	**(3569)**
DC-to-DC Converter (5V to ± 10V)			
	MAX680	Maxim	
DC-to-DC Converter (13 to 50 V)			
	PS6009	Adv Analog	
DC-to-DC Converter (13 to 60 V)			
	PS6008	Adv Analog	
DC-to-DC Voltage Converter			
	TSC7660C	TeledyneS	
Deglitcher Circuit			
	4903	TeledyneS	
Deglitcher (suppresses transients at outputs of D/A)			
	4902	TeledyneS	
	4902HR	TeledyneS	
Delay Line, Dual Channel			
	Bt622	Brooktree	
Delay Line, Quad Channel			
	Bt624	Brooktree	
Detector/Alarm System (with integral drivers for piezoelectric and mechanical horns)			
	CA3164A	Harris	
DFT Processor (buried channel CCD)			
	RT5601B	EG&G-Reticon	
Differential Amplifier (unity gain)			
	INA117A	**† Burr-Brown**	**(3334)**
	INA117B	**† Burr-Brown**	**(3334)**
Digital Gain Set, for setting gain of op-amps			
	LF13006	National	
	LF13007	National	
Digital to Resolver Converter, 14-Bit			
	MDRC	ILC-DDC	
Digital to Resolver/Synchro Converter			
	DSC11520	ILC-DDC	
Digital to Synchro and Digital to Resolver Converter, 14-Bit	DSC644	ILC-DDC	
Digital to Synchro Converter, 14-Bit			
	DSC544	ILC-DDC	
Digital-to-Resolver Converter			
	DRC1745	**AD**	**(3234)**
	DRC1746	**AD**	**(3234)**
Digital-to-Resolver Converter (with auto-nulling option)			
	AD2S65	**AD**	**(3234)**
	AD2S66	**AD**	**(3234)**
Direct Frequency Synthesizer, Upto 400 MHz (square, triangular, or sine wave output)			
	SP2002	Plessey	
Divider (See also Multipliers/Dividers below.)			
	AD535J	**AD**	**(3251)**
	AD535K	**AD**	**(3251)**
	DIV100	**Burr-Brown**	**(3339)**
Driver, Switch Driver, for Power Transistors			
	SG3629	**◊ SiliconG**	**(3643)**

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Driver, Dual High Current MOSFET Compatible Output Driver	UC1706	† Unitrode	
	UC3706	Unitrode	
Driver, Dual, High-Current MOSFET Output	UC1707	† Unitrode	
	UC3707	Unitrode	
Driver, Four Channel	LAS8091P	Lambda	5
Earth Leakage Detector	KA2807	Samsung	
Electronic Switching Circuit (for ignition applications)	CA3165	Harris	
Equalizer	ML202	MicroLinear	
Fiber Optic LED Driver	SFD4001	STC	
Fiber Optic Receiver Limiting Amplifier	SFA4011	STC	10
Fiber Optic Receiver Transimpedance Amplifier	SFA4021	STC	
Filter, Adaptive High-Pass (with independent gain block)	LS581	Gennum	
Filter, Digitally Programmable Low Pass	MAX270C	Maxim	
	MAX270M	† Maxim	
	MAX271C	Maxim	15
	MAX271M	† Maxim	
Filter, E^2 Programmable Dual BiQuad	SC22322	Sierra	
	SC22324	Sierra	
Filter, Low Pass, Seventh Order Elliptic	XR1015	Exar	
	XR1016	Exar	20
Filter, MF-10 Type programmable	SC11122	Sierra	
Filter, Switched Capacitor (general purpose)	RF5615A	EG&G-Reticon	
	RF6609A	EG&G-Reticon	
Filter, Switched Capacitor (notch filter)	RF6651A	EG&G-Reticon	
Filter, Switched Capacitor (universal)	MF10	National	25
Filter, Switched Capacitor (1/3 octave bandpass)	RM5604A	EG&G-Reticon	
Filter, Switched Capacitor (5th order highpass)	RF5611A	EG&G-Reticon	
Filter, Switched Capacitor (6th order bandpass)	RF5614A	EG&G-Reticon	
	RF5616A	EG&G-Reticon	
Filter, Switched Capacitor (7th order lowpass)	RF5609A	EG&G-Reticon	30
Filter, Switched Capacitor (8th order universal, digitally programmable)	CS7008	Crystal	
Filter, Switched-Capacitor (programmable)	TSGF04	SGS-Thomson	
	TSGF08	SGS-Thomson	
	TSGF12	SGS-Thomson	
Filter, Dual Universal	ML2110	MicroLinear	35
Filter, Dual Universal (high frequency)	ML2111	MicroLinear	
Flasher (LED)	LM3909	National	
Fluid Detector (oscillator, balance detector)	LM1830	National	
Fluid Level Detector (non-flammable fluids)	LM1042	National	
Flyback Converter Control Circuit	TDA4601	Motorola	
	TDA4601B	Motorola	40

Function	Device	Source	Line
Frequency-to-Voltage Converter	**451**	**AD (3232)**	
	453	**AD (3232)**	
	MB4206	Fujitsu	
	MB4207	Fujitsu	45
Frequency-to-Voltage Converter (precision)	CS2907	Cherry Semi	
	CS2917	Cherry Semi	
	XR2917	Exar	
	LM2907	National	
	LM2917	National	50
	L290	SGS-Thomson	
	L291	SGS-Thomson	
	L292	SGS-Thomson	
	4736	TeledyneS	
	LM2907	TI	55
	LM2917	TI	
Frequency-to-Voltage Converter (1 MHz)	4706	TeledyneS	
Frequency-to-Voltage Converter (10 kHz)	4702	TeledyneS	
	4714	TeledyneS	
	4722	TeledyneS	60
Frequency-to-Voltage Converter (10 kHz precision)	4708	TeledyneS	
Frequency-to-Voltage Converter (100 kHz)	4704	TeledyneS	
Frequency-to-Voltage Converter (100 kHz precision)	4710	TeledyneS	
FSK Data Receiver (for radio paging circuits)	SL6639	Plessey	
Function Generator, D/A Controller	CY360	Cybernetic	65
Gain/Attenuator Block	ML203	MicroLinear	
Gain Control, programmable gain/loss control	SC11310	Sierra	
Gain Control (programmable gain/loss control with EEPROM)	SC22310	Sierra	
Gear Tooth Sensor	UGN3056	Allegro Micro	
Ground Fault Interrupter	LM1851	Raytheon	70
Ground Fault Interrupter Circuit, Standard	RC4143	Raytheon	
	RC4144	Raytheon	
Ground Fault Interrupter, Low Power (for 120 or 220 volt systems)	RV4145	Raytheon	
Hall Effect Devices (sense magnetic field) See also Digital-Other Digital Devices	HKZ101	Siemens	
	SAS231W	Siemens	75
	TL172C	TI	
	TL173C	TI	
	TL3013	TI	
	TL3101	TI	
Hall Effect Switches (senses magnetic field)	**UGN3119U**	**Allegro Micro (3207)**	80
	UGN3120U	**Allegro Micro (3207)**	
	UGN3140U	**Allegro Micro (3207)**	
	UGS3119U	Allegro Micro	
	UGS3120U	Allegro Micro	
	UGS3140U	Allegro Micro	85
Hall-Effect Switch (for alternating magnetic field)	TLE4901F	Siemens	
Image Area Sensor, CCD Area Sensor with 270K Pixels (for 1/2" NTSC color)	LZ2111	Sharp	
	LZ2112	Sharp	

Function	Device	Source	Line
Image Area Sensor, CCD Area Sensor with 320K Pixels (for 1/2" PAL color)	LZ2121	Sharp	
	LZ2122	Sharp	90
Image Rotator	6125A	OEI	
Image Sensor, Area, Linear Self-Scanning	RA0100A	EG&G-Reticon	
	RA0128A	EG&G-Reticon	
	RA1441A	EG&G-Reticon	
Image Sensor, CC Photodiode	RL0256D	EG&G-Reticon	95
	RL0512D	EG&G-Reticon	
	RL0512R	EG&G-Reticon	
	RL1024D	EG&G-Reticon	
	RL1282D	EG&G-Reticon	
	RL1284D	EG&G-Reticon	100
	RL1288D	EG&G-Reticon	
	RL2048D	EG&G-Reticon	
Image Sensor, CCD (1/6inch, 180Hx260V frame transfer)	LC9943	Sanyo	
Image Sensor, CCD Line Sensor with 2K Pixels	LZ2019	Sharp	
Image Sensor, CCD Line Sensor (512 pixels)	LZ2018	Sharp	105
Image Sensor, CCD (400 x 200 pixels)	RA1200J	EG&G-Reticon	
Image Sensor, CCD (1/3 inch color, NTSC standard)	LC9965	Sanyo	
Image Sensor, CCD (1/3 inch, EIA TV standard, 400)	LC9931B	Sanyo	
Image Sensor, Circular, Self Scanning	RO0064N	EG&G-Reticon	
	RO720B	EG&G-Reticon	110
Image Sensor, Line Array	TC102-1	TI	
	TC103-1	TI	
	TC104-1	TI	
	TC106	TI	
Image Sensor, Linear Self Scanning	RL0064A	EG&G-Reticon	115
	RL0128G	EG&G-Reticon	
	RL0128L	EG&G-Reticon	
	RL0128S	EG&G-Reticon	
	RL0128SAF	EG&G-Reticon	
	RL0256G	EG&G-Reticon	120
	RL0512G	EG&G-Reticon	
	RL0512S	EG&G-Reticon	
	RL1024G	EG&G-Reticon	
	RL1024H	EG&G-Reticon	
	RL1024S	EG&G-Reticon	125
	RL1728H	EG&G-Reticon	
	RL2048H	EG&G-Reticon	
	RL4096	EG&G-Reticon	
	RL512SAF	EG&G-Reticon	
Image Sensor, Linear Self-Scanning	RL0128SAX	EG&G-Reticon	130
	RL0512SAX	EG&G-Reticon	
Image Sensor, Matrix (525h x 492v)	MB8037A	Fujitsu	
	MB8038A	Fujitsu	
Image Sensor, Photodiode (512 pixels, random access)	RL0512SR	EG&G-Reticon	
Image Sensor, Photodiode (1024 pixels, random access)	RL1024SR	EG&G-Reticon	135
Image Sensor, 128x1, CCD	TC102	TI	
Image Sensor, 500x580, CCD (B/W, PAL)	LZ22291	Sharp	
Image Sensor (2048 element)	MB8033	Fujitsu	
Image Sensor, 2048x1, CCD	TC103	TI	

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LINEAR

LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Image Sensor, 3456x1, CCD	TC104	TI	
Image Sensor (4096 element)	MB8035	Fujitsu	
Image Sensor, 192x165, CCD	TC210	TI	
	TC211	TI	
Image Sensor, 2952x1, CCD	TC106-1	TI	5
Image Sensor, 754x488, CCD	TC240	TI	
	TC241	TI	
Image Ssnsor, High-Speed CCD Imager	RA2048J	EG&G-Reticon	
Inductive Proximity Switch (with shortcircuit protection)	TCA305A	Siemens	
	TCA305B	Siemens	10
	TCA505A	Siemens	
Infrared Remote Control System	SDA3208	Siemens	
Instrumentation Amplifier	4253	TeledyneS	
Instrumentation Switched Capacitor Building Block, Dual	LT1043C	LinearTech	
	LT1043M	† LinearTech	15
Isolation Power Supply (3100V)	**710**	**Burr-Brown (3337)**	
Isolation Power Supply (3400V)	PWS727	Burr-Brown	
	PWS728	**Burr-Brown (3337)**	
	PWS750	**Burr-Brown (3337)**	
Isolation Power Supply (4200V)	**700**	**Burr-Brown (3337)**	20
Lamp Monitors for 24 V Systems (trucks, buses, railroad, and marine use)	ULN2457A	Allegro Micro	
Laser Diode Driver Circuit	IR3C07/N	Sharp	
	IR3C08	Sharp	
Level Detector, Fluid	LM903	National	
Level Detector, 12-Point (for fluorescent displays)	LC7555	Sanyo	25
Level Meter, Analog Input Drives a Bar of LED's	LB1405	Sanyo	
	UAA170	Siemens	
	UAA180	Siemens	
Level Meter Detector (9 levels detect/drive)	MB3764	Fujitsu	
Level Translator, High-Voltage (for driving the AP0130NA MOSFET array)	HT0130P	AT&T	30
Light Activated Switch	ZNP100	Plessey	
	ZNP102	Plessey	
	ZNP103	Plessey	
Light Detector (with buffer amplifier)	U123	AEG Corp	
Light Sensor	ULN3311D	† Allegro Micro	35
	ULN3311T	Allegro Micro	
	ULN3312D	† Allegro Micro	
	ULN3312T	Allegro Micro	
Linear Hall-Effect Devices	TL3103C	TI	
	TL3103I	TI	40
Linear Macrocell Array	RLA40	Raytheon	

Function	Device	Source	Line
Linear Regulator, High Speed Switching	IR3M04	Sharp	
Linear Regulator, Negative Micropower	TSC664	TeledyneS	
Linear Regulator, Positive Micropower	TSC663	TeledyneS	
Linear Regulator, Positive Micropower with Battery Detect	TSC666	TeledyneS	45
Linear Regulator, Precision	UC3832	Unitrode	
	UC3833	Unitrode	
Linearized Thermocouple Input Isolation Module	SCM5B47	Burr-Brown	
Log/Antilog Amplifier	**AD640**	**AD (3251)**	
Log/Antilog Amplifier (4 decade)	**759**	**AD (3251)**	50
Log/Antilog Amplifier (6 decade)	**755**	**AD (3251)**	
Logarithmic Operator (negative input)	4358	TeledyneS	
	4363	TeledyneS	
Logarithmic Operator (positive input)	4357	TeledyneS	
	4362	TeledyneS	55
Logic Controlled Regulator (5V/3A main, 5V/3mA aux.)	LT1035M	† LinearTech	
Logic Controlled Regulator (5V/3A main, 5V/75mA aux.)	LT1035C	LinearTech	
Low Battery Indicator, Triggers on 3 V (for use with 3 NiCd cells)	ICM7201	Harris	
Lowpass Filter, 5th Order Bessel (anti-aliasing, data logger)	MAX281AM	† Maxim	
	MAX281BC	Maxim	60
Lowpass Filter, 5th Order Bessel (anti-alising, data logger)	MAX281AC	Maxim	
Lowpass Filter,5th Order Bessel (anti-aliasing,data logger)	MAX281BM	† Maxim	
LVDT Signal Conditioner	NE5521	Signetics	
	SE5521	† Signetics	
LVDT Signal Conditioner (dc output proportional to position)	**AD598**	**AD (3253)**	65
LVDT to Digital Converter (direct ratiometric conversion)	**2S58**	**AD (3233)**	
LVDT to Digital Converter (1 kHz to 10 kHz reference frequency)	**2S50/460**	**† AD (3233)**	
	2S50/560	**AD (3233)**	
LVDT to Digital Converter (400 Hz reference frequency)	**2S50/410**	**† AD (3233)**	
	2S50/510	**AD (3233)**	70
LVDT-to-Digital Converter	2S82	AD	
Magnetic Amplifier Control Circuit	UC1838	Unitrode	
	UC2838	Unitrode	
	UC3838	Unitrode	
Massk Programmable Switched-Capacitor Active Filter System	LMF120	National	75
Meter Driver, Air-Core	SA5775	Signetics	
Micropower Regulator and Comparator (125 mA output current)	LT1020C	LinearTech	
	LT1020M	† LinearTech	
Motor, Brushless DC Motor Commutator	**LS7262**	**LSI Comp (3526)**	
Motor, Brushless DC Motor Speed Controller, 4 Phase	**LS7264**	**LSI Comp (3526)**	80
Motor, DC Motor Controller (position and velocity control)	GL1200	Galil	

Function	Device	Source	Line
Motor Driver	TLP298	TI	
Motor Driver, Full Bridge, Dual	L298	Unitrode	
Motor Driver, Dual, Schottky Diode	UC1610	† Unitrode	
	UC3610	Unitrode	85
Motor Speed Regulator, Auto Reverse	TDA7272	SGS-Thomson	
Motor Speed Regulator (for small dc motors). See also Linear—Consumer Circuits.	KA2401	Samsung	
	KA2402	Samsung	
	KA2403	Samsung	
Multifunction Converter (generates output = (V1÷V2)	LH0094C	National	90
Multifunction Converter (generates output = (V1÷V2)	LH0094	National	
Multifunction Converters (XY/Z)expM	4301	Burr-Brown	
	4302	**Burr-Brown (3339)**	
Multiplier/Divider	**AD632A**	**Burr-Brown (3338)**	
	AD632B	**Burr-Brown (3338)**	95
	AD632S	**† Burr-Brown (3338)**	
	AD632T	**† Burr-Brown (3338)**	
Multipliers	**AD539J**	**AD (3251)**	
	AD539K	**AD (3251)**	
	AD539S	**† AD (3251)**	100
	AD632	**AD (3251)**	
	MM109	AnalogSys	
	MPY534	**Burr-Brown (3338)**	
	XR2208	Exar	
	XR2208M	† Exar	105
	XR2228	Exar	
	XR2228M	† Exar	
	ICL8013C	Harris	
	ICL8013M	† Harris	
	MC1494	Motorola	110
	MC1495	Motorola	
	MC1594	† Motorola	
	MC1595	† Motorola	
	SG1495	**◊ SiliconG (3643)**	
	SG1595	**◊† SiliconG (3643)**	115
	TA7158	Toshiba	
Multipliers/Dividers	**AD532J**	**◊ AD (3251)**	
	AD532K	**◊ AD (3251)**	
	AD532S	**◊† AD (3251)**	
	AD533J	AD	120
	AD533K	AD	
	AD533L	AD	
	AD533S	† AD	
	AD534J	**◊ AD (3251)**	
	AD534K	**◊ AD (3251)**	125
	AD534L	**◊ AD (3251)**	
	AD534S	**◊† AD (3251)**	
	AD534T	**◊† AD (3251)**	
	AD538	**AD (3251)**	
	MPY100	**Burr-Brown (3338)**	130
	MPY100A	**Burr-Brown (3338)**	
	MPY100S	**† Burr-Brown (3338)**	
	MPY634	**Burr-Brown (3338)**	
	4203	Burr-Brown	
	4203S	† Burr-Brown	135
	4204	Burr-Brown	
	4204S	† Burr-Brown	

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LINEAR

LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Multipliers/Dividers		(Cont'd)	
	4205	Burr-Brown	
	4205S	† Burr-Brown	
	4206	Burr-Brown	
	4213	Burr-Brown	
	4213S	† Burr-Brown	5
	4213U	Burr-Brown	
	4213V	Burr-Brown	
	4213W	Burr-Brown	
	4214	Burr-Brown	
	4214M	† Burr-Brown	10
	RC4200	Raytheon	
	RC4200A	Raytheon	
Nicad QUICK CHARGE Control IC			
	TSC675	◊† TeledyneS	
Op Amp (triple programmable array)			
	CA144	**Newbridge**	**(3569)**
Optocoupler	TIL102	TI	15
	TIL103	TI	
	TIL111	TI	
	TIL112	TI	
	TIL113	TI	
	TIL114	TI	20
	TIL115	TI	
	TIL116	TI	
	TIL117	TI	
	TIL118	TI	
	TIL119	TI	25
	TIL119A	TI	
	TIL120	TI	
	TIL121	TI	
	TIL124	TI	
	TIL125	TI	30
	TIL126	TI	
	TIL127	TI	
	TIL128	TI	
	TIL128A	TI	
	TIL153	TI	35
	TIL154	TI	
	TIL155	TI	
	TIL156	TI	
	TIL157	TI	
	TIL157A	TI	40
	TIL186	TI	
	TIL187	TI	
	TIL189	TI	
	TIL190	TI	
	3N261	TI	45
	3N262	TI	
	3N263	TI	
	4N22	TI	
	4N23	TI	
	4N24	TI	50
	4N25	TI	
	4N26	TI	
	4N27	TI	
	4N28	TI	
	4N35	TI	55
	4N36	TI	
	4N37	TI	
	4N47	TI	
	4N48	TI	
	4N49	TI	60
	6N138	TI	
	6N139	TI	
Optocoupler, High DC Transfer Ratio			
	MCT2	TI	
	MCT2E	TI	
Optocoupler/Optoisolator			
	4N45	TI	65
	4N46	TI	
Optocoupler/Optoisolator, High Speed			
	HCPL2601	TI	
Optocoupler/Optoisolator (3KV isoaltion)			
	HCPL2531	TI	
Optocoupler/Optoisolator (3KV isolation)			
	HCPL2530	TI	
	HCPL2730	TI	70
	HCPL2731	TI	
Optocoupler/Optoisolator (3535 V peak isolation)			
	TIL3009	TI	
	TIL3010	TI	
	TIL3012	TI	
Optocoupler, single channel (3535 V peak isolation)			
	TIL191A	† TI	75
Optocoupler (used with telephone ring detector)			
	TIL181	TI	
Optocoupler, Single Channel (3535 V peak isolation)			
	TIL11B	† TI	
	TIL12B	TI	
	TIL191	† TI	
	TIL192	† TI	80
	TIL192A	TI	
Optocoupler, Dual-Channel (1.5 kV isolation)			
	4N55	Micropac	
	6N134	Micropac	
	66026	Micropac	
	66056-002	Micropac	85
	66058-002	Micropac	
	66071	Micropac	
	66072	Micropac	
	66088-002	Micropac	
Optocoupler, Dual-Channel (16 kV isolation)			
	66005-002	Micropac	90
Optocoupler, Dual-Channel (40 kV isolation)			
	66004-002	Micropac	
Optocoupler, Four channel (3535 V peak isolation)			
	TIL193	TI	
	TIL193A	TI	
	TIL193B	TI	
Optocoupler, Four-Channel (1.5 kV isolation)			
	6N140	Micropac	95
Optocoupler (1 kV isolation)			
	4N22	Micropac	
	4N22A	Micropac	
	4N23	Micropac	
	4N23A	Micropac	
	4N24	Micropac	100
	4N24A	Micropac	
	4N47	Micropac	
	4N48	Micropac	
	4N49	Micropac	
Optocoupler (1.5 kV isolation)			
	3N243	Micropac	105
	3N244	Micropac	
	3N245	Micropac	
	66022	Micropac	
	66053	Micropac	
	66056-001	Micropac	110
	66058-001	Micropac	
	66063	Micropac	
	66064	Micropac	
	66088-001	Micropac	
	66095	Micropac	115
Optocoupler (16 kV isolation)			
	66005-001	Micropac	
Optocoupler (40 kV isolation)			
	66004-001	Micropac	
Optoelectronic switch, Twilight Sensor			
	ULN3390D	Allegro Micro	
	ULN3390T	Allegro Micro	
Optoisolator, Buffer Open-Collector Output (5kV peak isolation)	OPI8013	TI	120
Optoisolator, Buffer Totem-Pole Output (5kV peak isolation)	OPI8012	TI	
Optoisolator, Inverter Open-Collector Output (5kV peak isolation)	OPI8015	TI	
Optoisolator, Inverter Totem-Pole Output (5kV peak isolation)	OPI8014	TI	
Optoisolator, Open-Collector Output (3kV dc isolation)			
	HCPL2502	TI	
	6N135	TI	125
	6N136	TI	
	6N137	TI	
Optoisolator, Dual Open-Collector Output (3kV dc isolation)	HCPL2630	TI	
Optoisolator (2500 Vrms isolation)			
	H11N3	Harris	
Optoisolator (4000 Vrms isolation)			
	H11N1	Harris	130
	H11N2	Harris	
Oscillator Accessory.			
	FLJAC01	Datel	
Oscillator, Crystal Clock (250 kHz to 60 MHz)			
	CK1100A	Solarise	
	CK1114A	Solarise	
	CK1144A	Solarise	135
	CK1145A	Solarise	
Oscillator, Fixed Frequency (10 Hz to 20 kHz)			
	4025	Burr-Brown	
Oscillator, Resistor Tuneable			
	ROJ20	Datel	
Oscillator, Quadrature			
	4423	**Burr-Brown**	**(3340)**
Peak Detector (for data transfer rates up to 30 mbit/s)			
	AD892	AD	140
Phase Accumulator (for DDS Application)			
	AD9950	**AD**	**(3287)**
Phase Detector, CMOS			
	IMI4345	IMI	
Phase/Frequency Comparator (1 GHz)			
	10G044-2	GigaBit	
Phase/Frequency Comparator (750 MHz data rate)			
	16G044-3	GigaBit	
Phase/Frequency Discriminator (digital)			
	AD9901	**AD**	**(3252)** 145
Photo Coupler, AC/DC Input			
	NJL5126D	NJR	
Photo Coupler, High Current Transfer			
	NJL5121D	NJR	
Photo Coupler (interface for computer)			
	NJL5151D	**NJR**	**(3571)**
	NJL5152D	**NJR**	**(3571)**
	NJL5153D	**NJR**	**(3571)** 150
Photo Detector (for audio systems)			
	NJL7112E	NJR	
	NJL7141E	NJR	
Photo Detector (for card readers, photoelectric switches, etc.)	NJL3227B	NJR	
	NJL7260B	NJR	
	NJL7260E	NJR	155
Photo Detector (for smoke detectors)			
	NJL611B	NJR	
	NJL612B	NJR	
	NJL721B	NJR	
	NJL722B	NJR	
	NJL811B	NJR	160
Photo Detector (photodiode for remote control TV and audio)	NJL6143A	NJR	
	NJL6144L	NJR	
	NJL6145L	NJR	
Photo Reflector (for copy machines, paper sensor)			
	NJL5133H	NJR	
Photo Reflector (for detection of motor rotation)			
	NJL5141EA	NJR	165
	NJL5146EA	NJR	
	NJL5161K	NJR	

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LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Photo Reflector (for detection of motor rotation) (Cont'd)			
	NJL5162K	NJR	
	NJL5265K	NJR	
Phototransistor			
	TIL601	TI	
	TIL602	TI	
	TIL603	TI	5
	TIL604	TI	
	TIL604HR2	TI	
	TL603	TI	
	1N5722	TI	
	1N5723	TI	10
	1N5724	TI	
	1N5725	TI	
PIN Diode Driver			
	UDS5791H	† Allegro Micro	
	DH0035	† National	
	DH0035C	National	15
Pluse Width Modulator Controller			
	UC3845	SGS-Thomson	
Potentiometer, E^2			
	X9102	Xicor	
	X9103	Xicor	
	X9103M	† Xicor	
	X9104	Xicor	20
	X9104M	† Xicor	
	X9503	Xicor	
	X9503M	† Xicor	
Potentiometer, E^2 (with 8-bit DAC and voltage reference)	SC22300	Sierra	
Potentiometer, Dual Double			
	TDA1074A	Signetics	25
Potentiometer, 3 1/2-Digit BCD			
	AD7525K	◊ AD	
	AD7525L	◊ AD	
	AD7525U	◊† AD	
Potentiometer, 5-Volt Only (nonvolatile)			
	X9MME	**Xicor (3749)**	
Precision Centigrade Temperature Sensors			
	LM35	National	30
	LM35A	National	
	LM35C	National	
	LM35CA	National	
	LM35D	National	
Precision Fahrenheit Temperature Sensor			
	LM34	National	35
	LM34A	National	
	LM34C	National	
	LM34CA	National	
	LM34D	National	
Pressure Sensors, Piezoresistive (integral gain-set resistor)	1210	IC Sensors	40
	1220	IC Sensors	
Proximity Detector, Electromagnetic			
	CS209	Cherry Semi	
Reference Voltage, Dual, 7V			
	LT1034BC	LinearTech	
	LT1034BM	† LinearTech	
	LT1034C	LinearTech	45
	LT1034M	† LinearTech	
Reference Voltage, 2.5V			
	LT580J	LinearTech	
	LT580K	LinearTech	
	LT580L	LinearTech	
	LT580M	LinearTech	50
	LT580S	† LinearTech	
	LT580T	† LinearTech	
	LT580U	† LinearTech	
Reference Voltage, 5V			
	LT1021C-5	LinearTech	
	LT1021M-5	† LinearTech	55
Reference Voltage, 6.9V			
	LM129	† LinearTech	
	LM329	LinearTech	
Reference Voltage, 7V			
	LTZ1000	LinearTech	
	LTZ1000A	LinearTech	
	LT1021C-7	LinearTech	60
	LT1021M-7	† LinearTech	
Reference Voltage, 10V			
	lt581j	LinearTech	
	LH0070	LinearTech	
	LT1021C-10	LinearTech	
	LT1021M-10	LinearTech	65
	LT1031C	LinearTech	
	LT1031M	† LinearTech	
	LT581K	LinearTech	
	LT581L	LinearTech	
	LT581S	† LinearTech	70
	LT581T	† LinearTech	
	LT581U	† LinearTech	
Regulator, 3 Amp Adjustable (negative)			
	UC1033	Unitrode	
Relay, High-Voltage Solid-State			
	LH1193AB	AT&T	
Relays, High Voltage, Optically Coupled			
	LH1061AB	AT&T	75
	LH1085AT	AT&T	
Resistor Tunable Oscillator.			
	ROJ1K	Datel	
Resolver and Synchro Systems			
	MSC2S20	AD	
	SDC1740	**AD (3233)**	
	SDC1741	**AD (3233)**	80
	SDC1742	**AD (3233)**	
	1S14	AD	
	1S20	AD	
	1S24	AD	
	1S40	AD	85
	1S44	AD	
	1S60	AD	
	1S61	AD	
	1S64	AD	
	1S74	AD	90
	2S20	AD	
	5S70	AD	
	5S72	AD	
	HMSDC-8700	ILC-DDC	
	HRCT14	ILC-DDC	95
	HRDC14	ILC-DDC	
	HSCT14	ILC-DDC	
	HSDC14	ILC-DDC	
	HSDC8915	ILC-DDC	
	HSDC8916	ILC-DDC	100
	HSDC8917	ILC-DDC	
	HSDC8918	ILC-DDC	
	HSDC8919	ILC-DDC	
	HSDC8920	ILC-DDC	
	HSDC8921	ILC-DDC	105
	HSDC8922	ILC-DDC	
	HXCDX-14	ILC-DDC	
	HXDC14	ILC-DDC	
	SDC14520	ILC-DDC	
Resolver, Digital to Resolver Converter (DRC)			
	DRC1765	† AD	110
	DRC1766	† AD	
	DRC10520	ILC-DDC	
Resolver/Synchro-to-Digital Converter, Dual Channel (with loss of track detection)			
	AD2S44	**AD (3284)**	
Resolver/Synchro-to-Digital Converter (1.3 arc min)			
	AD2S46	**AD (3284)**	
Resolver to Digital Converter (10-bits)			
	RDC630	ILC-DDC	115
Resolver to Digital Converter (12-bits)			
	RDC632	ILC-DDC	
Resolver to Digital Converter (14-bits)			
	RDC634	ILC-DDC	
Resolver to Digital Converter (16-bits)			
	RDC502	ILC-DDC	
Resolver to Digital Converter, 10- to 14-Bit Programmable Resolution			
	SDC14564	ILC-DDC	
	SDC14565	ILC-DDC	120
	SDC14566	ILC-DDC	
Resolver to Digital Converters (10, 12, 14 or 16-bit)			
	RDC19200	ILC-DDC	
Resolver-to-Digital Converter			
	RDC1740	**AD (3233)**	
	RDC1741	**AD (3233)**	
	RDC1742	**AD (3233)**	125
Resolver-to-Digital Converter, Variable Resolution			
	AD2S80A	AD	
	AD2S81A	AD	
	AD2S82A	AD	
Resolver-to-Digital Converter, Dual Channel (on-board oscillator)	**AD2S34**	**AD (3284)**	
Ring Demodulator/Balanced Mixer			
	SI8901A	Siliconix	130
RS-170 Image Processor, 512x512x8 Differential Buffer	67149	OEI	
RS-170 7 Frame 512x512x8 Image Integrator			
	67156	OEI	
RS-170 512x512x8 Frame Buffer			
	67145	OEI	
Sample and Hold Amplifier			
	AD681	AD	
	AD683	AD	135
	AD684	**AD (3235)**	
	SHA1144	AD	
	SHC702	**Burr-Brown (3345)**	
	SHMHU	**Datel (3359)**	
	SHMUH3	Datel	140
	SHM30C	**Datel (3359)**	
	HA5340	Harris	
Sample and Hold Amplifier (16-bit)			
	AD1154	**AD (3235)**	
Sample and Hold Circuit			
	SH376	Adv Analog	
	SHA2200	Analogic	145
	SHA2410	Analogic	
	SHM9MC	Datel	
	SCS3001	STC	
Sample and Hold Circuit (dual high-performance)			
	SHA2400	Analogic	
Sample and Hold Circuit (quad)			
	SMP04	**AD (3235)**	150
Sample and Hold Circuit, Octal			
	CEM5508	OnChip Sys	
Sample and Hold Circuits			
	A880	Adv Analog	
	A882	Adv Analog	
	SH346	† Adv Analog	
	SH347	† Adv Analog	155
	ADSHC-85	AD	
	ADSHC-85E	† AD	
	ADX346	AD	
	AD346	**AD (3235)**	
	AD582K	**AD (3235)**	160
	AD582S	**† AD (3235)**	
	AD583K	**AD (3235)**	
	AD583S	**† AD (3235)**	
	AD585J	**◊ AD (3235)**	
	AD585S	**◊† AD (3235)**	165
	HTC0300	**AD (3235)**	
	HTC0500	AD	
	HTS0025	**AD (3235)**	
	SMP10A	**† AD (3235)**	
	SMP10B	**† AD (3235)**	170

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

LINEAR

LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Sample and Hold Circuits (Cont'd)			
	SMP10E	**AD (3235)**	
	SMP10F	**AD (3235)**	
	SMP11A	**† AD (3235)**	
	SMP11B	**◊† AD (3235)**	
	SMP11E	**AD (3235)**	5
	SMP11F	**AD (3235)**	
	SMP11G	**AD (3235)**	
	SMP81E	**AD (3235)**	
	SMP81F	**AD (3235)**	
	SSM2300	**AD (3262)**	10
	MP260	Analogic	
	MP271	Analogic	
	MP282A	Analogic	
	SHC298A	**Burr-Brown (3345)**	
	SHC5320K	**Burr-Brown (3345)**	15
	SHC5320S	**Burr-Brown (3345)**	
	SHC600B	**Burr-Brown (3345)**	
	SHC601B	**Burr-Brown (3345)**	
	SHC76	**Burr-Brown (3345)**	
	SHC76K	**Burr-Brown (3345)**	20
	SHC803	**Burr-Brown (3345)**	
	SHC804	**Burr-Brown (3345)**	
	SHC85	**Burr-Brown (3345)**	
	SHC85ET	**Burr-Brown (3345)**	
	CS3112	Crystal	25
	SHMHUMC	**Datel (3359)**	
	SHMHUMM	**† Datel (3359)**	
	SHMIC-1	Datel	
	SHMIC-1M	† Datel	
	SHMLM-2	Datel	30
	SHM20C	**Datel (3359)**	
	SHM360	Datel	
	SHM361	Datel	
	SHM40MC	**Datel (3359)**	
	SHM40MM	**† Datel (3359)**	35
	SHM45MC	Datel	
	SHM45MM	† Datel	
	SHM4860MC	**Datel (3359)**	
	SHM4860MM	**† Datel (3359)**	
	SHM5	Datel	40
	SHM6MC	**† Datel (3359)**	
	SHM6MM	**† Datel (3359)**	
	SHM7MC	**Datel (3359)**	
	SHM91MC	**Datel (3359)**	
	HA2420-2	◊ Harris	45
	HA2420/883	◊ Harris	
	HA2425-5	† Harris	
	HA5320-2	◊† Harris	
	HA5330-2	◊† Harris	
	HA5330/883	◊ Harris	50
	LF198	† LinearTech	
	LF198A	† LinearTech	
	LF398	LinearTech	
	LF398A	LinearTech	
	MN343	**MicroNet (3548)**	55
	MN343H	**† MicroNet (3548)**	
	MN344	**MicroNet (3548)**	
	MN344H	**† MicroNet (3548)**	
	MN346	**MicroNet (3548)**	
	MN346H	**† MicroNet (3548)**	60
	MN347	**MicroNet (3548)**	
	MN347H	**† MicroNet (3548)**	
	MN375A	**MicroNet (3548)**	
	MN7130	**MicroNet (3546, 3548)**	
	MN7130H	**† MicroNet (3546, 3548)**	65
	LF198	‡ National	
		(Continued)	

Function	Device	Source	Line
Sample and Hold Circuits (Cont'd)			
	LF198A	† National	
	LF298	National	
	LF298A	National	
	LF398	National	70
	LF398A	National	
	LH0023	† National	
	LH0023C	National	
	LH0043	† National	
	LH0043C	National	75
	LH0053	† National	
	LH0053C	National	
	5021	OEI	
	5025	OEI	
	LF198	† Signetics	80
	LF298	Signetics	
	LF398	Signetics	
	NE5537	Signetics	
	SE5537	† Signetics	
	HS346	Sipex-HSD	85
	HS9704	Sipex-HSD	
	HS9705	Sipex-HSD	
	HS9714K	Sipex-HSD	
	HS9714TB	† Sipex-HSD	
	HS9716K	Sipex-HSD	90
	HS9716TB	† Sipex-HSD	
	HS9720	Sipex-HSD	
	SP5330	Sipex-HSD	
	CSH101A	† TeledyneS	
	4856	TeledyneS	95
	4860	TeledyneS	
	4860HR	† TeledyneS	
Sample and Hold Circuits (octal with multiplexed input)			
	SMP08	**AD (3235)**	
Sample and Hold (hybrid)			
	AH20016	Analogic	
Sample-and-Hold Amplifier			
	LF198	† TI	100
	LF198A	† TI	
	LF398	TI	
	LF398A	TI	
Sample-and-Hold Amplifier with Multiplexed Input,Octal			
	SMP08F	**AD (3235)**	
Sample-and-Hold Amplifier, Two Channel (900 ns)			
	AD682	**AD (3285)**	105
Sample-and-Hold Amplifier, 12-Bit			
	SP9730	Sipex-HSD	
Sample-and-Hold Amplifier, 16-Bit			
	SP9760	Sipex-HSD	
Sample-and-Hold Amplifier (900 ns)			
	AD781	**AD (3285)**	
Sample-and-Hold Amplifier,Quad CMOS			
	SMPO4E	AD	
SCR/TRIAC Control (phase control)			
	UAA145	AEG Corp	110
	UAA146	AEG Corp	
	U208B	AEG Corp	
	U212B	AEG Corp	
Secondary Protectors (for protection of switch line units)			
	LH1150	AT&T	
Security Detector, Data Receiver/Transmitter			
	CS212	Cherry Semi	115
Sensor/Controller, Air Temperature			
	MS120	AnalogSys	
Sensor Interface Circuit (for current sensing)			
	AD22050	**AD (3297)**	
Sensor Transmitter, 4–20 mA			
	AD693	**AD (3253)**	
Servo Amplifier, for Motor Control			
	ZN409CE	Plessey	
Servo Controller			
	EL2017	◊ Elantec	120

Function	Device	Source	Line
Servo Controller, Proportional Control			
	XR2264	◊ Exar	
	XR2265	◊ Exar	
Servo Controller, Radio Controlled Cars, 2 Channel			
	XR2266	Exar	
Signal Conditioning Module.			
	SCM100B	Datel	
Signal Multiplier, Wide Bandwidth (Modulator/demodulator)			
	MPY600	**Burr-Brown (3338)**	125
Signal Processor, Real Time Digital Processing of Analog Signals (programmable)			
	2920	Intel	
	2921	Intel	
Sinusoidal Line-Current Consumption Circuit (active harmonics filter)			
	TDA4816	Siemens	
Smoke Detector, Interconnectable			
	MC14468	Motorola	
Solid State Thermal Switch			
	TSC626	◊† TeledyneS	130
Solid State Thermostat IC			
	TSC620	◊† TeledyneS	
	TSC621	◊† TeledyneS	
Sonar Ranging Module			
	TL851	TI	
	TL853	TI	
Sonar Ranging Receiver			
	TL852	TI	135
Strain Gauge Conditioner (4 channel)			
	SCM103	Datel	
Strain Gauge Input Module			
	5B38	AD	
Streaming Tape Read/Write Control			
	TL041	TI	
Super Fast 12-Bit Track-Hold Amplifier			
	LH4860	National	
Switch Bank, Programmable EEPROM Digital/Analog Switch Bank and Memory Circuit			
	SC22304	Sierra	140
Switch, Industrial (1 amp relay driver)			
	LM1921	National	
Switch, Solid-State (1 amp with built-in error detection circuit)	LM1951	National	
Switched Capacitor Bandpass Filter, Pin Programmable			
	MAX267C	Maxim	
	MAX267M	† Maxim	
	MAX268C	Maxim	145
	MAX268M	† Maxim	
Switched Capacitor Filter, Microprocessor Programmable			
	MAX260C	Maxim	
	MAX260M	† Maxim	
	MAX261C	Maxim	
	MAX261M	† Maxim	150
	MAX262C	Maxim	
	MAX262M	† Maxim	
Switched Capacitor Filter, Low Pass, Butterworth, 4th Order	TLC04	TI	
	TLC14	TI	
Switched Capacitor Filter, Pin Programmable			
	MAX263C	Maxim	155
	MAX263M	† Maxim	
	MAX264C	Maxim	
	MAX264M	† Maxim	
Switched Capacitor Filter, Pin Programmable (resistor selectable Q)	MAX265C	Maxim	
	MAX265M	† Maxim	160
	MAX266C	Maxim	
	MAX266M	† Maxim	

LINEAR

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Switched Capacitor Filter, Second Order	XR1010	Exar	
Switched Capacitor Filter, Universal	MF5	National	
Switched Capacitor Filter (zero offset)	MAX280C	Maxim	
	MAX280M	† Maxim	
Switched Capacitor Filter, Dual, General Purpose, 2nd Order	TLC10	TI	5
	TLC20	TI	
Switched Capacitor Filter, Dual (second order)	MF10A	† National	
	MF10C	National	
Switched Capacitor Filter, Fourth Order	MF8	National	
Switched Capacitor Filter, Seventh Order Low Pass	**FLT-C1**	**Datel (3361)**	10
Switched Capacitor Universal Filter	LTC1059AC	LinearTech	
	LTC1059AM	† LinearTech	
Switched Capacitor Voltage Converter	LT1054C	LinearTech	
	LT1054M	† LinearTech	
Switched Capacitor Voltage Converter (positive to negative)	LMC7660	National	15
Switched-Mode Power Supply Control Circuit	TDA4919	Siemens	
Switched-Mode Power Supply Controller Set (chip set)	ICL7675	Harris	
	ICL7676	Harris	
Switches	ICL8018AC	Harris	
	ICL8018AM	† Harris	20
	ICL8019AC	Harris	
	ICL8019AM	† Harris	
	ICL8020AC	Harris	
	ICL8020AM	† Harris	
Switchmode Driver for DC Motors	L292	Unitrode	25
Switchmode Pulse Width Modulation Control Circuit	MC34060	Motorola	
	MC35060	† Motorola	
	TL494I	Motorola	
Synchro and Resolver to BCD Tracking Converter, 5-Decade, Pin-Programmable	SDC14700	ILC-DDC	
Synchro/Resolver, reference Oscillator	REF15001	ILC-DDC	30
Synchro to Digital and Resolver to Digital Converter, 1 and 36 Speed	SDC361	ILC-DDC	
	SDC362	ILC-DDC	
Synchro to Digital Converter (16-bits)	SDC502	ILC-DDC	
Synchro to Digital Converter, 10- to 14-Bit Programmable Resolution	SDC14560	ILC-DDC	
	SDC14561	ILC-DDC	35
	SDC14562	ILC-DDC	
	SDC14563	ILC-DDC	
Synchro to Digital Converter (10-bits)	SDC630	ILC-DDC	
Synchro to Digital Converter (12-bits)	SDC632	ILC-DDC	
Synchro to Digital Converter (14-bits)	SDC634	ILC-DDC	40
Temperature and Air Flow Sensor	UC1730	† Unitrode	
	UC2730	Unitrode	
	UC3730	Unitrode	
Temperature Sensor with Signal Conditioning	**AD22100**	**AD (3297)**	

Function	Device	Source	Line
Temperature, Set-Point Controller	**AD596**	**AD (3253)**	45
	AD597	**AD (3253)**	
Temperature Transducers	**AD590I**	**◇† AD (3252)**	
	AD590J	**◇† AD (3252)**	
	AD590K	**◇† AD (3252)**	
	AD590L	**◇† AD (3252)**	50
	AD590M	**◇ AD (3252)**	
	AD592	**† AD (3252)**	
	REF02	**◇‡ AD (3238)**	
	REF02A	**◇ AD (3238)**	
	REF02C	**◇‡ AD (3238)**	55
	REF02D	**◇ AD (3238)**	
	REF02E	**◇ AD (3238)**	
	REF02H	**◇ AD (3238)**	
	REF05A	**AD (3238)**	
	REF05B	**† AD (3238)**	60
	AD590I	† Harris	
	AD590J	† Harris	
	LM134	† LinearTech	
	LM234	LinearTech	
	LM134	† National	65
	LM135	‡ National	
	LM234	National	
	LM235	National	
	LM334	National	
	LM335	National	70
	LM3911	National	
	TDB0135	† SGS-Thomson	
	TDC0134	† SGS-Thomson	
Thermal Converter (matched transistors, diffused resistors)	4131	Burr-Brown	
Thermocouple Cold Junction Compensator	LT1025AC	LinearTech	
	LT1025AM	† LinearTech	75
	LT1025C	LinearTech	
	LT1025M	† LinearTech	
Threshold Switch (oscillator, switch with hysteresis)	TCA105	Siemens	
Threshold Switch (2/3 supply voltage)	TCA345A	Siemens	80
Timer/Divider, Programmable	TC5043	Toshiba	
Tone Decoder (traffic signal control and detector)	LA2200	Sanyo	
Touch Control Lamp Switch AC Power Controller with Auto Shut-Off Timer	**LS7338**	**LSI Comp (3526)**	
Touch Control Lamp Switch/AC Power Switch with Auto Shut-Off Timer	**LS7339**	**LSI Comp (3527)**	
	LS7340	**LSI Comp (3527)**	85
Track and Hold	**AD389**	**AD (3235)**	
	HTS0010	**AD (3235)**	
	CLC940AI	Comlinear	
	CLC940AM	† Comlinear	
	ADC-00304	ILC-DDC	90
	ADC-00310	ILC-DDC	
	THA05203	ILC-DDC	
	TH8530	ILC-DDC	
	MN0300A	**MicroNet (3548)**	
	MN050	MicroNet	95
	MN373	**MicroNet (3548)**	
	MN376	**MicroNet (3548)**	
	MN377	MicroNet	
	MN379	**MicroNet (3548)**	
	4866	TeledyneS	100
Track and Hold Amplifier	AL1210A	Acculin	
	AL1210J	Acculin	
	AL1210S	† Acculin	
Track and Hold Amplifier (16-bit)	**AD386**	**AD (3235)**	

Function	Device	Source	Line
Track and Hold (4-channel simultaneous)	CS31412	Crystal	105
Track and Hold (13-bit with controlled hold time)	DGL13	ILC-DDC	
Track-and-Hold Amplifier (0.1 μs acquisition time)	**HTC0300A**	**AD (3235)**	
Track-and-Hold Amplifier (20 ns settling time)	VN1025	Vanguard Semi	
Track-Hold Amplifier	4853	TeledyneS	
	4855	TeledyneS	110
	4858	TeledyneS	
Traffic Information Control System (ARI-DK type)	LA2211	Sanyo	
Transconductance Block, Programmable	Iv560	Gennum	
Transmitter, Two-Wire (converts voltage from a sensor to a current)	LH0045	National	
	LH0045C	National	115
Transversal Filter, Quad Chirped (for discrete Fourier transform and power spectral density applications)	RT5602A	EG&G-Reticon	
Triac Angle Firing Control Circuit	TDA1185	Motorola	
Trigonometric Function Generator (sine, cosine, tan, etc. and inverse functions)	**AD639A**	**AD (3252)**	
	AD639B	**AD (3252)**	
	AD639S	**† AD (3252)**	120
Universal Dual Filter Building Block (tracking, telecom)	LTC1060AC	LinearTech	
	LTC1060AM	† LinearTech	
	LTC1060M	† LinearTech	
Universal Triple Filter Building Block, (tracking, antialiasing)	LTC1061AC	† LinearTech	
	LTC1061AM	† LinearTech	125
Variable Differential Transformer Demodulator (interfaces LVDT or RVDT sensor for servo loop control)	VDTDemod	Honeywell	
VCA (Voltage Controlled Amplifier, dual)	CEM3381	OnChip Sys	
	CEM3382	OnChip Sys	
Video Amplifier, Wideband	MB3501	Fujitsu	
Video Buffer, 40 MHz	MAX452C	Maxim	130
	MAX452M	† Maxim	
Video Buffer, 40 MHz (With 2-Channel Multiplexer)	MAX453C	Maxim	
	MAX453M	† Maxim	
Video Buffer, 40 MHz (With 4-Channel Multiplexer)	MAX454C	Maxim	
	MAX454M	† Maxim	135
Video Buffer, 40 MHz (With 8-Channel Multiplexer)	MAX455C	Maxim	
	MAX455M	† Maxim	
Video Level Comparator	VLC931	ThirdDomain	
Video Switch (5 MHz bandwidth)	LM1044	National	
Voice Coil Driver	HA13447	Hitachi	140
Voiceband Receive Filter (for 14-bit ADC)	**AD7371**	**AD (3252)**	
Voiceband Transmission Filter (for 14-bit DAC)	**AD7341**	**AD (3252)**	
Voltage Comparator, Single	M51202	Mitsubishi	
Voltage Comparator, Dual	M5233	Mitsubishi	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◇ Available in Surface Mount Package

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LINEAR

LINEAR—Other Devices (Cont'd)

Function	Device	Source	Line
Voltage Comparator, Quad			
	GL339	GoldStar	
	M5234	Mitsubishi	
Voltage Converter (4–10V input, ± 7V to ± 18V output)	LT1026C	LinearTech	
	LT1026M	† LinearTech	
Voltage Detector (for power fail monitoring)			
	S8052	Seiko Instr	5
	S8054	Seiko Instr	
	S80721	**Seiko Instr (3586)**	
	S80725	**Seiko Instr (3586)**	
	S80727	**Seiko Instr (3586)**	
	S80730	**Seiko Instr (3586)**	10
	S80732	**Seiko Instr (3586)**	
	S80733	**Seiko Instr (3586)**	
	S80734	**Seiko Instr (3586)**	
	S80740	**Seiko Instr (3586)**	
	S80741	**Seiko Instr (3586)**	15
	S80744	**Seiko Instr (3586)**	
Voltage Detector/Dual Comparator	NJM2078	NJR	
Voltage to Frequency Converter	**VFC32WM/883B**	**† Burr-Brown (3348)**	
Voltage-to-Frequency Converter, 5 MHz	VFV-5MC	Datel	
Voltage-to-Frequency Converter, 10 MHz	VFV-10MC	Datel	20
Voltage-to-Frequency Converter (3500Vrms)	**ISO109**	**Burr-Brown (3338)**	
Window Comparator with Latch (threshold detector)	AD1317	AD	
Window Discriminator (indicates voltage above, below, inside, or outside two adjustable limits)	TCA965	Siemens	
Zero Voltage and Zero Crossing Triggers (triac and SCR control)	TEA1024	AEG Corp	
	U217B	AEG Corp	25
	U263	AEG Corp	
	CA3059	† Harris	
	CA3079	† Harris	
	CA3059	Motorola	
	CA3079	Motorola	30
	UAA1016A	Motorola	
	UAA1016B	Motorola	
	TCA785	† Siemens	
	TDA1023	Signetics	
	TA7606	Toshiba	35
Dual Inverting/Non-Inverting 1.5A Power Device Driver.	IXLD4428	IXYS	
Dual Inverting/Noninverting 3A Power Device Driver.	IXLD4425	IXYS	
Dual Inverting 1.5A Power Device Driver.	IXLD4426	IXYS	
Dual Inverting 3A Power Device Driver.	IXLD4423	IXYS	
	IXLD4424	IXYS	40
Dual Non-Inverting 1.5A Power Device Driver.	IXLD4427	IXYS	
Dual Smart Switch	UC1728	Unitrode	
10-BIT, 20nsec T/H Amplifiers	MN4000	MicroNet	
12-BIT, 10nsec T/H Amplifiers	MN4001	MicroNet	
4th Order Elliptic Notch Filter	LMF90	National	45

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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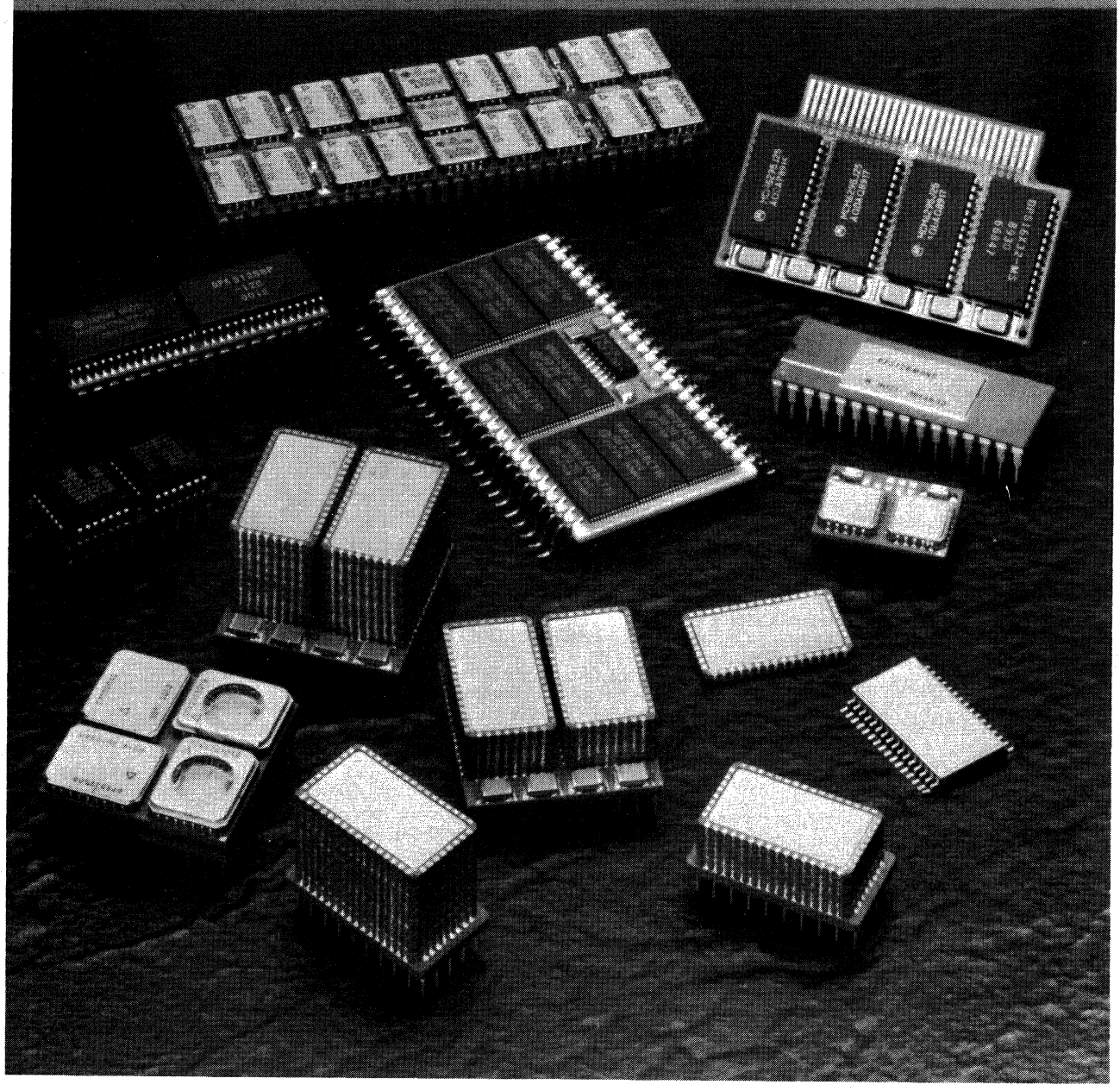
LINEAR

DENSE-PAC MICROSYSTEMS, INC.

Breaking Space Barriers

SHORT FORM CATALOG – 1991



INTRODUCTION TO MEMORY

The Memory Section provides initial selection information and data on E^2FDPROMs, RAMs, and ROMs as well as other memory devices. In these particular sections, the devices are characterized by organization (words and bits/word) and by access times. In order to assure that the access times are comparable, whenever possible the times are shown in nanoseconds over the full rated temperature range for the devices (i.e., 0° to 70°C for commercial units and -55°C to 125°C for military units). The full temperature nanosecond value is marked "nsF". When this value isn't specified, the guaranteed nanosecond value at room temperature is listed followed by "nsR". "Typical" values are invariably much faster than the guaranteed ones so that such listings place these memories higher on the list than they otherwise would appear.

Category

Character Generators.....902
FIFOs, LIFOs 903
E^{-2}PROMs 908
EPROMs 918
Flash Memories 932
PROMs 933
RAMs
Dynamic
General Purpose 942
Modules.....951
Multiport 955
Video 955
Static
General Purpose 955
Modules.....996
Multiport.....1010
NOVRAMs 1016
Cache Tag 1017
ROMs 1020
Shift Registers
Static 1023

MEMORY—Character Generators

Format	Number of Output Lines	Input Logic levels	Supply Voltage, V	Device	Source	Line
5x7	1	TTL	5	DM76S64	† National	
				DM86S64	National	
	35	TTL	5	MSL9650	OKI	
7x9	1	TTL	5	DM76S64	† National	
				DM86S64	National	5
7x11	1	TTL	5	CRT8002	SMC	
14 Segments						
	14	TTL	5	MSL9664	OKI	
				MSL9665	OKI	
16 Segments						
	16	TTL	5	MSL9662	OKI	
				MSL9663	OKI	10
18x16 Japanese						
	16	TTL	5	MSM28101A	OKI	
				MSM28201A	OKI	

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MEMORY—FIFOs, LIFOs

First-in First-out

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source	Line
16	4		5	9403A	National	
		8	3–15	CD40105B	† Harris	
				CD40105BE	Harris	
		10	5	54F403	† National	
				74F403	National	5
				N9403	Signetics	
		12	5	SN54LS222A	† TI	
				SN54LS224A	† TI	
				SN74LS222A	TI	
				SN74LS224A	TI	10
		20	5	SN74ALS229A	TI	
				SN74LS227	TI	
				SN74LS228	TI	
	5	10	5	SN74S225	TI	
	9	—	5	74HCT7030	Signetics	15
				74HC7030	Signetics	
32	8	0.5	−12,5	MJ2812	Plessey	
	9	0.5	−12,5	MJ2813	Plessey	
63	8		5	M66300	Mitsubishi	
64	4	0.7	−12,5	AM3341C	AMD	20
		1	−12,5	AM2841C	AMD	
				AM2841M	† AMD	
				MJ2841	Plessey	
		1.2	−12,5	AM2841A	AMD	
			5	CY3341C	Cypress	25
		2	5	CY3341-2C	Cypress	
				CY3341-2M	† Cypress	
				CY3341M	Cypress	
		5	5	67L401	AMD	
				CY7C401-5C	Cypress	30
		7	5	C57401	† AMD	
				57401	◊ AMD	
		10	5	C57401A	† AMD	
				C67401	AMD	
				57401A	◊† AMD	35
				67C401-10	AMD	
				67C4013-10	AMD	
				67401	◊ AMD	
				CY7C401-10C	Cypress	
				CY7C401-10M	† Cypress	40
				CY7C402-10M	† Cypress	
				CY7C403-10C	Cypress	
				CY7C403-10M	† Cypress	
				CY7C404-10M	† Cypress	
				54F413	† National	45
				54F433	† National	
				74F413	National	
				74F433	National	
		12	5	57C401	AMD	
				57C4013	AMD	50
		15	5	C67401A	AMD	
				67C401-15	AMD	
				67C4013-15	AMD	
				67401A	◊ AMD	
				CY7C401-15C	Cypress	55
				CY7C401-15M	† Cypress	
				CY7C402-15M	† Cypress	
				CY7C403-15C	Cypress	
				CY7C403-15M	† Cypress	
				CY7C404-15M	† Cypress	60
		16.7	5	C67401B	AMD	
				67401B	◊ AMD	

(Continued)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source	Line
64	4				(Cont'd)	
		25	5	CY7C403-25C	Cypress	
				CY7C403-25M	† Cypress	
				IDT72401	IDT	65
				IDT72403	IDT	
		35	5	67411A	AMD	
	5	7	5	C57402	† AMD	
				57402	◊† AMD	
		10	5	C57402A	† AMD	70
				C67402	AMD	
				57402A	◊† AMD	
				67C402-10	AMD	
				67C4023-10	AMD	
				67402	◊ AMD	75
				CY7C402-10C	Cypress	
				CY7C404-10C	Cypress	
		12	5	57C402	AMD	
				57C4023	AMD	
				57C4033	AMD	80
		15	5	C67402A	AMD	
				67C402-15	AMD	
				67C4023-15	AMD	
				67C4033-10	AMD	
				67C4033-15	AMD	85
				67402A	◊ AMD	
				CY7C402-15C	Cypress	
				CY7C404-15C	Cypress	
		16.7	5	C67402B	AMD	
				67402B	◊ AMD	90
		25	5	57413A	AMD	
				67413	AMD	
				CY7C404-25C	Cypress	
				CY7C404-25M	† Cypress	
				IDT72402	IDT	95
				IDT72404	IDT	
		35	5	67412A	AMD	
				67413A	AMD	
				IDT72413	IDT	
		40	5	67C413	AMD	100
	8	15	5	CY7C408-15C	Cypress	
				CY7C408-15M	† Cypress	
				SSL7408-15	Saratoga	
		25	5	SSL7408-25	Saratoga	
		35	5	CY7C408C	Cypress	105
				CY7C408M	† Cypress	
				DM75X431	† National	
				DM85X431	National	
				SSL7408-35	Saratoga	
		40	5	SSL7408-40	Saratoga	110
		50	5	SSL7408-50	Saratoga	
	8/9	9		67417	AMD	
	9	15	5	CY7C409-15C	Cypress	
				CY7C409-15M	† Cypress	
				SSL7409-15	Saratoga	115
				TDC1030	† TRWLSI	
		25	5	CY7C409-25C	Cypress	
				CY7C409-25M	† Cypress	
				SSL7409-25	Saratoga	
		35	5	CY7C409-35C	Cypress	120
				CY7C409-35M	† Cypress	
				SSL7409-35	Saratoga	
		40	5	SSL7409-40	Saratoga	
		50	5	SSL7409-50	Saratoga	
64K	RAM Controller			674219	AMD	125

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—FIFOs, LIFOs (Cont'd)

First-in First-out (Cont'd)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source
128	4	35	5	DM75X432	National
				DM85X432	National
	5	35	5	DM75X433	National
				DM85X433	National
132/128					
	9	0.65	5	WD1510-00	Western
		1.0	5	WD1510-01	Western
256	4		5	M66252	Mitsubishi
	9	10	5	AM7200-80	AMD
				MS7200-80 ◊	Mosel
		12.5	5	AM7200-65	AMD
		15	5	MS7200-50 ◊	Mosel
		15.4	5	AM7200-50	AMD
		20	5	AM7200-40	AMD
		22	5	AM7200-35	AMD
		22.2	5	MS7200-35 ◊	Mosel
		28.5	5	AM7200-25	AMD
				MS7200-25 ◊	Mosel
	36	40	5	**LH5420**	**Sharp (3588)**
512	8	16.7	5	AM4701-45 ◊	AMD
		28.6	5	AM4701-35	AMD
	9		5	DS2009-120 ◊	Dallas
				DS2009-35 ◊	Dallas
				DS2009-50 ◊	Dallas
				DS2009-65 ◊	Dallas
				DS2009-80 ◊	Dallas
				IDT7200L-25 ◊‡	IDT
				IDT7200L-30B ◊‡	IDT
				IDT7200L-35 ◊‡	IDT
				IDT7200L-40B ◊‡	IDT
				IDT7200L-50 ◊‡	IDT
				IDT7200L-50B ◊‡	IDT
				IDT7200L-65 ◊‡	IDT
				IDT7200L-65B ◊‡	IDT
				IDT7200S-25 ◊‡	IDT
				IDT7200S-30B ◊‡	IDT
				IDT7200S-35 ◊‡	IDT
				IDT7200S-40B ◊‡	IDT
				IDT7200S-50 ◊‡	IDT
				IDT7200S-50B ◊‡	IDT
				IDT7200S-65 ◊‡	IDT
				IDT7200S-65B ◊‡	IDT
				IDT7201LA-30B ◊‡	IDT
				IDT7201SA-30B ◊‡	IDT
				MK4501-10 ◊†	SGS-Thomson
				MK4501-65 ◊	SGS-Thomson
				MK4501-80 ◊†	SGS-Thomson
		4.2	5	MK4501-20 ◊	SGS-Thomson
		5.7	5	MKB4501-82 †	SGS-Thomson
				MK4501-15 ◊	SGS-Thomson
		7	5	IDT7201LA-120 ◊	IDT
				IDT7201LA-120B ◊	IDT

(Continued)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source
512	9	7	5	IDT7201SA-120 ◊	IDT
				IDT7201SA-120B ◊	IDT
		7.1	5	MKB4501-81 †	SGS-Thomson
				MK4501-12 ◊	SGS-Thomson
		8.3	5	SRT4501-120	SpaceResearch
		10	5	AM7201-80	AMD
				IDT7201LA-80 ◊	IDT
				IDT7201LA-80B ◊	IDT
				IDT7201SA-80 ◊	IDT
				IDT7201SA-80B ◊	IDT
				MS7201-80	Mosel
				MS7201A-80 ◊	Mosel
				KM75C01A-80 ◊	Samsung
				V61C01-80	Vitelic
				V61C01-80L	Vitelic
		12	5	IDT7201LA-65 ◊	IDT
				IDT7201LA-65B ◊	IDT
				IDT7201SA-65 ◊	IDT
				IDT7201SA-65B ◊	IDT
		12.5	5	AM7201-65	AMD
				67C4501-80	AMD
				CY7C420-65C	Cypress
				CY7C420-65M †	Cypress
				CY7C421-65C ◊	Cypress
				CY7C421-65M ◊†	Cypress
				KM75C101A-80 ◊	Samsung
				SRT4501-80	SpaceResearch
				V61C01-65	Vitelic
				V61C01-65L	Vitelic
		13	5	MA7001 ‡	Marconi
		15	5	67C4501-65	AMD
				IDT7201LA-50 ◊	IDT
				IDT7201LA-50B ◊	IDT
				IDT7201SA-50 ◊	IDT
				IDT7201SA-50B ◊	IDT
				MS7201A-50 ◊	Mosel
				V61C01-50	Vitelic
				V61C01-50L	Vitelic
		15.3	5	MS7201-50	Mosel
		15.4	5	AM7201-50	AMD
				KM75C01A-50 ◊	Samsung
				SRT4501-65	SpaceResearch
		20	5	67C4501-50	AMD
				CY7C420-40C	Cypress
				CY7C420-40M †	Cypress
				CY7C421-40C ◊	Cypress
				CY7C421-40M ◊†	Cypress
				KM75C101A-50 ◊	Samsung
				LH5496-50	Sharp
				V61C01-40	Vitelic

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—FIFOs, LIFOs (Cont'd)

First-in First-out (Cont'd)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source	Line
512	9	20	5	(Cont'd)		
				V61C01-40L	Vitelic	
				VT7201-50	VLSI Tech	
		22	5	AM4601	AMD	
		22.2	5	AM7201-35	AMD	
				MS7201A-35	◊ Mosel	5
				KM75C01A-35	◊ Samsung	
				75C101A-35	◊ Samsung	
				V61C01-35	Vitelic	
				V61C01-35L	Vitelic	
		25	5	CY7C421-30C	◊ Cypress	10
				CY7C421-30M	◊† Cypress	
				IDT7201LA-40B	◊† IDT	
				IDT7201SA-40B	◊† IDT	
		27	5	IDT7201LA-35	◊ IDT	
				IDT7201SA-35	◊ IDT	15
		28.5	5	AM7201-25	AMD	
				67C4501-35	AMD	
				MS7201A-25	◊ Mosel	
				KM75C01A-25	◊ Samsung	
				KM75C101A-35	◊ Samsung	20
				VT7201-35	VLSI Tech	
		28.6	5	LH5496-35	Sharp	
		33	–20	CY7C420-20C	Cypress	
			–75	CY7C420-25M	† Cypress	
		40	5	67C4501-25	AMD	25
				KM75C101A-25	◊ Samsung	
				75C101A-25	◊ Samsung	
		50	5	KM75C01A-20	◊ Samsung	
				KM75C101A-20	◊ Samsung	
				75C101A-20	◊ Samsung	30
				LH5496-20	Sharp	
				VT7201-20	VLSI Tech	
1024	5		5	M66250	Mitsubishi	
				M66251	Mitsubishi	
		20	5	MKB4505M-50	† SGS-Thomson	35
				MK4505M-50	SGS-Thomson	
		30	5	MKB4505M-33	† SGS-Thomson	
				MK4505M-33	SGS-Thomson	
		40	5	MKB4505M-25	† SGS-Thomson	
				MK4505M-25	SGS-Thomson	40
	9		5	IDT7202LA-25	◊‡ IDT	
				IDT7202LA-30B	◊‡ IDT	
				IDT7202SA-25	◊‡ IDT	
				IDT7202SA-30B	◊‡ IDT	
		-	5	DS2010-12	◊ Dallas	45
				DS2010-15	◊ Dallas	
		7	5	IDT7202LA-120	◊ IDT	
				IDT7202LA-120B	◊ IDT	
					(Continued)	

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source	Line
1024	9	7	5	(Cont'd)		
				IDT7202SA-120	◊ IDT	
				IDT7202SA-120B	◊ IDT	50
		10	5	AM7202-80	AMD	
				IDT7202LA-80	◊ IDT	
				IDT7202LA-80B	◊ IDT	
				IDT7202SA-80	◊ IDT	
				IDT7202SA-80B	◊ IDT	55
				MS7202-80	◊ Mosel	
				KM75C02A-80	◊ Samsung	
				V61C02-80	Vitelic	
				V61C02-80L	Vitelic	
		12	5	IDT7202LA-65	◊ IDT	60
				IDT7202LA-65B	◊ IDT	
				IDT7202SA-65	◊ IDT	
				IDT7202SA-65B	◊ IDT	
		12.5	5	AM7202-65	AMD	
				CY7C425-65C	◊ Cypress	65
				CY7C425-65M	◊† Cypress	
				DS2010-80	◊ Dallas	
				KM75C102A-80	◊ Samsung	
				V61C02-65	Vitelic	
				V61C02-65L	Vitelic	70
		15	5	IDT7202LA-50	◊ IDT	
				IDT7202LA-50B	◊ IDT	
				IDT7202SA-50	◊ IDT	
				IDT7202SA-50B	◊ IDT	
				MS7202-50	◊ Mosel	75
				V61C02-50	Vitelic	
				V61C02-50L	Vitelic	
		15.4	5	AM7202-50	AMD	
				CY7C424-65C	Cypress	
				DS2010-65	◊ Dallas	80
				KM75C02A-50	◊ Samsung	
		20	5	AM7202-40	AMD	
				CY7C425-40C	◊ Cypress	
				CY7C425-40M	◊† Cypress	
				DS2010-50	◊ Dallas	85
				KM75C102A-50	◊ Samsung	
				LH5497-50	Sharp	
				V61C02-40	Vitelic	
				V61C02-40L	Vitelic	
				VT7202-50	VLSI Tech	90
		22.2	5	AM7202-35	AMD	
				MS7202-35	◊ Mosel	
				KM75C02A-35	◊ Samsung	
		25	5	IDT7202LA-40B	◊† IDT	
				IDT7202SA-40B	◊† IDT	95
					(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—FIFOs, LIFOs (Cont'd)

First-in First-out (Cont'd)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source
1024	9				(Cont'd)
		27	5	IDT7202LA-35	◊ IDT
				IDT7202SA-35	◊ IDT
		28.5	5	AM7202-25	AMD
				DS2010-35	◊ Dallas
				MS7202-25	◊ Mosel
				KM75C02A-25	◊ Samsung
				KM75C102A-35	◊ Samsung
				LH5497-35	Sharp
				VT7202-35	VLSI Tech
		33	5	CY7C424-40C	Cypress
				CY7C425-20C	◊ Cypress
				CY7C425-25M	◊† Cypress
		40	5	KM75C102A-25	◊ Samsung
		42	5	SMF3009	STC
		50	5	KM75C02A-20	◊ Samsung
				KM75C102A-20	◊ Samsung
				LH5497-20	Sharp
				VT7202-20	VLSI Tech
2048	9		5	IDT72103-120	◊‡ IDT
				IDT72103-50	◊‡ IDT
				IDT72103-65	◊‡ IDT
				IDT72103-80	◊‡ IDT
				MK4503-10	SGS-Thomson
				MK4503-12	SGS-Thomson
				MK4503-15	SGS-Thomson
				MK4503-20	SGS-Thomson
				MK4503-65	SGS-Thomson
				MK4503-80	SGS-Thomson
			5	DS2011-12	◊ Dallas
				DS2011-15	◊ Dallas
		7	5	IDT7203L-120	◊ IDT
				IDT7203L-120B	◊† IDT
				IDT7203S-120	◊ IDT
				IDT7203S-120B	◊† IDT
		8	5	IDT7M203S-100B	† IDT
		10	5	AM7203-80	AMD
				IDT7203L-80	◊ IDT
				IDT7203L-80B	◊† IDT
				IDT7203S-80	◊ IDT
				IDT7203S-80B	◊† IDT
				MS7203-80	◊ Mosel
		12	5	IDT7M203S-65	IDT
				IDT7M203S-65B	† IDT
				IDT7203L-65	◊ IDT
				IDT7203L-65B	◊† IDT
				IDT7203S-65	◊ IDT
				IDT7203S-65B	◊† IDT
		12.5	5	AM7203-65	AMD
				67C4503-80	AMD
					(Continued)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source
2048	9	12.5	5		(Cont'd)
				CY7C428-65M	† Cypress
				DS2011-80	◊ Dallas
				KM75C03A-80	◊ Samsung
				KM75C103A-80	◊ Samsung
		15	5	67C4503-65	AMD
				IDT7M203S-50	IDT
				IDT7M203S-50B	† IDT
				IDT7203L-50	◊ IDT
				IDT7203L-50B	◊† IDT
				IDT7203S-50	◊ IDT
				IDT7203S-50B	◊† IDT
				MS7203-50	◊ Mosel
		15.4	5	AM7203-50	AMD
				CY7C429-65C	Cypress
				DS2011-65	◊ Dallas
		18	5	IDT7M203S-55B	† IDT
		20	5	AM7203-40	AMD
				67C4503-50	AMD
				CY7C428-40C	Cypress
				CY7C428-40M	† Cypress
				CY7C429-40M	◊† Cypress
				DS2011-50	◊ Dallas
				KM75C03A-50	◊ Samsung
				KM75C103A-50	◊ Samsung
				LH5498-50	Sharp
				VT7203-50	VLSI Tech
		22.2	5	AM7203-35	AMD
				MS7203-35	◊ Mosel
		25	5	CY7C429-40C	Cypress
				IDT7M203S-40	IDT
		28.5	5	AM7203-25	AMD
				67C4503-35	AMD
				DS2011-35	◊ Dallas
				KM75C03A-35	◊ Samsung
				KM75C103A-35	◊ Samsung
				LH5498-35	Sharp
				VT7203-35	VLSI Tech
		33	5	CY7C428-20C	Cypress
				CY7C428-25M	† Cypress
		40	5	KM75C03A-25	◊ Samsung
				KM75C103A-25	◊ Samsung
		40/20 S/P	5	IDT72103	IDT
				IDT72103B	† IDT
		50	5	KM75C03A-20	◊ Samsung
				KM75C103A-20	◊ Samsung
				LH5498-20	Sharp
				VT7203-20	VLSI Tech
4096	9		5	IDT72104-120	◊‡ IDT
				IDT72104-50	◊‡ IDT
				IDT72104-65	◊‡ IDT
					(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—FIFOs, LIFOs (Cont'd)

Words	Bits/ Word	Data Rate MHz (max)	Supply Voltage, V	Device	Source	Line
First-in First-out					**(Cont'd)**	
4096	9		5		(Cont'd)	
				IDT72104-80	◊‡ IDT	
				8X60	Signetics	
		7	5	IDT7204L-120	◊ IDT	
				IDT7204L-120B	◊† IDT	
				IDT7204S-120	◊ IDT	5
				IDT7204S-120B	◊† IDT	
		8	5	IDT7M204S-100	IDT	
				IDT7M204S-100B	† IDT	
		10	5	AM7204-80	AMD	
				IDT7204L-80	◊ IDT	10
				IDT7204L-80B	◊† IDT	
				IDT7204S-80	◊ IDT	
				IDT7204S-80B	◊† IDT	
				MS7204-80	◊ Mosel	
		12	5	IDT7M204S-65	IDT	15
				IDT7M204S-65B	† IDT	
				IDT7204L-65	◊ IDT	
				IDT7204L-65B	◊† IDT	
				IDT7204S-65	◊ IDT	
				IDT7204S-65B	◊† IDT	20
		12.5	5	AM7204-65	AMD	
				DS2012-80	◊ Dallas	
		15	5	IDT7M204S-50	IDT	
				IDT7M204S-50B	† IDT	
				IDT7204L-50	◊ IDT	25
				IDT7204L-50B	◊† IDT	
				IDT7204S-50	◊ IDT	
				IDT7204S-50B	◊† IDT	
				MS7204-50	◊ Mosel	
		15.4	5	AM7204-50	AMD	30
				DS2012-65	◊ Dallas	
		18	5	IDT7M204S-55B	† IDT	
		20	5	AM7204-40	AMD	
				DS2012-50	◊ Dallas	
		22.2	5	AM7204-35	AMD	35
				MS7204-35	◊ Mosel	
		25	5	IDT7M204S-40	IDT	
		28.5	5	AM7204-25	AMD	
		40	5	**LH5492**	**Sharp**	**(3587)**
		40/20 S/P	5	IDT72104	IDT	40
				IDT72104B	† IDT	
Last-in First-out						
132/128	9	1	5	WD1510-02	Western	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—E² PROMs

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
PAL EQUIV								
	15 nsF	CMOS	TS	20	5	**XL16FV8**	**EXEL (3395)**	
16x8		Serial		8	5	**S2940**	**Seiko Instr (3585)**	
16x16			Serial	8	5	KM93C06 ◊ Samsung		
						KM93C07 ◊ Samsung		
		CMOS	Serial	8	3–5	NMC93C06x3 ◊ National		5
			TS	8	5	ST93C06 ◊ SGS-Thomson		
	—	E²	Serial	8	5	NMC9306 ◊ National		
						SC22001 Sierra		
						SC22002 Sierra		
		Module	Serial	38	5	COB662256B Microchip		10
		NVRAM	Serial	8	5	**X2444**	**Xicor (3729)**	
		Serial	TS	8	5	**XL93LC06**	**EXEL (3396)**	
				8	5	**XL93LC06-3**	**EXEL (3396)**	
				8	5	NMC93CS06 National		
						NMC93CS06M		
						† National		15
	200 nsF		Serial	8	5	NMC9307 National		
						M9306 SGS-Thomson		
	400 nsF		Serial	8	5	ER59256 Microchip		
	1000 nsF							
		NVRAM	Serial	8	5	**X2444M**	**† Xicor (3729)**	
16x32		Serial	TS	8	5	NMC93CS26 National		20
						NMC93CS26M		
						† National		
16x64		Serial	TS	8	5	NMC93CS46 National		
						NMC93CS46M		
						† National		
32x8		Serial		8	5	**S2918**	**Seiko Instr (3585)**	
	150 nsF	CMOS	TS	18	5	SC22100 ◊°† Sierra		25
	180 nsF	CMOS	TS	18	5	SC22100-1 Sierra		
32x16	1000 nsF							
		EA	TS	28	–28,5	ER2051 Microchip		
	2000 nsF							
		EA	TS	28	–28,5	ER2051HR † Microchip		
39x8		Serial		8	5	**S2961**	**Seiko Instr (3585)**	
50x14	1000 nsF							
		EA			–30,5	ER1451 Microchip		30
64x4	300 nsF	NVRAM	TS	18	5	**X2210**	**Xicor (3721)**	
						X2210/10	**Xicor (3721)**	
						X2210/5	**Xicor (3721)**	
						X2210M	**† Xicor (3721)**	
						X2210M/10	**† Xicor (3721)**	35
						X2210M/5	**† Xicor (3721)**	
64x8	4000 nsF							
		EA	TS	22	–29,5	ER2055 Microchip		
64x16	—		Serial	8	5	SC22011 Sierra		
						SC22012 Sierra		
		CMOS	Serial	8	3–5	NMC93C46x3 ◊ National		40
					5	**93C46A**	**◊ ICT (3505)**	
						93C46M	**† ICT (3505)**	
						ER59C11A Microchip		
						59C11 ◊ Microchip		
						93C46 ◊ Microchip		45
						KM93C46 Samsung		
			TS	8	5	ST93CS46A ◊ SGS-Thomson		
						ST93C46A ◊ SGS-Thomson		
		Serial		8	2.5	ST93C547 ◊ SGS-Thomson		
					5	**S2911**	**Seiko Instr (3585)**	50
						S2914	**Seiko Instr (3585)**	
						S2917	**Seiko Instr (3585)**	
			TS	8	5	**CAT33C116**	**Catalyst Semi (3351)**	
						XL93CS46-3	**EXEL (3396)**	
						XL93LC46	**EXEL (3396)**	55
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
64x16		Serial	TS	8	5		(Cont'd)	
						XL93LC46-3	**EXEL (3396)**	
						IS93C46	**ISSI (3510)**	
						IS93C46-3	**ISSI (3510)**	
						NMC9346C	National	
	200 nsF	CMOS	Serial	8	2.5–6	**93CX46**	**◊† ICT (3505)**	60
	250 nsF	CMOS	TS	8	5	**XL93C46**	**◊ EXEL (3396)**	
				14	5	NMC95C12	National	
	400 nsF		Serial	8	–0.3 to 6V	**HY93C46**	**Hyundai (3475)**	
					5	**93C46**	**ICT (3505)**	
		CMOS	Serial	8	5	**HY93C46M**	**† Hyundai (3475)**	65
						93C46E	**◊ ICT (3505)**	
	450 nsF		TS	16	5	NMC9346 ◊ National		
	500 nsF	CMOS	TS	14	5	NMC95C12M † National		
	1000 nsF							
		CMOS	Serial	8	5	**XL93CS46**	**◊ EXEL (3396)**	
	4000 nsF		Serial	8	5	ER5911	Microchip	70
64x16, 128x8		Serial	TS	8	5	**CAT59C11**	**Catalyst Semi (3351)**	
						CAT59C11I	**Catalyst Semi (3351)**	
						CAT93C46	**Catalyst Semi (3351)**	
						CAT93C46A	**Catalyst Semi (3351)**	
						CAT93C46AI	**Catalyst Semi (3351)**	75
						CAT93C46I	**Catalyst Semi (3351)**	
82x1	100000 nsF							
		EA	TS	18	–30,5	ER0082	Microchip	
100x14	3400 nsF							
		EA	Serial	14	–35	ER1400	Microchip	
100x50	3400 nsF							
		EA	Serial	14	30,5	ER1451	Microchip	
128x8		CMOS	Serial	8	5	ER59C11	Microchip	80
						24C01	Microchip	
						59C11	◊ Microchip	
						KM93C46	Samsung	
			TS	8	5	μPD6253	◊ NEC	
		Serial	TS	8	5	**XL24LC01**	**EXEL (3397)**	85
						XL24LC01-3	**EXEL (3397)**	
	Serial	CMOS	TS	8	5	**CAT33C101**	**Catalyst Semi (3351)**	
						CAT33C101I	**Catalyst Semi (3351)**	
						CAT33C201	**Catalyst Semi (3351)**	
						CAT33C201I	**Catalyst Semi (3351)**	90
	15 ms	TTL	Serial	8	5	SDA2516	Siemens	
	20 ms	TTL	Serial	8	5	SDA2506	Siemens	
	180 nsF		TS	18	5	SC22101-1	Sierra	
		CMOS	TS	18	5	NMC98C10-1	National	
	200 nsF	NVRAM	TS	24	5	**X2001-20**	**Xicor (3727)**	95
	300 nsF		TS	18	5	SC22101	Sierra	
				24	5	ER5901	Microchip	
		CMOS	TS	8	3–6	X24LC01	Xicor	
					5	**X24C01**	**Xicor (3734)**	
				18	5	NMC98C10	National	100
						SC22201	Sierra	
		NVRAM	TS	24	5	**X2001**	**Xicor (3727)**	
	400 nsF	E²	Serial	8	5	ER5911	Microchip	
	3000 nsF							
		E²	TS	8	5	PCD8582	Microchip	
128x8x1	-	NV Tag	Serial	5	5	DS1201	Dallas	105
128x16		CMOS	Serial	8	2.5–6	**93CX56**	**◊ ICT (3505)**	
					3–5	NMC93C56x3 ◊ National		
					5	**93C56A**	**ICT (3505)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
128x16							(Cont'd)	
		Serial		8	5	**S2921**	**Seiko Instr (3585)**	
						S2924	**Seiko Instr (3585)**	
			TS	8	5	**XL33LC102**	**EXEL (3396)**	
						XL35LC102	**EXEL (3396)**	
						XL93LC56	**EXEL (3396)**	5
						XL93LC56-3	**EXEL (3396)**	
						IS93C56	**ISSI (3510)**	
						NMC93CS56	National	
	Serial	CMOS	TS	8	5	**CAT93C56**	**Catalyst Semi (3351)**	
						CAT93C56I	**Catalyst Semi (3351)**	10
						CAT93LC56	**Catalyst Semi (3351)**	
						CAT93LC56I	**Catalyst Semi (3351)**	
	500 nsF	CMOS	TS	8	5	NMC93C56	National	
	1000 nsF							
		CMOS	TS	8	5	**XL90C21**	◇ **EXEL (3396)**	
						XL93C56	◇ **EXEL (3396)**	15
128x16, 256x8		Serial	TS	8	5	**CAT35C102**	**Catalyst Semi (3351)**	
						CAT35C102I	**Catalyst Semi (3351)**	
						CAT35C202	**Catalyst Semi (3351)**	
						CAT35C202I	**Catalyst Semi (3351)**	
256x1	200 nsF	CMOS	OC	8	5	NMC9313B	National	20
256x4		E²	Serial	8	5	KM93C46	Samsung	
	20 nsF	NOVRAM						
			TS		5	MBM2212-20	Fujitsu	
	25 nsF	NOVRAM						
			TS		5	MBM2212-25	Fujitsu	
	300 nsF	CMOS	TS	18	5	**X2212A**	**Xicor (3723)**	
						X2212A/10	**Xicor (3723)**	25
						X2212A/5	**Xicor (3723)**	
		NVRAM	TS	18	5	**X2212**	**Xicor (3723)**	
						X2212/10	**Xicor (3723)**	
						X2212/5	**Xicor (3723)**	
						X2212M	**† Xicor (3723)**	30
						X2212M/10	**† Xicor (3723)**	
						X2212M/5	**† Xicor (3723)**	
256x8		CMOS	Serial	8	5	24C02	Microchip	
			TS	8	5	μPD6252	◇ NEC	
						ST24C02	◇ SGS-Thomson	35
						ST93CS56	◇ SGS-Thomson	
						ST93CS57	◇ SGS-Thomson	
		I²C serial interface				PCF8582B	Signetics	
						PCF8582C	Signetics	
						PCF8582D	Signetics	40
						PCF8582E	Signetics	
		Serial		8	2.5	ST25C02	◇ SGS-Thomson	
			TS	8	5	**CAT24C02**	**Catalyst Semi (3351)**	
						CAT24LC02	**Catalyst Semi (3351)**	
						EL24LC02	EXEL	45
						XL24LC02	**EXEL (3397)**	
						XL24LC02-3	**EXEL (3397)**	
	15 ms	TTL	Serial	8	5	SDA2526	Siemens	
	180 nsF		TS	18	5	SC22102-1	Sierra	
	200 nsF	NVRAM	TS	28	5	**X2001-25**	**Xicor (3727)**	50
	300 nsF		TS	18	5	SC22102	Sierra	
		CMOS	TS	8	5	**X2402M**	**† Xicor (3732)**	
	10000 nsF		Serial	8	5	**X2402**	**Xicor (3732)**	
256x16		CMOS	Serial	8	2.5–6	**93CX66**	◇ **ICT (3505)**	
					5	**93C66A**	◇ **ICT (3505)**	55
		Serial	TS	8	5	**XL93LC66**	**EXEL (3397)**	
						XL93LC66-3	**EXEL (3397)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
256x16		Serial	TS	8	5		(Cont'd)	
						IS93C66	**ISSI (3510)**	
						NMC93CS66	National	
	200 nsF	CMOS	Serial	8	5	KM35C704	◇ Samsung	60
	500 nsF	CMOS	TS	8	5	NMC93C66	National	
	1000 nsF							
		CMOS	TS	8	5	**XL90C41**	◇ **EXEL (3397)**	
						XL93C66	◇ **EXEL (3397)**	
256x16, 512x8		Serial	TS	8	3	**CAT33C104**	**Catalyst Semi (3351)**	
						CAT33C104I	**Catalyst Semi (3351)**	65
					5	**CAT35C104**	**Catalyst Semi (3351)**	
						CAT35C104I	**Catalyst Semi (3351)**	
						CAT35C704	**Catalyst Semi (3352)**	
						CAT35C704I	**Catalyst Semi (3352)**	
						CAT35C804A	**Catalyst Semi (3352)**	70
						CAT35C804AI	**Catalyst Semi (3352)**	
						CAT35C804B	Catalyst Semi	
						CAT35C804BI	Catalyst Semi	
512x8			Serial	8	5	**X2404**	**Xicor (3733)**	
		CMOS	Serial	8	5	24C04	Microchip	75
						K24CF04	National	
						K24CF04I	National	
						X24C04I	National	
						X24C04	**Xicor (3736)**	
						X24LC04	Xicor	80
			TS	8	5	μPD6254	◇ NEC	
						ST24C04	◇ SGS-Thomson	
						PCF8594	Signetics	
		Serial		8	2.5	ST25C04	◇ SGS-Thomson	
			TS	8	5	**CAT24C04**	**Catalyst Semi (3351)**	85
						CAT24LC04	**Catalyst Semi (3351)**	
	150 nsF	CMOS	TS	24	5	28C04-15	◇ Microchip	
						28C04A-15	◇ Microchip	
	180 nsF		TS	18	5	SC22104-1	Sierra	
		CMOS	TS	18	5	NMC98C40-1	National	90
	200 nsF	CMOS	TS	24	5	AT28C04-20		
							◇† ATMEL	
						28C04-20	◇† Microchip	
						28C04A-20	◇ Microchip	
						μPD28C04-20	NEC	
						μPD28C05-20	NEC	95
		NVRAM	TS	28	5	**X2004-20**	◇ **Xicor (3728)**	
	250 nsF		TS		5	2804A-250	SEEQ	
				24	5	**XL2804A-250**	**EXEL (3395)**	
						X2804A-25	**Xicor (3738)**	
		CMOS	TS	24	5	AT28C04-25		
							◇† ATMEL	100
						28C04-25	◇ Microchip	
						28C04A-25	◇ Microchip	
						μPD28C05-25	NEC	
						μPD28C04-25	NEC	
		Module	TS	38	5	COB65404EE	Microchip	105
		NVRAM	TS	28	5	**X2004-25**	◇ **Xicor (3728)**	
						X2004M-25	◇† **Xicor (3728)**	
	300 nsF		Serial	8	5	**X2404M**	**† Xicor (3733)**	
			TS	18	5	SC22104	Sierra	
				24	5	**XL2804A-300**	**EXEL (3395)**	110
						X2804A	**Xicor (3738)**	
						X2804AM	† Xicor	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
							(Cont'd)	
512x8	300 nsF	CMOS	TS	8	5	**X24C04M**	**Xicor (3736)**	
				18	5	NMC98C40	National	
				24	5	AT28C04-30M/883 ◊†	ATMEL	
		NVRAM	Parallel					
				24	5	HB3104A †	Hughes	
						HC3104A	Hughes	5
						2804A-300	SEEQ	
			TS	28	5	**X2004 ◊**	**Xicor (3728)**	
						X2004M ◊†	**Xicor (3728)**	
	350 nsF		TS	24	5	**XL2804A-350**	**EXEL (3395)**	
						X2804A-35	**Xicor (3738)**	10
						X2804AM-35 †	Xicor	
		CMOS	TS	24	5	AT28C04-35M/883 ◊†	ATMEL	
	450 nsF		TS	24	5	**XL2804A-450**	**EXEL (3395)**	
						X2804A-45	**Xicor (3738)**	
						X2804AM-45 †	Xicor	15
		CMOS	TS	24	5	AT28C04-45M/883 ◊†	ATMEL	
768		Sequential		8	5	**S2980**	**Seiko Instr (3585)**	
1024x1	200 nsF	CMOS	OC	8	5	NMC9314B	National	
			TS	8	5	MSM16811RS	OKI	
						MSM16911RS	OKI	20
	300 nsF	NVRAM	TS	18	5	**X2201A**	**Xicor (3720)**	
	1000 nsF							
		Floating Gate						
			Push-Pull					
				8	5	SC22056 ◊°†	Sierra	
1024x8	250 nsF	NVRAM Module						
			TS	28	5	DPN18	Dense-Pac	
	650 nsF		TS	24	5	HB3108A †	Hughes	
						HC3108A	Hughes	25
2048x4	1600 nsF							
		EA	TS	24	–24, –14,5	ER2810HR †	Microchip	
2048x8		CMOS	Serial	8	5	X24C16	Xicor	
						X24LC16	Xicor	
		Serial		8	5	ST24C16 ◊	SGS-Thomson	
			TS	8	5	**CAT24C16**	**Catalyst Semi (3351)**	30
						CAT24LC16	**Catalyst Semi (3351)**	
	25 nsF		TS	24	5	36C16-35 ◊	SEEQ	
		CMOS	TS	24	5	AT28HC191-35	ATMEL	
						AT28HC291-35	ATMEL	
	45 nsF	CMOS	TS	24	5	AT28HC16-45 ◊†	ATMEL	
						AT28HC191-45	ATMEL	35
						AT28HC291-45	ATMEL	
						M36C16-45 ◊†	SEEQ	
						M38C16-45 ◊†	SEEQ	
						36C16-45 ◊	SEEQ	40
	55 nsF		TS	24	5	**XL46C15-55**	**EXEL (3395)**	
		CMOS	TS	24	5	AT28HC16-55 ◊†	ATMEL	
						AT28HC16L-55 ◊†	ATMEL	
						AT28HC191-55	ATMEL	
						AT28HC291-55	ATMEL	45
						M36C16-55 ◊†	SEEQ	
						M38C16-55 ◊†	SEEQ	
	60 nsF	CMOS	TS	24	5	**XL46C15-60**	**EXEL (3395)**	
	70 nsF	CMOS	TS	24	5	AT28HC16-70 ◊†	ATMEL	
						AT28HC16L-70 ◊†	ATMEL	50
						XL46C15-70	**EXEL (3395)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
							(Cont'd)	
2048x8	85 nsF	CMOS	TS	24	5	**XL46C15-85 †**	**EXEL (3395)**	
	90 nsF	CMOS	TS	24	5	AT28HC16-90 ◊†	ATMEL	
						AT28HC16L-90 ◊†	ATMEL	
	100 nsF	CMOS	TS	24	5	XL28C16A ◊	EXEL	55
						XL28C16A-100 ◊	**EXEL (3395)**	
						XL28C16B-100	**EXEL (3395)**	
	120 nsF	NVRAM(Bat)						
			TS	24	5	MK48Z02-12	SGS-Thomson	
						MK48Z12-12	SGS-Thomson	
	150 nsF		TS	24	5	**X2816B**	**Xicor (3739)**	60
		CMOS	TS	24	5	AT28C16-15 ◊†	ATMEL	
						XL28C16B-150	**EXEL (3395)**	
						MSM28C16-15RS	OKI	
						KM28C16-15 ◊	Samsung	
				28	5	AT28C17-15 ◊†	ATMEL	65
						28C17A-15 ◊	Microchip	
						KM28C17-15 ◊	Samsung	
		E²	TS	24	5	28C16-15	Microchip	
						28C16A-15	Microchip	
		NVRAM (Bat.)						
			TS	24	5	DS1220-150	Dallas	70
		NVRAM(Bat)						
			TS	24	5	MK48Z02-15	SGS-Thomson	
						MK48Z12-15	SGS-Thomson	
		NVRAM(w/o Bat)						
			TS	28	5	MK48C02-15 ◊	SGS-Thomson	
						MK48C12-15 ◊	SGS-Thomson	
	200 nsF		TS	24	5	NMC9816A-20	National	75
						52B13-200	SEEQ	
						52B13H-200	SEEQ	
				28	5	AM2817A-2	AMD	
						AM2817A-20	AMD	
						2817A-200	SEEQ	80
						2817AH-200	SEEQ	
						5517AH	SEEQ	
		CMOS	TS	24	5	AT28C16-20	ATMEL	
						CAT28C16A-20 ◊	**Catalyst Semi (3351)**	
						CAT28C16AI-20 ◊	**Catalyst Semi (3351)**	85
						XL28C16B-200	**EXEL (3395)**	
						28C16-20 ◊†	Microchip	
						28C16A-20	Microchip	
						MSM28C16-20RS	OKI	
						KM28C16-20 ◊	Samsung	90
						X2816C-20 ◊	**Xicor (3740)**	
				28	5	AT28C17-20 ◊†	ATMEL	
						CAT28C17A-20 ◊	**Catalyst Semi (3351)**	
						CAT28C17AI-20 ◊	**Catalyst Semi (3351)**	
						28C17A-20 ◊	Microchip	95
						KM28C17-20 ◊	Samsung	
		NMOS	TS	28	5	M2817A-200 †	SEEQ	
		NVRAM (Bat.)						
			TS	24	5	DS1220-200	Dallas	
						NVR2	Greenwich	
		NVRAM(Bat)						
			TS	24	5	MK48212-20	SGS-Thomson	100
		NVRAM(w/o Bat)						
			TS	28	5	MK48C02-20 ◊	SGS-Thomson	
						MK48C12-20 ◊	SGS-Thomson	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	200 nsF						(Cont'd)	
		Parallel		24	5	**S2816**	**Seiko Instr (3585)**	
						S2840	**Seiko Instr (3585)**	
				28	5	**S2817**	**Seiko Instr (3585)**	
						S2864	Seiko Instr	
	250 nsF		TS	24	5	**XL2816A-250**	**EXEL (3395)**	5
						NMC9816A-25	National	
						2816A-250	SEEQ	
						52B13-250	SEEQ	
						52B13H-250	SEEQ	
						5516A-250	SEEQ	10
						X2816B-25	**Xicor (3739)**	
						X2816BM-25 †	Xicor	
				28	5	AM2817A-25	AMD	
						5517A-250	SEEQ	
		Cartridge						
			TS	30	5	DS1217A-16	Dallas	15
		CMOS	TS	24	5	AT28C16-25	◊† ATMEL	
						XL28C16B-250	**EXEL (3395)**	
						28C16-25	Microchip	
						28C16A-25	Microchip	
						KM28C16-25 ◊	Samsung	20
				28	5	AT28C17-25	◊† ATMEL	
						28C17A-25 ◊	Microchip	
						KM28C17-25 ◊	Samsung	
		Module	TS	38	5	COB65416EE	Microchip	
		NMOS	TS	24	5	KM2816A-25	Samsung	25
						M2816A-250 †	SEEQ	
						M52B13-250 †	SEEQ	
						M52B13H-250	† SEEQ	
						2816AH-250	SEEQ	
				28	5	KM2817A-25	Samsung	30
						M2817A-250 †	SEEQ	
						2817A-250	SEEQ	
						2817AH-250	SEEQ	
						5517AH-250	SEEQ	
		NVRAM Module						
			TS	28	5	DPN28	Dense-Pac	35
		NVRAM(Bat)						
			TS	24	5	MK48Z02-25	SGS-Thomson	
						MK48Z12-25	SGS-Thomson	
		NVRAM(w/o Bat)						
			TS	28	5	MK48C02-25 ◊	SGS-Thomson	
						MK48C12-25 ◊	SGS-Thomson	
	300 nsF		TS	24	5	**XL2816A-300**	**EXEL (3395)**	40
						M52B13-300 †	SEEQ	
						M52B13H-300	† SEEQ	
						2816A-300	SEEQ	
						5516A-300	SEEQ	
						X2816BM †	Xicor	45
		CMOS	Serial	8	5	X24C16M †	Xicor	
			TS	24	5	AT28C16-30	◊† ATMEL	
				28	5	AT28C17-30	◊† ATMEL	
		NMOS	TS	24	5	KM2816A-30	Samsung	
						2816AH-300	SEEQ	50
				28	5	KM2817A-30	Samsung	
						M2817A-300 †	SEEQ	
						2817A-300	SEEQ	
						2817AH-300	SEEQ	
						5517A-300	SEEQ	55
						5517AH-300	SEEQ	
	350 nsF		TS	24	5	**XL2816A-350**	**EXEL (3395)**	
						NMC9816A-35	National	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	350 nsF						(Cont'd)	
			TS	24	5	2816A-350	SEEQ	
						52B13-350	SEEQ	60
					5,21	52B13H-350	SEEQ	
				28	5	AM2817A-3	AMD	
		CMOS	TS	24	5	AT28C16-35	◊† ATMEL	
				28	5	AT28C17-35	◊† ATMEL	
		NMOS	TS	24	5	KM2816A-35	Samsung	65
						M2816A-350 †	SEEQ	
						M52B13-350 †	SEEQ	
						M52B13H-350	† SEEQ	
				28	5	KM2817A-35	Samsung	
	450 nsF		TS	24	5	**XL2816A-450**	**EXEL (3395)**	70
		CMOS	TS	24	5	AT28C16-45	◊† ATMEL	
				28	5	AT28C17-45	◊† ATMEL	
	700 nsF	Parallel	TS	32	5	**CAT28C16V3**	**Catalyst Semi (3351)**	
2848x8	200 nsF	NVRAM(Bat)	TS	24	5	MK48Z02-20	SGS-Thomson	
4096x1	1000 nsF	Floating Gate Push-pull		8	5	SC22057 ◊°†	Sierra	75
4096x8		Serial	TS	8	5	**CAT33C704**	**Catalyst Semi (3352)**	
	35 nsF	CMOS	TS	24	5	36C32-35	SEEQ	
						38C32-35 ◊	SEEQ	
	45 nsF	CMOS	TS	24	5	36C32-45	SEEQ	
				28	5	38C32-45 ◊	SEEQ	80
	55 nsF	CMOS	TS	24	5	36C32-55 †	SEEQ	
				28	5	38C32-55 ◊†	SEEQ	
4096x16		Serial	TS	8	5	**CAT33C804**	**Catalyst Semi (3352)**	
	55 nsF	CMOS	TS	40	5	28HC416-55 ◊	Microchip	
	70 nsF	CMOS	TS	40	5	28HC416-70	◊† Microchip	85
	90 nsF	CMOS	TS	40	5	28HC416-90	◊† Microchip	
8192x8	55 nsF	CMOS	TS	28	5	AT28HC64-55	◊ ATMEL	
						STK28C64-55	**Simtek (3652)**	
	60 nsF	CMOS	TS	28	5	M38C64-60 †	SEEQ	
	70 nsF		TS	28	5	**X2864H-70 ◊**	**Xicor (3743)**	90
		CMOS	TS	28	5	AT28HC64-70	◊† ATMEL	
						AT28HC64L-70	◊ ATMEL	
						XL28C64-70 †	**EXEL (3395)**	
						28HC64-70 ◊	Microchip	
						STK28C64-70	**Simtek (3652)**	95
		NVRAM(Bat)	TS	28	5	MK48Z08-70	SGS-Thomson	
	85 nsF	NVSRAM	TS	28	5	bq4010-85	Benchmarq	
	90 nsF		TS	28	5	**X2864H-90 ◊**	**Xicor (3743)**	
						X2864HM-90	◊† Xicor	
		CMOS	TS	28	5	AT28HC64-90	◊† ATMEL	100
						AT28HC64L-90	◊† ATMEL	
						XL28C64-90 †	**EXEL (3395)**	
						28HC64-90 ◊	Microchip	
						STK28C64-90	**Simtek (3652)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8							(Cont'd)	
	100 nsF	CMOS	TS	28	5	28CP64B-10 ◊	Microchip	
		NVRAM(Bat)						
			TS	28	5	MK48Z08-10	SGS-Thomson	
						MK48Z09-10	SGS-Thomson	
						MK48Z18-10	SGS-Thomson	
						MK48Z19-10	SGS-Thomson	5
	120 nsF		TS	28	5	**X2864B-12 ◊**	**Xicor (3742)**	
						X2864BM-12 ◊†	Xicor	
		CMOS	TS	28	5	AT28HC64-12 ◊†	ATMEL	
						AT28HC64L-12 ◊†	ATMEL	
						XL28C64-120 †	**EXEL (3395)**	10
						28CP64B-12 ◊†	Microchip	
						28C64B-120 ◊	Microchip	
						STK28C64-12	Simtek	
						X28C64-12 ◊	**Xicor (3744)**	
	150 ns*	CMOS	TS	28	5	**X28C64**	**Xicor (3744)**	15
	150 nsF		TS	28	5	**X2864B-15 ◊**	**Xicor (3742)**	
						X2864BM-15 ◊†	Xicor	
		CMOS	TS	28	5	AT28C64-15 ◊†	ATMEL	
						AT28PC64-15 ◊†	ATMEL	
						CAT28C64A-15 ◊	**Catalyst Semi (3351)**	20
						XL28C64B-150	**EXEL (3395)**	
						28CP64A-15 ◊†	Microchip	
						28CP64B-15 ◊†	Microchip	
						28C64-15 ◊†	Microchip	
						28C64A-15 ◊	Microchip	25
						28C64B-150 ◊	Microchip	
						MSM28C64-15RS	OKI	
						X28C64-15 ◊	**Xicor (3744)**	
						X28C64M-15 ◊†	**Xicor (3744)**	
		NVRAM (Bat.)						
			TS	28	5	DS1225-150	Dallas	30
						NVR8	Greenwich	
		NVRAM(Bat)						
			TS	28	5	MK48Z08-15	SGS-Thomson	
						MK48Z09-15	SGS-Thomson	
						MK48Z18-15	SGS-Thomson	
						MK48Z19-15	SGS-Thomson	35
		NVSRAM						
			TS	28	5	bq4010-150	Benchmarq	
	180 nsF		TS	28	5	**X2864B-18 ◊†**	**Xicor (3742)**	
						X2864BM-18 ◊†	Xicor	
		CMOS	TS	28	5	**X28C64-18 ◊**	**Xicor (3744)**	
						X28C64M-18 ◊†	**Xicor (3744)**	40
	200 nsF		TS	28	5	52B33H-200 ◊	SEEQ	
		CMOS	TS	28	5	AT28C64-20 ◊†	ATMEL	
						AT28PC64-20 ◊†	ATMEL	
						CAT28C64A-20 ◊	**Catalyst Semi (3351)**	
						CAT28C65A-20 ◊	**Catalyst Semi (3351)**	45
						XL28C64B-200	**EXEL (3395)**	
						28CP64A-20 ◊†	Microchip	
						28C64-20 ◊†	Microchip	
						28C64A-20 ◊	Microchip	
						2864B-200 ◊	Microchip	50
						µPD28C64-20	NEC	
						MSM28C64-20RS	OKI	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	200 nsF	CMOS	TS	28	5		(Cont'd)	
						KM28C64-20 ◊	Samsung	
						KM28C65-20 ◊	Samsung	
						28C64-200	SEEQ	55
						55C65-200 ◊†	SEEQ	
						5962-86830 ◊†	SEEQ	
						5962-87514 ◊†	SEEQ	
						X28C64-20 ◊	**Xicor (3744)**	
						X28C64M †	**Xicor (3744)**	60
						X28C64M-20 ◊†	**Xicor (3744)**	
		Module	TS	38	5	COB65464EE-20	Microchip	
		NMOS	TS	28	5	AM2864A-20	AMD	
						AM2864AE-200	AMD	
						AM2864BE-200	AMD	65
						52B33-200 ◊	SEEQ	
		NVRAM (Bat.)						
			TS	24	5	DS1225-200	Dallas	
		NVRAM(Bat)						
			TS	28	5	MK48Z08-20	SGS-Thomson	
						MK48Z09-20	SGS-Thomson	
						MK48Z18-20	SGS-Thomson	70
						MK48Z19-20	SGS-Thomson	
		NVSRAM						
			TS	28	5	bq4010-200	Benchmarq	
	250 nsF		TS	24	5	**X2864A-25 ◊**	**Xicor (3741)**	
				28	5	**XL2864A-250**	**EXEL (3395)**	
						XL2865A-250	**EXEL (3395)**	75
						M2864H-250 †	SEEQ	
						52B33H-250 ◊	SEEQ	
		Cartridge						
			TS	30	5	DS1217A-64	Dallas	
		CMOS	TS	28	5	AT28C64-25 ◊†	ATMEL	
						AT28PC64-25 ◊†	ATMEL	80
						CAT28C64A-250 ◊	**Catalyst Semi (3351)**	
						CAT28C65A-250 ◊	**Catalyst Semi (3351)**	
						XL28C64B-250	**EXEL (3395)**	
						MBM28C64-25	Fujitsu	
						MBM28C65-25	Fujitsu	85
						HN58C65-25	Hitachi	
						28CP64A-25 ◊†	Microchip	
						28C64-25 ◊†	Microchip	
						28C64A-25 ◊	Microchip	
						28C64B-250 ◊	Microchip	90
						µPD28C64-25	NEC	
						KM28C64-25 ◊	Samsung	
						KM28C65-25 ◊	Samsung	
						M28C64-250 †	SEEQ	
						TMS28C64-25	TI	95
						X28C64-25 ◊	**Xicor (3744)**	
						X28C64M-25 ◊†	**Xicor (3744)**	
		NMOS	TS	28	5	AM2864A-25	AMD	
						AM2864AE-250	AMD	
						AM2864B-25	AMD	100
						AM2864BE-250	AMD	
						M2864-250 †	SEEQ	
						2864-250 ◊	SEEQ	
						2864-350 ◊	SEEQ	
						2864H-250 ◊	SEEQ	105
						52B33-250 ◊	SEEQ	
	300 nsF		TS	24	5	M52B33-300	SEEQ	
				28	5	**XL2864A-300**	**EXEL (3395)**	
						XL2865A-300	**EXEL (3395)**	
						28C64-250	SEEQ	110
						52B33H-300 ◊	SEEQ	
						X2864A ◊	**Xicor (3741)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	300 nsF						(Cont'd)	
		CMOS	TS	28	5	AT28C64-30M/883	◊† ATMEL	
						AT28PC64-30	◊† ATMEL	
		E²	TS	28	5	52B33-300	◊ SEEQ	
		NMOS	TS	24	5	XLM2864A-300	† EXEL	
						XLM2865A-300	† EXEL	5
				28	5	AM2864A-30	AMD	
						AM2864AE-300	AMD	
						AM2864B-30	AMD	
						AM2864BE-300	AMD	
						M52B33H-300	SEEQ	10
						2864-300	◊ SEEQ	
						2864H-300	◊ SEEQ	
	350 nsF		TS	24	5	**X2864A-35**	**◊ Xicor (3741)**	
				28	5	**XL2864A-350**	**EXEL (3395)**	
						XL2865A-350	**EXEL (3395)**	15
		CMOS	TS	24	5	**X28C64T-25**	**Xicor (3744)**	
				28	5	AT28C64-35M/883	◊† ATMEL	
						AT28PC64-35	◊† ATMEL	
						MBM28C64-35	Fujitsu	
						MBM28C65-35	Fujitsu	20
						TMS28C64-35	TI	
		NMOS	TS	24	5	XLM2864A-350	† EXEL	
						XLM2865A-350	† EXEL	
				28	5	AM2864A-35	AMD	
						AM2864AE-350	AMD	25
						AM2864B-35	AMD	
						AM2864BE-350	AMD	
	450 nsF		TS	28	5	**XL2864A-450**	**EXEL (3395)**	
						XL2865A-450	**EXEL (3395)**	
						X2864A-45	**◊ Xicor (3741)**	30
		CMOS	TS	24	5	**X28C64T-35**	**Xicor (3744)**	
				28	5	AT28C64-45M/883	◊† ATMEL	
		NMOS	TS	24	5	XLM2864A-450	† EXEL	
						XLM2865A-450	† EXEL	
8192x16								
	70 nsF	CMOS Module	TS	40	5	**DPE8M628-70**	**◊† Dense-Pac (3378)**	35
						DPE8X16A-70	**† Dense-Pac (3378, 3381)**	
	90 nsF	CMOS Module	TS	40	5	**DPE8M628-90**	**◊† Dense-Pac (3378)**	
						DPE8X16A-90	**† Dense-Pac (3378, 3381)**	
	120 nsF	CMOS Module	TS	40	5	**DPE8M628-120**	**◊† Dense-Pac (3378)**	
						DPE8X16A-120	**† Dense-Pac (3378, 3381)**	40
	150 nsF	CMOS Module	TS	40	5	**DPE8X16A-150**	**† Dense-Pac (3378, 3381)**	
	200 nsF	CMOS	TS	40	5	**DPEX16A-200**	**† Dense-Pac (3378, 3381)**	
		CMOS Module	TS	40	5	**DPE8X16A-200**	**† Dense-Pac (3378, 3381)**	
						DPE8X16A-250	**† Dense-Pac (3378, 3381)**	
8192x32	55 nsF	Module	TS	66	5	**DPE832V-55**	**† Dense-Pac (3378, 3381)**	45
	70 nsF	Module	TS	66	5	**DPE832V-70**	**† Dense-Pac (3378, 3381)**	
	90 nsF	Module	TS	66	5	**DPE832V-90**	**† Dense-Pac (3378, 3381)**	
	120 nsF	Module	TS	66	5	**DPE832V-120**	**† Dense-Pac (3378, 3381)**	
	150 nsF	Module	TS	66	5	**DPE832V-150**	**† Dense-Pac (3378, 3381)**	
	200 nsF	Module	TS	66	5	**DPE832V-200**	**† Dense-Pac (3378, 3381)**	50
8196x8	300 nsF	NMOS	TS	28	5	M2864H-300	† SEEQ	
	350 nsF	NMOS	TS	28	5	52B33-350	◊ SEEQ	
16384x8								
	70 nsF	CMOS Module	TS	40	5	**DPE8X16A-70**	**Dense-Pac (3378, 3381)**	
	90 nsF	CMOS Module	TS	40	5	**DPE8X16A-90**	**† Dense-Pac (3378, 3381)**	
	120 nsF	CMOS Module	TS	40	5	**DPE8X16A-120**	**† Dense-Pac (3378, 3381)**	55
	150 nsF	CMOS Module	TS	40	5	**DPE8X16A-150**	**† Dense-Pac (3378, 3381)**	
	200 nsF	CMOS Module	TS	40	5	**DPE8X16A-200**	**† Dense-Pac (3378, 3381)**	
	250 nsF	CMOS Module	TS	440	5	**DPE8X16A-250**	**† Dense-Pac (3378, 3381)**	
16384x8x4								
	150 nsF	CMOS	TS	28	5	GR27513	Greenwich	
16384x16								
	55 nsF	Module	TS	66	5	**DPE832V-55**	**† Dense-Pac (3378, 3381)**	60
	70 nsF	CMOS Module	TS	40	5	**DPE8M656-70**	**◊† Dense-Pac (3378)**	
		Module	TS	66	5	**DPE832V-70**	**† Dense-Pac (3378, 3381)**	
	90 nsF	CMOS Module	TS	40	5	**DPE8M656-90**	**◊† Dense-Pac (3378)**	
		Module	TS	66	5	**DPE832V-90**	**† Dense-Pac (3378, 3381)**	
	120 nsF	CMOS Module	TS	40	5	**DPE8M656-120**	**◊† Dense-Pac (3378)**	65
		Module	TS	66	5	**DPE832V-120**	**† Dense-Pac (3378, 3381)**	
	150 nsF	Module	TS	66	5	**DPE832V-150**	**† Dense-Pac (3378, 3381)**	
	200 nsF	Module	TS	66	5	**DPE832V-200**	**† Dense-Pac (3378, 3381)**	
24576x8								
	250 nsF	Cartridge	TS	30	5	DS1217A-192	Dallas	
32768x8								
	35 nsF	NVSRAM	TS	28	5	bq4011H-35	Benchmarq	70
	45 nsF	NVSRAM	TS	28	5	bq4011H-45	Benchmarq	
	55 nsF	Module	TS	66	5	**DPE832V-55**	**† Dense-Pac (3378, 3381)**	
		NVRAM	TS	28	5	DS1230-55	Dallas	
	70 nsF	CMOS	TS	28	5	AT28HC256-70	◊ ATMEL	
						STK28C256-70	**◊ Simtek (3653)**	75
		Module	TS	66	5	**DPE832-70**	**† Dense-Pac (3378, 3381)**	
						DPE832V-70	**† Dense-Pac (3378, 3381)**	
		NVRAM	TS	28	5	DS1230-70	Dallas	

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	90 nsF	CMOS	TS	28	5	AT28HC256-90	◊† ATMEL	
						AT28HC256L-90	◊ ATMEL	
						28C256-90	◊† Microchip	
						28HC256-90	◊† Microchip	
						28C256A-200	◊† SEEQ	5
						STK28C256-90	**◊ Simtek (3653)**	
						STK28C256-90M	◊† Simtek	
				32	5	AM28F256	◊ AMD	
		Module	TS	28	5	DPE41257-90	◊† Dense-Pac	
				66	5	**DPE832V-90**	**† Dense-Pac (3378, 3381)**	10
	100 nsF	CMOS	TS	28	5	**XL28C256-100**	**EXEL (3395)**	
						28CP256B-10	◊ Microchip	
						28HC256-90	◊† SEEQ	
		NVRAM	TS	28	5	DS1230-100	Dallas	
		NVRAM(Bat)	TS	28	5	MK48Z30-10	SGS-Thomson	15
						MK48Z30A-10	SGS-Thomson	
		NVSRAM	TS	28	5	bq4011-100	Benchmarq	
	120 nsF	CMOS	TS	28	5	AT28HC256-12	◊† ATMEL	
						AT28HC256L-12	◊† ATMEL	
						XL28F256-120	**EXEL (3395)**	20
						28CP256B-12	◊† Microchip	
						28C256-120	◊† Microchip	
						28HC256-120	◊† SEEQ	
						STK28C256-12	◊ Simtek	
						STK28C256-12M	◊† Simtek	25
		Module	TS	28	5	DPE41257-120	◊† Dense-Pac	
				66	5	**DPE832V-120**	**† Dense-Pac (3378, 3381)**	
		NVRAM	TS	28	5	DS1230-120	Dallas	
						DS1235-120	Dallas	
		NVRAM(Bat)	TS	28	5	MK48Z30-12	SGS-Thomson	30
						MK48Z30A-12	SGS-Thomson	
	150 ns*	CMOS	TS	28	5	**X28C256**	**Xicor (3745)**	
	150 nsF	CMOS	TS	28	5	AT28C256-15	◊† ATMEL	
						MBM28C256	◊ Fujitsu	
						28CP256A-15	◊† Microchip	35
						28CP256B-15	◊† Microchip	
						28C256-150	◊† Microchip	
						KM28C256	Samsung	
						KM28C256-15	◊ Samsung	
						28C256A-150	◊† SEEQ	40
						STK28C256-15M	◊† Simtek	
						X28C256-15	**◊ Xicor (3745)**	
						X28C256M-15	**◊† Xicor (3745)**	
				32	5	KM28C256J	Samsung	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	150 nsF	Module	TS	28	5	DPE41257-150	◊† Dense-Pac	45
				66	5	**DPE832V-150**	**† Dense-Pac (3378, 3381)**	
		NVRAM	TS	28	5	DS1235-150	Dallas	
		NVRAM (Bat.)	TS	28	5	DS1230-150	Dallas	
		NVSRAM	TS	28	5	bq4011-150	Benchmarq	
	170 nsF	CMOS	TS	28	5	TC58257A-17	Toshiba	50
		CMOS Flash	TS	28	5	TMS29F256-170	◊ TI	
	180 nsF	CMOS	TS	28	5	**X28C256-18**	**◊ Xicor (3745)**	
						X28C256M-18	**◊† Xicor (3745)**	
	200 nsF	CMOS	TS	28	5	AT28C256-20	◊† ATMEL	
						CAT28C256-20	**◊ Catalyst Semi (3351)**	55
						CAT28C256I-20	**Catalyst Semi (3351)**	
						CAT28C256M-20	**† Catalyst Semi (3351)**	
						28CP256A-20	◊† Microchip	
						28C256-200	◊† Microchip	
						µPD28C256-20	NEC	60
						KM28C256-20	◊ Samsung	
						28C256-200	◊ SEEQ	
						55C256-200	◊† SEEQ	
						5962-88525	◊† SEEQ	
						X28C256-20	**◊ Xicor (3745)**	65
						X28C256I-20	**Xicor (3745)**	
						X28C256M-20	**◊† Xicor (3745)**	
		CMOS Flash	TS	28	5	TMS29F256-20	◊ TI	
						TMS29F256-200	◊ TI	
		Module	TS	66	5	**DPE832V-200**	**† Dense-Pac (3378, 3381)**	70
		NVRAM	TS	28	5	DS1235-200	Dallas	
		NVSRAM	TS	28	5	bq4011-200	Benchmarq	
	250 nsF		TS	28	5	**X28C256-25**	**Xicor (3745)**	
						X28C256M-25	**† Xicor (3745)**	
						X28256-25	**◊ Xicor (3745)**	75
						X28256M-25	**◊† Xicor (3745)**	
		Cartridge	TS	30	5	DS1217A-256	Dallas	
		CMOS	TS	28	5	AT28C256-25	◊† ATMEL	
						CAT28C256-25	**◊ Catalyst Semi (3351)**	
						CAT28C256I-25	**Catalyst Semi (3351)**	80
						CAT28C256M-25	**† Catalyst Semi (3351)**	
						28CP256A-25	◊† Microchip	
						28C256-250	◊† Microchip	
						KM28C256-25	◊ Samsung	
						M28C256-250	SEEQ	85
						28C256-250	◊ SEEQ	
						TC58257A-25	Toshiba	
						X28C256I-25	**Xicor (3745)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	250 nsF						(Cont'd)	
		CMOS Flash						
			TS	28	5	TMS29F256-25	◊ TI	
						TMS29F256-250	◊ TI	
	300 nsF		TS	28	5	**X28C256M**	**† Xicor (3745)**	
						X28256	**◊ Xicor (3745)**	
		CMOS	TS	28	5	AT28C256-30	◊† ATMEL	5
						CAT28C256-30	**◊ Catalyst Semi (3351)**	
						CAT28C256I-30	**Catalyst Semi (3351)**	
						CAT28C256M-30	**† Catalyst Semi (3351)**	
						28C256-300	◊ SEEQ	
						X28C256I	**Xicor (3745)**	10
		CMOS Flash						
			TS	28	5	TMS29F256-30	◊ TI	
						TMS29F256-300	◊ TI	
		E²	TS	28	5	**X28256M**	**◊† Xicor (3745)**	
	350 nsF		TS	28	5	**X28C256-35**	**Xicor (3745)**	
						X28C256M-35	**† Xicor (3745)**	15
						X28256-35	**◊ Xicor (3745)**	
						X28256M-35	**◊† Xicor (3745)**	
		CMOS	TS	28	5	AT28C256-35	◊† ATMEL	
32768x16								
	70 nsF	CMOS Module						
			TS	32	5	**DPE32X16A-70**	**† Dense-Pac (3378, 3381)**	
	90 nsF	CMOS Module						
			TS	32	5	**DPE32X16A-90**	**† Dense-Pac (3378, 3381)**	20
		Module	TS	40	5	**DPE8M612-90**	**◊† Dense-Pac (3378)**	
	100 nsF	Module	TS	40	5	**DPE8M612-100**	**◊† Dense-Pac (3378)**	
	120 nsF	CMOS Module						
			TS	40	5	**DPE32X16A-120**	**† Dense-Pac (3378, 3381)**	
		Module	TS	40	5	**DPE8M612-120**	**◊† Dense-Pac (3378)**	
	150 nsF	CMOS Module						
			TS	40	5	**DPE32X16A-150**	**† Dense-Pac (3378, 3381)**	25
						DPE8M612-150	**† Dense-Pac (3378)**	
	170 nsF	CMOS Module						
			TS	40	5	**DPE8M612-170**	**† Dense-Pac (3378)**	
	200 nsF	CMOS Module						
			TS	40	5	**DPE32X16A-200**	**† Dense-Pac (3378, 3381)**	
						DPE8M612-200	**† Dense-Pac (3378)**	
	250 nsF	CMOS Module						
			TS	40	5	**DPE32X16A-250**	**† Dense-Pac (3378, 3381)**	30
						DPE8M612-250	**† Dense-Pac (3378)**	
32768x32								
	70 nsF	Module	TS	66	5	**DPE3232V-70**	**† Dense-Pac (3378, 3381)**	
	90 nsF	Module	TS	66	5	**DPE3232V-90**	**† Dense-Pac (3378, 3381)**	
	120 nsF	Module	TS	66	5	**DPE3232V-120**	**† Dense-Pac (3378, 3381)**	
	150 nsF	Module	TS	66	5	**DPE3232V-150**	**† Dense-Pac (3378, 3381)**	35
65536x4								
	300 nsF	CMOS	TS	18	5	**X2210A**	**Xicor (3721)**	
						X2210A/10	**Xicor (3721)**	
						X2210A/5	**Xicor (3721)**	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x8								
	90 nsF	CMOS Module						
			TS	32	5	**DPE5648-90**	**† Dense-Pac (3378)**	
				40	5	**DPE32X16A-90**	**† Dense-Pac (3378, 3381)**	40
		Module	TS	32	5	**DPE4648-90**	**◊† Dense-Pac (3378)**	
	100 nsF	CMOS	TS	32	5	AM28F512	◊ AMD	
		Module	TS	32	5	**DPE4648-100**	**◊† Dense-Pac (3378)**	
	120 nsF	CMOS Module						
			TS	32	5	**DPE5648-120**	**† Dense-Pac (3378)**	
		Module	TS	32	5	**DPE4648-120**	**◊† Dense-Pac (3378)**	45
	135 nsF	NVRAM, Module (Bat.)						
			TS		5	NVR64	Greenwich	
	150 nsF	CMOS	TS	28	5	GR27512	Greenwich	
				40	5	AT28C1024-15	† ATMEL	
		CMOS Module						
			TS	32	5	**DPE5648-150**	**† Dense-Pac (3378)**	
				40	5	**DPE32X16A-150**	**† Dense-Pac (3378, 3381)**	50
	170 nsF	CMOS Module						
			TS	32	5	**DPE5648-170**	**† Dense-Pac (3378)**	
				40	5	**DPE32X16A-70**	**† Dense-Pac (3378, 3381)**	
	200 nsF		TS	32	5,12	48F512-200	◊ SEEQ	
		CMOS	TS	40	5	AT28C1024-20	† ATMEL	
						AT281024-20	† ATMEL	55
		CMOS Module						
			TS		5	**DPE32X16A-200**	**† Dense-Pac (3378, 3381)**	
				32	5	**DPE4648-200**	**† Dense-Pac (3378)**	
						DPE5648-200	**† Dense-Pac (3378)**	
	250 nsF		TS	32	5,12	48F512-250	◊ SEEQ	
		Cartridge						
			TS	30	5	DS1217M-1/2	Dallas	60
		CMOS	TS	40	5	AT28C1024-25	† ATMEL	
		CMOS Module						
			TS	32	5	**DPE5648-250**	**† Dense-Pac (3378)**	
				40	5	**DPE32X16A-250**	**† Dense-Pac (3378, 3381)**	
		Flash	TS	32	5,12	DM48F512-250	† SEEQ	
					512	LM48F512-250	◊† SEEQ	65
	300 nsF		TS	32	5,12	48F512-300	◊ SEEQ	
		Flash	TS	32	5,12	DM48F512-300	† SEEQ	
						LM48F512-300	◊† SEEQ	
	170 nsF	CMOS Module						
			TS	32	5	**DPE4648-170**	**† Dense-Pac (3378)**	
	250 nsF	CMOS Module						
			TS	32	5	**DPE4648-250**	**† Dense-Pac (3378)**	70
65536x16								
	70 nsF	Module	TS	66	5	**DPE3232V-70**	**† Dense-Pac (3378, 3381)**	
	90 nsF	Module	TS	40	5	**DPE8M624-90**	**◊† Dense-Pac (3378)**	
				66	5	**DPE3232V-90**	**† Dense-Pac (3378, 3381)**	
	100 nsF	Module	TS	40	5	**DPE8M624-100**	**◊† Dense-Pac (3378)**	
	120 nsF	Module	TS	40	5	**DPE8M624-120**	**◊† Dense-Pac (3378)**	75
				66	5	**DPE3232V-120**	**† Dense-Pac (3378, 3381)**	
	150 nsF	CMOS Module						
			TS	32	5	**DPE8M624-150**	**† Dense-Pac (3378)**	
		Module	TS	66	5	**DPE3232V-150**	**† Dense-Pac (3378, 3381)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x16							(Cont'd)	
	170 nsF	CMOS Module	TS	40	5	**DPE8M624-170**	**† Dense-Pac (3378)**	
	200 nsF	CMOS Module	TS	40	5	**DPE8M624-200**	**† Dense-Pac (3378)**	
	250 nsF	CMOS Module	TS	40	5	**DPE8M624-250**	**† Dense-Pac (3378)**	
65536x32								
	120 nsF	Module	TS	60	5	**DPE6434-120**	**◊† Dense-Pac (3378)**	
	150 nsF	Module	TS	60	5	**DPE6434-150**	**◊† Dense-Pac (3378)**	5
	170 nsF	CMOS Module	TS	60	5	**DPE6434-170**	**† Dense-Pac (3378)**	
	200 nsF	CMOS Module	TS	60	5	**DPE6434-200**	**† Dense-Pac (3378)**	
	250 nsF	CMOS Module	TS	60	5	**DPE6434-250**	**† Dense-Pac (3378)**	
131072x8								
	70 nsF	Module	TS	66	5	**DPE3232V-70**	**† Dense-Pac (3378, 3381)**	
	85 nsF	NVSRAM	TS	32	5	bq4013-85	Benchmarq	10
	90 nsF	Module	TS	32	5	**DPE41288-90**	**◊† Dense-Pac (3378)**	
						DPE51288-90	**◊† Dense-Pac (3378)**	
				66	5	**DPE3232V-90**	**† Dense-Pac (3378, 3381)**	
	100 nsF	Module	TS	32	5	**DPE41288-100**	**◊† Dense-Pac (3378)**	
						DPE51288-100	**◊† Dense-Pac (3378)**	15
	120 nsF	CMOS	TS	32	5	AM28F010	◊ AMD	
						AT28MC010-12	† ATMEL	
						28C010-120	◊† SEEQ	
		Module	TS	32	5	**DPE41288-120**	**◊† Dense-Pac (3378)**	
						DPE51288-120	**◊† Dense-Pac (3378)**	20
				66	5	**DPE3232V-120**	**† Dense-Pac (3378, 3381)**	
		NVSRAM	TS	32	5	bq4013-120	Benchmarq	
	150 nsF	CMOS	TS	28	5	**XL28F010-150**	**EXEL (3395)**	
				32	5	AT28C010-15	† ATMEL	
						AT28MC010-15	† ATMEL	25
						GR27010	Greenwich	
						28C010-150	◊† SEEQ	
						WE128K8-150	White Tech	
		Module	TS	32	5	**DPE51288-150**	**◊† Dense-Pac (3378)**	
				66	5	**DPE3232V-150**	**† Dense-Pac (3378, 3381)**	30
	200 nsF		TS	32	5,12	48F010-200	◊ SEEQ	
		CMOS	Floating Gate	32	5	**X28C010M-20**	**† Xicor (3748)**	
			TS	32	5	AT28C010-20	† ATMEL	
						AT28MC010-20	† ATMEL	
						28C010-200	◊† SEEQ	35
		CMOS Module	TS	32	5	**DPE41288-200**	**◊† Dense-Pac (3378)**	
						DPE51288-200	**◊† Dense-Pac (3378)**	
	250 nsF		TS	32	5,12	48F010-250	◊ SEEQ	
		Cartridge	TS	30	5	DS1217M-1	Dallas	
		CMOS	Floating Gate	32	5	**X28C010M-25**	**† Xicor (3748)**	40
			TS	32	5	AT28C010-25	† ATMEL	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8							(Cont'd)	
	250 nsF	CMOS	TS	32	5	AT28MC010-25	† ATMEL	
						XM28C010--25	**Xicor (3751)**	
						XM28C010M-25	**† Xicor (3751)**	
		CMOS Module	TS	32	5	**DPE41288-250**	**◊† Dense-Pac (3378)**	45
						DPE51288-250	**◊† Dense-Pac (3378)**	
						XM28C010	**† Xicor (3751)**	
		Flash	TS	32	5,12	DM48F010-250	† SEEQ	
						LM48F010-250	◊† SEEQ	
	300 nsF		TS	32	5,12	48F010-300	◊ SEEQ	50
		CMOS	Floating Gate	32	5	**X28C010M-30**	**† Xicor (3748)**	
			TS	32	5	**XM28C010M**	**† Xicor (3751)**	
		CMOS Module	TS	32	5	**DPE41288-300**	**◊† Dense-Pac (3378)**	
						DPE51288-300	**◊† Dense-Pac (3378)**	
		Flash	TS	32	5,12	DM48F010-300	† SEEQ	55
						LM48F010-300	◊† SEEQ	
	350 nsF	CMOS	Floating Gate	32	5	**X28C010M-35**	**† Xicor (3748)**	
		CMOS Module	TS	32	5	**DPE41288-350**	**◊† Dense-Pac (3378)**	
						DPE51288-350	**◊† Dense-Pac (3378)**	
131072x16								
	85 nsF	Module	TS	60	5	DPE6433-85	◊† Dense-Pac	60
	90 nsF	TTL	TS	60	5	**DPE6434-90**	**Dense-Pac (3378)**	
	100 nsF	Module	TS	60	5	**DPE6434-100**	**◊† Dense-Pac (3378)**	
	120 nsF	Module	TS	60	5	**DPE6434-120**	**◊† Dense-Pac (3378)**	
	150 nsF	Module	TS	60	5	**DPE6434-150**	**◊† Dense-Pac (3378)**	
	170 nsF	CMOS Module	TS	60	5	**DPE6434-170**	**† Dense-Pac (3378)**	65
	200 nsF	CMOS Module	TS	60	5	**DPE6434-200**	**† Dense-Pac (3378)**	
	250 nsF	CMOS Module	TS	60	5	**DPE6434-250**	**† Dense-Pac (3378)**	
131072x32		CMOS	TS	76	5	M4194E	White Tech	
131078x16								
	85 nsF	NVSRAM	TS	40	5	bq4024-85	Benchmarq	
	120 nsF	NVSRAM	TS	40	5	bq4024-120	Benchmarq	70
262144x8		4250 nsF	TS	32	5	**DPE256S8N-250**	**† Dense-Pac (3378)**	
	70 nsF	Module	TS	42	5	**DPE256Q8-70**	**† Dense-Pac (3378)**	
	85 nsF	NVSRAM	TS	32	5	bq4014-85	Benchmarq	
	90 nsF	Module	TS	42	5	**DPE256Q8-90**	**† Dense-Pac (3378)**	
	100 nsF	Module	TS	42	5	**DPE256Q8-100**	**† Dense-Pac (3378)**	75
	120 nsF	Module	TS	60	5	**DPE6434-120**	**◊† Dense-Pac (3378)**	
				66	5	**DPE256Q8-120**	**† Dense-Pac (3378)**	
		NVSRAM	TS	32	5	bq4014-120	Benchmarq	
	135 nsF	CMOS Module	TS	32	5	**DPE256S8N-135**	**† Dense-Pac (3378)**	
						DPE256S8N-150	**† Dense-Pac (3378)**	80
	150 nsF	CMOS	TS	32	5	WE256K8-150	White Tech	
		Module	TS	42	5	**DPE256Q8-150**	**† Dense-Pac (3378)**	
				60	5	**DPE6434-150**	**◊† Dense-Pac (3378)**	
							(Continued)	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—E² PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x8							(Cont'd)	
	170 nsF	CMOS Module						
			TS	32	5	**DPE256S8N-170**	**† Dense-Pac (3378)**	
				60	5	**DPE6434-170**	**† Dense-Pac (3378)**	
	200 nsF	CMOS Module						
			TS	32	5	**DPE256S8N-200**	**† Dense-Pac (3378)**	
				60	5	**DPE6434-200**	**† Dense-Pac (3378)**	
		Module	TS	42	5	**DPE256Q8-200**	**† Dense-Pac (3378)**	5
	250	CMOS Module						
			TS	60	5	**DPE6434-250**	**† Dense-Pac (3378)**	
	250 nsF	Cartridge						
			TS	30	5	DS1217M-2	Dallas	
		Module	TS	42	5	**DPE256Q8-250**	**† Dense-Pac (3378)**	
	300 nsF	Module	TS	42	5	**DPE256Q8-300**	**† Dense-Pac (3378)**	
262144x16		CMOS	TS	76	5	M4194E	White Tech	10
	85 nsF	NVSRAM						
			TS	40	5	bq4025-85	Benchmarq	
	120 nsF	NVSRAM						
			TS	40	5	bq4025-120	Benchmarq	
524288x8		CMOS	TS	76	5	M4194E	White Tech	
	85 nsF	NVSRAM						
			TS	32	5	bq4015-85	Benchmarq	
	100 nsF	Module	TS	48	5	**DPE45128-100**	**◊† Dense-Pac (3378)**	15
	120 nsF	Module	TS	48	5	**DPE45128-120**	**◊† Dense-Pac (3378)**	
	135 nsF	CMOS Module						
			TS	32	5	**DPE512S8N-135**	**† Dense-Pac (3378)**	
	150 nsF	CMOS	TS	24	5	AT28C04-15	◊† ATMEL	
				32	5	WE512K8-150	White Tech	
		CMOS Module						
			TS	32	5	**DPE512S8N-150**	**† Dense-Pac (3378)**	20
		Module	TS	56	5	**DPE45128-150**	**Dense-Pac (3378)**	
	170 nsF	CMOS Module						
			TS	32	5	**DPE512S8N-170**	**† Dense-Pac (3378)**	
	200 nsF	CMOS Module						
			TS	32	5	**DPE512S8N-200**	**† Dense-Pac (3378)**	
		Module	TS	48	5	**DPE45128-200**	**◊† Dense-Pac (3378)**	
	250 nsF	Cartridge						
			TS	30	5	DS1217M-4	Dallas	25
		CMOS Module						
			TS	32	5	**DPE512S8N-250**	**† Dense-Pac (3378)**	
		Module	TS	48	5	**DPE45128-250**	**◊† Dense-Pac (3378)**	
	120 nsF	NVSRAM						
			TS	32	5	bq4015-120	Benchmarq	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—EPROMs

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
64-Bit	—	Erasable	—	—	—	RP5H01	Ricoh	
64x16	200nsF	CMOS	TS	8	5	BR93C46F	ROHM	
256x4	5 nsF	ECL 10K	OE	16	−5.2	NM10E149-5	National	
		ECL 100K	OE	16	−4.5	NM100E149-5	National	
	7 nsF	ECL 10K	OE	16	−5.2	NM10E149-7	National	5
		ECL 100K	OE	16	−4.5	NM100E149-7	National	
	10 nsF	ECL 10K	OE	16	−5.2	NM10E149-10	National	
		ECL 100K	OE	16	−4.5	NM100E149-10	National	
	10nsF	ECL	OE	16	−5	100149A	ROHM	
					−5.2	MCM10149-10	ROHM	10
					5	10149A	ROHM	
512x8	300 nsF	CMOS	TS	24	10	IM6654A	Harris	
	450 nsF	CMOS	TS	24	5	IM6654-1	Harris	
	550 nsF	CMOS	TS	24	5	IM6654	Harris	
	600 nsF	CMOS Erasable	TS	24	5	IM6654M †	Harris	15
1024x4	550 nsF	CMOS	TS	24	5	IM6653-1	Harris	
	600 nsF	CMOS Erasable	TS	24	5	IM6653M †	Harris	
1024x8	350	NMOS	TS	24	±5,12	2708-35	Krueger	
	450	NMOS	TS	24	±5,12	2708-45	Krueger	
2048x8	20 nsF	CMOS	TS	24	5	AM27C45-20C	AMD	20
	25 nsF	CMOS	TS	24	5	AM27C45-25C	AMD	
						AM27C45-25M	† AMD	
		CMOS, Erasable	TS	24	5	CY7C245-25WC	◊ Cypress	
		CMOS Erasable	TS	24	5	CY7C245A-25WM	◊† Cypress	
						CY7C291A-25WC	Cypress	25
						CY7C293A-25WC	Cypress	
						WS57C45-25	**Waferscale (3716)**	
	35 nsF	CMOS	TS	24	5	AM27C45-35C	AMD	
						AM27C45-35M	† AMD	
						TMS27PC291-3	TI	30
						TMS27PC291-35	TI	
		CMOS, Erasable	TS	24	5	CY7C245-35WC	◊ Cypress	
						CY7C245-35WM	◊† Cypress	
		CMOS Erasable	TS	24	5	CY7C245AL-35WC	Cypress	
						CY7C245L-35WC	Cypress	35
						CY7C291-35WC	◊ Cypress	
		CMOS, Erasable	TS	24	5	CY7C291-35WM	◊† Cypress	
		CMOS Erasable	TS	24	5	CY7C291AL-35WC	Cypress	
						CY7C293AL-35WC	Cypress	
						27HC191-35	◊ Microchip	40
						27HC191L-35	◊ Microchip	
						27HC291-35	◊ Microchip	
						27HC291L-35	◊ Microchip	
						TMS27C291-3	TI	
						TMS27C291-35	TI	45

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	35 nsF	CMOS Erasable	TS	24	5		(Cont'd)	
						TMS27C292-3	TI	
						WS57C191B-35	**Waferscale (3716)**	
						WS57C291B-35	Waferscale	
						WS57C45-35	**Waferscale (3716)**	
						WS57C45-35M †	**Waferscale (3716)**	50
		Erasable	TS	24	5	TMS27C292-35	TI	
	45 nsF	CMOS Erasable	TS	24	5	27HC191-45	◊† Microchip	
						27HC191L-45	◊† Microchip	
						27HC291-45	◊† Microchip	
						27HC291L-45	◊† Microchip	55
						TMS27C291	TI	
						TMS27C291-45	TI	
						TMS27C292	TI	
						TMS27C292-45	TI	
						WS57C191B-45M	**† Waferscale (3716)**	60
						WS57C291-45	Waferscale	
						WS57C291B-45M	**† Waferscale (3716)**	
		Reg, Erasable	TS	24	5	CY7C245-45WM	◊† Cypress	
	50 nsF	CMOS	TS	24	5	TMS27C292-5	TI	
						TMS27C292-50	TI	65
		CMOS Erasable	TS	24	5	CY7C291-50WC	◊ Cypress	
						CY7C291-50WM	◊† Cypress	
						CY7C291AL-50WC	Cypress	
						CY7C293AL-50WC	Cypress	
						TMS27C291-5	TI	70
						TMS27C291-50	TI	
	55 nsF	CMOS	TS	24	5	27HC191-55	◊† Microchip	
						27HC191L-55	◊† Microchip	
						27HC291-55	◊† Microchip	
						27HC291L-55	◊† Microchip	75
						M36C16-55 †	SEEQ	
						WS57C191-55M	Waferscale	
						WS57C291-55	Waferscale	
						WS57C291-55M	† Waferscale	
	350 nsF	Erasable	TS	24	5	2716-1	Intel	80
						M2716-1	SGS-Thomson	
		NMOS Erasable, Refurbished	TS	24	±5,12	**2716T-350**	**Krueger (3513)**	
					5	**2716-350**	**Krueger (3513)**	
	390 nsF	Erasable	TS	24	5	2716-2	Intel	
	450 nsF	Erasable	TS	24	5	M2716	Intel	85
						2716	Intel	
						NMC27C16-45	National	
						M2716	SGS-Thomson	
		NMOS Erasable, Refurbished	TS	24	±5,12	**2716T-450**	**Krueger (3513)**	
					5	**2716-450**	**Krueger (3513)**	90

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x8	35 nsF	CMOS	TS	24	5	AM27C43-35C	AMD	
						AM27C43-35M †	AMD	
						WS57C43B-35	**Waferscale (3716)**	
	45 nsF	CMOS	TS	24	5	AM27C43-45C	AMD	
						AM27C43-45M †	AMD	5
						M36C32-45 ◊†	SEEQ	
						WS57C43B-45	**Waferscale (3716)**	
						WS57C43B-45M ◊†	**Waferscale (3716)**	
		CMOS Erasable	TS	24	5	36C32-45	SEEQ	
	55 nsF	CMOS	TS	24	5	M36C32-55 ◊†	SEEQ	10
						36C32-55	SEEQ	
						WS57C43B-55	**Waferscale (3716)**	
						WS57C43B-55M ◊†	**Waferscale (3716)**	
	70 nsF	CMOS	TS	24	5	M36C32-70 ◊†	SEEQ	
						WS57C43B-70	**Waferscale (3716)**	15
						WS57C43B-70M ◊†	**Waferscale (3716)**	
	100 nsF	CMOS	TS	24	5	TMS27C32-10	TI	
						TMS27C32-100	TI	
	120 nsF	CMOS	TS	24	5	TMS27C32-12	TI	
						TMS27C32-120	TI	20
	150 nsF	CMOS	TS	24	5	TMS27C32-15	TI	
						TMS27C32-150	TI	
	170 nsF		TS	24	5	TMS2732A-17	TI	
	200 nsF		TS	24	5	2732A-20	Intel	
						M2732A-2	SGS-Thomson	25
						TMS2732A-20	TI	
		CMOS	TS	24	5	NMC27C32B-200	National	
						TMS27C32-2	TI	
						TMS27C32-20	TI	
	250 nsF		TS	24	5	2732A-25	Intel	30
						M2732A	SGS-Thomson	
						TMS2732A-25	TI	
				28	5	M2732A-25 †	Intel	
		CMOS	TS	24	5	RD27C32-25	Ricoh	
						TMS27C32	TI	35
						TMS27C32-25	TI	
		NMOS Refurbished	TS	24	5	**2732-250**	**Krueger (3513)**	
						2732A-250	**Krueger (3513)**	
	300 nsF		TS	24	5	M2732A-3	SGS-Thomson	
		CMOS	TS	24	5	RD27C32-30	Ricoh	40
		NMOS Refurbished	TS	24	5	**2732-300**	**Krueger (3513)**	
						2732A-300	**Krueger (3513)**	
	350 nsF		TS	24	5	NMC27C32-35	National	
		CMOS	TS	24	5	NMC27C32B-350	National	
						RD27C32-35	Ricoh	45
		NMOS Refurbished	TS	24	5	**2532-350**	**Krueger (3513)**	
						2732-350	**Krueger (3513)**	
						2732A-350	**Krueger (3513)**	
	450 nsF		TS	24	5	NMC27C32-45	National	
						M2732A-4	SGS-Thomson	50
						TMS2732A-45	TI	
				28	5	M2732A-45 †	Intel	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x8	450 nsF						(Cont'd)	
		NMOS Refurbished	TS	24	5	**2532-450**	**Krueger (3513)**	
						2732-450	**Krueger (3513)**	
						2732A-450	**Krueger (3513)**	55
4096x16	55 nsF	CMOS	TS	40	5	WS57C65-55	Waferscale	
	70 nsF	CMOS	TS	40	5	WS57C65-70	Waferscale	
						WS57C65-70M ◊†	Waferscale	
8192x8	35 nsF	CMOS	TS	24	5	AM27C49-35C ◊	AMD	
						AT27HC641-35 ◊	ATMEL	60
						CY7C261-35WC ◊	Cypress	
						CY7C263-35WC	Cypress	
						CY7C264-35WC ◊	Cypress	
						CY7C266-35C	Cypress	
						NMC27C49-35	National	65
						M27HC641	SGS-Thomson	
				28	5	**WS57C49B-35 ◊**	**Waferscale (3716)**	
	40 nsF	CMOS	TS	24	5	CY7C261-40C ◊	Cypress	
						CY7C261-40WC	Cypress	
						CY7C263-40C	Cypress	70
						CY7C263-40WC	Cypress	
						CY7C264-40WC	Cypress	
				28	5	CY7C268-40WC ◊	Cypress	
						CY7C269-40WC ◊	Cypress	
	45 nsF	CMOS	TS	24	5	AM27C49-45C ◊	AMD	75
						AM27C49-45M ◊†	AMD	
						AT27HC641-45	ATMEL	
						AT27HC641L-45 ◊†	ATMEL	
						AT27HC642L-45 ◊†	ATMEL	
						CY7C261-45WC ◊	Cypress	80
						CY7C261-45WM ◊†	Cypress	
						CY7C263-45WC	Cypress	
						CY7C263-45WM †	Cypress	
						CY7C264-45WC ◊	Cypress	
						CY7C264-45WM ◊†	Cypress	85
						27HC641-45 ◊†	Microchip	
						27HC641L-45 ◊†	Microchip	
						NMC27C49-45	National	
						TMS27C49-4	TI	
						TMS27C49-45	TI	90
						WS57C49B-45 ◊	**Waferscale (3716)**	
				28	5	AT27HC64-45 ◊	ATMEL	
						AT27HC642-45 ◊†	ATMEL	
						27HC64-45 ◊†	Microchip	
						27HC64L-45 ◊†	Microchip	95
						WS57C49B-45M ◊†	**Waferscale (3716)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8						(Cont'd)		
	50 nsF	CMOS	TS	28	5	CY7C268-50WC	◊ Cypress	
						CY7C268-50WM	◊† Cypress	
						CY7C269-50WC	◊ Cypress	
						CY7C269-50WM	◊† Cypress	
	55 nsF	CMOS	TS	24	5	AM27C49-55C	◊ AMD	5
						AM27C49-55M	◊† AMD	
						AT27HC641-55	ATMEL	
						AT27HC641L-55	◊† ATMEL	
						AT27HC642L-55	◊† ATMEL	
						CY7C261-55WC	◊ Cypress	10
						CY7C261-55WM	◊† Cypress	
						CY7C263-55WC	Cypress	
						CY7C263-55WM	† Cypress	
						CY7C264-55WC	◊ Cypress	
						CY7C264-55WM	◊† Cypress	15
						27HC641-55	◊ Microchip	
						27HC641L-55	◊ Microchip	
						NMC27C49-55	National	
						TMS27C49-5	TI	
						TMS27C49-55	TI	20
						WS57C49B-55	**Waferscale (3716)**	
						WS57C49B-55M	**◊† Waferscale (3716)**	
				28	5	AM27C64-55	◊ AMD	
						AT27HC64-55	ATMEL	
						AT27HC64L-55	◊† ATMEL	25
						AT27HC642-55	◊† ATMEL	
						27HC64-55	◊ Microchip	
						27HC64L-55	◊ Microchip	
						WS57C49-90M	**◊ Waferscale (3716)**	
						WS57C64F-55	**Waferscale (3716)**	30
			TTL	24	5	LH5749J-55	Sharp	
	60 nsF	CMOS	TS	28	5	CY7C268-60WM	◊† Cypress	
						CY7C269-60WM	◊† Cypress	
	70 nsF	CMOS	TS	24	5	AT27HC64-70	ATMEL	
						AT27HC641-70	ATMEL	35
						AT27HC641L-70	◊† ATMEL	
						AT27HC642L-70	◊† ATMEL	
						27HC641-70	◊† Microchip	
						27HC641L-70	◊† Microchip	
						WS57C49B-70	**Waferscale (3716)**	40
						WS57C49B-70M	**◊† Waferscale (3716)**	
				28	5	AM27C64-70	AMD	
						AT27HC64L-70	◊† ATMEL	
						AT27HC642-70	◊† ATMEL	
						(Continued)		

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	70 nsF	CMOS	TS	28	5	(Cont'd)		
						27HC64-70	◊ Microchip	45
						27HC64L-70	◊ Microchip	
						WS57C64F-70	**Waferscale (3716)**	
						WS57C64F-70M	**† Waferscale (3716)**	
			TTL	24	5	LH5749J-70	Sharp	
				28	5	LH5762J-70	Sharp	50
						LH5763J-70	Sharp	
	90 nsF	CMOS	TS	24	5	AT27HC64-90	ATMEL	
						WS57C49-90M	**◊ Waferscale (3716)**	
				28	5	AM27C64-90	AMD	
						AT27HC64L-90	◊† ATMEL	55
						AT27HC641-90	◊† ATMEL	
						AT27HC642-90	◊† ATMEL	
						WS27C64F-90M	**† Waferscale (3717)**	
			TTL	28	5	LH5763J-90	Sharp	
	100 nsF	CMOS	TS	28	5	TMS27C64-100	TI	60
	120 nsF	CMOS	TS	24	5	AT27HC64-12	ATMEL	
				28	5	AM27C64-120	AMD	
						27C64A-12	◊ Signetics	
						TMS27C64-12	TI	
						TMS27C64-120	TI	65
						WS27C64F-120M	**† Waferscale (3717)**	
	125 nsF	CMOS	TS	28	5	27C64-12	◊ Microchip	
	150 nsF		TS	28	5	AM2764A-15	AMD	
		CMOS	TS	28	5	AM27C64-150	AMD	
						27C64-15	◊† Microchip	70
						NMC27C64-E150	National	
						NMC27C64-150	National	
						TS27C64A-15	SGS-Thomson	
						27C64A-15	◊ Signetics	
						27C64AI-15	◊ Signetics	75
						27C64AI15	◊ Signetics	
						TMS27C64-1	TI	
						TMS27C64-15	TI	
		CMOS Erasable	TS	28	5	**WS27C64F-150M**	**† Waferscale (3717)**	
	160 nsF		TS	28	5	2764-16	◊ SEEQ	80
	170 nsF		TS	28	5	AM2764A-1	AMD	
						M2764A-1	SGS-Thomson	
						TMS2764-17	TI	
		CMOS	TS	28	5	27C64-17	◊ Microchip	
	180 nsF		TS	28	5, 12.5	2764A-1	Intel	85
	200 nsF		TS	28	5	AM2764A-2	AMD	
						AM2764A-20	† AMD	
						AM2764A-20M	† AMD	
						MBM2764-20	◊ Fujitsu	
						DM2764-20	† SEEQ	90
						2764-20	SEEQ	
						8200501YA	† SEEQ	
						M2764A-2	SGS-Thomson	
						TMS2764-20	TI	
					5, 12.5	2764A-2	Intel	95
						2764A-20	Intel	
		CMOS	TS	28	5	AM27C64-200	AMD	
						27C64-20	◊ Microchip	
						NMC27C64-E200	National	
						NMC27C64-M200	† National	100
						27C64-200	† National	
						(Continued)		

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	200 nsF	CMOS	TS	28	5		(Cont'd)	
						ST27C64A	◊ SGS-Thomson	
						TS27C64A-20	SGS-Thomson	
						27C64-20	Signetics	
						27C64A-20	◊† Signetics	
						27C64AI-20	◊ Signetics	5
						27C64AI20	◊ Signetics	
						TMS27C64-2	TI	
						TMS27C64-20	TI	
			TTL	28	5	LH5764J-20	Sharp	
		CMOS, Refurbished						
			TS	28	5	**27C64-200**	**Krueger (3513)**	10
		NMOS	TS	28	5	ST2764A	SGS-Thomson	
		NMOS, Refurbished						
			TS	28	5	**2764-200**	**Krueger (3513)**	
						2764A-200	**Krueger (3513)**	
	250 nsF		TS	28	5	AM2764A	AMD	
						AM2764A-25	† AMD	15
						AM2764A-25M	† AMD	
						MBM2764-25	◊ Fujitsu	
						DM2764-25	† SEEQ	
						2764-25	SEEQ	
						8200502YA	† SEEQ	20
						M2764A	SGS-Thomson	
						TMS2764-25	TI	
					5, 12.5	2764A	Intel	
						2764A-25	Intel	
		CMOS	TS	28	5	AM27C64-250	AMD	25
						MBM27C64-25	◊ Fujitsu	
						27C64-25	◊ Microchip	
						NMC27C64-M250	† National	
						NMC27C64-250	National	
						27C64-250	† National	30
						RD27C64-28	Ricoh	
						TS27C64A-25	SGS-Thomson	
						TMS27C64	TI	
						TMS27C64-25	TI	
			TTL	28	5	LH5764J-25	Sharp	35
		CMOS, Refurbished						
			TS	28	5	**27C64-250**	**Krueger (3513)**	
		NMOS, Refurbished						
			TS	28	5	**2764-250**	**Krueger (3513)**	
	300 nsF		TS	28	5	AM2764A-3	AMD	
						AM2764A-30	AMD	
						MBM2764-30	◊ Fujitsu	40
						MBM2764-30X	◊ Fujitsu	
						2764-30	SEEQ	
						M2764A-3	SGS-Thomson	
		CMOS	TS	28	5	AM27C64-300	AMD	
						MBM27C64-30	◊ Fujitsu	45
						MBM27C64-30W	◊† Fujitsu	
						RD27C64-30	Ricoh	
						TS27C64A-30	SGS-Thomson	
		CMOS, Refurbished						
			TS	28	5	**27C64-300**	**Krueger (3513)**	
		NMOS, Refurbished						
			TS	28	5	**2764-300**	**Krueger (3513)**	50
	350 nsF	CMOS	TS	28	5	27C64-350	† National	
	450 nsF		TS	28	5	AM2764A-4	AMD	
						AM2764A-45M	† AMD	
						MSM2764A	OKI	
						DM2764-45	† SEEQ	55
						2764-45	SEEQ	
						8200507YA	† SEEQ	
						M2764A-4	SGS-Thomson	
						TMS2764-45	TI	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	450 nsF						(Cont'd)	
		NMOS, Refurbished						
			TS	24	5	**2564-450**	**Krueger (3513)**	60
				28	5	**2764-450**	**Krueger (3513)**	
8192x16								
	45 nsF	CMOS	TS	44	5	**MAP168-45**	**Waferscale (3716)**	
	55 nsF	CMOS	TS	44	5	**MAP168-55**	**Waferscale (3716)**	
16384x4								
	200 nsF	CMOS Refurbished						
			TS	28	5	**27C128-200**	**Krueger (3513)**	
		NMOS Refurbished						
			TS	28	5	**27128A-200**	**Krueger (3513)**	65
	250 nsF	CMOS Refubished						
			TS	28	5	**27C128-250**	**Krueger (3513)**	
		NMOS Refurbished						
			TS	28	5	**27128A-250**	**Krueger (3513)**	
	300 nsF	NMOS Refurbished						
			TS	28	5	**27128A-300**	**Krueger (3513)**	
	450 nsF	NMOS Refurbished						
			TS	28	5	**27128A-450**	**Krueger (3513)**	
16384x8								
	40 nsF	CMOS	TS	28	5	**WS57C51B-40**	**Waferscale (3716)**	70
	45 nsF	CMOS	TS	28	5	AM27C51-45C	AMD	
						CY7C251-45WC	◊ Cypress	
						CY7C254-45WC	Cypress	
						NMC27C51-45	National	
						WS57C51B-45	**Waferscale (3716)**	75
						WS57C51B-45M	**◊† Waferscale (3716)**	
	55 nsF	CMOS	TS	28	5	AM27C128-55	◊ AMD	
						AM27C51-55C	AMD	
						AM27C51-55M	† AMD	
						CY7C251-55WC	◊ Cypress	80
						CY7C251-55WM	◊† Cypress	
						CY7C254-55WC	Cypress	
						CY7C254-55WM	† Cypress	
						NMC27C51-55	National	
						WS57C51B-55	**Waferscale (3716)**	85
						WS57C51B-55M	**◊† Waferscale (3716)**	
						WS57C51B-70M	**◊† Waferscale (3716)**	
				40	5	**WS57C257-55**	**Waferscale (3716)**	
	60 nsF	CMOS	TS	28	5	**WS57C128F-55**	**Waferscale (3716)**	
	65 nsF	CMOS	TS	28	5	AM27C51-65C	AMD	90
						AM27C51-65M	† AMD	
						CY7C251-65WC	◊ Cypress	
						CY7C251-65WM	◊ Cypress	
						CY7C254-65WC	Cypress	
						CY7C254-65WM	† Cypress	95
	70 nsF	CMOS	TS	28	5	AM27C128-70	AMD	
						NMC27C51-70	National	
						WS57C128F-70	**Waferscale (3716)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x8							(Cont'd)	
	70 nsF	CMOS	TS	28	5	**WS57C128F-70M**	**† Waferscale (3716)**	
						WS57C51B-70	**Waferscale (3716)**	
			TTL	28	5	LH57126J-70	Sharp	
	90 nsF	CMOS	TS	28	5	AM27C128-90	AMD	
			TTL	28	5	LH57126J-90	Sharp	5
	100 nsF	CMOS	TS	28	5	TMS27C128-100	TI	
						WS27C128F-90M	**† Waferscale (3717)**	
			TTL	28	5	LH57127J-10	Sharp	
	120 nsF	CMOS	TS	28	5	AM27C128-120	AMD	
						AT27C128-12	◊ ATMEL	10
						AT27513R-12	◊† ATMEL	
						SMJ27C128-12	† TI	
						TMS27C128-12	TI	
						TMS27C128-120	TI	
						WS27C128F-120M	**† Waferscale (3717)**	15
		NMOS	TS	28	5	MSM27128A-12	OKI	
	125 nsF	CMOS	TS	28	5	27C128-12	◊ Microchip	
	150 nsF		TS	28	5	AM27128A-15	AMD	
					5, 12.5	27128A-1	◊ Intel	
		CMOS	TS	28	5	AM27C128-150	AMD	20
						AT27C128-15	ATMEL	
						27C128-15	◊ Microchip	
						SMJ27C128-15	† TI	
						TMS27C128-1	TI	
						TMS27C128-15	TI	25
						WS27C128F-150M	**† Waferscale (3717)**	
		Erasable NMOS	TS	28	5	AM27128A-1	AMD	
			TS	28	5	MSM27128A-15	OKI	
	170 nsF	CMOS	TS	28	5	27C128-17	◊ Microchip	
						SMJ27C128-17	† TI	30
	200 nsF		TS	28	5	AM27128A-2	AMD	
						AM27128A-20	AMD	
						AM27128A-20M	† AMD	
						M27128	† Intel	
						DM27128-20	† SEEQ	35
						27128-20	SEEQ	
						8202508YA	† SEEQ	
						M27128A-2	SGS-Thomson	
					5, 12.5	27128A-2	◊ Intel	
						27128A-20	◊ Intel	40
		CMOS	TS	28	5	AM27C128-200	AMD	
						AT27C128-20	ATMEL	
						27C128-20	◊ Microchip	
						NMC27CP128-200	National	
						SMJ27C128-20	† TI	45
						TMS27C128-2	TI	
						TMS27C128-20	TI	
			TTL	28	5	LH57128J-20	Sharp	
		NMOS	TS	28	5	ST27128A	SGS-Thomson	
		NMOS Refurished	TS	28	5	**27128-200**	**Krueger (3513)**	50
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x8							(Cont'd)	
	250 nsF		TS	28	5	AM27128A	AMD	
						AM27128A-25	AMD	
						AM27128A-25M	† AMD	
						AM27128AM	† AMD	
						DM27128-25	† SEEQ	55
						27128-25	SEEQ	
						8202502YA	† SEEQ	
						M27128A	SGS-Thomson	
					5, 12.5	27128A	◊ Intel	
						27128A-25	◊ Intel	60
		CMOS	TS	28	5	AM27C128-250	AMD	
						AT27C128-25	ATMEL	
						27C128-25	◊ Microchip	
						NMC27CP128-250	National	
						27CP128-250	† National	65
						TMS27C128	TI	
						TMS27C128-25	TI	
			TTL	28	5	LH57128J-25	Sharp	
		NMOS Refurbished	TS	28	5	**27128-250**	**Krueger (3513)**	
	300 nsF		TS	28	5	AM27128A-3	AMD	70
						AM27128A-30	AMD	
						AM27128A-30M	† AMD	
						27128-30	SEEQ	
						8202509YA	† SEEQ	
						M27128A-3	SGS-Thomson	75
		CMOS	TS	28	5	AM27C128-300	AMD	
						NMC27CP128-300	National	
						27CP128-300	† National	
						SMJ27C128-30	† TI	
		NMOS Refurbished	TS	28	5	**27128-300**	**Krueger (3513)**	80
	350 nsF		TS	28	5	DM27128-35	† SEEQ	
		CMOS	TS	28	5	27CP128-350	† National	
	450 nsF		TS	28	5	AM27128A-4	AMD	
						M27128-45	† Intel	
						DM27128-45	† SEEQ	85
						27128-45	◊ SEEQ	
						8202501YA	† SEEQ	
						M27128A-4	SGS-Thomson	
		NMOS Refurbished	TS	28	5	**27128-450**	**Krueger (3513)**	
16384x8x4								
	150 nsF	CMOS	TS	28	5	AT27513R-15	◊† ATMEL	90
						27C513-150V10	**Intel (3499)**	
	170 nsF		TS	28	5, 12.5	27513-170V05	Intel	
						27513-170V10	Intel	
	200 nsF		TS	28	5, 12.5	27513-2	Intel	
						27513-20	Intel	95
						27513-200V05	Intel	
						27513-200V10	Intel	
		CMOS	TS	28	5	AT27513R-20	◊† ATMEL	
						27C513-200V10	Intel	
		Emulator with Battery	TS	28	5	GR27513	Greenwich	100
	250 nsF		TS	28	5	27513	Intel	
					5, 12.5	27513-25	Intel	
		CMOS	TS	28	5	AT27513R-25	◊† ATMEL	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x8x8								
	150 nsF	CMOS	TS	28	5	AT27C011-15	◊ ATMEL	
						27C011-150V10	Intel	
	170 nsF	CMOS	TS	28	5	AT27C011-17	◊† ATMEL	
	200 nsF	CMOS	TS	28	5	AT27C011-20	◊† ATMEL	
						27011-200V10	Intel	5
		CMOS Erasable						
			TS	28	5	**27C011-200V10**	**Intel (3498)**	
		Erasable	TS	28	5	27011-200V05	Intel	
	250 nsF	CMOS	TS	28	5	AT27C011-25	◊† ATMEL	
		Erasable	TS	28	5	27011-250V05	Intel	
						27011-250V10	Intel	10
16384x16								
	45 nsF	CMOS	TS	40	5	27HC1616-45	Microchip	
	55 nsF	CMOS	TS	40	5	27HC1616-55	Microchip	
	70 nsF	CMOS	TS	40	5	27HC1616-70	Microchip	
						WS57C257-70	**Waferscale (3716)**	
						WS57C257-70M	**† Waferscale (3716)**	15
	170 nsF	CMOS	TS	40	5	TMS27C210-170	TI	
32768x8								
		CMOS Erasable, Refurbished						
			TS	28	5	**27C256-250**	**Krueger (3513)**	
	35 nsF	CMOS	TS	24	5	CY7C274-35C	Cypress	
	45 nsF	CMOS	TS	24	5	**27CX256-45**	**ICT (3506)**	
				28	5	CY7C271-45WC	Cypress	20
	55 nsF	CMOS	TS	28	5	AM27C256-55	◊ AMD	
						CAT27HC256-55	**Catalyst Semi (3352)**	
						CY7C271-55WC	Cypress	
						CY7C271-55WM	◊† Cypress	
						27HC256-55	◊ Microchip	25
						27HC256L-55	◊ Microchip	
						NMC27C53-55	National	
						WS57C256F-55	**Waferscale (3716)**	
	70 nsF	CMOS	TS	28	5	AM27C256-70	◊ AMD	
						AT27HC256-70	◊† ATMEL	30
						CAT27HC256-70	**Catalyst Semi (3352)**	
						CAT27HC256I-70	**◊ Catalyst Semi (3352)**	
						CAT27HC256L-70	**Catalyst Semi (3352)**	
						CAT27HC256LI-70	**◊ Catalyst Semi (3352)**	
						CAT27HC256LM-70	**◊† Catalyst Semi (3352)**	35
						CAT27HC256M-70	**◊† Catalyst Semi (3352)**	
						27HC256-70	◊† Microchip	
						NMC27C53-70	National	
						TC57H256-70	Toshiba	
						WS57C256-70	Waferscale	40
						WS57C256-70M	† Waferscale	
		CMOS, Erasable						
			TS	28	5	AT27HC256L-70	◊† ATMEL	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	80 nsF	CMOS	TS	28	5	M27C256B	◊ SGS-Thomson	
						M68C257B	◊ SGS-Thomson	
						M87C257B	◊ SGS-Thomson	45
	85 nsF	CMOS	TS	28	5	TC57H256-85	Toshiba	
	90 nsF	CMOS	TS	28	5	AM27C256-90	◊ AMD	
						AM27F256	AMD	
						AT27HC256-90	◊† ATMEL	
						AT27HC256L-90	◊† ATMEL	50
						CAT27HC256-90	**Catalyst Semi (3352)**	
						CAT27HC256I-90	**◊ Catalyst Semi (3352)**	
						CAT27HC256L-90	**Catalyst Semi (3352)**	
						CAT27HC256LI-90	**◊ Catalyst Semi (3352)**	
						CAT27HC256LM-90	**◊† Catalyst Semi (3352)**	55
						CAT27HC256M-90	**◊† Catalyst Semi (3352)**	
						27HC256-90	◊† Microchip	
						27HC256L-90	◊† Microchip	
						NMC27C53-90	National	
						WS27C256L-90	**◊ Waferscale (3717)**	60
	100 nsF	CMOS	TS	28	5	AM27C256-100	AMD	
						WS27C256F-10M	**◊† Waferscale (3717)**	
						WS27C256F-90M	**† Waferscale (3717)**	
						WS27C256L-10	**◊ Waferscale (3717)**	
	120 nsF		TS	66	5	**DPV3232V-120**	**† Dense-Pac (3378, 3382)**	65
		CMOS	TS	28	5	AM27C256-120	AMD	
						AT27C256R-12	◊† ATMEL	
				28	5	AT27HC256-12	◊† ATMEL	
				28	5	AT27HC256L-12	◊† ATMEL	
						CAT27HC256-12	**Catalyst Semi (3352)**	70
						CAT27HC256I-12	**Catalyst Semi (3352)**	
						CAT27HC256L-12	**Catalyst Semi (3352)**	
						CAT27HC256LI-12	**◊ Catalyst Semi (3352)**	
						CAT27HC256LM-12	**◊† Catalyst Semi (3352)**	
						CAT27HC256M-120	**◊† Catalyst Semi (3352)**	75
						27C256-120V10	**◊† Intel (3501)**	
						μPD27C256A-12	NEC	
						27C256-12FA	Signetics	
						TMS27C256-12	TI	
						TMS27C256-120	TI	80
						TMS27C256-150	TI	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	120 nsF	CMOS	TS	28	5		(Cont'd)	
						TC57256A-12	Toshiba	
						WS27C256F-120M	**† Waferscale (3717)**	
						WS27C256F12M	**◊† Waferscale (3717)**	
						WS27C256L-12	**◊ Waferscale (3717)**	
		CMOS, OTP						
			TS	28	5	27C256-12	◊ Signetics	5
		NMOS	TS	28	5	MSM27256-12	OKI	
	150 nsF	CMOS	TS	28	%	SMJ27C256-15	† TI	
					5	AM27C256-150	AMD	
						AT27C256R-15	◊† ATMEL	
						AT29C256-15	◊† ATMEL	10
						MBM28C256-15	Fujitsu	
						HN27C256	Hitachi	
						27C256-150V05	**◊ Intel (3501)**	
						27C256-150V10	**◊† Intel (3501)**	
						27C256-15	◊ Microchip	15
						μPD27C256A-15	NEC	
						RD27C256-15	Ricoh	
						27C256-15FA	Signetics	
						27C256I-15	◊ Signetics	
						TMS27C256-15	TI	20
						TC57256A-15	Toshiba	
						TMM27256B-15	Toshiba	
						WS27C256F-15M	**◊† Waferscale (3717)**	
						WS27C256F-150M	**† Waferscale (3717)**	
				32	5	AT29C257-15	ATMEL	25
		CMOS, OTP						
			TS	28	5	27C256-15	◊ Signetics	
		NMOS	TS	28	5	27256-15	◊ Microchip	
						MSM27256-15	OKI	
	170 nsF		TS	28	5	AM27256-1	AMD	
					5, 12.5	27256-1	◊ Intel	30
		CMOS	TS	28	5	AT27C256R-17	◊† ATMEL	
						HN27C256-17	Hitachi	
						68C257-170V10	Intel	
						87C257-170V10	◊ Intel	
						27C256-17	◊ Microchip	35
						NMC27C256-17	◊ National	
						27C256-17FA	Signetics	
						SMJ27C256-17	† TI	
						TMS27C256-1	TI	
						TMS27C256-17	TI	40
						TMS27C512-1	TI	
						TMX29F256-17	TI	
					5, 12.5	**27C256-1**	**◊ Intel (3501)**	
				32	5	**WS27C256F-17M**	**◊† Waferscale (3717)**	
		NMOS	TS	28	5	27256-17	◊ Microchip	45
	200 nsF		TS	28	5	AM27256-2	AMD	
						AM27256-20	AMD	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	200 nsF		TS	28	5		(Cont'd)	
						AM27256-20M	† AMD	
						27256-2	◊ Intel	
						M27256-2	SGS-Thomson	50
					5, 12.5	27256-20	◊ Intel	
		CMOS	TS	28	5	AM27C256-200	AMD	
						AT27C256R-20	◊† ATMEL	
						AT29C256-20	◊† ATMEL	
						HN27C256-20	Hitachi	55
						27C256-200V10	**◊† Intel (3501)**	
						68C257-200V10	Intel	
						87C257-200V10	◊ Intel	
						27C256-20	◊ Microchip	
						NMC27C256-20	◊ National	60
						μPD27C256A-20	NEC	
						RD27C256-20	Ricoh	
						DM27C256-20	† SEEQ	
						DQ27C256-20	SEEQ	
						ST27C256	◊ SGS-Thomson	65
						TS27C256-20	SGS-Thomson	
						27C256-20FA	Signetics	
						27C256I-20	◊ Signetics	
						SMJ27C256-20	† TI	
						TMS27C256-2	TI	70
						TMS27C256-20	TI	
						TC57256A-20	Toshiba	
						TC58257A-20	Toshiba	
						TMM27256B-20	Toshiba	
						WS27C256F-20M	**◊† Waferscale (3717)**	75
					5, 12.5	MBM27C256A-20	◊ Fujitsu	
						MBM27C256A-20W	◊† Fujitsu	
						27C256-2	**◊ Intel (3501)**	
						27C256-20	**◊ Intel (3501)**	
				32	5	AT29C257-20	ATMEL	80
						LM27C256-20	◊† SEEQ	
		CMOS Refurbished						
			TS	28	5	**27C256-200**	**Krueger (3513)**	
		NMOS	TS	28	5	27256-20	◊ Microchip	
						ST27256	SGS-Thomson	
		NMOS Refurbished						
			TS	28	5	**27256-200**	**Krueger (3513)**	85
	250 nsF		TS	28	5	AM27256	AMD	
						AM27256-25	AMD	
						AM27256-25M	† AMD	
						27C256	**◊ Intel (3501)**	
						27256	◊ Intel	90
						M27256	SGS-Thomson	
					5, 12.5	27256-25	◊ Intel	
		CMOS	TS	28	5	AT27C256R-25	◊† ATMEL	
						AT29C256-25	◊† ATMEL	
						68C257-250V10	Intel	95
						87C257-250V10	◊ Intel	
						27C256-25	◊ Microchip	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	250 nsF	CMOS	TS	28	5		(Cont'd)	
						NMC27C256-E250	◊ National	
						NMC27C256-M250	◊† National	
						NMC27C256-25	◊ National	
						27C256-250	† National	
						RD27C256-25	Ricoh	5
						DM27C256-25	† SEEQ	
						DQ27C256-25	SEEQ	
						TS27C256-25	SGS-Thomson	
						TMS27C256	TI	
						TMS27C256-25	TI	10
						WS27C256F-25M	**◊† Waferscale (3717)**	
					5, 12.5	MBM27C256A-25	◊ Fujitsu	
						MBM27C256A-25W	◊† Fujitsu	
						27C256-25	**◊ Intel (3501)**	
				32	5	AT29C257-25	ATMEL	15
						LM27C256-25	◊† SEEQ	
		NMOS	TS	28	5	27256-25	† Microchip	
		NMOS Refurbished	TS	28	5	**27256-250**	**Krueger (3513)**	
	300 nsF		TS	24	5	M27256-3	SGS-Thomson	
				28	5	AM27256-3	AMD	20
		CMOS	TS	28	5	AM27C256-300	AMD	
						NMC27C256-30	◊ National	
						27C256-300	† National	
						RD27C256-30	Ricoh	
						DM27C256-30	† SEEQ	25
						TS27C256-30	SGS-Thomson	
						SMJ27C256-30	† TI	
				32	5	LM27C256-30	◊† SEEQ	
		CMOS Refurbished	TS	28	5	**27C256-300**	**Krueger (3513)**	
		Erasable	TS	28	5	AM27256-30	AMD	30
		NMOS Refurbished	TS	28	5	**27256-300**	**Krueger (3513)**	
	350 nsF	CMOS	TS	28	5	NMC27C256-M350	◊† National	
						27C256-350	† National	
	450 nsF		TS	28	5	AM27256-4	AMD	
		CMOS	TS	28	5	NMC27C256-45	◊ National	35
32768x16								
	55 nsF	CMOS Module	TS	40	5	**DPV32X16A-55**	**† Dense-Pac (3378, 3382)**	
	70 nsF	CMOS Module	TS	40	5	**DPV32X16A-70**	**† Dense-Pac (3378, 3382)**	
	200 nsF	CMOS Module	TS	40	5	**DPV32X16A-200**	**† Dense-Pac (3378, 3382)**	
	250 nsF	CMOS Module	TS	40	5	**DPV32X16A-250**	**† Dense-Pac (3378, 3382)**	
	120 nsF	CMOS Module	TS	40	5	**DPV32X16A-120**	**† Dense-Pac (3378, 3382)**	40
	90 nsF	CMOS Module	TS	40	5	**DPV32X16A-90**	**† Dense-Pac (3378, 3382)**	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x32								
	55 nsF		TS	66	5	**DPV3232V-55**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	66	5	**DPV3232VA-55**	**Dense-Pac (3378, 3382)**	
	70 nsF		TS	66	5	**DPV3232V-70**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	66	5	**DPV3232VA-70**	**Dense-Pac (3378, 3382)**	45
	90 nsF		TS	66	5	**DPV3232V-90**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	66	5	**DPV3232VA-90**	**Dense-Pac (3378, 3382)**	
	120 nsF	CMOS	TS	66	5	**DPV3232VA-120**	**Dense-Pac (3378, 3382)**	
	150 nsF		TS	66	5	**DPV3232V-150**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	66	5	**DPV3232VA-150**	**Dense-Pac (3378, 3382)**	50
	170 nsF	CMOS	TS	66	5	**DPV3232VA-170**	**Dense-Pac (3378, 3382)**	
	200 nsF	CMOS	TS	66	5	**DPV3232VA-200**	**Dense-Pac (3378, 3382)**	
36288x1								
	400 nsF	CMOS	CMOS	8	5	XC1736	† Xilinx	
65536x1								
	400 nsF	CMOS	TTL	8	5	XC1765	◊ Xilinx	
65536x8								
	20 nsF		TS	28	5	TMS27C512-2	Ricoh	55
	55 nsF	CMOS Module	TS	40	5	**DPV32X16A-55**	**† Dense-Pac (3378, 3382)**	
	70 nsF	CMOS Module	TS	40	5	**DPV32X16A-70**	**† Dense-Pac (3378, 3382)**	
	90 nsF	CMOS	TS	28	5	**WS27C512L-90**	**◊ Waferscale (3717)**	
		CMOS Module	TS	40	5	**DPV32X16A-90**	**† Dense-Pac (3378, 3382)**	
	100 nsF	CMOS	TS	28	5	AM27F512	AMD	60
						M27C512	◊ SGS-Thomson	
						M27C513	◊ SGS-Thomson	
						M27C515	◊ SGS-Thomson	
						M87C512	◊ SGS-Thomson	
						WS27C512L-10	**◊ Waferscale (3717)**	65
	120 nsF	CMOS	TS	28	5	AT27C512R-12	◊† ATMEL	
						27C512-120V10	**† Intel (3500)**	
						μPD27C512-12	NEC	
						27C512-12	◊ Signetics	
						WS27C512L-12	**◊ Waferscale (3717)**	70
		CMOS Module	TS	40	5	**DPV32X16A-120**	**† Dense-Pac (3378, 3382)**	
		NMOS	TS	28	5	MSM27512-12	OKI	
	125 nsF	CMOS	TS	28	5	27C512-12	◊ Microchip	
	150 nsF	CMOS	TS	28	5	AT27C512R-15	◊† ATMEL	
						27C512-150V10	† Intel	75
						27C512-15	◊ Microchip	
						NMC27C512AN150	National	
						μPD27C512-15	NEC	
						27C512-15FA	◊ Signetics	
						TMS27C512-15	TI	80
						TMS27C512-150	TI	
						TC57512A-15	Toshiba	

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x8							(Cont'd)	
	150 nsF							
		CMOS Module						
			TS	40	5	**DPV32X16A-150**	**† Dense-Pac (3378, 3382)**	
		CMOS, OTP						
			TS	28	5	27C512-15	◊ Signetics	
		NMOS	TS	28	5	MSM27512-15	OKI	
	170 nsF		TS	28	5, 12.5	27512-170V05	Intel	
		CMOS	TS	28	5	27C512-17	◊ Microchip	5
						NMC27C512AN170	National	
						27C512A-170	◊† National	
						27C512-17FA	◊ Signetics	
						TMS27C512-17	TI	
		CMOS, OTP						
			TS	28	5	27C512-17	◊ Signetics	10
		NMOS	TS	28	5	TMM27512A-17	Toshiba	
	200 nsF		TS	28	5	M27512-2	SGS-Thomson	
					5, 12.5	27512-2	Intel	
						27512-20	Intel	
						27512-200V05	Intel	15
						27512-200V10	Intel	
		CMOS	TS	28	5	AM27C512-200	AMD	
						AT27C512R-20	◊† ATMEL	
						27C512-200V10	† Intel	
						27C512-20	◊ Microchip	20
						27C512A-200	◊† National	
						μPD27C512-20	NEC	
						27C512-20FA	◊ Signetics	
						SMJ27C512-20	† TI	
						TMS27C512-2	TI	25
						TMS27C512-20	TI	
						TC57512A-20	Toshiba	
		CMOS Module						
			TS	40	5	**DPV32X16A-200**	**† Dense-Pac (3378, 3382)**	
		CMOS, OTP						
			TS	28	5	27C512-20	◊ Signetics	
		CMOS, Refurbished						
			TS	28	5	**27C512-200**	**Krueger (3513)**	30
		Emulator with Battery						
			TS	28	5	GR27512	Greenwich	
		NMOS	TS	28	5	TMM27512A-20	Toshiba	
		NMOS, Refurbished						
			TS	28	5	**27512-200**	**Krueger (3513)**	
	250 nsF		TS	28	5	AM27512	AMD	
						AM27512-25	AMD	35
						27512	Intel	
						TMS27C512	Ricoh	
						M27512	SGS-Thomson	
					5, 12.5	27512-25	Intel	
		CMOS	TS	28	5	AM27C512-250	AMD	40
						AT27C512R-25	◊† ATMEL	
						27C512-25	◊ Microchip	
						NMC27C512-250	National	
						NMC27C512AN250	National	
						27C512A-250	◊† National	45
						μPD27C512-25	NEC	
						SMJ27C512-25	† TI	
						TMS27C512	TI	
						TMS27C512-25	TI	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x8							(Cont'd)	
	250 nsF							
		CMOS Module						
			TS	40	5	**DPV32X16A-250**	**† Dense-Pac (3378, 3382)**	50
		CMOS, Refurbished						
			TS	28	5	**27C512-250**	**Krueger (3513)**	
		NMOS, Refurbished						
			TS	28	5	**27512-250**	**Krueger (3513)**	
	300 nsF		TS	28	5	AM27512-3	AMD	
						AM27512-30	AMD	
						AM27512-30M	† AMD	55
						TMS27C512-3	Ricoh	
						M27512-3	SGS-Thomson	
					5, 12.5	27512-3	Intel	
						27512-30	Intel	
		CMOS	TS	28	5	NMC27C512-300	National	60
						SMJ27C512-30	† TI	
						TMS27C512-3	TI	
						TMS27C512-30	TI	
	350 nsF		TS	28	5	TMS27C512-4	Ricoh	
		CMOS	TS	28	5	NMC27C512-350	National	65
	450 nsF		TS	28	5	AM27512-45	AMD	
						AM27512-45M	† AMD	
						M27512-4	SGS-Thomson	
	200 nsF	CMOS	TS	28	5	NMC27C512AN200	National	
65536x16								
	45 nsF	CMOS	TS	40	5	27C213-45V05	◊ Intel	70
	55 nsF		TS	66	5	**DPV3232V-55**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	40	5	AT27HC1024-55	◊ ATMEL	
						27C213-55V05	◊ Intel	
						27C213-55V10	◊ Intel	
		CMOS Module						
			TS	40	5	**DPV64X16A-200**	**† Dense-Pac (3378, 3382)**	75
						DPV64X16A-55	**Dense-Pac (3378, 3382)**	
						DPV64X16A-70	**† Dense-Pac (3378, 3382)**	
	70 nsF	CMOS	TS	40	5	AT27HC1024-70	◊† ATMEL	
	85 nsF	CMOS	TS	40	5	TC57H1024-85	Toshiba	
	90 nsF		TS	66	5	**DPV3232V-90**	**† Dense-Pac (3378, 3382)**	80
		CMOS	TS	40	5	AT27HC1024-90	◊† ATMEL	
		CMOS Module						
			TS	40	5	**DPV64X16A-90**	**† Dense-Pac (3378, 3382)**	
	100 nsF	CMOS	TS	40	5	AM27C1024-105	◊ AMD	
						TC57H1024-10	Toshiba	
	120 nsF		TS	66	5	**DPV3232V-120**	**† Dense-Pac (3378, 3382)**	85
		CMOS	TS	28	5	MBM27C1028	◊ Fujitsu	
				40	5	AM27C1024-120	◊ AMD	
						AT27HC1024-12	◊† ATMEL	
						NMC27C1024-120	National	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
65536x16							(Cont'd)
	120 nsF	CMOS	TS	40	5	μPD27C1024A-12	NEC
						M27C1024 ◊	SGS-Thomson
		CMOS Module	TS	40	5	**DPV64X16A-120 †**	**Dense-Pac (3378, 3382)**
						DPV64X16A-120 †	**Dense-Pac (3378, 3382)**
		NMOS	TS	40	5	MSM271024-12	OKI
	130 nsF	CMOS	TS	40	5	**27C210-130V10**	**Intel (3495)**
	150 nsF		TS	66	5	**DPV3232V-150 †**	**Dense-Pac (3378, 3382)**
		CMOS	TS	40	5	AM27C1024-150	◊‡ AMD
						AT27C1024-15	◊ ATMEL
						AT27C1024L-15	◊ ATMEL
						AT27HC1024-15	◊† ATMEL
						CAT27C210-15 ◊	**Catalyst Semi (3352)**
						MBM27C1024-15	Fujitsu
						27C210-150V10	◊† Intel
						NMC27C1024-150	National
						μPD27C1024-15	NEC
						μPD27C1024A-15	NEC
						27C210-15FA ◊	Signetics
						TC571024-15	Toshiba
		CMOS, OTP	TS	40	5	27C210-15 ◊	Signetics
		NMOS	TS	40	5	MSM271024-15	OKI
	150nsF	CMOS	TS	40	5	27C210-150 ◊	Krueger
						27C210-170	Krueger
	170 nsF	CMOS	TS	40	5	AT27C1024-17	◊† ATMEL
						AT27C1024L-17	◊† ATMEL
						CAT27C210-170	**Catalyst Semi (3352)**
				44	5	**CAT27C210I-170**	**Catalyst Semi (3352)**
		CMOS Module	TS	40	5	**DPV64X16A-170 †**	**Dense-Pac (3378, 3382)**
	200 nsF	CMOS	TS	40	5	AM27C1024-200	AMD
						AT27C1024-20	◊† ATMEL
						AT27C1024L-20	◊† ATMEL
						27C210-200V10	◊† Intel
						NMC27C1024-200	National
						μPD27C1024-20	NEC
						μPD27C1024A-20	NEC
						27C210-20FA ◊	Signetics
						SMJ27C210-20	† TI
						TMS27C210-20	TI
						TMS27C210-200	TI
						TC571024-20	Toshiba
							(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
65536x16							(Cont'd)
	200 nsF	CMOS	TS	44	5	**CAT27C210I-200**	**Catalyst Semi (3352)**
		CMOS, OTP	TS	40	5	27C210-20 ◊	Signetics
	200nsF	CMOS	TS	40	5	27C210-200	Krueger
	250 nsF		TTL	40	5	AM27C1024	AMD
		CMOS	TS	40	5	AM27C1024-250	AMD
						AT27C1024-25	◊† ATMEL
						AT27C1024L-25	◊† ATMEL
						μPD27C1024-25	NEC
						SMJ27C210-25	† TI
						TMS27C210-25	TI
						TMS27C210-250	TI
				44	5	**CAT27C210I-250**	**Catalyst Semi (3352)**
		CMOS Module	TS	40	5	**DPV64X16A-250 †**	**Dense-Pac (3378, 3382)**
	300 nsF	CMOS	TS	40	5	AM27C1024-300	AMD
						TMS27C210-30	TI
						TMS27C210-300	TI
	150 nsF	CMOS Module	TS	40	5	**DPV64X16A-150 †**	**Dense-Pac (3378, 3382)**
65536x32							
	120 nsF		TS	66	5	**DPV6432V-120 †**	**Dense-Pac (3378, 3382)**
	150 nsF	EX	TS	66	5	**DPV6432V-150 †**	**Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ64X32B-150	† Dense-Pac
	200 nsF		TS	66	5	**DPV6432V-200 †**	**Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ64X32B-200	† Dense-Pac
	250 nsF		TS	66	5	**DPV6432V-250 †**	**Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ64X32B-250	† Dense-Pac
129536x8		CMOS	TS	44	5	**27960KX**	**Intel (3504)**
	120 nsF	CMOS	TS	32	5	**27C010-120 ◊**	**Intel (3496)**
131072x8							
	30 nsF	CMOS	TS	44	5	**27960C2-33 ◊**	**Intel (3503)**
	40 nsF	CMOS	TS	44	5	**27960C2-25 ◊**	**Intel (3503)**
						27960LC2-25 ◊	Intel
	50 nsF	CMOS	TS	44	5	**27960C1-20 ◊**	**Intel (3503)**
						27960LC1-20 ◊	Intel
						27960LC2-20 ◊	Intel
	55 nsF		TS	66	5	**DPV3232V-55 †**	**Dense-Pac (3378, 3382)**
		CMOS	TS	24	5	**27CX010-55**	**ICT (3506)**
		CMOS Module	TS	40	5	**DPV64X16A-55 †**	**Dense-Pac (3378, 3382)**
	62.5 nsF	CMOS	TS	44	5	**27960C1-16 ◊**	**Intel (3503)**
	70 nsF	CMOS	TS	24	5	**27CX010-70**	**ICT (3506)**
				32	5	**CAT27HC010-70 †**	**Catalyst Semi (3352)**
						CAT27HCU10I-70	**Catalyst Semi (3352)**
							(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8								
	70 nsF						(Cont'd)	
		CMOS Module	TS	40	5	**DPV64X16A-70**	**† Dense-Pac (3378, 3382)**	
	90 nsF		TS	66	5	**DPV3232V-90**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	32	5	**CAT27HC010-90**	**† Catalyst Semi (3352)**	
						CAT27HC010I-90	**Catalyst Semi (3352)**	
		CMOS Module	TS	40	5	**DPV64X16A-90**	**† Dense-Pac (3378, 3382)**	5
	100 nsF	CMOS	TS	32	5	AM27C010-105	◊ AMD	
						WS27C010L-10	**◊ Waferscale (3717)**	
	120 nsF		TS	66	5	**DPV3232V-120**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	32	5	AM27C010-120	◊ AMD	
						AM27C100-120	AMD	10
						AM27F010	AMD	
						CAT27HC010-120	**† Catalyst Semi (3352)**	
						CAT27HC010I-120	**Catalyst Semi (3352)**	
						27C100-120V10	**Intel (3497)**	
						μPD27C1000A-12	NEC	15
						μPD27C1001A-12	NEC	
						M27C1000	◊ SGS-Thomson	
						M27C1001	◊ SGS-Thomson	
						M27C1011	◊ SGS-Thomson	
						M87C1000	◊ SGS-Thomson	20
						M87C1001	◊ SGS-Thomson	
						WS27C010L-12	**Waferscale (3717)**	
						WS27C010L-12M	**◊† Waferscale (3717)**	
		CMOS Module	TS	40	5	**DPV64X16A-120**	**Dense-Pac (3378, 3382)**	
		Flash	TS	32	12	**CAT28F010-12**	**◊ Catalyst Semi (3351)**	25
		NMOS Erasable	TS	32	5	MSM271000-12	OKI	
	150 nsF		TS	66	5	**DPV3232V-150**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	32	5	AM27C010-150	◊‡ AMD	
						AM27C100-150	AMD	
						AT27C010-15	◊ ATMEL	30
						AT27C010L-15	◊ ATMEL	
						AT29C010-15	ATMEL	
						MBM27C1001-15	Fujitsu	
						27C100-150V10	Intel	
						NMC27C010-15	National	35
						NMC27C010-150	National	
						μPD27C1000A-15	NEC	
						μPD27C1001A-15	NEC	
						TC571000-15	**Toshiba (3677)**	
						TC571001-15	**Toshiba (3677)**	40
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8								
	150 nsF	CMOS	TS	32	5		(Cont'd)	
						WS27C010L-15	**Waferscale (3717)**	
						WS27C010L-15M	**◊† Waferscale (3717)**	
		CMOS Module	TS	40	5	**DPV64X16A-150**	**† Dense-Pac (3378, 3382)**	
		Flash	TS	32	12	**CAT28F010-15**	**◊ Catalyst Semi (3351)**	
		NMOS	TS	32	5	MSM271000-15	OKI	45
	170 nsF	CMOS	TS	28	5	TMS27C010-170	TI	
				32	5	AM27C100-170	AMD	
						AT27C010-17	◊† ATMEL	
						AT27C010L-17	◊† ATMEL	
						NMC27C010-17	National	50
						NMC27C010-170	National	
						NMC27C010M-17	† National	
						NMC27C010M-170	† National	
						WS27C010L-17M	**◊† Waferscale (3717)**	
		CMOS Module	TS	40	5	**DPV64X16A-170**	**† Dense-Pac (3378, 3382)**	55
	200 nsF		TS	32	5	**27010-200V05**	**Krueger (3513)**	
		CMOS	TS	32	5	AM27C100-200	AMD	
						AM27X100-200	AMD	
						AT27C010-20	◊† ATMEL	
						AT27C010L-20	◊† ATMEL	60
						AT29C010-20	ATMEL	
						DPV27C101-200	**◊† Dense-Pac (3378)**	
						HN27C101-20	Hitachi	
						HN27C301-20	Hitachi	
						27C100-200V10	Intel	65
						NMC27C010-20	National	
						NMC27C010-200	National	
						NMC27C010M-20	† National	
						NMC27C010M-200	† National	
						μPD27C1000A-20	NEC	70
						μPD27C1001A-20	NEC	
						SMJ27C010-20	† TI	
						TMS27C010-20	TI	
						TMS27C010-200	TI	
						TC571000-20	**Toshiba (3677)**	75
						TC571001-20	**Toshiba (3677)**	
						WS27C010L-20M	**◊† Waferscale (3717)**	
		CMOS Module	TS	40	5	**DPV64X16A-200**	**† Dense-Pac (3378, 3382)**	
		Flash	TS	32	12	**CAT28F010-20**	**◊ Catalyst Semi (3351)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8							(Cont'd)	
	250	CMOS Module	TS	40	5	**DPV64X16A-250**	**† Dense-Pac (3378, 3382)**	
	250 nsF	CMOS	TS	32	5	AM27C100-250	AMD	
						AM27X100-250	AMD	
						AT27C010L-25	◊† ATMEL	
						AT27C101-25	◊† ATMEL	5
						AT29C010-25	ATMEL	
						DPV27C101-250	**◊† Dense-Pac (3378)**	
						HN27C101-25	Hitachi	
						HN27C301-25	Hitachi	
						NMC27C010-25	National	10
						NMC27C010-250	National	
						27C010-250/883	◊† National	
						SMJ27C010-25	† TI	
						TMS27C010-25	TI	
						TMS27C010-250	TI	15
						WS27C010L-25M	**◊† Waferscale (3717)**	
	300 nsF	CMOS	TS	32	5	AM27C100-300	AMD	
						AM27X100-300	AMD	
						DPV27C101-300	**◊† Dense-Pac (3378)**	
						27C010-300/883	◊† National	20
						TMS27C010-30	TI	
						TMS27C010-300	TI	
	350 nsF	CMOS	TS	32	5	**DPV27C101-350**	**◊† Dense-Pac (3378)**	
131072x8 (EPROM emulator)						GR27010	Greenwich	
131072x16								
	100 nsF	CMOS	TS	40	5	AM27C2048	AMD	25
						AM27C2048-105	◊ AMD	
	120 nsF		TS	66	5	**DPV6432V-120**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	40	5	AM27C2048-120	◊ AMD	
	150 nsF		TS	66	5	**DPV6432V-150**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	40	5	AM27C2048-150	◊ AMD	30
						27C220-150V10	**† Intel (3494)**	
						NMC27C2048-15	National	
		Flash Module	TS	66	5	DPZ64X32B-150	† Dense-Pac	
	170 nsF	CMOS	TS	40	5	AM27C2048-170	◊ AMD	
						NMC27C2048-17	National	35
						NMC27C2048M-17	† National	
	200 nsF		TS	66	5	**DPV6432V-200**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	40	5	AM27C2048-200	◊ AMD	
						27C220-200V10	◊† Intel	
						NMC27C2048-20	National	40
						NMC27C2048M-20	† National	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x16								
	200 nsF						(Cont'd)	
		Flash Module	TS	66	5	DPZ64X32B-200	† Dense-Pac	
	250 nsF		TS	66	5	**DPV6432V-250**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	40	5	AM27C2048-250	◊ AMD	
						NMC27C2048-25	National	45
		Flash Module	TS	66	5	DPZ64X32B-250	† Dense-Pac	
		TTL	TS	68	5	MB98A608A-25	Fujitsu	
	300 nsF	Module	TS	56	5	**DPV6432V-300**	**◊† Dense-Pac (3378, 3382)**	
	120 nsF	CMOS Module	TS	40	5	**DPV128X16A-120**	**† Dense-Pac (3378, 3382)**	
	150 nsF	CMOS Module	TS	40	5	**DPV128X16A-150**	**† Dense-Pac (3378, 3382)**	50
	170 nsF	CMOS Module	TS	40	5	**DPV128X16A-170**	**† Dense-Pac (3378, 3382)**	
	200 nsF	CMOS Module	TS	40	5	**DPV128X16A-200**	**† Dense-Pac (3378, 3382)**	
	250 nsF	CMOS Module	TS	40	5	**DPV128X16A-250**	**† Dense-Pac (3378, 3382)**	
131072x32								
	120 nsF		TS	66	5	**DPV12832V-120**	**† Dense-Pac (3378, 3382)**	
	150 nsF		TS	66	5	**DPV12832V-150**	**† Dense-Pac (3378, 3382)**	55
	200 nsF		TS	66	5	**DPV12832V-200**	**† Dense-Pac (3378, 3382)**	
	250 nsF		TS	66	5	**DPV12832V-250**	**† Dense-Pac (3378, 3382)**	
131972x8								
	62.5 nsF	CMOS	TS	44	5	27960LC1-16	◊ Intel	
262144x8		Module	TS	32	5	**PEP256KX8E**	**Peps (3573)**	
	100 nsF	CMOS	TS	32	5	AM27C020-105	◊ AMD	60
	120 nsF		TS	66	5	**DPV6432V-120**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	32	5	AM27C020-120	◊ AMD	
		CMOS Module	TS	40	5	**DPV128X16A-120**	**† Dense-Pac (3378, 3382)**	
	150 nsF		TS	66	5	**DPV6432V-150**	**† Dense-Pac (3378, 3382)**	
		CMOS	TS	32	5	AM27C020	AMD	65
						AM27C020-150	◊† AMD	
						27C020-150V10	**† Intel (3493)**	
						NMC27C020-15	National	
						μPD27C2001-15	NEC	
		CMOS Module	TS	40	5	**DPV128X16A-150**	**† Dense-Pac (3378, 3382)**	70
		Flash Module	TS	66	5	DPZ64X32B-150	† Dense-Pac	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
262144x8							
	170 nsF	CMOS	TS	32	5	AM27C020-170	◊† AMD
						NMC27C020-17	National
						NMC27C020M-17	† National
						μPD27C2001-17	NEC
		CMOS Module	TS	40	5	**DPV128X16A-170**	**† Dense-Pac (3378, 3382)**
	200 nsF		TS	66	5	**DPV6432V-200**	**† Dense-Pac (3378, 3382)**
		CMOS	TS	32	5	AM27C020-200	◊† AMD
						27C020-200V10	◊† Intel
						NMC27C020-20	National
						NMC27C020M-20	† National
						μPD27C2001-20	NEC
		CMOS Module	TS	40	5	**DPV128X16A-200**	**† Dense-Pac (3367, 3382)**
		Flash Module	TS	66	5	DPZ64X32B-200	† Dense-Pac
	250 nsF		TS	66	5	**DPV6432V-250**	**† Dense-Pac (3378, 3382)**
		CMOS	TS	32	5	AM27C020-250	◊† AMD
						NMC27C020-25	National
		CMOS Module	TS	40	5	**DPV128X16A-250**	**† Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ64X32B-250	† Dense-Pac
		TTL	TS	68	5	**MB98A608A-25**	**Fujitsu (3424)**
	300 nsF	CMOS	TS	32	5	AM27C020-30	◊† AMD
262144x16							
	100 nsF	CMOS	TS	40	5	TC574096-100	Toshiba
	120 nsF		TS	66	5	**DPV12832V-120**	**† Dense-Pac (3378, 3382)**
		CMOS	TS	40	5	AM27C4096	AMD
						AM27C4096-120	◊ AMD
						TC574096-120	Toshiba
	150 nsF		TS	66	5	**DPV12832V-150**	**† Dense-Pac (3378, 3382)**
		CMOS	TS		5	27C240	◊ Signetics
				40	5	AM27C4096-150	◊ AMD
						27C240-150V10	**† Intel (3492)**
						27C400-150V10	**Intel (3491)**
	200 nsF		TS	66	5	**DPV12832V-200**	**† Dense-Pac (3378, 3382)**
		CMOS	TS	40	5	AM27C4096-200	◊ AMD
						27C240-200V10	† Intel
						27C400-200V10	Intel
	250 nsF		TS	66	5	**DPV12832V-250**	**† Dense-Pac (3378, 3382)**
		CMOS	TS	40	5	AM27C4096-250	◊ AMD
		TTL	TS	68	5	MB98A609A-25	Fujitsu
262144x32							
	170 nsF	Flash Module	TS	66	5	DPZ256X32B-170	† Dense-Pac
	200 nsF	Flash Module	TS	66	5	DPZ256X32B-200	† Dense-Pac
	250 nsF	Flash Module	TS	66	5	DPZ256X32B-250	† Dense-Pac
524288x8							
	120 nsF		TS	66	5	**DPV12832V-120**	**† Dense-Pac (3378, 3382)**
	150 nsF		TS	66	5	**DPV12832V-150**	**† Dense-Pac (3378, 3382)**
		CMOS	TS		5	27C040	◊ Signetics
				32	5	**27C040-150V10**	**† Intel (3490)**
						μPD27C4001-15	NEC
						TC574000-15	**Toshiba (3676)**
				66	5	**DPV12832VA-150**	**Dense-Pac (3378, 3382)**
	170 nsF	CMOS	TS	32	5	μPD27C4001-17	NEC
				66	5	**DPV12832VA-170**	**Dense-Pac (3378, 3382)**
	200 nsF		TS	66	5	**DPV12832V-200**	**† Dense-Pac (3367, 3382)**
		CMOS	TS	32	5	27C040-200V10	† Intel
						μPD27C4001-20	NEC
				66	5	**DPV12832VA-200**	**Dense-Pac (3378, 3382)**
	250 nsF		TS	66	5	**DPV12832V-250**	**† Dense-Pac (3378, 3382)**
		TTL	TS	68	5	**MB98A609A-25**	**Fujitsu (3424)**
524288x16							
	170 nsF	CMOS	TS	66	5	**DPV256X32V-170**	**Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ256X32B-170	† Dense-Pac
	200 nsF	CMOS	TS	66	5	**DPV256X32V-200**	**Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ256X32B-200	† Dense-Pac
	250 nsF	CMOS	TS	66	5	**DPV256X32V-250**	**Dense-Pac (3378, 3382)**
		Flash Module	TS	66	5	DPZ256X32B-250	† Dense-Pac
		TTL	TS	68	5	MB98A610A-25	Fujitsu
	300 nsF	CMOS	TS	66	5	**DPV256X32V-300**	**Dense-Pac (3378, 3382)**
	350 nsF	CMOS	TS	66	5	**DPV256X32V-350**	**Dense-Pac (3378, 3382)**
1048576x8							
	170 nsF	Flash Module	TS	66	5	DPZ256X32B-170	† Dense-Pac
	250 nsF	Flash Module	TS	66	5	DPZ256X32B-250	† Dense-Pac
		TTL	TS	68	5	**MB98A610A-25**	**Fujitsu (3424)**

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—EPROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x16								
	150 nsF	Flash Module	TS	50	5	**DPZ1MS16P-150**	**Dense-Pac (3372, 3379)**	
	200 nsF	Flash Module	TS	50	5	**DPZ1MS16P-200**	**Dense-Pac (3372, 3379)**	
	250 nsF	Flash Module	TS	50	5	**DPZ1MS16P-250**	**Dense-Pac (3372, 3379)**	
1048576x200								
	200 nsF	Flash Module	TS	66	5	DPZ256X32B-200	† Dense-Pac	
16384x8								
	150 nsF	NMOS	TS	28	5	M27128A-1F1	SGS-Thomson	5
2097152x8								
	150 nsF	Flash Module	TS	50	5	**DPZ1MS16P-150**	**Dense-Pac (3372, 3379)**	
	200 nsF	Flash Module	TS	50	5	**DPZ1MS16P-200**	**Dense-Pac (3372, 3379)**	
	250 nsF	Flash Module	TS	50	5	**DPZ1MS16P-250**	**Dense-Pac (3372, 3379)**	
2097152x16								
	200 nsF	Flash Module	TS	50	5	**DPZ2MS16P-200**	**Dense-Pac (3372, 3379)**	
	250 nsF	Flash Module	TS	50	5	**DPZ2MS16P-250**	**Dense-Pac (3372, 3379)**	10
	300 nsF	Flash Module	TS	50	5	**DPZ2MS16P-300**	**Dense-Pac (3372, 3379)**	
32768x16								
	55 nsF	CMOS Module	TS	40	5	**DPV32X16A-150**	**† Dense-Pac (3378, 3382)**	
32768x8								
	170 nsF	CMOS	TS	28	5	87C257	◊ Intel	
		NMOS	TS	28	5	M27256-1F1	SGS-Thomson	
4194304x8								
	200 nsF	Flash Module	TS	50	5	**DPZ2MS16P-200**	**Dense-Pac (3379)**	15
	250 nsF	Flash Module	TS	50	5	**DPZ2MS16P-250**	**Dense-Pac (3379)**	
	300 nsF	Flash Module	TS	50	5	DPZ2MS16P-300	Dense-Pac	
64x16	200nsF	CMOS	TS	8	5	BR93C46	ROHM	
8192x8	150 nsF	NMOS	TS	28	5	M2F64A-15XF1	SGS-Thomson	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—FLASH

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	120 nsF	CMOS	TS	32	12	**28F256A-120** ◊	**Intel (3488)**	
	150 nsF	CMOS	TS	32	12	28F256A-150 ◊	Intel	
	200 nsF	CMOS	TS	32	12	28F256A-200 ◊	Intel	
65536x8								
	150 nsF	CMOS	TS	32	12	28F512-150 ◊	Intel	
		CMOS Module	TS	40	5	**DPZ32X16A-150**	**Dense-Pac (3379, 3382)**	5
	170 nsF	CMOS Module	TS	40	5	**DPZ32X16A-170**	**Dense-Pac (3379, 3382)**	
	200 nsF	CMOS	TS	32	5	**CAT28F512**	**Catalyst Semi (3351)**	
						CAT28F512V5	**Catalyst Semi (3351)**	
					12	28F512-200 ◊	Intel	
		CMOS Module	TS	40	5	**DPZ32X16A-200**	**Dense-Pac (3379, 3382)**	10
	250 nsF	CMOS Module	TS	40	5	**DPZ32X16A-250**	**Dense-Pac (3379, 3382)**	
	300 nsF	CMOS Module	TS	40	5	**DPZ32X16A-300**	**Dense-Pac (3379, 3382)**	
	350 nsF	CMOS Module	TS	40	5	**DPZ32X16A-350**	**Dense-Pac (3379, 3382)**	
131072x8								
	120 nsF	CMOS	TS	32	12	**28F010-120** ◊	**Intel (3486)**	
		CMOS Module	TS	40	5	**DPZ64X16A-120**	**Dense-Pac (3379)**	15
	135 nsF	CMOS Module	TS	40	5	**DPZ64X16A-135**	**Dense-Pac (3379)**	
	150 nsF	CMOS	TS	32	12	28F010-150 ◊	Intel	
						28F020-150 ◊	**Intel (3485)**	
		CMOS Module	TS	40	5	**DPZ64X16A-150**	**Dense-Pac (3379)**	
				66	5	**DPZ32X32V-150**	**Dense-Pac (3379, 3382)**	20
	170 nsF	CMOS Module	TS	40	5	**DPZ64X16A-170**	**Dense-Pac (3379)**	
				66	5	**DPZ32X32V-170**	**Dense-Pac (3379, 3382)**	
	200 nsF	CMOS	TS	32	12	28F010-200 ◊	Intel	
						28F020-200 ◊	Intel	
		CMOS Module	TS	40	5	**DPZ64X16A-200**	**Dense-Pac (3379)**	25
				66	5	**DPZ32X32V-200**	**Dense-Pac (3379, 3382)**	
	250 nsF	CMOS Module	TS	40	5	**DPZ64X16A-250**	**Dense-Pac (3379)**	
				66	5	**DPZ32X32V-250**	**Dense-Pac (3379, 3382)**	
	300 nsF	CMOS Module	TS	40	5	**DPZ64X16A-300**	**Dense-Pac (3379)**	
				66	5	**DPZ32X32V-300**	**Dense-Pac (3379, 3382)**	30
	350 nsF	CMOS Module	TS	66	5	**DPZ32X32V-350**	**Dense-Pac (3379, 3382)**	
262144x8								
	120 nsF	CMOS Module	TS	40	5	**DPZ128X16A-120**	**Dense-Pac (3379, 3382)**	
				66	5	**DPZ64X32V-120**	**Dense-Pac (3379)**	
	135 nsF	CMOS Module	TS	40	5	**DPZ128X16A-135**	**Dense-Pac (3379, 3382)**	
	150 nsF	CMOS Module	TS	66	5	**DPZ64X32V-150**	**Dense-Pac (3379)**	35

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x8							(Cont'd)	
	170 nsF	CMOS Module	TS	40	5	**DPZ128X16A-170**	**Dense-Pac (3379, 3382)**	
				66	5	**DPZ64X32V-170**	**Dense-Pac (3379)**	
	200 nsF	CMOS Module	TS	40	5	**DPZ128X16A-200**	**Dense-Pac (3379, 3382)**	
				66	5	**DPZ64X32V-200**	**Dense-Pac (3379)**	
	250 nsF	CMOS Module	TS	40	5	**DPZ128X16A-250**	**Dense-Pac (3379, 3382)**	40
				66	5	**DPZ64X32V-250**	**Dense-Pac (3379)**	
	300 nsF	CMOS Module	TS	40	5	**DPZ128X16A-300**	**Dense-Pac (3379, 3382)**	
				66	5	**DPZ64X32V-300**	**Dense-Pac (3379)**	
524288x8								
	120 nsF	CMOS Module	TS	66	5	**DPZ128X32V-120**	**Dense-Pac (3379, 3382)**	
	135 nsF	CMOS Module	TS	66	5	**DPZ128X32V-135**	**Dense-Pac (3379, 3382)**	45
	150 nsF	CMOS Module	TS	66	5	**DPZ128X32V-150**	**Dense-Pac (3379, 3382)**	
	170 nsF	CMOS Module	TS	66	5	**DPZ128X32V-170**	**Dense-Pac (3379, 3382)**	
	200 nsF	CMOS Module	TS	66	5	**DPZ128X32V-200**	**Dense-Pac (3379, 3382)**	
	250 nsF	CMOS Module	TS	66	5	**DPZ128X32V-250**	**Dense-Pac (3379, 3382)**	
	300 nsF	CMOS Module	TS	66	5	**DPZ128X32V-300**	**Dense-Pac (3379, 3382)**	50
524288x16								
	120 nsF	CMOS	TS	80	12	**SM28F001AX-120** ◊	**Intel (3489)**	
	150 nsF	CMOS	TS	80	12	M28F001AX-150 ◊	Intel	
	200 nsF	CMOS	TS	80	12	SM28F001AX-200 ◊	Intel	
1048576x8								
	170 nsF	CMOS Module	TS	66	5	**DPZ256X32V-170**	**Dense-Pac (3379, 3382)**	
	200 nsF	CMOS Module	TS	66	5	**DPZ256X32V-200**	**Dense-Pac (3379, 3382)**	55
	250 nsF	CMOS Module	TS	66	5	**DPZ256X32V-250**	**Dense-Pac (3379, 3382)**	
2097152x8								
	150 nsF	CMOS Module	TS	48	5	DPZ1MS16P	Dense-Pac	
	200 nsF	CMOS Module	TS	48	5	**DPZ1MS16P-200**	**Dense-Pac (3372, 3379)**	
	250 nsF	CMOS Module	TS	48	5	**DPZ1MS16P-250**	**Dense-Pac (3372, 3379)**	
4194304x8								
	200 nsF	CMOS Module	TS	48	5	DPZMS16P-200	Dense-Pac	60
	250 nsF	CMOS Module	TS	48	5	**DPZ2MS16P-250**	**Dense-Pac (3372, 3379)**	
	300 nsF	CMOS Module	TS	48	5	**DPZ2MS16P-300**	**Dense-Pac (3372, 3379)**	
65536x8								
	120 nsF	CMOS	TS	32	12	**28F512-120** ◊	**Intel (3487)**	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—PROMs

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32x8	10 nsF	TTL	OC	16, 20	5	N82US23	◊ Signetics	
			TS	16, 20	5	N82US123	◊ Signetics	
	15 nsF	TTL	TS	16	5	AM27S19SA-15C	◊ AMD	
						PL77X288B	National	
						PL87X288B	National	5
	20 nsF	TTL	TS	16	5	AM27S19SA-20M	◊† AMD	
						MB7112Y	◊ Fujitsu	
	25 nsF	ECL	OE	16	−5.2	MCM10139	Motorola	
		TTL	OC	16	5	MB7111H	Fujitsu	
						DM74S188A	National	10
				16, 20	5	N82S23A	◊ Signetics	
			TS	16	5	AM27S19A-25C	◊ AMD	
						MB7112H	◊ Fujitsu	
						DM74S288A	National	
				16, 20	5	N82S123A	◊ Signetics	15
	35 nsF	TTL	OC	16	5	MB7111E	Fujitsu	
						DM54S188A	† National	
						DM74S188	National	
			TS	16	5	AM27S19A-35M	◊† AMD	
						53S081	◊† AMD	20
						MB7112E	◊ Fujitsu	
						MB7112E-W	◊† Fujitsu	
						DM54S288A	† National	
						DM74S288	National	
	40 nsF	TTL	OC	16	5	AM27S18C	AMD	25
			TS	16	5	AM27S19C	AMD	
	45 nsF	TTL	OC	16	5	DM54S188	† National	
			TS	16	5	DM54S288	† National	
	50 nsF	TTL	OC	16	5	AM27LS18C	AMD	
						AM27S18M	† AMD	30
						MB7111L	Fujitsu	
						N82S23	Signetics	
			TS	16	5	AM27LS19C	AMD	
						AM27S19M	† AMD	
						MB7112L	◊ Fujitsu	35
						N82S123	Signetics	
	65 nsF	TTL	OC	16	5	S82S23	† Signetics	
			TS	16	5	AM27LS19M	† AMD	
						S82S123	† Signetics	
256x4	10 nsF	ECL	OE	16	−5.2	MCM10149-10	Motorola	40
					5	**100149A**	**Signetics (3608)**	
						10149A	**Signetics (3608)**	
	15 nsF	ECL	OE	16	−5.2	MCM10149A	Motorola	
	20 nsR	ECL	OE	16	−5.2	100149	Signetics	
						10149	Signetics	45
	25 nsF	ECL	OE	16	−5.2	MCM10149	Motorola	
						MCM10149-25	Motorola	
	27 nsF	TTL	TS	16, 20	5	N82S129A	◊ Signetics	
	30 nsF	TTL	OC	16	5	MB7113H	Fujitsu	
			TS	16	5	AM27S21A-30C	◊ AMD	
						MB7114H	◊ Fujitsu	50
	40 nsF	TTL	OC	16	5	MB7113E	Fujitsu	
			TS	16	5	AM27S21A-40M	◊† AMD	
						53S141A	◊† AMD	
						MB7114E	◊ Fujitsu	55
						MB7114E-W	◊† Fujitsu	
	45 nsF	TTL	OC	16	5	AM27S20C	AMD	
						63S140	◊ AMD	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
256x4	45 nsF	TTL					(Cont'd)	
			TS	16	5	AM27S21C	AMD	
	50 nsF	TTL	OC	16	5	MB7113L	Fujitsu	60
						DM74S387	National	
						N82S126	Signetics	
			TS	16	5	MB7114L	◊ Fujitsu	
						DM74S287	National	
						N82S129	Signetics	65
	55 nsF	TTL	OC	16	5	53S140	◊† AMD	
			TS	16	5	53S141	◊† AMD	
	60 nsF	TTL	OC	16	5	AM27S20M	† AMD	
						DM54S387	† National	
			TS	16	5	AM27S21M	† AMD	70
						DM54S287	† National	
	70 nsF	TTL	OC	16	5	S82S126	† Signetics	
			TS	16	5	S82S129	† Signetics	
	30 nsF	TTL	OC	16	5	N82S126A	◊ Signetics	
256x8	28 nsF	TTL	TS	20	5	63S281A	◊ AMD	75
	35 nsF	TTL	OC	20	5	MB7117H	Fujitsu	
			TS	20	5	MB7118H	◊ Fujitsu	
	40 nsF	TTL	TS	20	5	53S281A	AMD	
	45 nsF	TTL	OC	20	5	MB7117E	Fujitsu	
			TS	20	5	63S281	◊ AMD	80
						MB7118E	◊ Fujitsu	
						N82S135	◊ Signetics	
	50 nsF	TTL	TS	20	5	53S281	◊† AMD	
	60 nsF	TTL	TS	20	5	DM74LS471	National	
	70 nsF	TTL	TS	20	5	DM54LS471	† National	85
	100 nsF	TTL	TS	20	5	N82LS135	Signetics	
512x4	30 nsF	TTL	TS	16	5	AM27S13A-30C	◊ AMD	
				16, 20	5	N82S131A	◊ Signetics	
	33 nsF	TTL	OC	16, 20	5	N82S130A	◊ Signetics	
	35 nsF	TTL	OC	16	5	MB7115H	Fujitsu	90
			TS	16	5	MB7116H	◊ Fujitsu	
	40 nsF	TTL	TS	16	5	AM27S13A-40M	◊† AMD	
	45 nsF	TTL	OC	16	5	MB7115E	Fujitsu	
			TS	16	5	53S241A	◊† AMD	
						63S241	◊ AMD	95
						MB7116E	◊ Fujitsu	
						MB7116E-W	◊† Fujitsu	
	50 nsF	TTL	OC	16	5	N82S130	Signetics	
			TS	16	5	AM27S13C	AMD	
						N82S131	Signetics	100
	55 nsF	TTL	OC	16	5	53S240	◊† AMD	
						DM74S570	National	
						DM74S570A	National	
			TS	16	5	53S241	◊† AMD	
						DM74S571	National	105
						DM74S571A	National	
						DM74S571B	National	
	65 nsF	TTL	OC	16	5	DM54S570	† National	
						DM54S570A	† National	
			TS	16	5	DM54S571	† National	110
						DM54S571A	† National	
						DM54S571B	† National	
	70 nsF	TTL	OC	16	5	S82S130	† Signetics	
			TS	16	5	S82S131	† Signetics	
512x8	20 nsF	TTL	Reg	24	5	53RA481A	◊† AMD	115
						63RA481	◊ AMD	
			TS	24	5	MB7226RA-20	◊ Fujitsu	
						MB7226RS-20	◊ Fujitsu	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
512x8							(Cont'd)	
	25 nsF	CMOS Reg	TS	24	5	CY7C225-25C	◊ Cypress	
						CY7C225-30M	◊† Cypress	
		TTL	Reg	24	5	53RA481	◊† AMD	
			TS	20	5	N82S147B	◊ Signetics	
				24	5	AM27S25SA-25	AMD	5
						MB7226RA-25	◊ Fujitsu	
						MB7226RS-25	◊ Fujitsu	
	27 nsF	Reg	TS	22	5	AM27S27C	AMD	
				24	5	AM27S25C	AMD	
	30 nsF	Reg	TS	22	5	AM27S27M	† AMD	10
				24	5	AM27S25M	† AMD	
						CY7C225-30C	◊ Cypress	
		TTL	TS	20	5	AM27S29SA-30C	◊ AMD	
				22	5	AM27S27A-30C	◊ AMD	
				24	5	AM27S25A-30C	◊ AMD	15
						AM27S25SA-30	AMD	
	35 nsF	Reg	TS	22	5	DM87SR27B	National	
				24	5	CY7C225-35M	◊† Cypress	
						DM87SR476B	National	
		TTL	OC	20	5	MB7123H	Fujitsu	20
			Reg	24	5	DM87SR474	National	
						DM87SR476	National	
			TS	20	5	AM27S29A-35C	◊ AMD	
						MB7124H	◊ Fujitsu	
						DM74S472B	National	25
				22	5	AM27S27A-35M	◊† AMD	
				24	5	AM27S25A-35M	◊† AMD	
						AM27S31A-35C	◊ AMD	
	40 nsF	Reg	TS	24	5	CY7C225-40M	◊† Cypress	
						DM77SR474	† National	30
		TTL	Reg	24	5	DM77SR476	† National	
			TS	20	5	AM27S29SA-40M	◊† AMD	
						53S481A	◊† AMD	
	45 nsF	TTL	OC	20	5	MB7123E	Fujitsu	
						DM74S473A	National	35
				24	5	DM74S475A	National	
			TS	20	5	AM27S29A-45M	◊† AMD	
						63S481	◊ AMD	
						MB7124E	◊ Fujitsu	
						DM74S472A	National	40
						DM74S472B	National	
						N82S147A	Signetics	
				24	5	AM27S31A-45M	◊† AMD	
						DM74S474A	National	
	50 nsF	Reg	TS	22	5	DM87SR27	National	45
		TTL	TS	20	5	53S481	◊† AMD	
	55 nsF	TTL	TS	20	5	AM27S29C	AMD	
				24	5	AM27S31C	AMD	
						53S485	† AMD	
	60 nsF	TTL	OC	20	5	DM54S473A	† National	50
						DM74S473	National	
				24	5	DM54S475A	† National	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
512x8	60 nsF	TTL					(Cont'd)	
			TS	20	5	DM54S472	† National	
						DM54S472A	† National	
						DM54S472B	† National	55
						DM54S474A	† National	
						DM54S474B	† National	
						DM74S472	National	
				24	5	N82S115	Signetics	
						N82S141	Signetics	60
	65 nsF	TTL	OC	20	5	DM54S473	† National	
				24	5	DM54S475	† National	
						DM74S475	National	
			TS	20	5	AM27S29M	† AMD	
				24	5	AM27S31M	† AMD	65
						DM74S474	National	
	70 nsF	TTL	TS	20	5	29623	◊ Raytheon	
						TBP28S42M	◊ TI	
				24	5	DM54S474	† National	
	90 nsF	TTL	TS	24	5	S82S141	† Signetics	70
	120 nsF	CMOS	TS	24	5	HM6642B-9	Harris	
						HM6642B/883	† Harris	
	200 nsF	CMOS	TS	24	5	HM6642	† Harris	
						HM6642-9	Harris	
						HM6642/883	† Harris	75
	250 nsF	CMOS	TS	24	5	HM6641-9	◊ Harris	
						HM6641/883	◊† Harris	
1024x4	35 nsF	TTL	OC	18	5	AM27S33AC	AMD	
						MB7121H	Fujitsu	
			TS	18	5	AM27S33AC	AMD	80
						MB7122H	◊ Fujitsu	
						DM74S573B	National	
						N82S137B	Signetics	
	45 nsF	TTL	OC	18	5	AM27S32AM	† AMD	
						MB7121E	Fujitsu	85
						DM74S572A	National	
			TS	18	5	AM27S33AM	† AMD	
						MB7122E	◊ Fujitsu	
						MB7122E-W	◊† Fujitsu	
						DM74S573A	National	90
				18, 20	5	N82S137A	◊ Signetics	
				24	5	DM87S181A	National	
						N82S141A	◊ Signetics	
	50 nsF	TTL	TS	18	5	53S441A	◊† AMD	
						DM54S573B	† National	95
	55 nsF	TTL	OC	18	5	AM27S32C	AMD	
			TS	18	5	AM27S33C	AMD	
						53S441	◊† AMD	
	60 nsF	TTL	OC	18	5	DM54S572A	† National	
						DM54S573A	† National	100
						DM74S572	National	
			TS	18	5	DM74S573	National	
						N82S137	Signetics	
	65 nsF	TTL	OC	18	5	AM27S32M	† AMD	
			TS	18	5	AM27S33M	† AMD	105
				24	5	DM77S181A	† National	
	70 nsF	TTL	TS	18	5	S82S137A	† Signetics	
	75 nsF	TTL	OC	18	5	DM54S572	† National	
			TS	18	5	DM54S573	† National	
	80 nsF	TTL	TS	18	5	S82S137	† Signetics	110
1024x8	—	TTL	TS	24	5	AM27PS181	AMD	
						AM27PS281	AMD	
						AM27S35AC	AMD	
						AM27S35AM	† AMD	
						AM27S35C	AMD	115
						AM27S35M	† AMD	
						AM27S37A	AMD	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x8							(Cont'd)	
	15 nsF	TTL	Reg	24	5	63RS881A	◊ AMD	
	20 nsF	TTL	Reg	24	5	53RS881A	◊† AMD	
						63RS881	◊† AMD	
			TS	24	5	MB7232RA-20	◊ Fujitsu	
						MB7232RS-20	◊ Fujitsu	5
	25 nsF	CMOS Reg.	TS	24	5	CY7C235-25C	Cypress	
		TTL	Reg	24	5	53RS881	◊† AMD	
			TS	24	5	MB7232RA-25	◊ Fujitsu	
						MB7232RS-25	◊ Fujitsu	
	30 nsF	CMOS	TS	24	5	CY7C235-30M	† Cypress	10
						CY7C281-30C	◊ Cypress	
						CY7C282-30C	Cypress	
		Reg	TS	24	5	CY7C235-30C	Cypress	
		TTL	TS	24	5	63S881A	◊ AMD	
	35 nsF	CMOS Reg.	TS	24	5	CY7C235-35M	◊† Cypress	15
		Reg	TS	24	5	DM87SR183B	National	
		TTL	OC	24	5	AM27S37	AMD	
			TS	24	5	AM27S181A-35C	◊ AMD	
						AM27S281A-35C	◊ AMD	
						MB7132Y	◊ Fujitsu	20
						N82S191C	◊ Signetics	
				24, 28	5	N82S181C	◊ Signetics	
	40 nsF	Reg	TS	24	5	CY7C235-40M	† Cypress	
						DM77SR181	† National	
						DM87SR181	National	25
						DM87SR183	National	
	45 nsF	CMOS	TS	24	5	CY7C281-45C	◊ Cypress	
						CY7C281-45M	◊† Cypress	
						CY7C282-45C	Cypress	
						CY7C282-45M	† Cypress	30
		Reg	TS	24	5	DM77SR183	† National	
		TTL	TS	24	5	53S881A	◊† AMD	
						63S881	◊ AMD	
						MB7132H	◊ Fujitsu	
						N82HS187A	Signetics	35
						N82HS189A	Signetics	
						N82S181B	◊ Signetics	
	50 nsF	TTL	TS	24	5	AM27S181A-50M	◊† AMD	
						AM27S281A-50M	◊† AMD	
	55 nsF	TTL	OC	24	5	DM87S180	National	40
						DM87S280	National	
			TS	24	5	53S881	◊† AMD	
						MB7132E	◊ Fujitsu	
						MB7132E-W	◊ Fujitsu	
						DM87S281	National	45
						N82HS187	Signetics	
						N82HS189	Signetics	
						N82S181A	◊ Signetics	
	60 nsF	TTL	OC	24	5	AM27S180C	AMD	
			TS	24	5	AM27S281C	AMD	50
						29631A	† Raytheon	
						29631A	Raytheon	
						29633A	◊† Raytheon	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x8	60 nsF	TTL	TS	24	5		(Cont'd)	
						29633A	◊ Raytheon	
						N82S183	Signetics	55
	70 nsF	TTL	TS	24	5	DM87S181	National	
						29633A	◊† Raytheon	
						29633A	◊ Raytheon	
						N82S181	◊ Signetics	
	75 nsF	TTL	OC	24	5	DM77S180	† National	60
						DM77S280	† National	
			TS	24	5	DM77S181	† National	
						DM77S281	† National	
	80 nsF	TTL	OC	24	5	AM27S180M	† AMD	
			TS	24	5	AM27S181M	† AMD	65
						AM27S281M	† AMD	
						S82S181A	† Signetics	
	90 nsF	TTL	TS	24	5	S82S181	† Signetics	
						S82S183	† Signetics	
						S82S2708	† Signetics	70
	95 nsF	TTL	TS	24	5	29633C	◊ Raytheon	
	120 nsF	TTL	TS	24	5	N82LS181	Signetics	
	175 nsF	TTL	TS	24	5	S82LS181	† Signetics	
2048x4	35 nsF	TTL	OC	18	5	AM27S184AC	AMD	
			TS	18	5	DM87S185B	National	75
	45 nsF	TTL	TS	18	5	MB7128H	◊ Fujitsu	
						DM87S185A	National	
						N82S185B	Signetics	
	50 nsF	TTL	TS	18	5	AM27S185C	AMD	
						53S841A	◊† AMD	80
						DM77S185B	† National	
						N82S185A	Signetics	
	55 nsF	TTL	OC	18	5	DM87S184	National	
			TS	18	5	AM27S185M	† AMD	
						53S841	◊† AMD	85
						MB7128E	◊ Fujitsu	
						MB7128E-W	◊† Fujitsu	
						DM87S185	National	
	60 nsF	TTL	TS	18	5	AM27LS185C	AMD	
						AM27PS185C	AMD	90
						DM77S185A	† National	
						29651A	Raytheon	
						29653A	◊ Raytheon	
				24	5	N82S191A	Signetics	
	65 nsF	TTL	TS	18	5	AM27LS185M	† AMD	95
						AM27PS185M	† AMD	
	70 nsF	TTL	OC	18	5	DM77S184	† National	
			TS	18	5	DM77S185	† National	
						29651C	Raytheon	
	75 nsF	TTL	TS	18	5	29653C	Raytheon	100
	80 nsF	TTL	TS	18	5	S82S185A	Signetics	
				24	5	S82S191A	† Signetics	
	90 nsF	TTL	TS	18	5	29651M	† Raytheon	
	95 nsF	TTL	TS	18	5	29653M	† Raytheon	
	100 nsF	TTL	TS	18	5	N82S185	Signetics	105
	115 nsF	TTL	TS	18	5	S82S185	† Signetics	
2048x8	—	Emulator (RAM w/Bat.)				GR2716	Greenwich	
	15 nsF	CMOS	TS	24	5	CY7C245A-15WC	Cypress	
		CMOS Reg	TS	24	5	CY7C245A-15C	Cypress	
		TTL	Reg	24	5	63RA1681A	◊ AMD	110
						63RS1681A	◊ AMD	
	18 nsF	CMOS Reg.	TS	24	5	CY7C245A-18C	◊ Cypress	
						CY7C245A-18WC	◊ Cypress	
	20 nsF	CMOS	TS	24	5	CY7C291A-20C	Cypress	
						CY7C293A-20	Cypress	115
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	20 nsF						(Cont'd)	
		TTL	Reg	24	5	53RA1681A	◊† AMD	
						53RS1681A	◊† AMD	
						63RA1681	◊ AMD	
						63RS1681	◊ AMD	
			TS	24	5	MB7238RA-20	Fujitsu	5
						MB7238RS-20	Fujitsu	
	25 nsF	Bipolar	TTL	24	5	MB71A38-25	Fujitsu	
		CMOS	TS	24	5	AM27C191-25C	AMD	
						AM27C291-25C	AMD	
						CY7C291A-25C	Cypress	10
						CY7C291A-25M	† Cypress	
						CY7C292A-25C	Cypress	
						CY7C293A-25	Cypress	
						CY7C293A-25C	Cypress	
		CMOS Reg	TS	24	5	CY7C245-25C	◊ Cypress	15
		CMOS Reg.	TS	24	5	CY7C245A-25C	◊ Cypress	
						CY7C245A-25M	◊† Cypress	
						CY7C245A-25WC	◊ Cypress	
		Reg	TS	24	5	DM87SR191	National	
						DM87SR193	National	20
		TTL	Reg	24	5	53RA1681	◊† AMD	
						53RS1681	◊† AMD	
			TS	24	5	AM27S291SA-25C	◊ AMD	
						AM27S45SA-25C	◊ AMD	
						AM27S47SA-25C	◊ AMD	25
						MB7238RA-25	Fujitsu	
						MB7238RA-25W	† Fujitsu	
						MB7238RS-25	Fujitsu	
						MB7238RS-25W	† Fujitsu	
						N82HS191	◊ Signetics	30
	28 nsF	TTL	TS	24	5	AM27S45SA-28M	◊† AMD	
						AM27S47SA-28M	◊† AMD	
	30 nsF	CMOS	TS	24	5	CY7C293A-30	Cypress	
		CMOS Reg.	TS	24	5	CY7C291A-30M	◊† Cypress	
						CY7C291A-30WM	◊† Cypress	35
						CY7C292A-30M	† Cypress	
						CY7C293A-30M	† Cypress	
						CY7C293A-30WM	† Cypress	
		TTL	TS	24	5	AM27S291SA-30M	◊† AMD	
	35 nsF	Bipolar	TTL	24	5	MB71A38-35	Fujitsu	40
		CMOS	TS	24	5	AM27C191-35C	AMD	
						AM27C191-35M	† AMD	
						AM27C291-35C	AMD	
						AM27C291-35M	† AMD	
						CY7C291-35C	◊ Cypress	45
						CY7C291-35M	◊† Cypress	
						CY7C291AL-35C	Cypress	
						CY7C291L-35C	Cypress	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	35 nsF	CMOS	TS	24	5		(Cont'd)	
						CY7C291L-35WC	Cypress	
						CY7C292-35C	Cypress	50
						CY7C292AL-35C	Cypress	
						CY7C292L-35C	Cypress	
						CY7C293A-35	Cypress	
						CY7C293AL-35C	Cypress	
		CMOS Reg	TS	24	5	CY7C245-35M	◊† Cypress	55
		CMOS Reg.	TS	24	5	CY7C245A-35C	◊ Cypress	
						CY7C245A-35M	◊† Cypress	
						CY7C245A-35WC	◊ Cypress	
						CY7C245A-35WM	◊† Cypress	
						CY7C245AL-35C	Cypress	60
						CY7C245L-35C	Cypress	
						CY7C291A-35C	◊ Cypress	
						CY7C291A-35M	◊† Cypress	
						CY7C291A-35WC	◊ Cypress	
						CY7C291A-35WM	◊† Cypress	65
						CY7C292A-35C	Cypress	
						CY7C292A-35M	† Cypress	
						CY7C293A-35C	Cypress	
						CY7C293A-35M	† Cypress	
						CY7C293A-35WC	Cypress	70
						CY7C293A-35WM	Cypress	
		Reg	TS	24	5	CY7C245-35C	◊ Cypress	
						DM77SR191	† National	
						DM77SR193	† National	
		TTL	OC	24	5	SFC71190C	SGS-Thomson	75
			TS	24	5	AM27S291A	AMD	
						MB7138Y	◊ Fujitsu	
						SFC71191C	SGS-Thomson	
	40 nsF	Reg	TS	24	5	AM27S45A	AMD	
						AM27S47A	AMD	80
	45 nsF	CMOS	TS	24	5	AM27C191-45C	AMD	
						AM27C191-45M	† AMD	
						AM27C291-45C	AMD	
						AM27C291-45M	† AMD	
						AT28HC191L-45	† ATMEL	85
						CY7C245L-45C	Cypress	
						CY7C245L-45WC	Cypress	
						TMS27PC291	TI	
						TMS27PC291-45	TI	
		CMOS, E^2	TS	24	5	AT28HC291L-45	◊† ATMEL	90
		CMOS OTP	TS	24	5	WS57C191-45	† Waferscale	
						WS57C191B-45	**Waferscale (3716)**	
						WS57C291B-45	**Waferscale (3716)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	45 nsF						(Cont'd)	
		Reg	TS	24	5	AM27S45	AMD	
						AM27S47	AMD	
						CY7C245-45M	◊† Cypress	
		TTL	OC	24	5	SFC71190B	SGS-Thomson	
			TS	24	5	MB7138H	◊ Fujitsu	5
						SFC71191B	SGS-Thomson	
	50 nsF	CMOS	TS	24	5	CY7C291-50C	◊ Cypress	
						CY7C291-50M	◊† Cypress	
						CY7C291AL-50C	Cypress	
						CY7C291L-50C	Cypress	10
						CY7C291L-50WC	Cypress	
						CY7C292-50C	Cypress	
						CY7C292-50M	† Cypress	
						CY7C292AL-50C	Cypress	
						CY7C292L-50C	Cypress	15
						CY7C293A-50	Cypress	
						CY7C293AL-50C	Cypress	
						TMS27PC291-5	TI	
						TMS27PC291-50	TI	
		CMOS Reg.	TS	24	5	CY7C291A-50C	◊ Cypress	20
						CY7C291A-50M	◊† Cypress	
						CY7C291A-50WC	◊ Cypress	
						CY7C291A-50WM	◊ Cypress	
						CY7C292A-50C	Cypress	
						CY7C292A-50M	† Cypress	25
						CY7C293A-50C	Cypress	
						CY7C293A-50M	† Cypress	
						CY7C293A-50WC	Cypress	
						CY7C293A-50WM	Cypress	
		TTL	OC	24	5	AM27S190C	AMD	30
			TS	24	5	AM27PS191A-50C	◊ AMD	
						AM27PS191C	AMD	
						AM27PS291A-50C	◊ AMD	
						AM27PS291C	AMD	
						AM27S191	AMD	35
						AM27S291	AMD	
						53S1681A	◊† AMD	
						29681A	† Raytheon	
						29681A	Raytheon	
						29683A	◊† Raytheon	40
						29683A	◊ Raytheon	
	55 nsF	CMOS	TS	24	5	AT28HC191L-55	† ATMEL	
						LH57191J-55	Sharp	
		CMOS, E^2	TS	24	5	AT28HC291L-55	◊† ATMEL	
		CMOS OTP	TS	24	5	WS57C191-55	◊ Waferscale	45
						WS57C191B-55	**Waferscale (3716)**	
						WS57C291B-55	**Waferscale (3716)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	55 nsF						(Cont'd)	
		TTL	TS	24	5	MB7138E	◊ Fujitsu	
						MB7138E-W	◊† Fujitsu	
	60 nsF	TTL	TS	24	5	SFC71191A	† SGS-Thomson	50
	65 nsF	TTL	OC	24	5	AM27S190M	† AMD	
			TS	24	5	AM27PS191A-65M	◊† AMD	
						AM27PS191M	† AMD	
						AM27PS291A-65M	◊† AMD	
						AM27S291M	† AMD	55
						53S1681	◊† AMD	
	70 nsF	CMOS	TS	24	5	LH57191-70	Sharp	
						LH57191J-70	Sharp	
		TTL	TS	24	5	29681A	† Raytheon	
						29681A	Raytheon	60
						29683A	◊† Raytheon	
						29683A	◊ Raytheon	
	80 nsF	TTL	OC	24	5	DM77S190	† National	
						SFC71190A	† SGS-Thomson	
			TS	24	5	29681	Raytheon	65
						N82S191	Signetics	
	85 nsF	TTL	TS	24	5	29683	◊ Raytheon	
	90 nsF	CMOS	TS	24	5	HM6617B-9	Harris	
						HM6617B/883	† Harris	
	100 nsF	TTL	TS	24	5	S82S191	† Signetics	70
	120 nsF	CMOS	TS	24	5	HM6617-9	Harris	
						HM6617/883	† Harris	
	140 nsF	CMOS	TS	24	5	**HS6617RH**	**‡ Harris (3456)**	
	200 nsF	TTL	TS	24	5	AM2716B-200	AMD	
	250 nsF	TTL	TS	24	5	AM2716B-250	AMD	75
	300 nsF	TTL	TS	24	5	AM2716B-300	AMD	
	450 nsF	TTL	TS	24	5	AM2716B-450	AMD	
4096x4	25 nsF	Reg	TS	24	5	AM27S85AC	AMD	
		TTL	TS	20	5	N82HS195B	Signetics	
	30 nsF	Reg	TS	24	5	AM27S85AM	† AMD	80
						AM27S85C	AMD	
	35 nsF	Reg	TS	24	5	AM27S85M	† AMD	
		TTL	TS	20	5	AM27S41A	AMD	
						63S1641A	◊ AMD	
						MB7152Y	Fujitsu	85
						N82HS195A	Signetics	
	45 nsF	TTL	TS	20	5	N82HS195	Signetics	
				20	5	MB7152H	Fujitsu	
	50 nsF	TTL	TS	20	5	AM27S41	AMD	
						53S1641A	† AMD	90
						DM77S195B	† National	
						S82HS195	† Signetics	
	55 nsF	TTL	TS	20	5	MB7134E	◊ Fujitsu	
						MB7134E-W	◊† Fujitsu	
						MB7152E	Fujitsu	95
	60 nsF	TTL	TS	20	5	DM77S195A	† National	
	65 nsF	TTL	TS	20	5	AM27PS41	◊† AMD	
						AM27S41M	† AMD	
						53S1641	† AMD	
4096x8	—	Emulator (RAM w/Bat.)				GR2732	Greenwich	100
	25 nsF	Bipolar	TS	24	7	82HS321C	◊† Signetics	
	30 nsF	TTL	TS	24	5	N82HS321B	Signetics	
	35 nsF	BiCMOS	TTL	24	5	MB71C42-35	Fujitsu	
		CMOS	TS	24	5	**27CX321-35**	**ICT (3506)**	
						27CX322-35	**ICT (3506)**	105
		TTL	TS	24	5	63S3281A	◊ AMD	
						N82HS321A	Signetics	
	40 nsF	TTL	TS	24	5	AM27S43A	AMD	
						53S3281B	AMD	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x8							(Cont'd)	
	45 nsF	BiCMOS	TTL	24	5	MB71C42-45	Fujitsu	
		CMOS	TS	24	5	**27CX321-40**	**ICT (3506)**	
						27CX322-40	**ICT (3506)**	
						27CX322-45	**ICT (3506)**	
		TTL	TS	24	5	53S3281 ◊†	AMD	5
						N82HS321	Signetics	
	50 nsF	TTL	TS	24	5	AM27S43	AMD	
						53S3281A ◊†	AMD	
						63S3281 ◊	AMD	
	55 nsF	CMOS	TS	24	5	**27CX321-45**	**ICT (3506)**	10
		TTL	TS	24	5	MB7142H ◊	Fujitsu	
	65 nsF	TTL	TS	24	5	MB7142E ◊	Fujitsu	
						MB7142E-W ◊†	Fujitsu	
	70 nsF	TTL	TS	24	5	29671A †	Raytheon	
						29671A	Raytheon	15
	80 nsF	TTL	TS	24	5	29671 †	Raytheon	
						29671	Raytheon	
						29671A †	Raytheon	
						29671A	Raytheon	
	85 nsF	TTL	TS	24	5	29673 ◊†	Raytheon	20
						29673 ◊	Raytheon	
	100 nsF	TTL	TS	24	5	29671 †	Raytheon	
						29671	Raytheon	
	105 nsF	TTL	TS	24	5	29673 ◊†	Raytheon	
						29673 ◊	Raytheon	25
	120 nsF	CMOS	TS	24	5	TMS27PC32-12	TI	
						TMS27PC32-120	TI	
	150 nsF	CMOS	TS	24	5	TMS27PC32-15	TI	
						TMS27PC32-150	TI	
		TTL	TS	24	5	AM2732B-150	AMD	30
	200 nsF	CMOS	TS	24	5	TMS27PC32-2	TI	
						TMS27PC32-20	TI	
		NMOS	TS	24	5	2732A-2	Intel	
		TTL	TS	24	5	AM2732B-200	AMD	
	250 nsF	CMOS	TS	24	5	TMS27PC32	TI	35
						TMS27PC32-25	TI	
		NMOS	TS	24	5	2732A	Intel	
		TTL	TS	24	5	AM2732B-250	AMD	
	300 nsF	TTL	TS	24	5	AM2732B-300	AMD	
	450 nsF	TTL	TS	24	5	AM2732B-450	AMD	40
8192x8	—	Emulator (RAM w/Bat.)				GR2764	Greenwich	
	25 nsF	Bipolar	TS	24	7	82HS641C ◊†	Signetics	
	30 nsF	CMOS	TS	24	5	CY7C261-30C	Cypress	
						CY7C263-30C	Cypress	
						CY7C264-30C	Cypress	45
	35 nsF	BiCMOS	TTL	24	5	MB71C44-35	Fujitsu	
		CMOS	TS	24	5	CY7C261-35C ◊	Cypress	
						CY7C263-35C	Cypress	
						CY7C264-35C ◊	Cypress	
						27CX641-40	**ICT (3506)**	50
			TTS	24	5	**27CX642-40**	**ICT (3506)**	
		TTL	OC	24	5	93Z665C	National	
			TS	24	5	N82HS641B	Signetics	
	40 nsF	CMOS Reg.	TS	28	5	CY7C265-40C	Cypress	
		Reg	TS	28	5	CY7C268-40C ◊	Cypress	55
	45 nsF	BiCMOS	TTL	24	5	MB71C44-45	Fujitsu	
		CMOS	TS	24	5	CY7C261-45C ◊	Cypress	
						CY7C261-45M ◊†	Cypress	
						CY7C263-45C	Cypress	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	45 nsF	CMOS	TS	24	5		(Cont'd)	
						CY7C263-45M †	Cypress	60
						CY7C264-45C ◊	Cypress	
						CY7C264-45M ◊†	Cypress	
						27CX641-45	**ICT (3506)**	
						27CX642-45	**ICT (3506)**	
						27HC641-45 ◊	Signetics	65
						TMS27PC49-4	TI	
						TMS27PC49-45	TI	
				28	5	CY7C266-45C	Cypress	
						CY7C266-45WC	Cypress	
		CMOS Reg.	TS	28	5	CY7C265-40WC	Cypress	70
		TTL	OC	24	5	93Z665M †	National	
						93Z667M †	National	
			TS	24	5	MB7144Y ◊	Fujitsu	
						N82HS641A	Signetics	
	49 nsF	CMOS, Reg	TS	28	5	CY7C269-40C ◊	Cypress	75
	50 nsF	CMOS Reg.	TS	28	5	CY7C265-50C	Cypress	
						CY7C265-50M ◊†	Cypress	
						CY7C265-50WC	Cypress	
						CY7C265-50WM ◊†	Cypress	
		CMOS, Reg	TS	28	5	CY7C269-50C ◊	Cypress	80
						CY7C269-50M ◊†	Cypress	
		Reg	TS	28	5	CY7C268-50C ◊	Cypress	
						CY7C268-50M ◊†	Cypress	
		TTL	TS	24	5	93Z667M-50 †	National	
	55 nsF	CMOS	TS	24	5	CY7C261-55C ◊	Cypress	85
						CY7C261-55M ◊†	Cypress	
						CY7C263-55C	Cypress	
						CY7C263-55M †	Cypress	
						CY7C264-55C ◊	Cypress	
						CY7C264-55M ◊†	Cypress	90
						27CX641-55	**ICT (3506)**	
						27CX642-55	**ICT (3506)**	
						TMS27PC49-5	TI	
						TMS27PC49-55	TI	
				28	5	CY7C266-55C	Cypress	95
						CY7C266-55M †	Cypress	
						CY7C266-55WC	Cypress	
						CY7C266-55WM †	Cypress	
		TTL	TS	24	5	AM27S49AM †	AMD	
						AM27S49C	AMD	100
						MB7144H ◊	Fujitsu	
						93Z667M-55 †	National	
						N82HS641	Signetics	
		TTL/CMOS	TS	24, 28	5	27HC641-55 ◊	Signetics	
	60 nsF	CMOS Reg.	TS	28	5	CY7C265-60C	Cypress	105
						CY7C265-60M ◊†	Cypress	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	60 nsF	CMOS Reg.					(Cont'd)	
			TS	28	5	CY7C265-60WC	Cypress	
						CY7C265-60WM	Cypress	
		Reg	TS	28	5	CY7C268-60M	◊† Cypress	
						CY7C269-60M	◊† Cypress	
	65 nsF	TTL	TS	24	5	AM27S49M	† AMD	5
						MB7144E	◊ Fujitsu	
						MB7144E-W	◊† Fujitsu	
	70 nsF	CMOS	TTL	28	5	LH5749-70	Sharp	
						LH5762-70	Sharp	
	90 nsF	CMOS	TTL	28	5	LH5763-90	Sharp	10
	120 nsF	CMOS	TS	28	5	TMS27PC64-12	TI	
						TMS27PC64-120	TI	
	150 nsF	CMOS	TS	28	5	TMS27PC64-1	TI	
						TMS27PC64-15	TI	
	200 nsF	CMOS	TS	28	5	MBM27C64-20	◊ Fujitsu	15
						TMS27PC64-2	TI	
						TMS27PC64-20	TI	
		CMOS OTP						
			TTL	28	5	LH5764-20	Sharp	
		Module	TS	38	5	COB65464E	Microchip	
	250 nsF	CMOS	TS	28	5	MBM27C64-25W	◊† Fujitsu	20
						MBM27C64-25X	◊ Fujitsu	
						TMS27PC64	TI	
						TMS27PC64-25	TI	
		CMOS OTP						
			TTL	28	5	LH5764-25	Sharp	
		NMOS, Refurbished						
			TS	28	5	**2764A-250**	**Krueger (3513)**	25
		TTL	TS	28	5	AM2764-25M	† AMD	
	300 nsF	CMOS	TS	28	5	MBM27C64-30X	◊ Fujitsu	
		NMOS, Refurbished						
			TS	28	5	**2764A-300**	**Krueger (3513)**	
		UV EPROM						
			TS	28	5	DM2764-300	† SEEQ	
	450 nsF	NMOS, Refurbished						
			TS	28	5	**2764A-450**	**Krueger (3513)**	30
		TTL	TS	28	5	AM2764-45M	† AMD	
16384x8								
	—	Emulator (RAM w/Bat.)				GR27128	Greenwich	
	35 nsF	BiCMOS	TTL	28	5	MB71C46-35	Fujitsu	
	45 ns*	TTL	TS	24	5	N82HS1281	Signetics	
	45 nsF	BiCMOS	TTL	28	5	MB71C46-45	Fujitsu	35
		CMOS	TS	28	5	CY7C251-45C	◊ Cypress	
						CY7C254-45C	Cypress	
	55 nsF	CMOS	TS	28	5	CY7C251-55C	◊ Cypress	
						CY7C251-55M	◊† Cypress	
						CY7C254-55C	Cypress	40
						CY7C254-55M	Cypress	
	65 nsF	CMOS	TS	28	5	CY7C251-65C	◊ Cypress	
						CY7C251-65M	◊ Cypress	
						CY7C254-65C	Cypress	
						CY7C254-65M	Cypress	45
	90 nsF	CMOS	TTL	28	5	LH57126-90	Sharp	
	120 nsF	CMOS	TTL	28	5	LH57127-12	Sharp	
	150 nsF	CMOS	TS	28	5	TMS27PC128-1	TI	
						TMS27PC128-15	TI	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x8							(Cont'd)	
	200 nsF	CMOS	TS	28	5	MBM27C128-20	◊ Fujitsu	50
						TMX27PC128-2	Ricoh	
						TMS27PC128-2	TI	
						TMS27PC128-20	TI	
			TTL	28	5	LH57128-20	Sharp	
		Module	TS	38	5	COB654128E	Microchip	55
	250 nsF	CMOS	TS	28	5	MBM27C128-25	◊ Fujitsu	
						TMX27PC128	Ricoh	
						TMS27PC128	TI	
						TMS27PC128-25	TI	
			TTL	28	5	LH57128-25	Sharp	60
	300 nsF	CMOS	TS	28	5	MBM27C128-30	◊ Fujitsu	
						TMX27PC128-3	Ricoh	
	350 nsF	CMOS	TS	28	5	TMX27PC128-4	Ricoh	
32768x8								
	—	Emulator (RAM w/Bat.)				GR27256	Greenwich	
	25 nsF	BiCMOS	TS	28	5	MBM71C256	◊ Fujitsu	65
						MB71C256-25	◊ Fujitsu	
	35 nsF	BiCMOS	TS	28	5	MB71C256-35	◊ Fujitsu	
		CMOS	TS	28	5	CY7C271-35C	Cypress	
						CY7C279-35C	Cypress	
	40 nsF	CMOS	TS	28	5	CY7C277-40C	Cypress	70
						CY7C277-40WC	Cypress	
						WS57C71-40	**Waferscale (3716)**	
	45 nsF	CMOS	TS	28	5	CY7C271-45C	Cypress	
						CY7C274-45C	Cypress	
						CY7C274-45WC	Cypress	75
						CY7C279-45C	Cypress	
						CY7C279-45WC	Cypress	
						WS57C71-45	**Waferscale (3716)**	
				32	5	**WS57C71-45M**	**† Waferscale (3716)**	
	50 nsF	CMOS	TS	28	5	CY7C277-50C	Cypress	80
						CY7C277-50M	† Cypress	
						CY7C277-50WC	Cypress	
						CY7C277-50WM	† Cypress	
	55 nsF	CMOS	TS	28	5	CY7C271-55C	Cypress	
						CY7C271-55M	◊† Cypress	85
						CY7C274-55C	Cypress	
						CY7C274-55M	† Cypress	
						CY7C274-55WC	Cypress	
						CY7C274-55WM	Cypress	
						CY7C279-55C	Cypress	90
						CY7C279-55M	† Cypress	
						CY7C279-55WC	Cypress	
						CY7C279-55WM	† Cypress	
						LH5762J-55	Sharp	
						WS57C71-55	**Waferscale (3716)**	95
			TS	32	5	**WS57C71-55M**	**† Waferscale (3716)**	
	70 nsF	CMOS	TS	28	5	AT27HC256-70	† ATMEL	
						LH57254J-70	Sharp	
				32	5	**WS57C71-70M**	**† Waferscale (3716)**	

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	90 nsF	CMOS	TS	28	5	AT27HC256-90	† ATMEL	
						LH57254-90	Sharp	
						LH57254J-90	Sharp	
	100 nsF	CMOS	TS	28	5	LH57255J-10	Sharp	
	120 nsF	CMOS	TS	28	5	LH57255-12	Sharp	5
						LH57255J-12	Sharp	
						LH57256J-12	Sharp	
	150 nsF	CMOS	TS	28	5	LH57256-15	Sharp	
						LH57256J-15	Sharp	
						TMS27PC256-15	TI	10
						TMS27PC256-150	TI	
		CMOS OTP	TS	28	5	TC54256A-15	Toshiba	
	170 nsF	CMOS	TS	28	5	AM27C256-170	AMD	
						TMS27PC256-1	TI	
						TMS27PC256-17	TI	15
		CMOS, OTP	TS	28	5	27C256-17	† Signetics	
		NMOS OTP	TS	28	5	TMM24256B-17	◊ Toshiba	
	200 nsF	CMOS	TS	28	5	MBM27C256A-20	◊ Fujitsu	
						TMS27PC256-2	TI	
						TMS27PC256-20	TI	20
		CMOS, OTP	TS	28	5	27C256-20	† Signetics	
		CMOS OTP	TS	28	5	TC54256A-20	Toshiba	
		Module	TS	38	5	COB654C256E	Microchip	
		NMOS OTP	TS	28	5	TMM24256B-20	◊ Toshiba	
	250 nsF	CMOS	TS	28	5	AM27C256-250	AMD	25
						HN27C256FP-25	Hitachi	
						TMS27PC256	TI	
						TMS27PC256-25	TI	
		TTL/CMOS	TS	28, 32	5	27C256-25	† Signetics	
32768x16								
	250 nsF	Module	TS	38	5	COB657C256A2E	Microchip	30
65536	250 nsF	CMOS	TS	40	5	TMX27PC210-250	TI	
65536x8								
	55 nsF	CMOS	TS	28	5	CY7C287-55	Cypress	
	60 nsF	CMOS	TS	28	5	CY7C286-60	Cypress	
	65 nsF	CMOS	TS	28	5	CY7C287-65	Cypress	
	70 nsF	CMOS	TS	28	5	CY7C286-70	Cypress	35
	75 nsF	CMOS	TS	28	5	CY7C285-75	Cypress	
	85 nsF	CMOS	TS	32	5	CY7C289-85	Cypress	
	150 nsF	CMOS	TS	28	5	TMS27PC512-15	TI	
						TMS27PC512-150	TI	
		CMOS OTP	TS	28	5	TC54512A-15	Toshiba	40
	170 nsF	CMOS	TS	28	5	TMS27PC512-1	TI	
						TMS27PC512-17	TI	
	200 nsF	CMOS	TS	28	5	MBM27C512-20	◊ Fujitsu	
						27C512I-20	◊ Signetics	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x8							(Cont'd)	
	200 nsF	CMOS	TS	28	5	TMS27PC512-2	TI	45
						TMS27PC512-20	TI	
		CMOS OTP	TS	28	5	TC54512A-20	Toshiba	
		Module	TS	38	5	COB654512E	Microchip	
		NMOS OTP	TS	28	5	TMM24512A-20	◊ Toshiba	
		TTL	TS	32	5	DQ48F512-20	SEEQ	50
						NQ48F512-200	◊ SEEQ	
	250 nsF	CMOS	TS	28	5	MBM27C512-25	◊ Fujitsu	
						TMS27PC512	TI	
						TMS27PC512-25	TI	
		TTL	TS	32	5	DQ48F512-25	SEEQ	55
						NQ48F512-250	◊ SEEQ	
	300 nsF	CMOS	TS	28	5	TMS27PC512-3	TI	
						TMS27PC512-30	TI	
		TTL	TS	32	5	DQ48F512-30	SEEQ	
						NQ48F512-300	◊ SEEQ	60
65536x16								
	55 nsF	CMOS	TS	40	5	WS57C210-55	Waferscale	
	70 nsF	CMOS	TS	40	5	WS57C210-70	Waferscale	
						WS57C210-70M	† Waferscale	
	120 nsF	CMOS	TS	40	5	AT27C1024-12	† ATMEL	
	150 nsF	CMOS	TS	28	5	MBM27C1028-15	◊ Fujitsu	65
	200 nsF	CMOS	TS	28	5	MBM27C1028-20	◊ Fujitsu	
				40	5	MBM27C1024-20	Fujitsu	
	250 nsF	CMOS	TS	28	5	MBM27C1028-25	◊ Fujitsu	
				40	5	MBM27C1024-25	Fujitsu	
						TMX27PC210-25	TI	70
		TTL	TS	68	5	**MB98A6070-25**	**Fujitsu (3425)**	
131072x8								
	55 nsF	CMOS	TS	32	5	WS57C010-55	Waferscale	
	70 nsF	CMOS	TS	32	5	WS57C010-70M	† Waferscale	
	120 nsF	CMOS	TS	28	5	AT27C010-12	† ATMEL	
	150 nsF	CMOS OTP	TS	32	5	TC541000-15	◊ Toshiba	75
						TC541001-15	◊ Toshiba	
	170 nsF	CMOS	TS	32	5	AM27C010-170	AMD	
	200 nsF	CMOS	TS	28	5	MBM27C1028-20	◊ Fujitsu	
				32	5	AM27C010-200	AMD	
						MBM27C1000-20	Fujitsu	80
						MBM27C1001-20	Fujitsu	
		CMOS OTP	TS	32	5	TC541000-20	◊ Toshiba	
						TC541001-20	◊ Toshiba	
		TTL	TS	32	5	DQ48F010-20	SEEQ	
						NQ48F010-200	◊ SEEQ	85
	250 nsF	CMOS	TS	28	5	AT27C010-25	† ATMEL	
						MBM27C1028-25	◊ Fujitsu	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—PROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8							(Cont'd)	
	250 nsF	CMOS	TS	32	5	AM27C010-250	AMD	
						MBM27C1000-25	Fujitsu	
						MBM27C1001-25	Fujitsu	
		Module	TS	38	5	COB654512X2E	Microchip	
		TTL	TS	32	5	DQ48F010-25	SEEQ	5
						NQ48F010-250	◊ SEEQ	
	300 nsF	CMOS	TS	32	5	AM27C010-300	AMD	
		TTL	TS	32	5	DQ48F010-30	SEEQ	
						NQ48F010-300	◊ SEEQ	
131072x16								
	250 nsF	TTL	TS	68	5	**MB98A6080-25**	**Fujitsu (3425)**	10
262144x16								
	250 nsF	TTL	TS	68	5	MB98A6090-25	Fujitsu	
524288x8								
	120 nsF	CMOS	TS	32	5	WS27C040-12	Waferscale	
	150 nsF	CMOS	TS	32	5	WS27C040-15	Waferscale	
						WS27C040-15M	† Waferscale	
	170 nsF	CMOS	TS	32	5	WS27C040-17	Waferscale	15
						WS27C040-17M	† Waferscale	
524288x16								
	200 nsF	CMOS	TS	64	5	MB838200-20	◊ Fujitsu	
	250 nsF	TTL	TS	68	5	**MB98A6100-25**	**Fujitsu (3425)**	
1048576x8								
	150 nsF	Flash CMOS	TS	34	5	WF1024K8-150	White Tech	
	200 nsF	CMOS	TS	64	5	MB838200-20	◊ Fujitsu	20

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs

Dynamic—General Purpose

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
256x4	5 nsF	10K/10KH ECL	OE	24	−4.5	CY10E422L-5C	◊ Aspen	
	7 nsF	10K/10KH ECL	OE	24	−4.5	CY10E422L-7C	◊ Aspen	
512x512x4	100 nsF	CMOS	TS	28	5	MSM514221-10	OKI	
	120 nsF	CMOS	TS	28	5	MSM514221-12	OKI	
910x263x4	40 nsF	CMOS	TS	28	5	μPD42270	NEC	5
1024x4	120 nsF	CMOS	TS	18	5	HM6514S/883	◊† Harris	
16384x1	120nsF	NMOS	TS	16	±5,12	**4116-12**	**Krueger (3513)**	
	150nsF	NMOS	TS	16	±5,12	**4116-15**	**Krueger (3513)**	
	200nsF	NMOS	TS	16	±5,12	**4116-20**	**Krueger (3513)**	
16384x4	20 nsF	CMOS	TS	24	5	P4C198A-20C	Performance	10
						P4C198A-20M	◊† Performance	
	120 nsF	NMOS	TS	18	5	SMJ4416-12	† TI	
	150 nsF	NMOS	TS	18	5	MN4264-15	Panasonic	
						SMJ4416-15	† TI	
	200 nsF	NMOS	TS	18	5	SMJ4416-20	† TI	15
16384x8	120 nsF	CMOS	TS	28	5	SMJ27C128-12	† TI	
	150 nsF	CMOS	TS	28	5	SMJ27C128-15	† TI	
	170 nsF	CMOS	TS	28	5	SMJ27C128-17	† TI	
	250 nsF	CMOS	TS	28	5	SMJ27C128-25	† TI	
32762x8	150 nsF	CMOS	TS	28	5	SMJ27C256-15	† TI	20
32768x8	85 nsF		8	28	5	**GM76C256-85**	◊ **GoldStar (3432)**	
		CMOS, Pseudo-Static	TS	28	5	**TC51832-85**	◊ **Toshiba (3682)**	
	100 nsF	CMOS, Pseudo-Static	TS	28	5	**TC51832-10**	◊ **Toshiba (3682)**	
	170 nsF	CMOS	TS	28	5	SMJ27C256-17	† TI	
	250 nsF	CMOS	TS	28	5	SMJ27C256-25	† TI	25
32768x8x4	20 nsF	CMOS, Field Memory	TS	40	5	TC521000	◊ Toshiba	
65536x1	25 nsF	CMOS	TS	22	5	IDT7187L-25	◊‡ IDT	
	100 nsF	NMOS	TS	16	5	MT4264-10	◊ MicronTech	
						KM4164B-10	Samsung	
	120 nsF	NMOS	TS	16	5	MT4264-12	◊ MicronTech	30
						NMC4164-12	National	
						MSM3764A-12	OKI	
						MN4164-12A	Panasonic	
						KM4164B-12	Samsung	
						MKB45H64-81	† SGS-Thomson	35
						SMJ4164-12	◊† TI	
		NMOS, Refurbished	TS	16	5	**4164-120**	**Krueger (3513)**	
	150 nsF	NMOS	TS	16	5	MT4264-15	MicronTech	
						NMC4164-15	National	
						MSM3764A-15	OKI	40

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x1	150 nsF	NMOS	TS	16	5		(Cont'd)	
						MN4164-15A	Panasonic	
						KM4164B-15	Samsung	
						MKB45H64-82	† SGS-Thomson	
						TS4164-15	SGS-Thomson	
						SMJ4164-15	◊† TI	45
		NMOS, Refurbished	TS	16	5	**4164-150**	**Krueger (3513)**	
	200 nsF	NMOS	TS	16	5	NMC4164-20	National	
						MKB45H64-83	† SGS-Thomson	
						TS4164-20	SGS-Thomson	
						SMJ4164-20	◊† TI	50
		NMOS, Refurbished	TS	16	5	**4164-200**	**Krueger (3513)**	
65536x1 Random/Sequential	150 nsF	NMOS	TS	20	5	SMJ4161-15	† TI	
	200 nsF	NMOS	TS	20	5	SMJ4161-20	† TI	
65536x4	60 nsF	CMOS	TS	18	5	AAA2805-06	◊ NMB	
	70 nsF	CMOS	TS	18	5	AAA2805-07	◊ NMB	55
						KM41C464-07	◊ Samsung	
						KM41C466-07	◊ Samsung	
						V53C464-70	Vitelic	
						V53C466-70	Vitelic	
				24	5	**HY53C464-70**	**Hyundai (3475)**	60
						HY53C464L-70	**Hyundai (3475)**	
			TTL	18	5	V53C464-70L	Vitelic	
						V53C466-70L	Vitelic	
	80 nsF	CMOS	TS	18	5	**GM71C464-80**	**GoldStar (3431, 3433)**	
						AAA2805-08	◊ NMB	65
						KM41C464-08	◊ Samsung	
						KM41C466-08	◊ Samsung	
						V53C464-80	Vitelic	
						V53C466-80	Vitelic	
				24	5	**HY53C464-80**	**Hyundai (3475)**	70
						HY53C464L-80	**Hyundai (3475)**	
			TTL	18	5	V53C464-80L	Vitelic	
						V53C466-80L	Vitelic	
		NMOS	TS	16	5	MN41464A-08	◊ Panasonic	
						MN41464AL-08	Panasonic	75
				18	5	MT4067-8	◊ MicronTech	
	100 nsF	CMOS	TS	18	5	**GM71C464-10**	**GoldStar (3431, 3433)**	
						AAA2805-10	◊ NMB	
						KM41C464-10	◊ Samsung	
						KM41C466-10	◊ Samsung	80
						V53C464-10	Vitelic	
						V53C464-10L	Vitelic	
						V53C466-10	Vitelic	
				24	5	**HY53C464-10**	**Hyundai (3475)**	
						HY53C464L-10	**Hyundai (3475)**	85
			TTL	18	5	V53C466-10L	Vitelic	
		NMOS	TS	18	5	**4464-100**	◊ **Krueger (3513)**	
						MT4067-10	◊ MicronTech	
						μPD41464-10	◊ NEC	
						MSM41464-10	OKI	90
						LH2464-10	Sharp	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	120 nsF	CMOS	TS	18	5	LH2464-12	Sharp	
						LH2465-12	Sharp	
						SMJ4464-12 †	TI	
				24	5	**HY53C464-12**	**Hyundai (3475)**	
						HY53C464L-12	**Hyundai (3475)**	5
		Fast Page						
			TTL	18	5	MB81464-12 ◊	Fujitsu	
		NMOS	TS	18	5	HM50464-12	Hitachi	
						HM50464-15	Hitachi	
						MT4067-12 ◊	MicronTech	
						μPD41464-12 ◊	NEC	10
						MSM41464-12	OKI	
		NMOS, Page Mode						
			TS	18	5	KM41464A-12 ◊	Samsung	
		NMOS, Refurbished						
			TS	18	5	**4464-120 ◊**	**Krueger (3513)**	
	150 nsF	CMOS	TS	18	5	LH2464-15	Sharp	
						LH2465-15	Sharp	15
						SMJ4464-15 †	TI	
		NMOS	TS	18	5	MT4067-15 ◊	MicronTech	
		NMOS, Page Mode						
			TS	18	5	KM41464A-15 ◊	Samsung	
		NMOS, Refurbished						
			TS	18	5	**4464-150**	**Krueger (3513)**	
	200 nsF	CMOS	TS	18	5	SMJ4464-20 †	TI	20
65536x8								
	70 nsF	CMOS	TTL	24	5	V53C864-70	Vitelic	
						V53C864-70L	Vitelic	
	80 nsF	CMOS	TTL	24	5	V53C864-80	Vitelic	
						V53C864-80L	Vitelic	
	100 nsF	CMOS	TTL	24	5	V53C864-10	Vitelic	25
						V53C864-10L	Vitelic	
	120 nsF	CMOS	TTL	24	5	V53C864-12	Vitelic	
						V53C864-12L	Vitelic	
65536x16								
	80 nsF	CMOS	TS	40	5	**TC511664-80 ◊**	**Toshiba (3684)**	
						TC511665-80 ◊	Toshiba	30
						TC51665-80 ◊	Toshiba	
	100 nsF	CMOS	TS	40	5	**TC511664-10 ◊**	**Toshiba (3684)**	
						TC511665-10 ◊	Toshiba	
1048576x1								
	70 nsF	CMOS	TS	20	5	EDI411024C70B	EDI	
131072x8								
	80 nsF	CMOS, Pseudo-Static						
			TS	32	5	**TC518128A-80 ◊**	**Toshiba (3682)**	35
						TC518129A-80 ◊	**Toshiba (3682)**	
	100 nsF	CMOS, Pseudo-Static						
			TS	32	5	**TC518128A-10 ◊**	**Toshiba (3682)**	
						TC518129A-10 ◊	**Toshiba (3682)**	
	120 nsF	CMOS, Pseudo-Static						
			TS	32	5	**TC518128A-12 ◊**	**Toshiba (3682)**	
						TC518129A-12 ◊	**Toshiba (3682)**	40
131072x8 (video)								
	100 nsF	CMOS	Serial	40	5	M5M482128 ◊	Mitsubishi	
131072x9								
	70 nsF	CMOS	TS	22	5	LH69128-70	Sharp	
	90 nsF	CMOS	TS	22	5	LH69128-90	Sharp	
189360x6								
	60 nsF	CMOS		22	5	LH66180	Sharp	
262144x1								
	60 nsF	CMOS	TS		5	AAA2800-06 ◊	NMB	45
				16	5	TC51256-60 ◊	Toshiba	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x1							(Cont'd)	
	70 nsF	CMOS	TS		5	AAA2800-07 ◊	NMB	
				16	5	**HY53C256-70**	**Hyundai (3475)**	
						HY53C256L-70	**Hyundai (3475)**	
						KM41C256-07 ◊	Samsung	50
						KM41C257-07 ◊	Samsung	
						KM41C258-07 ◊	Samsung	
						TC51256-70 ◊	Toshiba	
						V53C256-70	Vitelic	
						V53C256-70L	Vitelic	55
						V53C258-70 ◊	Vitelic	
				20	5	TC514258A-70 ◊	Toshiba	
			TTL	16	5	V53C258-70L	Vitelic	
	80 nsF	CMOS	TS		5	AAA2800-08 ◊	NMB	
				16	5	**GM71C256-80**	**GoldStar (3431, 3433)**	60
						HY53C256-80	**Hyundai (3475)**	
						HY53C256L-80	**Hyundai (3475)**	
						KM41C256-08 ◊	Samsung	
						KM41C257-08 ◊	Samsung	
						KM41C258-08 ◊	Samsung	65
						TC51256-80 ◊	Toshiba	
						V53C256-80	Vitelic	
						V53C256-80L	Vitelic	
						V53C258-80	Vitelic	
			TTL	16	5	V53C258-80L	Vitelic	70
		NMOS	TS	16	5	MT1259-8 ◊	MicronTech	
						MN41256A-08 ◊	Panasonic	
						MN41256AL-08	Panasonic	
						MN41257A-08 ◊	Panasonic	
						41257AL-08	Panasonic	75
	100 nsF	CMOS	TS	16	5	**GM71C256-10**	**GoldStar (3431, 3433)**	
						HY53C256-10	**Hyundai (3475)**	
						HY53C256L-10	**Hyundai (3475)**	
						KM41C256-10 ◊	Samsung	
						KM41C257-10 ◊	Samsung	80
						KM41C258-10 ◊	Samsung	
						V53C256-10	Vitelic	
						V53C256-10L	Vitelic	
						V53C258-10	Vitelic	
			TTL	16	5	V53C258-10L	Vitelic	85
		Fast Page						
			TTL	16	5	MB81256-10 ◊	Fujitsu	
		NMOS	TS	16	5	MT1259-10 ◊	MicronTech	
						MT1259-12 ◊	MicronTech	
						MCM6256B-10 ◊	Motorola	
						MCM6257B-10 ◊	Motorola	90
						μPD41256-10 ◊	NEC	
						MSM41256A-10 ◊	OKI	
						MSM41257A-10	OKI	
						MKB45F56-80 †	SGS-Thomson	
						LH21256-10	Sharp	95
						LH21257-10	Sharp	
						LH21258-10	Sharp	
						HYB41256-10	Siemens	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x1							(Cont'd)	
	120 nsF	CMOS	TS	16	5	**GM71C256-12**	**GoldStar (3431, 3433)**	
						HM51258-12	Hitachi	
						HY53C256-12	**Hyundai (3475)**	
						HY53C256L-12	**Hyundai (3475)**	
						LH21256-12	Sharp	5
						LH21257-12	Sharp	
						LH21258-12	Sharp	
						V53C256-12	Vitelic	
						V53C256L-12	Vitelic	
		Fast Page						
			TTL	16	5	MB81256-12	◊ Fujitsu	10
			NMOS	TS	16	5	GM71256-12	GoldStar
						HM50256-12	Hitachi	
						MCM6256B-12	◊ Motorola	
						MCM6257B-12	◊ Motorola	
						μPD41256-12	◊ NEC	15
						μPD41257-12	◊ NEC	
						MSM41256A-12	◊ OKI	
						MSM41257A-12	OKI	
						MKB45F56-81	† SGS-Thomson	
						MK45H56-12	SGS-Thomson	20
		NMOS, Page Mode						
			TS	16	5	KM41256A-12	◊ Samsung	
		TTL	TS	16	5	HYB41256-12	Siemens	
	150 nsF	CMOS	TS	16	5	HM51258-15	Hitachi	
						LH21256-15	Sharp	
						LH21257-15	Sharp	25
						LH21258-15	Sharp	
		NMOS	TS	16	5	GM71256-15	GoldStar	
						HM50256-15	Hitachi	
						MT1259-15	◊ MicronTech	
						μPD41257-15	◊ NEC	30
						MSM41256A-15	◊ OKI	
						MSM41257A-15	OKI	
						MKB45F56-82	† SGS-Thomson	
						MK45H56-15	SGS-Thomson	
						SMJ4256-15	† TI	35
		NMOS, Page Mode						
			TS	16	5	KM41256A-15	◊ Samsung	
		TTL	TS	16	5	HYB41256-15	Siemens	
	200 nsF	CMOS	TS	16	5	LH21256-20	Sharp	
						LH21257-20	Sharp	
						LH21258-20	Sharp	40
		NMOS	TS	16	5	HM50256-20	Hitachi	
						SMJ4256-20	† TI	
262144x4								
	60 nsF	CMOS	TS		5	AAA1M304-06	◊ NMB	
				18	5	MB81C4256A(L)-60	Fujitsu	
				20	5	MN41C4256A-06	Panasonic	45
						MN41C4256AL-06	Panasonic	
						MN41C4258A-06	Panasonic	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x4							(Cont'd)	
	60 nsF	CMOS	TS	20	5	MN41C4258AL-06	Panasonic	
						HYB514256A-60	◊ Siemens	
		Fast Page						
			TTL	20	5	**MB81C4256A-60**	**◊ Fujitsu (3406)**	50
		Static Column						
			TTL	20	5	MB81C4258A-60	◊ Fujitsu	
	70	CMOS	TS	20	5	**EDI44256C70B**	**EDI (3390)**	
	70 nsF	CMOS	TS		5	AAA1M304-07	◊ NMB	
				18	5	MCM51L4256A-70	Motorola	
						MCM514256A-70	Motorola	55
						MCM514258A-70	Motorola	
				20	5	MB81C4256A(L)-70	Fujitsu	
						M5M44266-7	Mitsubishi	
						M5M44268-7	Mitsubishi	
						μPD424256-70	◊ NEC	60
						μPD424258-70	◊ NEC	
						MN41C4256A-07	Panasonic	
						MN41C4256AL-07	Panasonic	
						MN41C4258A-07	Panasonic	
						MN41C4258AL-07	Panasonic	65
						HYB514256A-70	◊ Siemens	
						TC514256A-70	◊ Toshiba	
						TC514268A-70	◊ Toshiba	
		CMOS, Fast Page						
			TS	20	5	TC514266A-70	◊ Toshiba	
		Fast Page						
			TTL	20	5	**MB81C4256A-70**	**Fujitsu (3406)**	70
		Static Column						
			TTL	20	5	MB81C4258A-70	Fujitsu	
	80 nsF	CMOS	TS		5	AAA1M304-08	◊ NMB	
				18	5	MCM51L4256A-80	Motorola	
						MCM514256A-80	Motorola	
						MCM514258A-80	Motorola	75
						TMS44C256-80	◊ TI	
						TC514258A-80	◊ Toshiba	
				20	5	MB81C4256A(L)-80	Fujitsu	
						GM71C4256A-80	**GoldStar (3431)**	
						HY51C4256-80	**Hyundai (3475)**	80
						HY51C4256L-80	**Hyundai (3475)**	
						MT4C4256-8	◊ MicronTech	
						M5M44256B-7	◊ Mitsubishi	
						M5M44256B-8	◊ Mitsubishi	
						M5M44258A-8	◊ Mitsubishi	85
						M5M44258B-7	◊ Mitsubishi	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x4							(Cont'd)	
	80 nsF	CMOS	TS	20	5	M5M44258B-8	◊ Mitsubishi	
						M5M44266-8	Mitsubishi	
						M5M44268-8	Mitsubishi	
						μPD424256-80	NEC	
						μPD424258-80	NEC	5
						MN41C4256-08	◊ Panasonic	
						MN41C4256A-08	Panasonic	
						MN41C4256AL-08	Panasonic	
						MN41C4258-08	◊ Panasonic	
						MN41C4258A-08	Panasonic	10
						MN41C4258AL-08	Panasonic	
						MN41C4258L-08	Panasonic	
						HYB514256A-80	◊ Siemens	
						TC514256A-80	◊ Toshiba	
		CMOS, Fast Page	TS	20	5	TC514256-80	◊ Toshiba	15
		CMOS, Page Mode	TS	20	5	KM44C256A-08	◊ Samsung	
		CMOS, Static Column	TS	20	5	MT4C4258-8	MicronTech	
						KM44C258A-08	◊ Samsung	
						TC514268A-80	◊ Toshiba	
		Fast Page	TTL	20	5	MB81C4256-80	◊ Fujitsu	20
						MB81C4256A-80	**Fujitsu (3406)**	
						MB81C4256L-80	◊ Fujitsu	
		Nibble Mode	TTL	20	5	MB81C4258A-80	Fujitsu	
		Static Column	TTL	20	5	MB81C4258-80	◊ Fujitsu	
						MB81C4258L-80	◊ Fujitsu	25
	85 nsF	CMOS	TS	20	5	GM71C4256-85	GoldStar	
						MCM514256A-85	◊ Motorola	
						MCM514258A-85	◊ Motorola	
			TTL	20	5	TC514256-85	Toshiba	
						V53C104-85	Vitelic	30
						V53C104-85L	Vitelic	
	100 nsF	CMOS	TS	18	5	MCM51L4256A-10	Motorola	
						MCM514256A-10	◊ Motorola	
						MCM514258A-10	◊ Motorola	
				20	5	MB81C4256A(L)-10	Fujitsu	35
						MB81C4256A-10	**Fujitsu (3406)**	
						GM71C4256-10	**GoldStar (3434)**	
						GM71C4256A-10	**GoldStar (3431)**	
						HY51C4256-10	**Hyundai (3475)**	
						HY51C4256L-10	**Hyundai (3475)**	40
						514256-10	**◊ Krueger (3513)**	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x4							(Cont'd)	
	100 nsF	CMOS	TS	20	5	MT4C4256-10	◊ MicronTech	
						M5M44256B-10	◊ Mitsubishi	
						M5M44258A-10	◊ Mitsubishi	
						M5M44258B-10	◊ Mitsubishi	45
						M5M44266-10	Mitsubishi	
						M5M44268-10	Mitsubishi	
						μPD424256-10	NEC	
						μPD424258-10	NEC	
						MSM514256-10	◊ OKI	50
						MSM514258-10	◊ OKI	
						LH64258-10	Sharp	
						HYB514256A-10	◊ Siemens	
						SMJ44C256-10	◊† TI	
						TC514258-10	Toshiba	55
				22	5	LH64256-10	Sharp	
				28	5	MSM514251-10	OKI	
			TTL	20	5	TC514256-10	Toshiba	
						V53C104-10	Vitelic	
						V53C104-10L	Vitelic	60
		CMOS, Fast Page	TS	20	5	TC514266A-10	◊ Toshiba	
		CMOS, Page Mode	TS	20	5	KM44C256A-10	◊ Samsung	
		CMOS, Static Column	TS	20	5	MT4C4258-10	MicronTech	
						KM44C258A-10	◊ Samsung	
						TC514258A-10	◊ Toshiba	65
						TC514268A-10	◊ Toshiba	
		Fast Page	TTL	20	5	MB81C4256L-10	◊ Fujitsu	
		NMOS, Refurbished	TS	18	5	**41256-100**	**◊ Krueger (3513)**	
		Static Column	TTL	20	5	MB81C4258L-10	◊ Fujitsu	
	120 nsF	CMOS	TS	20	5	**GM71C4256-12**	**GoldStar (3434)**	70
						GM71C4256A-12	GoldStar	
						HY51C4256-12	**Hyundai (3475)**	
						HY51C4256L-12	**Hyundai (3475)**	
						514256-12	**◊ Krueger (3513)**	
						MT4C4256-12	◊ MicronTech	75
						MCM514256A-12	◊ Motorola	
						MCM514258A-12	◊ Motorola	
						μPD424256-12	NEC	
						μPD424258-12	NEC	
						MSM514256-12	◊ OKI	80
						MSM514258-12	◊ OKI	
						LH64258-12	Sharp	
						SMJ44C256-12	† TI	
						TC514258-12	Toshiba	
				22	5	LH64256-12	Sharp	85
				28	5	MSM514251-12	OKI	

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x4								
	120 nsF	CMOS					(Cont'd)	
			TTL	20	5	TC514256-12	Toshiba	
						V53C104-12	Vitelic	
						V53C104-12L	Vitelic	
		CMOS, Static Column						
			TS	20	5	MT4C4258-12	MicronTech	
		NMOS, Refurbished						
			TS	18	5	**41256-120**	◊ **Krueger (3513)**	5
	150 nsF	CMOS	TS	20	5	**EDI44256C150B**	**EDI (3390)**	
						HY51C4256-15	**Hyundai (3475)**	
						HY51C4256L-15	**Hyundai (3475)**	
						MT4C4256-15	◊ MicronTech	
						LH64258-15	Sharp	10
						SMJ44C256-15	† TI	
		CMOS, Static Column						
			TS	20	5	MT4C4258-15	MicronTech	
		NMOS, Refurbished						
			TS	18	5	**41256-150**	◊ **Krueger (3513)**	
262144x4, Field RAM								
	25 nsF	Pseudo-Static, CMOS						
			TS	16	5	TMS4C1050-3	TI	
	50 nsF	Pseudo-Static, CMOS						
			TS	16	5	TMS4C1050-6	TI	15
262144x4, Page Mode								
	100 nsF	CMOS	TS	20	5	TMS44C256-10	TI	
	120 nsF	CMOS	TS	20	5	TMS44C256-12	TI	
262144x8								
	70 nsF	CMOS	TS	30	5	MCM8L4256-70	Motorola	
		CMOS TS						
			TS	30	5	MCM84256-70	Motorola	
	80 nsF	CMOS	TS	30	5	MCM8L4256-80	Motorola	20
						MCM84256-80	Motorola	
	100 nsF	CMOS	TS	30	5	MCM8L4256-10	Motorola	
						MCM84256-10	Motorola	
		NMOS	TS	30	5	MSC2304-10	OKI	
	120 nsF	NMOS	TS	30	5	MSC2304-12	OKI	25
262144x9								
	60 nsF	CMOS	TS		5	MM2800J9S-06	NMB	
	70 nsF	CMOS	TS		5	MM2800J9S-07	NMB	
				30	5	MCM9L4256-70	Motorola	
						MCM94256-70	Motorola	
	80 nsF	CMOS	TS		5	MM2800J9S-08	NMB	30
				30	5	MCM9L4256-80	Motorola	
						MCM94256-80	Motorola	
	100 nsF	CMOS	TS	30	5	MCM9L4256-10	Motorola	
						MCM94256-10	Motorola	
262144x36								
	70 nsF	CMOS	TS	72	5	MCM36256-70	Motorola	35
	80 nsF	CMOS	TS	72	5	MCM36256-80	Motorola	
	100 nsF	CMOS	TS	72	5	MCM36256-10	Motorola	
276500x4								
	30 nsF	CMOS	TS	28	5	LH64270	Sharp	
4194304x1								
	80 nsF	CMOS	TS	18	5	MB814101-80	◊ Fujitsu	
524288x36								
	70 nsF	CMOS	TS	72	5	MCM36512-70	Motorola	40
	80 nsF	CMOS	TS	72	5	MCM36512-80	Motorola	
	100 nsF	CMOS	TS	72	5	MCM36512-10	Motorola	
1048576x1								
	60 nsF	CMOS	TS		5	AAA1M300-06	◊ NMB	
				18	5	MB81C1000A(L)-60	Fujitsu	
						MB81C1000A-60	◊ **Fujitsu (3405)**	45
						MB81C1000A-60L	◊ Fujitsu	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x1								
	60 nsF	CMOS	TS	18	5		(Cont'd)	
						MB81C1001A(L)-60	Fujitsu	
						MN41C1000A-06	Panasonic	
						MN41C1002A-06	Panasonic	
						HYB511000A-60	◊ Siemens	50
				20	5	MN41C1000L-06	Panasonic	
						MN41C1002AL-06	Panasonic	
		Nibble Mode						
			TTL	20	5	MB81C1001A-60	◊ Fujitsu	
		Static Column						
			TTL	20	5	MB81C1002A-60	◊ Fujitsu	
	70 nsF	CMOS	TS		5	AAA1M300-07	◊ NMB	55
				18	5	MB81C000A(L)-70	Fujitsu	
						MB81C1000-70	◊ Fujitsu	
						MB81C1000-70L	◊ Fujitsu	
						MB81C1000A-70	◊ **Fujitsu (3405)**	
						MB81C1000A-70L	◊ Fujitsu	60
						MB81C1001A(L)-70	Fujitsu	
						MCM51L1000A-70	◊ Motorola	
						MCM511000A-70	◊ Motorola	
						MCM511001A-70	◊ Motorola	
						MCM511002A-70	Motorola	65
						μPD421000-70	◊ NEC	
						μPD421001-70	◊ NEC	
						μPD421002-70	◊ NEC	
						MN41C1000A-07	Panasonic	
						MN41C1002A-07	Panasonic	70
						HYB511000A-70	◊ Siemens	
						TC511000A-70	◊ Toshiba	
						TC511001A-70	◊ Toshiba	
						TC511002A-70	◊ Toshiba	
				20	5	MN41C1000L-07	Panasonic	75
						MN41C1002AL-07	Panasonic	
		CMOS, Nibble Mode						
			TS	18	5	KM41C1001A-07	◊ Samsung	
		CMOS, Page Mode						
			TS	18	5	KM41C1000A-07	◊ Samsung	
		CMOS, Static Column						
			TS	18	5	KM41C1002A-07	◊ Samsung	
		Nibble Mode						
			TTL	20	5	MB81C1001A-70	Fujitsu	80
		Static Column						
			TTL	20	5	MB81C1002A-70	Fujitsu	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x1							(Cont'd)	
	80	CMOS	TS	18	5	TC511002A-80	◊ Toshiba	
	80 nsF	CMOS	TS		5	AAA1M200-08	◊ NMB	
				18	5	MB81C1000-80	◊ Fujitsu	
						MB81C1000-80L	◊ Fujitsu	
						MB81C1000A(L)-80	Fujitsu	5
						MB81C1000A-80	**◊ Fujitsu (3405)**	
						MB81C1000A-80L	◊ Fujitsu	
						MB81C1001A(L)-80	Fujitsu	
						HY51C1000-80	**Hyundai (3475)**	
						HY51C1000L-80	**Hyundai (3475)**	10
						HY51C1002-80	**Hyundai (3475)**	
						HY51C1002L-80	**Hyundai (3475)**	
						MT4C1024-8	◊ MicronTech	
						M5M41000B-7	◊ Mitsubishi	
						M5M41000B-8	◊ Mitsubishi	15
						M5M41001B-7	◊ Mitsubishi	
						M5M41001B-8	◊ Mitsubishi	
						M5M41002B-7	◊ Mitsubishi	
						M5M41002B-8	◊ Mitsubishi	
						MCM51L1000A-80	Motorola	20
						MCM511000A-80	◊ Motorola	
						MCM511001A-80	◊ Motorola	
						MCM511002A-80	Motorola	
						μPD421000-80	NEC	
						μPD421001-80	NEC	25
						μPD421002-80	NEC	
						MN41C1000-08	◊ Panasonic	
						MN41C1002-08	◊ Panasonic	
						MN41C1002A-08	Panasonic	
						HYB511000A-80	◊ Siemens	30
						TMS4C1024-80	◊ TI	
						TMS4C1025-80	◊ TI	
						TMS4C1027-80	◊ TI	
						TC511000A-80	◊ Toshiba	
						TC511001A-80	◊ Toshiba	35
				20	5	MN41C1000A-08	◊ Panasonic	
						MN41C1000L-08	Panasonic	
						MN41C1002AL-08	Panasonic	
						MN41C1002L-08	Panasonic	
		CMOS, Nibble Mode						
			TS	18	5	KM41C1001A-08	◊ Samsung	40
		CMOS, Page Mode						
			TS	18	5	KM41C1000A-08	◊ Samsung	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x1							(Cont'd)	
	80 nsF							
		CMOS, Static Column						
			TS	18	5	KM41C1002A-08	◊ Samsung	
		Fast Page						
			TTL	20	5	MB81C1000L-80	◊ Fujitsu	
		Nibble Mode						
			TTL	20	5	MB81C1001-80	◊ Fujitsu	
						MB81C1001A-80	Fujitsu	45
						MB81C1001L-80	◊ Fujitsu	
		Static Column						
			TTL	20	5	MB81C1002-80	◊ Fujitsu	
						MB81C1002A-80	Fujitsu	
						MB81C1002L-80	◊ Fujitsu	
	85 nsF			20	5	DPD1MM1	Dense-Pac	50
		CMOS	TS	18	5	**GM71C1000-80**	**GoldStar (3431, 3434)**	
						MCM511000A-85	◊ Motorola	
						MCM511001A-85	◊ Motorola	
						MCM511002A-85	◊ Motorola	
			TTL	18	5	TC511000-85	Toshiba	55
						TC511001-85	Toshiba	
						TC511002-85	Toshiba	
	100 nsF	CMOS	TS	18	5	MB81C001A(L)-10	Fujitsu	
						MB81C1000-10	◊ Fujitsu	
						MB81C1000-10L	◊ Fujitsu	60
						MB81C1000A(L)-10	Fujitsu	
						MB81C1000A-10	Fujitsu	
						MB81C1000A-10L	◊ Fujitsu	
						GM71C1000-10	**GoldStar (3431, 3434)**	
						HY51C1000-10	**Hyundai (3475)**	65
						HY51C1000L-10	**Hyundai (3475)**	
						HY51C1002-10	**Hyundai (3475)**	
						HY51C1002L-10	**Hyundai (3475)**	
						511000-10	**◊ Krueger (3513)**	
						MT4C1024-10	◊ MicronTech	70
						M5M41000B-10	◊ Mitsubishi	
						MCM51L1000A-10	◊ Motorola	
						MCM511000A-10	◊ Motorola	
						MCM511001A-10	◊ Motorola	
						MCM511002A-10	Motorola	75
						μPD421000-10	NEC	
						μPD421001-10	NEC	
						μPD421002-10	NEC	
						μPD42601	◊ NEC	
						MSM511000-10	◊ OKI	80
						MSM511001-10	◊ OKI	
						MSM511002-10	OKI	
						HYB511000A-10	◊ Siemens	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x1								
	100 nsF	CMOS	TS	18	5		(Cont'd)	
						SMJ4C1024-10	◊† TI	
						TC511000-10	Toshiba	
						TC511001-10	Toshiba	
						TC511002-10	Toshiba	
		CMOS, Nibble Mode						
			TS	18	5	KM41C1001A-10	◊ Samsung	5
		CMOS, Page Mode						
			TS	18	5	KM41C1000A-10	◊ Samsung	
		CMOS, Static Column						
			TS	18	5	KM41C1002A-10	◊ Samsung	
		Fast Page						
			TTL	20	5	MB81C1000L-10	◊ Fujitsu	
		Nibble Mode						
			TTL	20	5	MB81C1001L-10	◊ Fujitsu	
		Static Column						
			TTL	20	5	MB81C1002L-10	◊ Fujitsu	10
		TTL	OC	18	5	MB81C1001-10	Fujitsu	
	120 nsF	CMOS	TS	18	5	MB81C1000-12	◊ Fujitsu	
						MB81C1000-12L	◊ Fujitsu	
						GM71C1000-12	**GoldStar (3431, 3434)**	
						HY51C1000-12	**Hyundai (3475)**	15
						HY51C1000L-12	**Hyundai (3475)**	
						HY51C1002-12	**Hyundai (3475)**	
						HY51C1002L-12	**Hyundai (3475)**	
						511000-12	**◊ Krueger (3513)**	
						MT4C1024-12	◊ MicronTech	20
						MCM511000A-12	◊ Motorola	
						MCM511001A-12	◊ Motorola	
						MCM511002A-12	◊ Motorola	
						μPD421000-12	NEC	
						μPD421001-12	NEC	25
						μPD421002-12	NEC	
						MSM511000-12	◊ OKI	
						MSM511001-12	◊ OKI	
						MSM511002-12	OKI	
						SMJ4C1024-12	† TI	30
						TC511000-12	Toshiba	
						TC511001-12	Toshiba	
						TC511002-12	Toshiba	
	150 nsF	CMOS	TS	18	5	**HY51C1000-15**	**Hyundai (3475)**	
						HY51C1002-15	**Hyundai (3475)**	35
						HY51C1002L-15	**Hyundai (3475)**	
						MT4C1024-15	◊ MicronTech	
						SMJ4C1024-15	† TI	
				20	5	EDI411024C150B	EDI	
1048576x1, Nibble Mode								
	100 nsF	CMOS	TS	18	5	TMS4C1025-10	TI	40
	120 nsF	CMOS	TS	18	5	TMS4C1025-12	TI	
1048576x1, Page Mode								
	100 nsF	CMOS	TS	18	5	TMS4C1024-10	TI	
	120 nsF	CMOS Page Mode						
			TS	18	5	TMS4C1024-12	TI	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x1, SCD								
	100 nsF	CMOS	TS	18	5	TMS4C1027-10	TI	
	120 nsF	CMOS	TS	18	5	TMS4C1027-12	TI	45
1048576x2								
	100 nsF	CMOS	TTL	18	5	MB81C1002-10	Fujitsu	
1048576x4								
	60 nsF	CMOS	TS	26	5	**MB814400A-60**	**Fujitsu (3408)**	
	70 nsF	CMOS	TS	26	5	**MB814400A-70**	**Fujitsu (3408)**	
		CMOS Page Mode						
			TS	20	5	MT4C4001-7	MicronTech	
		CMOS Static Column						
			TS	20	5	MT4C4003-7	MicronTech	50
	80 nsF	CMOS	TS	18	5	MCM51L4400-80	◊ Motorola	
						MCM514400-80	◊ Motorola	
						MCM514410-80	◊ Motorola	
				20	5	MB814400-80	◊ Fujitsu	
						MN41C41000-08	Panasonic	55
						MN41C41000L-08	Panasonic	
						MN41C41002-08	Panasonic	
						MN41C41002L-08	Panasonic	
						KM44C1000-08	◊ Samsung	
						KM44C1002-08	◊ Samsung	60
						HYB514400-80	◊ Siemens	
				26	5	MB814400(L)-80	Fujitsu	
						HM514400-8	◊ Hitachi	
						MCM41000-80	Motorola	
						μPD424400-80	◊ NEC	65
						TMS44400-80	TI	
				426	5	**MB814400A-80**	**Fujitsu (3408)**	
		CMOS, Fast Page						
			TS	20	5	**TC514400-80**	**◊ Toshiba (3685)**	
						TC514410-80	◊ Toshiba	
		CMOS, Nibble Mode						
			TS	20	5	TC514402-80	◊ Toshiba	70
		CMOS Page Mode						
			TS	20	5	MT4C4001-8	MicronTech	
		CMOS Static Column						
			TS	20	5	MT4C4003-8	MicronTech	
		Fast Page						
			TTL	20	5	MB814400-8	◊ Fujitsu	
		Nibble Mode						
			TTL	20	5	MB814401-8	◊ Fujitsu	
		NMOS	TS		5	M5M44400-8	◊ Mitsubishi	75
						M5M44402-8	◊ Mitsubishi	
		Static Column						
			TTL	20	5	MB814402-8	◊ Fujitsu	
	100 nsF	CMOS	TS	18	5	MCM51L4400-10	◊ Motorola	
						MCM514400-10	◊ Motorola	
						MCM514410-10	◊ Motorola	80
				20	5	MN41C41000-10	◊ Panasonic	
						MN41C41000L-10	Panasonic	
						MN41C41002-10	Panasonic	
						MN41C41002L-10	Panasonic	
						KM44C1000-10	◊ Samsung	85

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x4								
	100 nsF	CMOS	TS	20	5		(Cont'd)	
						KM44C1002-10	◊ Samsung	
						HYB514400-10	◊ Siemens	
				26	5	MB814400(L)-10	Fujitsu	
						HM514400-10	◊ Hitachi	
						MCM41000-10	Motorola	5
						μPD424400-10	◊ NEC	
						TMS44400-10	TI	
		CMOS, Fast Page						
			TS	20	5	**TC514400-10**	**◊ Toshiba (3685)**	
						TC514410-10	◊ Toshiba	
		CMOS, Nible Mode						
			TS	20	5	TC514402-10	◊ Toshiba	10
		CMOS Page Mode						
			TS	20	5	MT4C4001-10	MicronTech	
		CMOS Static Column						
			TS	20	5	MT4C4003-10	MicronTech	
		Fast Page						
			TTL	20	5	MB814400-10	◊ Fujitsu	
		Nibble Mode						
			TTL	20	5	MB814401-10	◊ Fujitsu	
		NMOS	TS		5	M5M44400-10	◊ Mitsubishi	15
						M5M44402-10	◊ Mitsubishi	
		Static Column						
			TTL	20	5	MB814402-10	◊ Fujitsu	
	120 nsF	CMOS	TS	26	5	HM514400-12	◊ Hitachi	
						μPD424400-12	◊ NEC	
						TMS44400-12	TI	20
		Fast Page						
			TTL	20	5	MB814400-12	◊ Fujitsu	
		Nibble Mode						
			TTL	20	5	MB814401-12	◊ Fujitsu	
		Static Column						
			TTL	20	5	MB814402-12	◊ Fujitsu	
1048576x8								
	70 nsF	CMOS	TS	30	5	MCM8L1000-70	Motorola	
						MCM81000-70	Motorola	25
						MCM81001-70	Motorola	
						MCM81002-70	Motorola	
						MC421000A8-70	NEC	
						MC421000B8-70	NEC	
						MC421000C8-70	NEC	30
	80	CMOS	TS	30	5	MCM8L1000-80	Motorola	
	80 nsF	CMOS	TS	30	5	MCM81000-80	Motorola	
						MCM81001-80	Motorola	
						MCM81002-80	Motorola	
						MC421000A8-80	NEC	35
						MC421000B8-80	NEC	
						MC421000C8-80	NEC	
		CMOS, Page Mode						
			TS	30	5	KMM581000-08	Samsung	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x8							(Cont'd)	
	100 nsF	CMOS	TS	30	5	MCM8L1000-10	Motorola	
						MCM81000-10	Motorola	40
						MCM81001-10	Motorola	
						MCM81002-10	Motorola	
						MC421000A8-10	NEC	
						MC421000B8-10	NEC	
				30	5	MC421000C8-10	NEC	45
				30	5	MSC2313-10	OKI	
		CMOS, Page Mode						
			TS	30	5	KMM581000-10	Samsung	
	120 nsF	CMOS	TS	30	5	MSC2313-12	OKI	
1048576x9								
	60 nsF	CMOS	TS		5	MM1M300J9S-06	NMB	
	70 nsF	CMOS	TS		5	MM1M300J9S-07	NMB	50
				30	5	MCM9L1000-70	Motorola	
						MCM91000-70	Motorola	
						MCM91001-70	Motorola	
						MCM91002-70	Motorola	
						MC421000A9-70	NEC	55
						MC421000B9-70	NEC	
						MC421000C9-70	NEC	
	80 nsF	CMOS	TS		5	MM1M200J9S-08	NMB	
				30	5	MCM9L1000-80	Motorola	
						MCM91000-80	Motorola	60
						MCM91001-80	Motorola	
						MCM91002-80	Motorola	
						MC421000A9-80	NEC	
						MC421000B9-80	NEC	
						MC421000C9-80	NEC	65
	100 nsF	CMOS	TS	30	5	MCM9L1000-10	Motorola	
						MCM91000-10	Motorola	
						MCM91001-10	Motorola	
						MCM91002-10	Motorola	
						MC421000A9-10	NEC	70
						MC421000B9-10	NEC	
						MC421000C9-10	NEC	
						MSC2312-10	OKI	
	120 nsF	CMOS	TS	30	5	MSC2312-12	OKI	
1049576x9								
	80 nsF	CMOS, Page Mode						
			TS	30	5	KMM591000-08	Samsung	75
	100 nsF	CMOS, Page Mode						
			TS	30	5	KMM591000-10	Samsung	
4194304								
	120 nsF	CMOS	TS	26	5	TMS44100-12	TI	
4194304x1								
	60 nsF	CMOS	TS	%18	5	**MB814100A-60**	**Fujitsu (3407)**	
				26	5	MB81400A(L)-60	Fujitsu	
						MB814101A(L)-60	Fujitsu	80
						MB814101A-60	Fujitsu	
	70 nsF	CMOS	TS	26	5	MB814100A(L)-70	Fujitsu	
						MB814100A-70	**Fujitsu (3407)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C)
OC–Open Collector
ns*–Nanoseconds Typical
nsF–Nanoseconds over Full Temperature Range
TS–Three-State
nsR–Nanoseconds at Room Temperature
OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4194304x1							
	70 nsF	CMOS	TS	26	5		(Cont'd)
						MB814101A(L)-70	Fujitsu
						MB814101A-70	Fujitsu
						HM514100-7	◊ Hitachi
		CMOS Page Mode	TS	18	5	MT4C1004-7	MicronTech
		CMOS Static Column	TS	18	5	MT4C1006-7	MicronTech
	80 nsF	CMOS	TS	18	5	MB814100-80	◊ Fujitsu
						MCM51L4100-80	Motorola
						MCM514100-80	Motorola
						MN41C4000-08	Panasonic
						MN41C4002-08	Panasonic
				20	5	EDI41496C80B	EDI
						MN41C4000L-08	Panasonic
						MN41C4002L-08	Panasonic
						KM41C4000-08	◊ Samsung
						KM41C4001-08	◊ Samsung
						KM41C4002-08	◊ Samsung
						HYB514100-80	◊ Siemens
				26	5	MB814100(L)-80	Fujitsu
						MB814100A(L)-80	Fujitsu
						MB814100A-80	**Fujitsu (3407)**
						MB814101A(L)-80	Fujitsu
						MB814101A-80	Fujitsu
						HM514100-8	◊ Hitachi
						MCM11400-80	Motorola
						μPD424100-80	◊ NEC
						TMS44100-80	TI
		CMOS, Fast Page	TS	20	5	TC514100-80	◊ Toshiba
		CMOS, Nibble Mode	TS	20	5	TC514101-80	◊ Toshiba
		CMOS Page Mode	TS	18	5	MT4C1004-8	MicronTech
		CMOS Static Column	TS	18	5	MT4C1006-8	MicronTech
		CMOS, Static Column	TS	20	5	TC514102-80	◊ Toshiba
		Fast Page	TTL	18	5	MB814100-8	◊ Fujitsu
		Nibble Mode	TTL	18	5	MB814101-8	◊ Fujitsu
		NMOS	TS		5	M5M44100-8	◊ Mitsubishi
						M5M44101-8	◊ Mitsubishi
						M5M44102-8	◊ Mitsubishi
		Static Column	TTL	18	5	MB814102-8	◊ Fujitsu
	85 nsF			20	5	DPD4MM1	Dense-Pac
	100 nsF	CMOS	TS	18	5	MCM51L4100-10	Motorola
						MCM514100-10	Motorola
						MN41C4000-10	Panasonic
						MN41C4002-10	Panasonic
				20	5	MN41C4002L-10	Panasonic
						KM41C4000-10	◊ Samsung
							(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4194304x1							
	100 nsF	CMOS	TS	20	5		(Cont'd)
						KM41C4001-10	◊ Samsung
						KM41C4002-10	◊ Samsung
						HYB514100-10	◊ Siemens
				26	5	MB814100(L)-10	Fujitsu
						MB814101(L)-10	Fujitsu
						HM514100-10	◊ Hitachi
						MCM11400-10	Motorola
						μPD424100-10	◊ NEC
						TMS44100-10	TI
		CMOS, Fast Page	TS	20	5	TC514100-10	◊ Toshiba
		CMOS, Nibble Mode	TS	20	5	TC514101-10	◊ Toshiba
		CMOS Page Mode	TS	18	5	MT4C1004-10	MicronTech
		CMOS Static Column	TS	18	5	MT4C1006-10	MicronTech
		CMOS, Static Column	TS	20	5	TC514102-10	◊ Toshiba
		Fast Page	TTL	18	5	MB814100-10	◊ Fujitsu
		Nibble Mode	TTL	18	5	MB814101-10	◊ Fujitsu
		NMOS	TS		5	M5M44100-10	◊ Mitsubishi
						M5M44101-10	◊ Mitsubishi
						M5M44102-10	◊ Mitsubishi
		Static Column	TTL	18	5	MB814102-10	◊ Fujitsu
	120 nsF	CMOS	TS	26	5	HM514100-12	◊ Hitachi
						μPD424100-12	◊ NEC
		Fast Page	TTL	18	5	MB814100-12	Fujitsu
		Nibble Mode	TTL	18	5	MB814101-12	◊ Fujitsu
		Static Column	TTL	18	5	MB814102-12	◊ Fujitsu
	150 nsF	CMOS	TS	20	5	**EDI414096C150B**	**EDI (3390)**
4194304x8							
	80 nsF	CMOS	TS	30	5	MCM8L4000-80	Motorola
						MCM84000-80	Motorola
	100 nsF	CMOS	TS	30	5	MCM84000-10	Motorola
4194304x9							
	80 nsF	CMOS	TS	30	5	MCM9L4000-80	Motorola
						MCM94000-80	Motorola
	100	CMOS	TS	30	5	MCM94000-10	Motorola
	100 nsF	CMOS	TS	30	5	MCM8L4000-10	Motorola
						MCM94L4000-10	Motorola
4194304x1							
	80 nsF	CMOS	TS	26	5	MB814101(L)-80	Fujitsu

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—Modules

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4								
	120 nsF		TS	22	5	**PEP4064EC4-120**	**Peps (3573)**	
	150 nsF		TS	22	5	**PEP4064EC4-150**	**Peps (3573)**	
	200 nsF		TS	22	5	**PEP4064EC4-200**	**Peps (3573)**	
65536x5								
	120 nsF		TS	24	5	**PEP4064EC5-120**	**Peps (3573)**	
	150 nsF		TS	24	5	**PEP4064EC5-150**	**Peps (3573)**	5
	200 nsF		TS	24	5	**PEP4064EC5-200**	**Peps (3573)**	
65536x8								
	100 nsF		TS	30	5	MT8068-10 ◊	MicronTech	
	120 nsF		TS	30	5	MT8068-12 ◊	MicronTech	
						PEP4064EL8-120	**Peps (3573)**	
	150 nsF		TS	30	5	MT8068-15 ◊	MicronTech	10
						PEP4064EL8-150	**Peps (3573)**	
	200 nsF		TS	30	5	**PEP4064EL8-200**	**Peps (3573)**	
65536x9								
	100 nsF		TS	30	5	MT9068-10 ◊	MicronTech	
	120 nsF		TS	30	5	MT9068-12 ◊	MicronTech	
						PEP4064EL9-120		
						◊	**Peps (3573)**	15
	150 nsF		TS	30	5	MT9068-15 ◊	MicronTech	
						PEP4064EL9-150		
						◊	**Peps (3573)**	
	200 nsF		TS	30	5	**PEP4064EL9-200**		
						◊	**Peps (3573)**	
262144x4								
	60 nsF		TS	22	5	**PEP4256EC4-60**	**Peps (3573)**	
	70 nsF		TS	22	5	**PEP4256EC4-70**	**Peps (3573)**	20
	80 nsF		TS	22	5	MT4259-8	MicronTech	
						PEP4256EC4-80	**Peps (3573)**	
	100 nsF		TS	22	5	MT4259-10	MicronTech	
						PEP4256EC4-100	**Peps (3573)**	
						TM4256EC4-10	TI	25
	120 nsF		TS	22	5	MT4259-12	MicronTech	
						PEP4256EC4-120	**Peps (3573)**	
						TM4256EC4-12	TI	
	150 nsF		TS	22	5	MT4259-15	MicronTech	
						PEP4256EC4-150	**Peps (3573)**	30
						TM4256EC4-15	TI	
262144x5								
	60 nsF		TS	24	5	**PEP4256EC5-60**	**Peps (3573)**	
	70 nsF		TS	24	5	**PEP4256EC5-70**	**Peps (3573)**	
	80 nsF		TS	24	5	**PEP4256EC5-80**	**Peps (3573)**	
		TTL, Page Mode						
			TS	24	5	MT85259-8	MicronTech	35
	100 nsF		TS	24	5	**PEP4256EC5-100**	**Peps (3573)**	
		TTL, Page Mode						
			TS	24	5	MT85259-10	MicronTech	
	120 nsF		TS	24	5	**PEP4256EC5-120**	**Peps (3573)**	
		TTL, Page Mode						
			TS	24	5	MT85259-12	MicronTech	
	150 nsF		TS	24	5	**PEP4256EC5-150**	**Peps (3573)**	40
		TTL, Page Mode						
			TS	24	5	MT85259-15	MicronTech	
262144x8								
	60 nsF		TS	30	5	**PEP4256EL8-60**	**Peps (3573)**	
		CMOS	TS	30	5	MM256K0J8-06	NMB	
	70 nsF		TS	30	5	MCM84258-70	Motorola	
						PEP4256EL8-70	**Peps (3573)**	45
		CMOS	TS	30	5	MCM8L4256-70	Motorola	
						MCM84256-70	Motorola	
						MM256K0J8-07	NMB	
						MM2800J8-07	NMB	
						VM53C256K8-70		
							Vitelic	50
		NMOS	TS	30	5	THM82500A-70	Toshiba	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x8								(Cont'd)
	80 nsF		TS	30	5	MT8259-8 ◊	MicronTech	
						MCM84258-80	Motorola	
						PEP4256EL8-80	**Peps (3573)**	
		CMOS	TS	30	5	MCM8L4256-80	Motorola	55
						MCM84256-80	Motorola	
						MM256K0J8-08	NMB	
						MM2800J8-08	NMB	
						KMM58256A-08		
							Samsung	
						VM53C256K8-80		
							Vitelic	60
		NMOS	TS	30	5	THM82500A-80	Toshiba	
	100 nsF		TS	30	5	MT8259-10 ◊	MicronTech	
						MCM84258-10	Motorola	
						PEP4256EL8-100	**Peps (3573)**	
						TM4256FL8-10	TI	65
						TM4256GU8-10	TI	
		CMOS	TS	30	5	MCM8L4256-10	Motorola	
						MCM84256-10	Motorola	
						MM256K0J8-10	NMB	
						MM2800J8-10	NMB	70
						KMM58256A-10		
							Samsung	
						VM53C256K8-10		
							Vitelic	
		NMOS	TS	30	5	MT8259	MicronTech	
						THM82500A-10	Toshiba	
	120 nsF		TS	30	5	MT8259-12 ◊	MicronTech	75
						MC41256A8-12	NEC	
						PEP4256EL8-120	**Peps (3573)**	
						TM4256FL8-12	TI	
		NMOS	TS	30	5	TM4256GU8-12	TI	
	150 nsF		TS	30	5	MT8259-15 ◊	MicronTech	80
						PEP4256EL8-150	**Peps (3573)**	
						TM4256FL8-15	TI	
		NMOS	TS	30	5	TM4256GU8-15	TI	
262144x9								
	10 nsF	NMOS	TS	30	5	THM92500A-10	Toshiba	
	60 nsF		TS	30	5	**PEP4256EL9-60**	**Peps (3573)**	85
		CMOS	TS	30	5	MM256K0J9-06	NMB	
	70 nsF		TS	30	5	**PEP4256EL9-70**	**Peps (3573)**	
		CMOS	TS	30	5	MCM9L4256-70	Motorola	
						MCM92456-70	Motorola	
						MM256K0J9-07	NMB	90
						MM2800J9-07	NMB	
						HYM31000-70	Siemens	
						VM53C256K9-70		
							Vitelic	
		NMOS	TS	30	5	THM92500A-70	Toshiba	
	80 nsF		TS	30	5	MT9259-8 ◊	MicronTech	95
						PEP4256EL9-80	**Peps (3573)**	
		CMOS	TS	30	5	MCM9L4256-80	Motorola	
						MCM94256-80	Motorola	
						MM256K0J9-08	NMB	
						MM2800J9-08	NMB	100
						KMM59256A-08		
							Samsung	
						HYM31000-80	Siemens	
						VM53C256K9-80		
							Vitelic	
		NMOS	TS	30	5	THM92500A-80	Toshiba	
	100 nsF		TS	30	5	MT9259-10 ◊	MicronTech	105
						PEP4256EL9-100	**Peps (3573)**	
						TM4256EL9-10	TI	
						TM4256GU9-10	TI	
		CMOS	TS	30	5	MCM9L4256-10	Motorola	
						MCM94256-10	Motorola	110
						MM256K0J9-10	NMB	
						MM2800J9-10	NMB	

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Dynamic—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x9								
	100 nsF	CMOS	TS	30	5		(Cont'd)	
						KMM59256A-10	Samsung	
						VM53C256K9-10	Vitelic	
	120 nsF		TS	30	5	MT9259-12 ◊	MicronTech	
						MC41256A9-12	NEC	
						PEP4256EL9-120	**Peps (3573)**	5
						TM4256EL9-12	TI	
		NMOS	TS	30	5	TM4256GU9-12	TI	
	150 nsF		TS	30	5	MT9259-15 ◊	MicronTech	
						PEP4256EL9-150	**Peps (3573)**	
						TM4256EL9-15	TI	10
		NMOS	TS	30	5	TM4256GU9-15	TI	
262144x36								
	60 nsF	CMOS	TS	72	5	**MB85336-60**	**Fujitsu (3421)**	
						MM256K0J36-06A	NMB	
	70 nsF	CMOS	TS	72	5	**MB85336-70**	**Fujitsu (3421)**	
						MCM36256-70	Motorola	15
						MM256K0J36-07	NMB	
						THM362500A-70	Toshiba	
						THM365120A-70	Toshiba	
	80 nsF	CMOS	TS	72	5	**MB85336-80**	**Fujitsu (3421)**	
						MT8C36256	MicronTech	20
						MCM36256-80	Motorola	
						MM256K0J36-08	NMB	
						KMM36256-08	Samsung	
						THM362500A-80	Toshiba	
						THM365120A-80	Toshiba	25
						VM55C104K36-80	Vitelic	
	100 nsF	CMOS	TS	72	5	**MB85336-10**	**Fujitsu (3421)**	
						MCM36256-10	Motorola	
						MM256K0J36-10	NMB	
						KMM36256-10	Samsung	30
						THM362500A-10	Toshiba	
						THM365120A-10	Toshiba	
						VM55C104K36-10	Vitelic	
		CMOS, Page Mode	TS	72	5	MT8C3656-10	MicronTech	
	120 nsF	CMOS, Page Mode	TS	72	5	MT8C3656-12	MicronTech	35
	150 nsF	CMOS, Page Mode	TS	72	5	MT8C3656-15	MicronTech	
262144x40								
	60 nsF	CMOS	TS	72	5	MB85253-60	Fujitsu	
	70 nsF	CMOS	TS	72	5	MB85253-70	Fujitsu	
	80 nsF	CMOS	TS	72	5	MB85253-80	Fujitsu	
	100 nsF	CMOS	TS	72	5	MB85253-10	Fujitsu	40
4194304x9								
	120 nsF	CMOS	TS	30	5	**MB85285-12**	**Fujitsu (3419)**	
524288x36								
	60 nsF	CMOS	TS	72	5	MB85337-60	Fujitsu	
						MM512K0J36-06	NMB	
	70 nsF	CMOS	TS	72	5	MB85337-70	Fujitsu	
						MCM36512-70	Motorola	45
						MM512K0J36-07	NMB	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
524288x36							(Cont'd)	
	80 nsF	CMOS	TS	72	5	MB85337-80	Fujitsu	
						MT8C36512	MicronTech	
						MCM36512-80	Motorola	
						MM512K0J36-08	NMB	50
						KMM36512-08	Samsung	
						VM55C1042K36-80	Vitelic	
	100 nsF	CMOS	TS	72	5	MB85337-10	Fujitsu	
						MCM36512-10	Motorola	
						MM512K0J36-10	NMB	55
						KMM36512-10	Samsung	
						VM5C1042K36-10	Vitelic	
524288x40								
	60 nsF	CMOS	TS	72	5	MB85254-60	Fujitsu	
	70 nsF	CMOS	TS	72	5	MB85254-70	Fujitsu	
	80 nsF	CMOS	TS	72	5	MB85254-80	Fujitsu	60
	100 nsF	CMOS	TS	72	5	MB85254-10	Fujitsu	
1048576x1								
	120 nsF		TS	22	5	TM4256FC1-12	TI	
	150 nsF		TS	22	5	TM4256FC1-15	TI	
1048576x1								
	100 nsF		TS	22	5	TM4256FC1-10	TI	
1048576x4								
	80 nsF		TS	26	5	**PEP1MX4Z-80**	**Peps (3573)**	65
		CMOS	TS	26	5	MCM41000-80	Motorola	
	100 nsF		TS	24	5	TM024HAC4-10	TI	
				26	5	**PEP1MX4Z-100**	**Peps (3573)**	
		CMOS	TS	26	5	MCM41000-10	Motorola	
	120 nsF		TS	24	5	**PEP1MX4-120**	**Peps (3573)**	70
						TM024HAC4-12	TI	
				26	5	**PEP1MX4Z-120**	**Peps (3573)**	
	150 nsF		TS	24	5	TM024HAC4-15	TI	
1048576x5								
	80 nsF		TS	30	5	**PEP1MX5-80**	**Peps (3573)**	
	100 nsF		TS	30	5	**PEP1MX5-100**	**Peps (3573)**	75
	120 nsF		TS	30	5	**PEP1MX5-120**	**Peps (3573)**	
1048576x8			TS	30	5	DPD1MX8	Dense-Pac	
	60 nsF	CMOS	TS	30	5	MB85230A-60	Fujitsu	
						MB85260A-60	Fujitsu	
						MM1M200J8-06	NMB	80
	70 nsF	CMOS	TS	30	5	MB85230A-70	Fujitsu	
						MB85260A-70	Fujitsu	
						MCM8L1000-70	Motorola	
						MCM81000-70	Motorola	
						MCM81001-70	Motorola	85
						MCM81002-70	Motorola	
						MM1M200J8-07	NMB	
						KMM581000-07	Samsung	
						THM81000A-70	Toshiba	
						THM81020A-70	Toshiba	90
	80	CMOS	TS	30	5	MCM8L1000-80	Motorola	
	80 nsF		TS	30	5	MH1M08A-80	◊ Mitsubishi	
						MH1M08A1-8	◊ Mitsubishi	
						MH1M08A2-8	◊ Mitsubishi	
						MH1M08BA0-8	◊ Mitsubishi	95
						MH1M08BA1-8	◊ Mitsubishi	
						MH1M08BA2-8	◊ Mitsubishi	
						MH1M09A0-8	◊ Mitsubishi	
						PEP1MX8-80	**Peps (3573)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x8							(Cont'd)	
	80 nsF							
		CMOS	TS	30	5	MB85230-80	Fujitsu	
						MB85231-80	Fujitsu	
						MB85260-80	Fujitsu	
						MT8C8024-8	◊ MicronTech	
						MCM81000-80	Motorola	5
						MCM81001-80	Motorola	
						MCM81002-80	Motorola	
						MM1M200J8-08	NMB	
						TM024GAD8-80	TI	
						THM81000A-80	Toshiba	10
						THM81020A-80	Toshiba	
	85 nsF	NMOS	TS	30	5	THM81001-85	Toshiba	
						THM81002-85	Toshiba	
						THM81020-85	Toshiba	
						THM81021-85	Toshiba	15
						THM81022-85	Toshiba	
	100 nsF		TS	30	5	MT8C8024-10	◊ MicronTech	
						MH1M08A-10	◊ Mitsubishi	
						MH1M08A1-10	◊ Mitsubishi	
						MH1M08A2-10	◊ Mitsubishi	20
						MH1M08BA0-10	◊ Mitsubishi	
						MH1M08BA1-10	◊ Mitsubishi	
						MH1M08BA2-10	◊ Mitsubishi	
						MH1M09A0-10	◊ Mitsubishi	
						MCM1002-10	Motorola	25
						PEP1MX8-100	**Peps (3573)**	
		CMOS	TS	30	5	MB85230-10	Fujitsu	
						MB85231-10	Fujitsu	
						MB85260-10	Fujitsu	
						MCM8L1000-10	Motorola	30
						MCM81000-10	Motorola	
						MCM81001-10	Motorola	
						MCM81002-10	Motorola	
						MM1M200J8-10	NMB	
						TM024GAD8-10	TI	35
						THM81000A-10	Toshiba	
						THM81020A-10	Toshiba	
		CMOS, Nibble Mode	TS	30	5	MT8C8025-10	MicronTech	
		CMOS, Static Column	TS	30	5	MT8C8026-10	MicronTech	
		NMOS	TS	30	5	THM81001-10	Toshiba	40
						THM81002-10	Toshiba	
						THM81020-10	Toshiba	
						THM81021-10	Toshiba	
						THM81022-10	Toshiba	
	120 nsF	CMOS	TS	30	5	MT8C8024-12	◊ MicronTech	45
						TM024GAD8-12	TI	
		CMOS, Nibble Mode	TS	30	5	MT8C8025-12	MicronTech	
		CMOS, Static Column	TS	30	5	MT8C8026-12	MicronTech	
		Module	TS	30	5	**PEP1MX8-120**	**Peps (3573)**	
		NMOS	TS	30	5	THM81001-12	Toshiba	50
						THM81002-12	Toshiba	
						THM81020-12	Toshiba	
						THM81021-12	Toshiba	
						THM81022-12	Toshiba	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x8							(Cont'd)	
	150 nsF	CMOS	TS	30	5	MT8C8024-15	◊ MicronTech	55
						TM024GAD8-15	TI	
		CMOS, Nibble Mode	TS	30	5	MT8C8025-15	MicronTech	
		CMOS, Static Column	TS	30	5	MT8C8026-15	MicronTech	
1048576x9		Module	TS	30	5	DPD1MX9	Dense-Pac	
	10 nsF	NMOS	TS	30	5	THM91050A-10	Toshiba	60
	60	CMOS	TS	30	5	HYM91000S-60	Siemens	
	60 nsF	CMOS	TS	30	5	MB85235A-60	Fujitsu	
						MB85265A-60	Fujitsu	
						MM1M200J9-06	NMB	
	70 nsF	CMOS	TS	30	5	MB85235A-70	Fujitsu	65
						MB85265A-70	Fujitsu	
						MCM9L1000-70	Motorola	
						MCM91000-70	Motorola	
						MCM91001-70	Motorola	
						MCM91002-70	Motorola	70
						MM1M200J9-07	NMB	
						KMM591000-07	Samsung	
						HYM91000-70	Siemens	
						THM91000A-70	Toshiba	
						THM91010A-70	Toshiba	75
						THM91020A-70	Toshiba	
		NMOS	TS	30	5	THM91050A-70	◊ Toshiba	
	80 nsF		TS	30	5	MH1M09A1-8	◊ Mitsubishi	
						MH1M09A2-8	◊ Mitsubishi	
						MH1M09B1-8	◊ Mitsubishi	80
						MH1M09B2-8	◊ Mitsubishi	
						PEP1MX9-80	**Peps (3573)**	
		CMOS	TS	30	5	MB85235-80	Fujitsu	
						MB85236-80	Fujitsu	
						MB85265-80	Fujitsu	85
						MCM9L1000-80	Motorola	
						MCM91000-80	Motorola	
						MCM91001-80	Motorola	
						MCM91002-80	Motorola	
						MM1M200J9-08	NMB	90
						HYM91000-80	Siemens	
						TM024EAD9-80	TI	
						THM91000A-80	Toshiba	
						THM91010A-80	Toshiba	
						THM91020A-80	Toshiba	95
		NMOS	TS	30	5	THM91050A-80	Toshiba	
	85 nsF	NMOS	TS	30	5	THM91001-85	Toshiba	
						THM91020-85	Toshiba	
						THM91021-85	Toshiba	
						THM91022-85	Toshiba	100
				72	5	THM91002-85	Toshiba	
	100 nsF		TS	30	5	MH1M09A1-10	◊ Mitsubishi	
						MH1M09A2-10	◊ Mitsubishi	
						MH1M09B1-10	◊ Mitsubishi	
						MH1M09B2-10	◊ Mitsubishi	105
						PEP1MX9-100	**Peps (3573)**	
						THM91000-10	Toshiba	
		CMOS	TS	30	5	MB85235-10	Fujitsu	
						MB85236-10	Fujitsu	
						MB85265-10	Fujitsu	110

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Dynamic—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
1048576x9							
	100 nsF	CMOS	TS	30	5		(Cont'd)
						MT8C9024-10	◊ MicronTech
						MCM9L1000-10	Motorola
						MCM91000-10	Motorola
						MCM91001-10	Motorola
						MCM91002-10	Motorola
						MM1M200J9-10	NMB
						TM024EAD9-10	TI
						THM91010A-10	Toshiba
						THM91020A-10	Toshiba
		CMOS, Nibble Mode	TS	30	5	MT8C9025-10	MicronTech
		CMOS, Static Column	TS	30	5	MT8C9026-10	MicronTech
		NMOS	TS	30	5	THM91000A-10	Toshiba
						THM91001-10	Toshiba
						THM91002-10	Toshiba
						THM91020-10	Toshiba
						THM91021-10	Toshiba
						THM91022-10	Toshiba
	120 nsF		TS	30	5	**PEP1MX9-120**	**Peps (3573)**
						THM91000-12	Toshiba
		CMOS	TS	30	5	MT8C9024-12	◊ MicronTech
				149	5	TM024EAD9-12	TI
		CMOS, Nibble Mode	TS	30	5	MT8C9025-12	MicronTech
		CMOS, Static Column	TS	30	5	MT8C9026-12	MicronTech
		NMOS	TS	30	5	THM91001-12	Toshiba
						THM91002-12	Toshiba
						THM91020-12	Toshiba
						THM91021-12	Toshiba
						THM91022-12	Toshiba
	150 nsF	CMOS	TS	30	5	MT8C9024-15	◊ MicronTech
						TM024EAD9-15	TI
		CMOS, Nibble Mode	TS	30	5	MT8C9025-15	MicronTech
		CMOS, Static Column	TS	30	5	MT8C9026-15	MicronTech
1048576x16							
	80 nsF		TS	64	5	**PEP1MX16-80**	**Peps (3573)**
	100 nsF		TS	64	5	**PEP1MX16-100**	**Peps (3573)**
	120 nsF		TS	64	5	**PEP1MX16-120**	**Peps (3573)**
1048576x32							
	80 nsF	NMOS	TS	72	5	THM321020-80	Toshiba
	100 nsF	NMOS	TS	72	5	THM321020-10	Toshiba
1048576x36							
	80	CMOS	TS	72	5	HYM361020S-80	Siemens
	80 nsF	CMOS	TS	72	5	MB85346-80	Fujitsu
		NMOS	TS		5	MH1M36DJ-8	◊ Mitsubishi
				72	5	HB56D136B-8	Hitachi
						THM361020-80	Toshiba
	100	CMOS	TS	72	5	HYM361020S-10	Siemens
	100 nsF	CMOS	TS	72	5	MB85346-10	Fujitsu
		NMOS	TS		5	MH1M36DJ-10	◊ Mitsubishi
				72	5	HB56D136B-10	Hitachi
						THM361020-10	Toshiba
	120 nsF	CMOS	TS	72	5	**MB85346-12**	**Fujitsu (3422)**
		NMOS	TS	72	5	HB56D136B-12	Hitachi
1048576x40							
	80 nsF	NMOS	TS	72	5	THM401020-80	Toshiba
	100 nsF	NMOS	TS	72	5	THM401020-10	Toshiba
1049576x4							
	80 nsF		TS	24	5	**PEP1MX4-80**	**Peps (3573)**
	100 nsF		TS	24	5	**PEP1MX4-100**	**Peps (3573)**
2097152x8							
	80 nsF		TS	64	5	**PEP2MX8-80**	**Peps (3573)**
	100 nsF		TS	64	5	**PEP2MX8-100**	**Peps (3573)**
	120 nsF		TS	64	5	**PEP2MX8-120**	**Peps (3573)**
2097152x36							
	80	CMOS	TS	72	5	HYM362020S-80	Siemens
	80 nsF	CMOS	TS	72	5	MB85347-80	Fujitsu
		NMOS	TS	72	5	HB56D236B-8	Hitachi
						THM362020-80	Toshiba
	100 nsF	CMOS	TS	72	5	MB85348-10	Fujitsu
		NMOS	TS	72	5	HB56D236B-10	Hitachi
						THM362020-10	Toshiba
	120 nsF	NMOS	TS	72	5	HB56D236B-12	Hitachi
2097152x36							
	100	CMOS	TS	72	5	HYM362020S-10	Siemens
262144x9							
	80	CMOS	TS	30	5	HYM39500S-80	Siemens
4194304x1							
	80 nsF		TS	23	5	**PEP4MX1Z-80**	**Peps (3573)**
				26	5	**PEP4MX1-80**	**Peps (3573)**
		CMOS	TS	26	5	MCM11400-80	Motorola
	100 nsF		TS	23	5	**PEP4MX1Z-100**	**Peps (3573)**
				26	5	**PEP4MX1-100**	**Peps (3573)**
		CMOS	TS	26	5	MCM11400-10	Motorola
	120 nsF		TS	23	5	**PEP4MX1Z-120**	**Peps (3573)**
				26	5	**PEP4MX1-120**	**Peps (3573)**
4194304x8			TS	30	5	DPD4MX8	Dense-Pac
						PEP4MX8	**Peps (3573)**
	80 nsF	CMOS	TS	30	5	MB85280-80	Fujitsu
						MB85281-80	Fujitsu
						MB85290-80	Fujitsu
						MCM8L4000-80	Motorola
						MCM84000-80	Motorola
		NMOS	TS	30	5	HB56A48A-8	Hitachi
						THM84000-80	Toshiba
	100 nsF	CMOS	TS	30	5	MB85280-10	Fujitsu
						MB85281-10	Fujitsu
						MB85290-10	Fujitsu
						MCM8L4000-10	Motorola
						MCM84000-10	Motorola
		NMOS	TS	30	5	HB56A48A-10	Hitachi
						THM84000-10	Toshiba
	120 nsF	NMOS	TS	30	5	HB56A48A-12	Hitachi
4194304x9			TS	30	5	DPD4MX9	Dense-Pac
						PEP4MX9	**Peps (3573)**
	80	CMOS	TS	30	5	HYM94000S-80	Siemens
	80 nsF	CMOS	TS	30	5	**MB85285-80**	**Fujitsu (3419)**
						MB85286-80	Fujitsu
						MB85295-80	**Fujitsu (3420)**
						MCM9L4000-80	Motorola
						MCM94000-80	Motorola
						TMS4100EBD9-80	TI
		NMOS	TS		5	MH4M09A0J-8	◊ Mitsubishi
				30	5	HB56A49A-8	Hitachi
						THM94000-80	Toshiba
	100 nsF	CMOS	TS	30	5	**MB85285-10**	**Fujitsu (3419)**
						MB85286-10	Fujitsu
						MB85295-10	**Fujitsu (3420)**
						MCM9L4000-10	Motorola
						MCM94000-10	Motorola
						TMS4100EBD9-10	TI

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Dynamic—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4194304x9							(Cont'd)	
	100 nsF							
		NMOS	TS		5	MH4M09A0J-10	◊ Mitsubishi	
				30	5	HB56A49A-10	Hitachi	
						THM94000-10	Toshiba	
	120 nsF	CMOS	TS	30	5	**MB85295-12**	**Fujitsu (3420)**	
						TMS4100EBD9-12	TI	5
		NMOS	TS	30	5	HB56A49A-12	Hitachi	
4194304x9								
	100	CMOS	TS	30	5	HYM94000S-10	Siemens	

Dynamic—Multiport

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65534x4								
	120 nsF	NMOS	TS	24	5	SMJ4461-12	† TI	
65536x4								
	100 nsF	CMOS, 2-Port						
			TS	24	5	MT42C4064-10	MicronTech	
	120 nsF	CMOS 2-Port						
			TS	24	5	**41264-12**	**Krueger (3513)**	10
						μPD41264-12	NEC	
		CMOS, 2-Port						
			TS	24	5	MT42C4064-12	MicronTech	
		NMOS	TS	24	5	MB81461-12	Fujitsu	
	150 nsF	CMOS, 2-Port						
			TS	24	5	MT42C4064-15	MicronTech	
		CMOS 2-Port, Refurbished						
			TS	24	5	**41264-15**	**Krueger (3513)**	15
		NMOS	TS	24	5	MB81461-15	Fujitsu	
						SMJ4461-15	† TI	
		2-Port Module						
			TS	24	5	μPD41264-15	NEC	
65536x4 Video								
	100 nsF	2-Port Module						
			—	31	5	HM53461-10	Hitachi	
	150 nsF	2-Port Module						
			—	31	5	HM53461-15	Hitachi	20
131072x8								
	100 nsF	CMOS	TS	40	5	TC528126A-10	Toshiba	
						TC528128A-10	Toshiba	
		NMOS	TS		5	M5M482128-10	◊ Mitsubishi	
	120 nsF	CMOS	TS	40	5	TC528126A-12	Toshiba	
						TC528128A-12	Toshiba	25
262144x4								
	100 nsF	CMOS	TS	28	5	TC524258A-10	Toshiba	
	120 nsF	CMOS	TS	28	5	TC524258A-12	Toshiba	

Dynamic—Video

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4								
	80 nsF	CMOS	TS	24	5	**GM53C261-80**	**GoldStar (3431)**	
			TTL	24	5	V53C261-80	Vitelic	
	100 nsF	CMOS	TS	24	5	**GM53C261-10**	**GoldStar (3431)**	30
			TTL	24	5	V53C261-10	Vitelic	
	120 nsF	CMOS	TS	24	5	**GM53C261-12**	**GoldStar (3431)**	
65536x4 Video								
	120 nsF	2-Port Module						
			—	31	5	HM53461-12	Hitachi	
65536x4, VRAM (Random/Sequential)								
	120 nsF	NMOS Multiport						
			TS	24	5	TMS4461-12	TI	
	150 nsF	NMOS Multiport						
			TS	24	5	TMS4461-15	TI	35
131072x8								
	100 nsF	CMOS	TS	40	5	TC528126A-10	◊ Toshiba	
						TC528128A-10	◊ Toshiba	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8							(Cont'd)	
	120 nsF	CMOS	TS	40	5	TC528126A-12	◊ Toshiba	
						TC528128A-12	◊ Toshiba	
262144x4								
	100 nsF	CMOS	TS	28	5	**TC524256A-10**	**◊ Toshiba (3686)**	40
						TC524258A-10	◊ Toshiba	
		CMOS Video						
			TS	28	5	MSM514252-10	OKI	
		CMOS, Video						
			TS	28	5	TMS44C251-10	TI	
						TC524256-10	◊ Toshiba	
						TC524257-10	◊ Toshiba	45
	120 nsF	CMOS	TS	28	5	**TC524256A-12**	**◊ Toshiba (3686)**	
						TC524258A-12	◊ Toshiba	
		CMOS, Video						
			TS	28	5	TMS44C251-12	TI	
						TC524256-12	◊ Toshiba	
						TC524257-12	◊ Toshiba	50
		CMOS Video RAM						
			TS	28	5	MSM514252-12	OKI	
	150 nsF	CMOS, Video						
			TS	28	5	TMS44C251-15	TI	
262144x4 (video)								
	100 nsF	CMOS	Serial	28	5	M5M442256	◊ Mitsubishi	

Static—General Purpose

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4x4	40 nsR	TTL	OC	16	5	SN74LS170	Motorola	
						54LS170	† National	55
						54170	† National	
						74LS170	◊ National	
						74170	National	
						74LS170	SGS-Thomson	
						54LS170	† Signetics	60
						SN54LS170	◊† TI	
						SN54170	† TI	
						SN74LS170	TI	
						SN74170	TI	
			TS	16	5	SN54LS670	† Motorola	65
						SN74LS670	Motorola	
						DM54LS670	† National	
						DM74LS670	National	
						54LS670	† National	
						74LS670	◊ National	70
						74LS670	SGS-Thomson	
						54LS670	† Signetics	
						74LS670	Signetics	
						SN54LS670	◊† TI	
						SN74LS670	TI	75
	1000 nsR							
		CMOS	—	24	4.5–15	MC14580BA	† Motorola	
	1500 nsR							
		CMOS	—	24	3–15	MC14580BC	Motorola	
8x2	15 nsF	ECL	—	24	–5.2	MCM10143	Motorola	
	50 nsR	TTL	TS	24	5	SN74172	TI	
16x1	35 nsR	TTL	OC	14	5	MC4304	† Motorola	80
16x4	5 nsF	ECL	OE	16	–4.5	F100402	◊ National	
	6 nsF	ECL	OE	16	–5.2	MC10H145	Motorola	
	7 nsF	ECL	OE	24	–4.5	F100145	◊ National	
	9 nsF	ECL	OE	16	–5.2	F10145A	◊ National	
	15 nsF	CMOS	TS	16	5	CY7C189-15C	◊ Cypress	85
						CY7C190-15C	◊ Cypress	
		ECL	OE	16	–5.2	MCM10145	Motorola	
	25 nsF	CMOS	TS	16	5	CY27S03AC	† Cypress	
						CY27S03AM	† Cypress	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16x4	25 nsF	CMOS	TS	16	5		(Cont'd)
						CY27S07AC	† Cypress
						CY7C189-25C	◊ Cypress
						CY7C189-25M	◊† Cypress
						CY7C190-25C	◊ Cypress
						CY7C190-25M	◊† Cypress
		TTL	TS	16	5	AM27S07C	AMD
						DM74S189A	National
	30 nsF	TTL	TS	16	5	AM27S07M	† AMD
						DM54S189A	National
	35 nsF	CMOS	TS	16	5	CY27S03M	† Cypress
						CY27S07M	† Cypress
						CY74S189	Cypress
		TTL	OC	16	5	AM27S02C	AMD
						DM74S289	National
						N3101A	Signetics
			TS	16	5	AM27S03C	AMD
						DM74S189	National
						74S189	Signetics
	40 nsF	TTL	TS	18	5	DM75S68	National
						DM75S68A	National
						DM85S68	National
	45 nsF	TTL	OC	16	5	AM27S02M	† AMD
			TS	16	5	AM27S03M	† AMD
	50 nsF	TTL	OC	16	5	N82S25	Signetics
						S3101A	† Signetics
				28	5	IDM29705C	National
			TS	16	5	DM54S189	† National
						54S189	† Signetics
	53 nsF	TTL	TS	28	5	AM29705C	◊ AMD
						IDM29705	† National
	55 nsF	TTL	OC	16	5	AM27LS02C	AMD
			TS	16	5	AM27LS03C	AMD
						AM27LS07C	AMD
	58 nsF	TTL	TS	28	5	AM29705M	◊† AMD
	60 nsF	TTL	OC	16	5	DM8589	National
						S82S25	† Signetics
			TS	16	5	AM27LS07M	† AMD
						SN74LS189A	TI
						SN74LS219A	TI
	65 nsF	CMOS	TS	16	5	CY27LS03M	◊† Cypress
						CY27S07AM	† Cypress
		TTL	OC	16	5	AM27LS02M	† AMD
			TS	16	5	AM27LS03M	† AMD
	80 nsF	TTL	OC	16	5	DM7589	† National
	140 nsF	CMOS	TS	16	5	MM54C989	† National
						MM74C989	National
	650 nsR	CMOS	TS	16	5	CD4011BE	Harris
						MM74C89	National
32x8	300 ns *						
		CMOS	TS	18	10	CDP1824	† Harris
						HB1824	† Hughes
						HC1824	◊ Hughes
	600 ns *						
		CMOS	TS	18	5	CDP1824C	† Harris
					10	HB1824C	† Hughes
						HC1824C	◊ Hughes
64x1	15 nsF	ECL	OE	16	–5.2	MCM10148	Motorola
	1050 nsR						
		CMOS	TS	24	5–15	MCM14552A	† Motorola
	2100 nsR						
		CMOS	TS	24	5–15	MCM14552C	Motorola
64x8	800 nsF	CMOS	TS	22	5	CDP1826C	Harris
64x9	35 nsF	TTL	OC	28	5	N82S19	Signetics
	45 nsF	TTL	OC	28	5	MBM93419	Fujitsu
	60 nsF	TTL	OC	28	5	S82S19	† Signetics
	80 nsF	TTL	OC	28	5	S82S09	† Signetics
128x1	12 nsR	ECL	OE	16	–5.2	MCM10147	Motorola
128x8	100 nsF	CMOS	TS	8	5	CDP68HC68R1	Harris
	250 ns *						
		NMOS	TS	24	5	MCM68B10	Motorola
	250 nsF	CMOS	TS	24	10	CDP1823	Harris
		TTL	TS	24	5	HB1823	† Hughes
						HC1823	Hughes
	360 nsF	NMOS	TS	24	5	MCM68A10	Motorola
	450 nsF	CMOS	TS	24	5	CDP1823C	Harris
		NMOS	TS	24	5	HM46810	Hitachi
						MCM6810	Motorola
256x1	15 nsF	ECL	OE	16	–5.2	MCM10152	Motorola
	26 nsF	ECL	OE	16	–5.2	MCM10144	Motorola
	35 nsF	TTL	TS	16	5	AM27LS00AC	AMD
	40 nsF	TTL	OC	16	5	74LS301	Signetics
			TS	16	5	N82LS16	Signetics
	45 nsF	TTL	TS	16	5	AM27LS00AM	† AMD
						AM27LS00C	AMD
	50 nsF	TTL	OC	16	5	N82S17	Signetics
						74S301	Signetics
			TS	16	5	N82S16	Signetics
	55 nsF	TTL	OC	16	5	AM27LS01M	† AMD
			TS	16	5	AM27LS00M	† AMD
	60 nsF	TTL	TS	16	5	S82LS16	† Signetics
	70 nsF	TTL	OC	16	5	54LS301	† Signetics
						54S301	† Signetics
	400 nsR	CMOS	TS	16	3–15	MM54C200	‡ Micrel
						MM54C200	† National
						MM74C200	National
	1000 nsF						
		PMOS	TS	16	5,–9	NCM1101Z	NCM
256x4	2 nsF	GaAs	ECL	40	–5.2	12G014	GigaBit
	2.5 nsF	GaAs	Reg.		5	12G014-2	GigaBit
	3 nsF	ECL 10K	OE		–5.2	**SY10422-3**	**Synergy (3667)**
		ECL 100K					
			OE		–4.5	**SY100422-3**	**Synergy (3667)**
		ECL 101K					
			OE		–5.2	**SY101422-3**	**Synergy (3667)**
		10K/10KH ECL					
			OE	24	–4.5	CY10E422-3C	◊ Aspen
		100K ECL					
			OE	24	–5.2	CY100E422-3C	◊ Aspen
	3.5 nsF	GaAs	Reg.		5	12G014-3	GigaBit
	4 nsF	GaAs E/D Mode					
			100K ECL				
				24	–4.5	VS12G422ED-4	Vitesse
	5 nsF	BiCMOS	TS	24	5	CY100E422-5	Cypress
		ECL	OE	24	–4.5	MBM100422A-5	Fujitsu
					–5.2	MBM10422A-5	Fujitsu
		ECL 10K	OE		–5.2	**SY10422-5**	**Synergy (3667)**
		ECL 100K					
			OE		–4.5	**SY100422-5**	**Synergy (3667)**
		ECL 101K					
			OE		–5.2	**SY101422-5**	**Synergy (3667)**
		GaAs E/D Mode					
			TTL	22	5	VS12G422TD-5	Vitesse
			100K ECL				
				24	–4.5	VS12G422ED-5	Vitesse

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
256x4	5 nsF						(Cont'd)	
		10K/10KH ECL						
			OE	24	−4.5	CY10E422-5C	◊ Aspen	
		100K ECL						
			OE	24	−5.2	CY100E422-5C	◊ Aspen	
						CY100E422L-5C	◊ Aspen	
		10K/KH ECL						
			OE	24	−5.2	CY10E422L-5C	◊ Cypress	
		100K ECL						
			OE	24	−4.5	CY100E422L-5C	◊ Cypress	5
	6 nsF	GaAs E/D Mode						
			TTL	22	5	VS12G422TD-6	Vitesse	
	7 nsF	BiCMOS	TS	24	5	CY100E422-7	Cypress	
		CMOS	TS	24	5	CY7C123-7C	Cypress	
		ECL	OE	24	−4.5	MBM100422A-7	Fujitsu	
						μPB100422-7 ◊	NEC	10
					−5.2	MBM10422A-7	Fujitsu	
						μPB10422-7	NEC	
		ECL 10K	OE		−5.2	**SY10422-7**	**Synergy (3667)**	
		ECL 100K						
			OE		−4.5	**SY100422-7**	**Synergy (3667)**	
		ECL 101K						
			OE		−5.2	**SY101422-7**	**Synergy (3667)**	15
		100K ECL						
			OE	24	−5.2	CY100E422L-7C	◊ Aspen	
	8 nsF	CMOS	TS	22	5	P4C422-8C	Performance	
		GaAs E/D Mode						
			TTL	22	5	VS12G422TD-8	Vitesse	
	9 nsF	CMOS	TS	24	5	CY7C123-9C ◊	Cypress	
	10 nsF	CMOS	TS	22	5	P4C422-10C	Performance	20
				24	5	CY7C123-10M	◊† Cypress	
		ECL	OE	24	−4.5	F100422 ◊	National	
						μPB100422-10	◊ NEC	
					−5.2	MCM10422-10	Motorola	
						F10422 ◊	National	25
						μPB10422-10	NEC	
	12 nsF	CMOS	TS	22	5	P4C422-12C	Performance	
				24	5	CY7C123-12C	Cypress	
	15 nsF	CMOS	TS	22	5	CY7C122-15C	◊ Cypress	
						P4C422-15C	Performance	30
						P4C422-15M †	Performance	
						VT7C122	VLSI Tech	
				24	5	CY7C123-15M	† Cypress	
		ECL	OE	24	−5.2	MCM10422-15	Motorola	
	20 nsF	CMOS	TS	22	5	P4C422-20M †	Performance	35
	25 nsF	CMOS	TS	22	5	CY7C122-25C	◊ Cypress	
						CY7C122-25M	◊† Cypress	
						P4C422-25C	Performance	
						P4C422-25M †	Performance	
		NMOS	TS	24	5	AM9122-25	AMD	40
	35 nsF	CMOS	TS	22	5	CY7C122-35C	◊ Cypress	
						CY7C122-35M	◊† Cypress	
						CY93422AC	Cypress	
						P4C422-35M †	Performance	
						P93U422-35C	Performance	45
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
256x4	35 nsF						(Cont'd)	
		NMOS	TS	24	5	AM91L22-35	AMD	
						AM9122-35	AMD	
						AM9122-35M †	AMD	
		TTL	TS	22	5	93422AC ◊	National	
	40 nsF	TTL	TS	22	5	AM93422	AMD	50
	45 nsF	CMOS	TS	16	5	CY93422C	Cypress	
				22	5	CY93L422AC	Cypress	
						CY93422AM †	Cypress	
		ECL	OE	24	−5.2	93L422AC ◊	National	
						93422AM ◊†	National	55
		NMOS	TS	24	5	AM91L22-45	AMD	
						AM91L22-45M	† AMD	
		TTL	TS	22	5	93422C ◊	National	
	55 nsF	CMOS	TS	22	5	CY93L422AM †	Cypress	
		TTL	TS	22	5	93L422AM ◊	National	60
	60 nsF	CMOS	TS	16	5	CY93422M †	Cypress	
				22	5	CY93L422C	Cypress	
		CMOS/SOS						
			TS	22	5	MA5101SOS	Marconi	
		TTL	TS	22	5	AM93L422	AMD	
						AM93422M †	AMD	65
						93L422C ◊	National	
						93422M ◊†	National	
	75 nsF	CMOS	TS	22	5	CY93L422M †	Cypress	
		TTL	TS	22	5	AM93L422M †	AMD	
						93L422M ◊†	National	70
	150 nsF	CMOS	TS	22	5	MWS5101	Harris	
						MWS5101A	Harris	
	220 nsF	CMOS	TS	18	5	HM6561B-9	Harris	
						HM6561B/883	† Harris	
						IM65X61-1	Intel	75
				22	5	HM6551B-9	Harris	
						HM6551B/883	† Harris	
	250 nsF	CMOS	TS	22	5	MWS5101EL2	Harris	
					10	CDP1822	Harris	
						TCC244	Harris	80
	300 nsF	CMOS	TS	18	5	HM6561-9	Harris	
						HM6561/883 †	Harris	
				22	5	HM6551-9	Harris	
						HM6551/883 †	Harris	
						LH5101-30 †	Sharp	85
	350 nsF	CMOS	TS	18	5	HM6561-5	Harris	
				22	5	HM6551-5	Harris	
						MWS5101DL3	† Harris	
						MWS5101EL3	Harris	
	400 nsF	CMOS	TS	22	5	CDP1822C †	Harris	90
						HB1822C †	Hughes	
	450 nsF	CMOS	TS	22	5	LH5101-45	Sharp	
	650 nsF	CMOS	TS	22	5	LH5101-L3	Sharp	
	800 nsF	CMOS	TS	22	5	LH5101	Sharp	
	3000 nsF							
		CMOS	TS	22	3	LH5101S	Sharp	95
				36	3	LH5101SM	Sharp	
256x8		CMOS	I^2C Interface			PCF8570	Signetics	
	35 nsF	CMOS	TS	24	5	AV2102-35 °†	Avasem	
	40 nsF	TTL	TS	22	5	N8X350	Signetics	
						S8X350 †	Signetics	100
	55 nsF	CMOS	TS	24	5	AV2102-55 °†	Avasem	
	70 nsF	CMOS	TS	24	5	AV2102-70 °†	Avasem	
	100 nsF	CMOS	TS	8	5	CDP68HC68R2	Harris	
256x9	35 nsF	TTL	TS	22	5	93479AC	National	
						N82S212A	Signetics	105
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
256x9							(Cont'd)	
	45 nsF	TTL	TS	22	5	93479AM	National	
						93479C	National	
						N82S212	Signetics	
	60 nsF	TTL	TS	22	5	93479M	National	
	70 nsF	TTL	TS	22	5	S82S212	† Signetics	5
256x16	5 nsF	ECL	OE	60	−5.2	MB770H-5	Fujitsu	
512x4	650 nsF	CMOS	TS	22	5	LH5102-6	Sharp	
	800 nsF	CMOS	TS	22	5	LH5102-8	Sharp	
	1200 nsF							
		CMOS	TS	22	5	LH5102W	Sharp	
				24	5	LH5102	Sharp	10
512x8	85 nsF	CMOS	TS	32	5	**BPS16288P**	**ROHM**	**(3584)**
512x9	15 nsF	ECL	OE	32	−5.2	MB70801-15	Fujitsu	
	20 nsF	ECL	OE	24	−5.2	MB70802-15	Fujitsu	
	25 nsF	CMOS	TS	28	5	MK45H01-25 ◊	SGS-Thomson	
	35 nsF	CMOS	TS	28	5	MK45H01-35 ◊	SGS-Thomson	15
	50 nsF	CMOS	TS	28	5	MK45H01-50 ◊	SGS-Thomson	
	65 nsF	CMOS	TS	28	5	MK45H01-65 ◊	SGS-Thomson	
	120 nsF	CMOS	TS	28	5	MK45H01-12 ◊	SGS-Thomson	
1024x1	15 nsF	ECL	OE	16	−5.2	MCM10415-15	Motorola	
	20 nsF	NMOS	TS	16	5	2125H-1	Intel	20
	25 nsF	NMOS	TS	16	5	2125H-2	Intel	
	29 nsF	ECL	OE	16	−5.2	MCM10146	Motorola	
	30 nsF	NMOS	TS	16	5	2125H-3	Intel	
		TTL	OC	16	5	AM93425AC	AMD	
						93415AC ◊	National	25
			TS	16	5	93425AC ◊	National	
	35 nsF	NMOS	TS	16	5	2125H-4	Intel	
	40 nsF	TTL	TS	16	5	AM93425AM †	AMD	
	45 nsF	NMOS	OC	16	5	2115A	Intel	
						2115AL	Intel	30
			TS	16	5	2125A	Intel	
						2125AL	Intel	
		TTL	OC	16	5	93415C ◊	National	
			TS	16	5	AM93425C	AMD	
						93425C ◊	National	35
	50 nsF	TTL	TS	16	5	93425AM ◊†	National	
	60 nsF	TTL	OC	16	5	MCM93415M ◊†	Motorola	
						93L415 ◊	National	
						93L415C ◊	National	
						93415M ◊†	National	40
			TS	16	5	93L425C ◊	National	
						93425M ◊†	National	
	65 nsF	TTL	TS	16	5	AM93425M †	AMD	
	70 nsF	NMOS	OC	16	5	2115A-2	Intel	
						2115AL-2	Intel	45
			TS	16	5	2125A-2	Intel	
						2125AL-2	Intel	
		TTL	OC	16	5	93L415M ◊	National	
			TS	16	5	AM93L425M †	AMD	
						93L425M ◊†	National	50
	180 nsF	CMOS	TS	16	5	HM6508B-9	Harris	
						HM6508B/883 †	Harris	
				18	5	HM6518B-9 ◊	Harris	
						HM6518B/883 ◊†	Harris	
	250 nsF	CMOS	TS	16	5	HM6508-9	Harris	55
						HM6508/883 †	Harris	
				18	5	HM6518-9 ◊	Harris	
						HM6518/883 ◊†	Harris	
	300 nsF	CMOS	TS	16	5	HM6508-5	Harris	
				18	5	HM6518-5 ◊	Harris	60
1024x4	2.5 nsF	GaAs		28	−2/2	VS12G476-2.5 ◊‡	Vitesse	
	3 nsF	Bipolar	ECL	24	−5.2	MBM10A474-3 ◊	Fujitsu	
						MBM101474A-3 ◊	Fujitsu	
		ECL	TS	24	5	CY10E474-3	Cypress	
		ECL 10K	OE		−5.2	**SY10474-3**	**Synergy**	**(3667)** 65
				24	−5.2	μPB10474-3 ◊	NEC	
		ECL 100K	OE		−4.5	**SY100474-3**	**Synergy**	**(3667)**
				24	−4.5	μPB100474-3 ◊	NEC	
		ECL 101K	OE		−5.2	**SY101474-3**	**Synergy**	**(3667)**
		GaAs		28	−2/2	VS12G476-3 ◊‡	Vitesse	70
		10K/10KH ECL	OE	24	−4.5	CY10E474-4C ◊	Aspen	
		100K ECL	OE	24	−5.2	CY100E474-35C ◊	Aspen	
	4 nsF	ECL 10K	OE	24	−5.2	μPB10474-4 ◊	NEC	
		GaAs		28	−2/2	VS12G476-4 ◊‡	Vitesse	
	5 nsF	ECL	OE	24	−4.5	MBM100474A-5	Fujitsu	75
					−5.2	MBM10474A-5	Fujitsu	
			TS	24	4	CY100E474-5	Cypress	
		ECL 10K	OE		−5.2	**SY10474-5**	**Synergy**	**(3667)**
		ECL 100K	OE		−4.5	**SY100474-5**	**Synergy**	**(3667)**
		ECL 101K	OE		−5.2	**SY101474-5**	**Synergy**	**(3667)** 80
		GaAs		28	−2/2	VS12G476-5 ◊‡	Vitesse	
		10K/10KH ECL	OE	24	−4.5	CY10E474-5C ◊	Aspen	
						CY10E474L-5C ◊	Aspen	
		100K ECL	OE	24	−5.2	CY100E474-5C ◊	Aspen	
						CY100E474L-5C ◊	Aspen	85
		10K/KH ECL	OE	24	−5.2	CY10E474L-5C ◊	Cypress	
		100K ECL	OE	24	−4.5	CY100E474L-5C ◊	Cypress	
	6 nsF	CMOS	TS	24	3.3	P3C3148-6C ◊	Performance	
		ECL	OE	24	−4.5	μPB100474-6 ◊	NEC	
	7 nsF	CMOS	TS	24	3.3	P3C3148-7C ◊	Performance	90
		ECL	OE	24	−4.5	MBM100474A-7	Fujitsu	
					−5.2	MBM10474A-7	Fujitsu	
			TS	24	5	CY100E474-7	Cypress	
		ECL 10K	OE		−5.2	**SY10474-7**	**Synergy**	**(3667)**
		ECL 100K	OE		−4.5	**SY100474-7**	**Synergy**	**(3667)** 95
		ECL 101K	OE		−5.2	**SY101474-7**	**Synergy**	**(3667)**
		10K/10KH ECL	OE	24	−4.5	CY10E474L-7C ◊	Aspen	
		100K ECL	OE	24	−5.2	CY100E474L-7C ◊	Aspen	
	8 nsF	CMOS	TS	24	3.3	P3C3148-8C ◊	Performance	
		ECL	OE	24	−4.5	μPB100474-8 ◊	NEC	100
						SSM100474 †	Saratoga	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x4	8 nsF	ECL	OE	24		(Cont'd)		
					-5.2	μPB10474-8	NEC	
						SSM10474	† Saratoga	
					5.2	MBM10474A-15	Fujitsu	
	9 nsF	ECL	Latched	28	-4.5	MBM100476LL-9	Fujitsu	
					-5.2	MBM10476LL-9	Fujitsu	5
			Reg.	28	-4.5	MBM100476RR-9	Fujitsu	
					-5.2	MBM10476RR-9	Fujitsu	
	10 nsF	CMOS	TS	18	5	P4C148-10C	Performance	
						P4C149-10C	Performance	
				20	5	P4C151-10C	Performance	10
				24	5	P4C150-10C	◊ Performance	
		ECL	OE	24	-4.5	MBM100474A-10	Fujitsu	
						μPB100474-10	◊ NEC	
					-5.2	MBM10474A-10	Fujitsu	
						μPB10474-10	NEC	15
	12 nsF	CMOS	TS	18	5	P4C148-12C	Performance	
						P4C149-12C	Performance	
				20	5	P4C151-12C	Performance	
				24	5	P4C150-12C	◊ Performance	
	15 nsF	CMOS	TS	18	5	P4C148-15C	Performance	20
						P4C148-15M	† Performance	
						P4C149-15C	Performance	
						P4C149-15M	† Performance	
				20	5	P4C151-15C	Performance	
						P4C151-15M	† Performance	25
				24	5	CY7C150-15C	◊ Cypress	
						P4C150-15C	◊ Performance	
						P4C150-15M	◊† Performance	
						VT20C50-15	◊ VLSI Tech	
		ECL	OE	24	-4.5	MBM100474A-15	Fujitsu	
						μPB100474-15	◊ NEC	30
					-5.2	MB10474A-15	Fujitsu	
						μPB10474-15	NEC	
	20 nsF	CMOS	TS	18	5	P4C148-20C	Performance	
						P4C148-20M	† Performance	35
						P4C149-20C	Performance	
						P4C149-20M	† Performance	
				20	5	P4C151-20C	Performance	
						P4C151-20M	† Performance	
				24	5	P4C150-20C	◊ Performance	40
						P4C150-20M	◊† Performance	
						VT20C50-20	VLSI Tech	
		NMOS	TS	24	5	AM9150-20	AMD	
		TTL	TS	18	5	SSM2148	† Saratoga	
						SSM2149	† Saratoga	45
				24	5	SSM2150	† Saratoga	
	25 nsF	CMOS	TS	18	5	CY7C148-25C	◊ Cypress	
						CY7C149-25C	◊ Cypress	
						P4C148-25C	Performance	
						P4C148-25M	† Performance	50
						P4C149-25C	Performance	
						P4C149-25M	† Performance	
						(Continued)		

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x4	25 nsF	CMOS	TS	18	5	(Cont'd)		
						IMS1223-25	SGS-Thomson	
						IMS1223-25M	† SGS-Thomson	
				20	5	P4C151-25C	Performance	55
						P4C151-25M	† Performance	
				24	5	CY7C150-25C	◊ Cypress	
						CY7C150-25M	◊† Cypress	
						P4C150-25C	◊ Performance	
						P4C150-25M	◊† Performance	60
						VT20C50-25	VLSI Tech	
		ECL	OE	24	-4.5	AM100474	AMD	
		NMOS	TS	24	5	AM9150-25	AMD	
	35 nsF	CMOS	TS	18	5	CY21L48-35C	Cypress	
						CY21L49-35C	Cypress	65
						CY2148-35C	Cypress	
						CY2149-35C	Cypress	
						CY7C148-35C	◊ Cypress	
						CY7C148-35M	◊† Cypress	
						CY7C149-35C	◊ Cypress	70
						CY7C149-35M	◊† Cypress	
						P4C148-35M	† Performance	
						P4C149-35M	† Performance	
						IMS1223-35	SGS-Thomson	
						IMS1223-35M	† SGS-Thomson	75
				20	5	P4C151-35M	† Performance	
				24	5	CY7C150-35C	◊ Cypress	
						CY7C150-35M	◊† Cypress	
						P4C150-35M	◊† Performance	
		NMOS	TS	18	5	AM2148-35	◊ AMD	80
						AM2149-35	◊ AMD	
						2149H-1	Intel	
				24	5	AM9150-35	AMD	
		NMOS, Refurbished	TS	18	5	**2148-35**	**Krueger (3513)**	
						2149-35	**Krueger (3513)**	85
	40 nsF	NMOS	TTL	24	5	AM9151-40	AMD	
	45 nsF	CMOS	TS	18	5	CY21L48-45C	Cypress	
						CY21L49-45C	Cypress	
						CY2148-45C	Cypress	
						CY2148-45M	† Cypress	90
						CY2149-45C	Cypress	
						CY2149-45M	† Cypress	
						CY7C148-45C	◊ Cypress	
						CY7C148-45M	◊† Cypress	
						CY7C149-45C	◊ Cypress	95
						CY7C149-45M	◊† Cypress	
						IMS1223-45M	† SGS-Thomson	
		NMOS	TS	18	5	AM21L48-45	AMD	
						AM21L49-45	AMD	
						AM2148-45	◊ AMD	100
						AM2149-45	◊ AMD	
						2148H-2	Intel	
						2149H-2	Intel	
				24	5	AM9150-45	AMD	
		NMOS, Refurbished	TS	18	5	**2148-45**	**Krueger (3513)**	105
						2149-45	**Krueger (3513)**	
						(Continued)		

† Military Temperature Range (-55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x4							(Cont'd)	
	50 nsF	NMOS	TTL	24	5	AM9151-50	AMD	
	55 nsF	CMOS	TS	18	5	CY21L48-55C	Cypress	
						CY21L49-55C	Cypress	
						CY2148-55C	Cypress	
						CY2148-55M †	Cypress	5
						CY2149-55C	Cypress	
						CY2149-55M †	Cypress	
		NMOS	TS	18	5	AM21L48-55	AMD	
						AM21L49-55	AMD	
						AM2148-55 ◊	AMD	10
						AM2149-55 ◊	AMD	
						2148H-3	Intel	
						2148HL-3	Intel	
						2149H-3	Intel	
	60 nsF	NMOS	TTL	24	5	AM9151-60	AMD	15
	70 nsF	CMOS/SOS						
			TS	18	5	MA5114SOS	Marconi	
		NMOS	TS	18	5	AM21L48-70	AMD	
						AM21L49-70	AMD	
						AM2148-70 ◊	AMD	
						AM2149-70 ◊	AMD	20
						M2148H †	Intel	
						2148H ◊	Intel	
						2148HL	Intel	
						2149H	Intel	
						2149HL	Intel	25
						NMC2148H	National	
		NMOS, Refurbished						
			TS	18	5	**2148-70**	**Krueger (3513)**	
	90 nsF	CMOS	TS	18	5	UM6114	UMC	
	100 nsF	NMOS	TS	18	5	2114AL-1	Intel	
	120 nsF	CMOS	TS	18	5	HM6514S-9 ◊	Harris	30
		NMOS	TS	18	5	2114AL-2	Intel	
	150 nsF	CMOS	TS	18	5	MWS5114	Harris	
						LH5114H-15	Sharp	
		NMOS	TS	18	5	M2114AL-3 †	Intel	
						2114AL-3	Intel	35
	200 nsF	CMOS	TS	18	5	HM6514B-9 ◊	Harris	
						HM6514B/883 ◊†	Harris	
						MWS5114-3 †	Harris	
		NMOS	TS	18	5	AM9114E	AMD	
						M2114A-4 †	Intel	40
						M2114AL-4 †	Intel	
						2114AL-4	Intel	
	220 nsF	CMOS	TS	18	5	HS6514RH ‡	Harris	
						HS6514RRH ‡	Harris	
	250 nsF	CMOS	TS	18	5	MWS5114-2 †	Harris	45
						SRM2114C-5	**S-MOS (3654)**	
						UM6104	UMC	
		NMOS	TS	18	5	M2114A-5 †	Intel	
	300 nsF	CMOS	TS	18	5	CMM5114/1RZ ‡	Harris	
						HM6514-5 ◊	Harris	50
						HM6514-9 ◊	Harris	
						HM6514C-9 ◊	Harris	
						MWS5114-1 †	Harris	
		NMOS	TS	18	5	AM91L14C	AMD	
						AM9114C	AMD	55
	450 nsF	CMOS	TS	18	5	LH5114-4	Sharp	
		NMOS	TS	18	5	AM9114B	AMD	
	1000 nsF							
		CMOS	TS	18	5	LH5114L	Sharp	
	2000 nsF							
		CMOS	TS	18	5	UM6104-1	UMC	
1024x4 (latched, self-timed)								
	3 nsF	GaAs		40	-5.2, -3.4	12G044 ◊‡	GigaBit	60

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x5	24 nsF	CMOS	TS	20	5	MK4505S-25	SGS-Thomson	
	33 nsF	CMOS	TS	20	5	MK4505S-33	SGS-Thomson	
	50 nsF	CMOS	TS	20	5	MK4505S-50	SGS-Thomson	
1024x8	45 nsF	CMOS	TS	48	5	CY7C130-45M †	Cypress	
	55 nsF	CMOS	TS	48	5	CY7C130-55C	Cypress	65
						CY7C130-55M	Cypress	
	90 nsF	CMOS 2-Port	TS	48	5	MS6130L-90	Mosel	
	100 nsF	2-Port	TS	48	5	IDT7130LA-100 ◊	IDT	
	120 nsF	CMOS	TS	48	5	IDT7130LA-120 ◊	IDT	
	120nsF	NMOS	TS	24	5	4801-1	Krueger	70
	150nsF	NMOS	TS	24	5	4801-2	Krueger	
	200	NMOS	TS	24	5	4801-3	Krueger	
	250nsF	NMOS	TS	24	5	4801-4	Krueger	
1024x9	25 nsF	CMOS	TS	28	5	MK45H02-25 ◊	SGS-Thomson	
						MK45H02-35 ◊	SGS-Thomson	75
	35 nsF	CMOS	TS	28	5	VT7202-35 ◊	VLSI Tech	
	50 nsF	CMOS	TS	28	5	MK45H02-50 ◊	SGS-Thomson	
						VT7202-50 ◊	VLSI Tech	
	65 nsF	CMOS	TS	28	5	MK45H02-65 ◊	SGS-Thomson	
	120 nsF	CMOS	TS	28	5	MK45H02-12 ◊	SGS-Thomson	80
1024x16								
	10 nsF	ECL	OE	60	-5.2	MB7750-10	Fujitsu	
1024x4	150 nsF	NMOS, Refurbished						
			TS	18	5	**2114-150**	**Krueger (3513)**	
	200 nsF	NMOS, Refurbished						
			TS	18	5	**2114-200**	**Krueger (3513)**	
	1024x4	NMOS, Refurbished						
			TS	18	5	**2149-70**	**Krueger (3513)**	
1024x8	450 nsF	NMOS, Refurbished						
			TS	18	5	**2114-450**	**Krueger (3513)**	85
2048x2	5 nsF	GaAs	ECL	28	-2	VS1ZG478FC-5 ◊‡	Vitesse	
	7 nsF	GaAs	ECL	28	-2	VS12G478FC-7 ◊‡	Vitesse	
2048x8	12 nsF	CMOS	TS	24	5	VT20C19-12 ◊	VLSI Tech	
	15 nsF	CMOS	TS	24	5	CY6116A-15	Cypress	
						CY7C128A-15C ◊	Cypress	90
						IDT6116LA-15 ◊‡	IDT	
						IDT6116SA-15 ◊‡	IDT	
						IS61C16-15	**ISSI (3510)**	
						IS61C16L-15	**ISSI (3510)**	
						L6116C-15 ◊	LogicDev	95
						P4C116-15C	Performance	
						VT20C18-15 ◊	VLSI Tech	
						VT20C19-15 ◊	VLSI Tech	
	20 nsF	CMOS	TS	24	5	CY7C128A-20C ◊	Cypress	
						CY7C128A-20M ◊†	Cypress	100
						IDT6116LA-20 ◊‡	IDT	
						IDT6116SA-20 ◊‡	IDT	
						L6116C-20 ◊	LogicDev	
						L6116M-20 ◊†	LogicDev	
						P4C116-20C	Performance	105
						P4C116-20M †	Performance	
						VT20C18	VLSI Tech	
						VT20C18-20 ◊	VLSI Tech	
						VT20C19	VLSI Tech	
						VT20C19-20	VLSI Tech	110
		TTL	TS	24	5	SSM6116 †	Saratoga	
	25 nsF	BiCMOS	TS	24	5	TMS6716-25	TI	
		CMOS	TS	24	5	CY7C128A-25C ◊	Cypress	
						CY7C128A-25M ◊†	Cypress	

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	25 nsF	CMOS	TS	24	5	(Cont'd)		
						IDT6116LA-25	◊‡ IDT	
						IDT6116LA-25B	◊‡ IDT	
						IDT6116SA-25	◊‡ IDT	
						IDT6116SA-25B	◊‡ IDT	
						IS61C16-25	**ISSI (3510)**	5
						IS61C16L-25	**ISSI (3510)**	
						L6116C-25	◊ LogicDev	
						L6116M-25	◊† LogicDev	
						P4C116-25C	Performance	
						P4C116-25M	† Performance	10
						UM6116-25	**UMC (3688)**	
						VT20C18-25	VLSI Tech	
						VT20C19-25	VLSI Tech	
		TTL	TS	24	5	MT5C1608-25	◊ MicronTech	
	30 nsF	CMOS	TS	24	5	IDT6116LA-30	◊ IDT	15
						IDT6116LA-30B	◊‡ IDT	
						IDT6116SA-30	◊ IDT	
						IDT6116SA-30B	◊‡ IDT	
						P4C116-30C	Performance	
						P4C116-30M	† Performance	20
	35 nsF	CMOS	TS	24	5	CY6116-35C	◊ Cypress	
						CY6116-35M	◊† Cypress	
						CY7C128A-35C	◊ Cypress	
						CY7C128A-35M	◊† Cypress	
						IDT6116LA-35	◊ IDT	25
						IDT6116LA-35B	◊† IDT	
						IDT6116SA-35	◊ IDT	
						IDT6116SA-35B	◊† IDT	
						IS61C16-35	**ISSI (3510)**	
						IS61C16L-35	**ISSI (3510)**	30
						L6116C-35	◊ LogicDev	
						L6116M-35	◊† LogicDev	
						P4C116-35C	◊ Performance	
						P4C116-35M	† Performance	
						UM6116-35	**UMC (3688)**	35
						V61C16-35	◊ Vitelic	
						VT20C18-35	VLSI Tech	
						VT20C19-35	VLSI Tech	
				52	5	IDT71321LA-35	◊‡ IDT	
						IDT71321SA-35	◊‡ IDT	40
		HMOS	TS	24	5	MCM2018A-35	Motorola	
		NMOS	TS	24	5	MCM2018AN35	Motorola	
		TTL	TS	24	5	MT5C1608-35	◊ MicronTech	
		2-Port	TS	48	5	IDT7142LA-35	◊ IDT	
	45 nsF	CMOS	TS	24	5	AV2116-45	°† Avasem	45
						CY6116-45C	◊ Cypress	
						CY6116-45M	◊ Cypress	
						CY7C128A-45C	◊ Cypress	
						CY7C128A-45M	◊† Cypress	
						IDT6116LA-45	◊ IDT	50
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	45 nsF	CMOS	TS	24	5	(Cont'd)		
						IDT6116LA-45B	◊† IDT	
						IDT6116SA-45	◊ IDT	
						IDT6116SA-45B	◊† IDT	
						L6116C-45	◊ LogicDev	
						L6116M-45	◊† LogicDev	55
						P4C116-45M	◊† Performance	
						BR6116-45	**ROHM (3584)**	
						UM6116-45	**◊ UMC (3688)**	
						V61C16-45	◊ Vitelic	
						V61C16-45L	◊ Vitelic	60
				48	5	IDT71322L-45	◊‡ IDT	
						IDT71322S-45	◊‡ IDT	
				52	5	IDT71321LA-45	◊‡ IDT	
						IDT71321SA-45	◊‡ IDT	
				52	5	IDT71421SA-45B	◊‡ IDT	65
		HMOS	TS	24	5	MCM2018A-45	Motorola	
		NMOS	TS	24	5	MCM2018AN45	Motorola	
		2-Port	TS	48	5	IDT7142LA-45	◊ IDT	
				52	5	IDT71321SA-45B	◊‡ IDT	
	55 nsF	CMOS	TS	24	5	AV2116-55	°† Avasem	70
						CY6116-55C	◊ Cypress	
						CY6116-55M	◊ Cypress	
						CY7C128A-55C	◊ Cypress	
						CY7C128A-55M	◊† Cypress	
						HM65162S-9	◊ Harris	75
						IDT6116LA-55B	◊‡ IDT	
						IDT6116SA-55B	◊† IDT	
						LH5115-55	Sharp	
						V61C16-55	◊ Vitelic	
						V61C16-55L	◊ Vitelic	80
				52	5	IDT71321LA-55	◊‡ IDT	
						IDT71321SA-55	◊‡ IDT	
		CMOS, 2-port	TS	48	5	CY7C142-55C	◊ Cypress	
						CY7C142-55M	◊† Cypress	
		NMOS	TS	24	5	MCM2018AN55	Motorola	85
		2-Port	TS	48	5	IDT7132SA-55	◊ IDT	
						IDT7142LA-55	◊ IDT	
				52	5	IDT71321SA-55B	◊‡ IDT	
	60 nsF	CMOS	TS	24	5	HC6116	◊°‡ Honeywell	
		TTL	TS	24	5	HC6216	◊°‡ Honeywell	90
	70 nsF	CMOS	TS	20	5	V61C16-70L	Vitelic	
				24	5	AV2116-70	°† Avasem	
						HM65162B-9	◊ Harris	
						HM65162B/883	◊† Harris	
						IDT6116LA-70B	◊‡ IDT	95
						IDT6116SA-70B	◊† IDT	
						LH5115-70	Sharp	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	70 nsF	CMOS	TS	24	5		(Cont'd)	
						STC6116M-70	† STC	
						UM6116A-70	◊ **UMC (3688)**	
						V61C16-70	◊ Vitelic	
		NMOS	TS	24	5	AM9128-70	AMD	
		2-Port	TS	48	5	IDT7132SA-70	◊ IDT	5
						IDT7142LA-70	◊ IDT	
	80 nsF	CMOS	TS	24	5	HS65C162RH	‡ Harris	
						HS65C162RRH	‡ Harris	
	85 nsF			24	5	**S2517**	**Seiko Instr (3585)**	
		CMOS	TS	24	5	L6116C-85	◊ LogicDev	10
						L6116M-85	◊† LogicDev	
	90 nsF	CMOS	TS	24	5	HM65162-9	◊ Harris	
						HM65162/883	◊† Harris	
						HM65162C-9	◊ Harris	
						HM65172/883	† Harris	15
						IDT6116LA-90B	◊‡ IDT	
						IDT6116SA-90B	◊† IDT	
						MS6516L-90C	Mosel	
						MS6516S-90C	Mosel	
						BR6116	**ROHM (3584)**	20
						STC6116M-90	† STC	
						UM6116-3	◊ **UMC (3688)**	
		2-Port	TS	48	5	IDT7132SA-90	◊ IDT	
						IDT7142LA-90	◊ IDT	
	100 nsF	CMOS	TS	24	5	**GM76C28-10**	**GoldStar (3432)**	25
						HS65T162RH	‡ Harris	
						HS65T162RRH	‡ Harris	
						MS6516L-10	◊ Mosel	
						MS6516L-100C	Mosel	
						MS6516S-10	◊ Mosel	30
						MS6516S-100C	Mosel	
						SRM2016C-10	**S-MOS (3654)**	
						LH5116-10	◊ Sharp	
						LH5118-10	◊ Sharp	
						CXK5816M-10L	Sony	35
						CXK5816PN-10L	Sony	
						UM6116A-10	◊ **UMC (3688)**	
			TTL	24	5	**HY6116A-10**	**Hyundai (3475)**	
						HY6116AL-10	**Hyundai (3475)**	
				28	5	**HY6264L-10**	**Hyundai (3475)**	40
		NMOS	TS	24	5	AM9128-10	AMD	
		NMOS, Refurbished	TS	24	5	**2128-100**	**Krueger (3513)**	
	120	CMOS	TS	24	5	**UM6116A-12**	◊ **UMC (3688)**	
	120 nsF	CMOS	TS	24	5	XL61C16	◊ EXEL	
						GM76C28-12	**GoldStar (3432)**	45
						HM6516B-9	◊ Harris	
						HM6516B/883	◊† Harris	
						HM65162C/883	◊† Harris	
						HM6116-2	◊ Hitachi	
						HY6116L-12	**Hyundai (3475)**	50
						IDT6116LA-120B	◊† IDT	
						IDT6116SA-120B	◊† IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	120 nsF	CMOS	TS	24	5		(Cont'd)	
						SRM2016C-12	**S-MOS (3654)**	
						MK48T02B-12	SGS-Thomson	
						MK48T12B-12	SGS-Thomson	55
						MK48Z02B-12	SGS-Thomson	
						MK48Z12B-12	SGS-Thomson	
						LH5116-12	◊ Sharp	
						CXK5816M-12L	◊ Sony	
						CXK5816PN-12L	Sony	60
						STC6116M-12	† STC	
						UM6116-2	◊ **UMC (3688)**	
			TTL	24	5	**HY6116A-12**	**Hyundai (3475)**	
						HY6116AL-12	**Hyundai (3475)**	
		CMOS, Refurbished	TS	24	5	**6116-120**	**Krueger (3513)**	65
						6116LP-120	**Krueger (3513)**	
		CMOS/SOS	TS	24	5	MA6116SOS	Marconi	
		NMOS	TS	24	5	AM9128-12M	† AMD	
		NMOS, Refurbished	TS	24	5	**2128-120**	**Krueger (3513)**	
	150 nsF	CMOS	TS	24	5	CDM6116A-3	Harris	70
						HM6116-3	◊ Hitachi	
						IDT6116LA-150B	◊† IDT	
						IDT6116SA-150B	◊† IDT	
						MK48T02B-15	SGS-Thomson	
						MK48T12B-15	SGS-Thomson	75
						MK48Z02-15	SGS-Thomson	
						MK48Z12B-15	SGS-Thomson	
						MK6116-15	SGS-Thomson	
						MK6116L-15	SGS-Thomson	
						LH5116-15	Sharp	80
						CXK5816M-15L	◊ Sony	
						CXK5816PN-15L	Sony	
						STC6116M-15	† STC	
				28	5	MK6116	◊ SGS-Thomson	
			TTL	24	5	**HY6116A-15**	**Hyundai (3475)**	85
						HY6116AL-15	**Hyundai (3475)**	
		CMOS, Refurbished	TS	24	5	**6116-150**	**Krueger (3513)**	
						6116LP-150	**Krueger (3513)**	
		NMOS	TS	24	5	AM9128-15M	† AMD	
						ETL2128-3	SGS-Thomson	90
		NMOS, Refurbished	TS	24	5	**2128-150**	**Krueger (3513)**	
	200 nsF	CMOS	TS	24	5	CDM6116A-2	Harris	
						HM6516-5	◊ Harris	
						HM6516-9	◊ Harris	
						HM6516/883	◊† Harris	95
						HM6116-4	◊ Hitachi	
						MK48T02B-20	SGS-Thomson	
						MK48T12B-20	SGS-Thomson	
						MK48Z02-20	SGS-Thomson	
						MK48Z12B-20	SGS-Thomson	100
						MK6116-20	SGS-Thomson	
						MK6116L-20	SGS-Thomson	
				28	5	**48C02-20**	◊ **Krueger (3513)**	
						MK48C02-20	◊ SGS-Thomson	
						MK48C02L-20	◊ SGS-Thomson	105
		CMOS, Refurbished	TS	24	5	**6116-200**	**Krueger (3513)**	
						6116LP-200	**Krueger (3513)**	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	200 nsF						(Cont'd)	
		NMOS	TS	24	5	AM9128-20	AMD	
						AM9128-20M †	AMD	
						ETL2128-4	SGS-Thomson	
		NMOS, Refurbished						
			TS	24	5	**2128-200**	**Krueger (3513)**	
	250 nsF	CMOS	TS	24	5	CDM6116A-9	Harris	5
						MK48T02B-25	SGS-Thomson	
						MK48T12B-25	SGS-Thomson	
						MK48Z02-25	SGS-Thomson	
						MK48Z12B-25	SGS-Thomson	
				28	5	**48C02-25** ◊	**Krueger (3513)**	10
						MK48C02-25 ◊	SGS-Thomson	
						MK48C02L-25 ◊	SGS-Thomson	
		NMOS	TS	24	5	ETL2128-5	SGS-Thomson	
	1000 nsF							
		CMOS	TS	24	5	**UM6116-V** ◊	**UMC (3688)**	
2048x9	25 nsF	CMOS	TS	28	5	MK45H03-25 ◊	SGS-Thomson	15
	35 nsF	CMOS	TS	28	5	MK45H03-35 ◊	SGS-Thomson	
						VT7203-35 ◊	VLSI Tech	
	50 nsF	CMOS	TS	28	5	MK45H03-50 ◊	SGS-Thomson	
						VT7203-50 ◊	VLSI Tech	
	65 nsF	CMOS	TS	28	5	MK45H03-65 ◊	SGS-Thomson	20
	120 nsF	CMOS	TS	28	5	MK45H03-12 ◊	SGS-Thomson	
2048x16								
	40 nsF	CMOS	TS	44	5	**MAP168-45**	**Waferscale (3716)**	
	45 nsF	CMOS	TS	44	5	**MAP168-45**	**Waferscale (3716)**	
	55 nsF	CMOS	TS	44	5	**MAP168-55**	**Waferscale (3716)**	
				68	5	IDT7133L-55 ◊‡	IDT	25
						IDT7133S-55 ◊‡	IDT	
						IDT7143L-55 ◊‡	IDT	
						IDT7143S-55 ◊‡	IDT	
	70 nsF	CMOS	TS	68	5	IDT7133L-70 ◊‡	IDT	
						IDT7133S-70 ◊‡	IDT	30
						IDT7143L-70 ◊‡	IDT	
						IDT7143S-70 ◊‡	IDT	
2048x32								
	85 nsF	CMOS	TS	132	5	μPD43608	NEC	
4096x1	6 nsF	CMOS	TS	20	3.3	P3C3147-6C ◊	Performance	
	7 nsF	CMOS	TS	20	3.3	P3C3147-7C ◊	Performance	35
	8 nsF	CMOS	TS	20	3.3	P3C3147-8C ◊	Performance	
	10 nsF	CMOS	TS	18	5	P4C147-10C	Performance	
		ECL	OE	18	−4.5	μPB100470-10	NEC	
						SSM100470 †	Saratoga	
					−5.2	MBM100470A-10	Fujitsu	40
						MBM10470A-10	Fujitsu	
						μPB10470-10	NEC	
						SSM10470 †	Saratoga	
	12 nsF	CMOS	TS	18	5	P4C147-12C	Performance	
	15 nsF	CMOS	TS	18	5	P4C147-15C	Performance	45
						P4C147-15M †	Performance	
		ECL	OE	18	−4.5	MBM100470A-15	Fujitsu	
						μPB100470-15	NEC	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x1	15 nsF	ECL	OE	18			(Cont'd)	
					−5.2	MBM10470A-15	Fujitsu	
						μPB10470-15	NEC	50
	20 nsF	CMOS	TS	18	5	P4C147-20C	Performance	
						P4C147-20M †	Performance	
		ECL	OE	18	−5.2	MBM10470A-20	Fujitsu	
	25 nsF	CMOS	TS	18	5	CY7C147-25C ◊	Cypress	
						P4C147-25C	Performance	55
						P4C147-25M †	Performance	
						IMS1203-25	SGS-Thomson	
						IMS1203-25M †	SGS-Thomson	
	35 nsF	CMOS	TS	18	5	CY2147-35C	Cypress	
						CY7C147-35C ◊	Cypress	60
						CY7C147-35M ◊†	Cypress	
						P4C147-35M †	Performance	
						IMS1203-35	SGS-Thomson	
						IMS1203-35M †	SGS-Thomson	
		NMOS	TS	18	5	AM2147-35 ◊	AMD	65
						2147H-1	Intel	
						ET2147H-1	SGS-Thomson	
		NMOS, Refurbished						
			TS	18	5	**2147-35**	**Krueger (3513)**	
	45 nsF	CMOS	TS	18	5	CY2147-45C	Cypress	
						CY2147-45M †	Cypress	70
						CY7C147-45C ◊	Cypress	
						CY7C147-45M ◊†	Cypress	
						IMS1203-45M †	SGS-Thomson	
		NMOS	TS	18	5	AM21L47-45	AMD	
						AM2147-45 ◊	AMD	75
						M2147H-2 †	Intel	
						2147H-2	Intel	
						ET2147H-2	SGS-Thomson	
		NMOS, Refurbished						
			TS	18	5	**2147-45**	**Krueger (3513)**	
	55 nsF	CMOS	TS	18	5	CY2147-55C	Cypress	80
						CY2147-55M †	Cypress	
		NMOS	TS	18	5	AM21L47-55	AMD	
						AM2147-55 ◊	AMD	
						M2147H-3 †	Intel	
						2147H-3	Intel	85
						2147HL-3	Intel	
						NMC2147H-4	National	
						ETL2147H-3	SGS-Thomson	
						ET2147H-3	SGS-Thomson	
		NMOS, Refurbished						
			TS	18	5	**2147-55**	**Krueger (3513)**	90
	70 nsF	CMOS	TS	18	5	HM6147H	Hitachi	
		CMOS/SOS						
			TS	18	5	MA5104SOS ‡	Marconi	
		NMOS	TS	18	5	AM21L47-70	AMD	
						AM2147-70 ◊	AMD	
						2147 ◊	Harris	95
						M2147H †	Intel	
						2147H ◊	Intel	
						2147HL	Intel	
						ETL2147	SGS-Thomson	
		NMOS, Refurbished						
			TS	18	5	**2147-70**	**Krueger (3513)**	100
	120 nsF	CMOS	TS	18	5	HM6504S-9 ◊	Harris	
						HM6504S/883 ◊†	Harris	
		NMOS	TS	18	5	AM21L41-12	AMD	

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x1							(Cont'd)	
	150 nsF	NMOS	TS	18	5	AM21L41-15	AMD	
	180 nsF	CMOS	TS	18	5	HS6504RH ‡	Harris	
						HS6504RRH ‡	Harris	
	200 nsF	CMOS	TS	18	5	HM6504B-9 ◊	Harris	
						HM6504B/883 ◊†	Harris	5
		NMOS	TS	18	5	AM21L41-20	AMD	
	250 nsF	NMOS	TS	18	5	AM21L41-25	AMD	
	300 nsF	CMOS	TS	18	5	CMM5104/1RZ ‡	Harris	
						HM6504-5 ◊	Harris	
						HM6504-9 ◊	Harris	10
						HM6504/883 ◊†	Harris	
						HM6504C-9 ◊	Harris	
		NMOS	TS	18	5	AM90L44C	AMD	
						AM90L44CM †	AMD	
						AM9044CM †	AMD	15
	450 nsF	CMOS	TS	18	5	LH5104-4	Sharp	
4096x4	5 nsF	Bipolar	ECL	28	−5.2	MBM10A484-5 ◊	Fujitsu	
						MBM101A484-5 ◊	Fujitsu	
		ECL 10K	OE		−5.2	**SY10484-5**	**Synergy (3667)**	
				28	−5.2	μPB10A484-5 ◊	NEC	20
						μPB10484A-5 ◊	NEC	
		ECL 100K	OE		−4.5	**SY100484-5**	**Synergy (3667)**	
				28	−4.5	μPB100A484-5 ◊	NEC	
						μPB100484A-5 ◊	NEC	
		ECL 101K	OE		−5.2	**SY101484-5**	**Synergy (3667)**	25
	7 nsF	ECL 10K	OE	28	−5.2	μPB10A484-7 ◊	NEC	
						μPB10484A-7 ◊	NEC	
		ECL 10K/10KH	OE	28	−5.2	CY10E484-7C ◊	Aspen	
		ECL 100K	OE	28	−4.5	CY100E484-7C ◊	Aspen	
						μPB100A484-7 ◊	NEC	30
						μPB100484A-7 ◊	NEC	
					−5.2	CY101E484-7C ◊	Aspen	
	8 nsF	ECL 10K	OE		−5.2	**SY10484-8**	**Synergy (3667)**	
		ECL 100K	OE		−4.5	**SY100484-8**	**Synergy (3667)**	
		ECL 101K	OE		−5.2	**SY101484-8**	**Synergy (3667)**	35
	10 nsF	ECL	OE	28	−4.5	MBM100484A-10 ◊	Fujitsu	
						μPB100484-10	NEC	
					−5.2	MBM10484A-10 ◊	Fujitsu	
						μPB10484-10	NEC	
		ECL 10K	OE		−5.2	**SY10484-10**	**Synergy (3667)**	40
		ECL 10K/10KH	OE	28	−5.2	CY10E484-10C ◊	Aspen	
		ECL 100K	OE		−4.5	**SY100484-10**	**Synergy (3667)**	
				28	−4.5	CY100E484-10C ◊	Aspen	
					−5.2	CY101E484-10C ◊	Aspen	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x4	10 nsF						(Cont'd)	
		ECL 101K	OE		−5.2	**SY101484-10**	**Synergy (3667)**	45
	12 nsF	CMOS	TS	20	5	IDT6168LA-12 ◊	IDT	
						IDT6168SA-12 ◊	IDT	
						VT20C69-12 ◊	VLSI Tech	
				22	5	IDT6187S-12 ◊	IDT	
						IDT61970L-12 ◊	IDT	50
						IDT61970S-12 ◊	IDT	
						P4C170-12C	Performance	
						VT20C79-12 ◊	VLSI Tech	
				24	5	P4C1681-12C	Performance	
						P4C1682-12C	Performance	55
	13 nsF	ECL	Latched	28	−4.5	MBM100486LL-13	Fujitsu	
					−5.2	MBM10486LL-13	Fujitsu	
			Reg.	28	−4.5	MBM100486RR-13	Fujitsu	
					−5.2	MBM10486RR-13	Fujitsu	
	15 nsF	CMOS	TS	20	5	CYC168A-15C ◊	Cypress	60
						CY7C168A-15	Cypress	
						CY7C169A-15	Cypress	
						CY7C169A-15C ◊	Cypress	
						IDT6168LA-15 ◊‡	IDT	
						IDT6168SA-15 ◊‡	IDT	65
						IS61C68L-15	**ISSI (3510)**	
						IS61C68S-15 ◊‡	**ISSI (3510)**	
						L7C168C-15 ◊	LogicDev	
						P4C168-15C	Performance	
						P4C168-20C	Performance	70
						P4C169-15C	Performance	
						VT20C68-15 ◊	VLSI Tech	
						VT20C69-15 ◊	VLSI Tech	
				22	5	CY7C170A-15	Cypress	
						CY7C170A-15C ◊	Cypress	75
						IDT6178S-15 ◊	IDT	
						IDT6178S-15B ◊†	IDT	
						IDT61970L-15 ◊	IDT	
						IDT61970L-15B ◊†	IDT	
						IDT61970S-15 ◊	IDT	80
						IDT61970S-15B ◊†	IDT	
						IS61C70L-15	**ISSI (3510)**	
						IS61C70S-15	**ISSI (3510)**	
						L7C170C-15 ◊	LogicDev	
						P4C170-15C	Performance	85
						VT20C78-15 ◊	VLSI Tech	
						VT20C79-15 ◊	VLSI Tech	
				24	5	CY7C171A-15	Cypress	
						CY7C171A-15C ◊	Cypress	
						CY7C172A-15	Cypress	90
						CY7C172A-15C ◊	Cypress	
						L7C171C-15 ◊	LogicDev	
						L7C172C-15 ◊	LogicDev	
						P4C1681-15C	Performance	
						P4C1682-15C	Performance	95
						VT20C72-15 ◊	VLSI Tech	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x4	15 nsF						(Cont'd)	
		ECL	OE	28	-4.5	MBM100484-15	◊ Fujitsu	
						μPB100484-15	NEC	
						SSM100484	† Saratoga	
					-5.2	MBM10484-15	◊ Fujitsu	
						μPB10484-15	NEC	5
						SSM10484	† Saratoga	
	20	CMOS	TS	20	5	CY7C168A-20M	◊† Cypress	
	20 nsF	CMOS	TS	20	5	CY7C168A-20C	◊ Cypress	
						CY7C169A-20C	◊ Cypress	
						CY7C169A-20M	◊† Cypress	10
						IDT6168LA-20	◊ IDT	
						IDT6168LA-20B	◊‡ IDT	
						IDT6168SA-20	◊ IDT	
						IDT6168SA-20B	◊‡ IDT	
						IS61C68L-20	**ISSI (3510)**	15
						IS61C68S-20	**ISSI (3510)**	
						L7C168C-20	◊ LogicDev	
						L7C168M-20	◊† LogicDev	
						MCM6269-20	Motorola	
						P4C168-20M	† Performance	20
						P4C169-20C	Performance	
						P4C169-20M	† Performance	
						MK41H68-20	† SGS-Thomson	
						MK41H69-20	† SGS-Thomson	
						VT20C68	VLSI Tech	25
						VT20C68-20	VLSI Tech	
						VT20C69	VLSI Tech	
						VT20C69-20	VLSI Tech	
				22	5	CY7C170A-20C	◊ Cypress	
						CY7C170A-20M	◊† Cypress	30
						IDT6178S-20	◊ IDT	
						IDT6178S-20B	◊† IDT	
						IDT61970L-20	◊ IDT	
						IDT61970L-20B	◊† IDT	
						IDT61970S-20	◊ IDT	35
						IDT61970S-20B	◊† IDT	
						IS61C70L-20	**ISSI (3510)**	
						IS61C70S-20	**ISSI (3510)**	
						L7C170C-20	◊ LogicDev	
						L7C170M-20	◊† LogicDev	40
						P4C170-20C	Performance	
						P4C170-20M	† Performance	
						MK41H80-20	SGS-Thomson	
						VT20C78	VLSI Tech	
						VT20C78-20	VLSI Tech	45
						VT20C79	VLSI Tech	
						VT20C79-20	VLSI Tech	
				24	5	CY7C171A-20C	◊ Cypress	
						CY7C171A-20M	◊† Cypress	
						CY7C172A-20C	◊ Cypress	50
						CY7C172A-20M	◊† Cypress	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x4	20 nsF	CMOS	TS	24	5		(Cont'd)	
						IDT71681LA-20	◊ IDT	
						IDT71681SA-20	◊‡ IDT	
						IDT71682LA-20	◊‡ IDT	
						IDT71682SA-20	◊‡ IDT	55
						L7C171C-20	◊ LogicDev	
						L7C171M-20	◊† LogicDev	
						L7C172C-20	◊ LogicDev	
						L7C172M-20	◊† LogicDev	
						MCM6268-20	Motorola	60
						MCM6270-20	Motorola	
						P4C1681-20C	Performance	
						P4C1681-20M	† Performance	
						P4C1682-20C	Performance	
						P4C1682-20M	† Performance	65
						VT20C72-20	◊ VLSI Tech	
		TTL	TS	20	5	SSM6168	† Saratoga	
				22	5	SSM6170	† Saratoga	
				24	5	SSM6171	† Saratoga	
						SSM6172	† Saratoga	70
	22 nsF	CMOS	TS		5	MCM62350-22	Motorola	
						MCM62351-22	Motorola	
				20	5	MCM4180-22	Motorola	
	25 nsF	CMOS	TS	20	5	CY7C168A-25C	◊ Cypress	
						CY7C168A-25M	◊† Cypress	75
						CY7C169A-25C	◊ Cypress	
						CY7C169A-25M	◊† Cypress	
						HM6268-25	Hitachi	
						IDT6168LA-25	◊ IDT	
						IDT6168LA-25B	◊† IDT	80
						IDT6168SA-25	◊ IDT	
						IDT6168SA-25B	◊† IDT	
						IS61C68L-25	**ISSI (3510)**	
						IS61C68S-25	**ISSI (3510)**	
						L7C168C-25	◊ LogicDev	85
						L7C168M-25	◊† LogicDev	
						MCM6268-25	Motorola	
						MCM6269-25	Motorola	
						P4C168-25C	Performance	
						P4C168-25M	† Performance	90
						P4C169-25C	Performance	
						P4C169-25M	† Performance	
						IMS1423-25	SGS-Thomson	
						MK41H68-25	† SGS-Thomson	
						MK41H69-25	† SGS-Thomson	95
						VT20C68-25	VLSI Tech	
						VT20C69-25	VLSI Tech	
				22	5	CY7C170-25M	◊† Cypress	
						CY7C170A-25C	◊ Cypress	
						CY7C170A-25M	◊† Cypress	100
						IDT61970L-25	◊ IDT	
						IDT61970L-25B	◊† IDT	
						IDT61970S-25	◊ IDT	
						IS61C70L-25	**ISSI (3510)**	
							(Continued)	

† Military Temperature Range (-55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x4	25 nsF	CMOS	TS	22	5		(Cont'd)	
						IS61C70S-25	**ISSI (3510)**	
						L7C170C-25	◊ LogicDev	
						L7C170M-25	◊† LogicDev	
						MCM4180-25	Motorola	
						P4C170-25C	Performance	5
						P4C170-25M	† Performance	
						MK41H78-25	SGS-Thomson	
						MK41H79-25	SGS-Thomson	
						MK41H80-25	SGS-Thomson	
						VT20C78-25	VLSI Tech	10
						VT20C79-25	VLSI Tech	
				24	5	CY7C171A-25C	◊ Cypress	
						CY7C171A-25M	◊† Cypress	
						CY7C172A-25C	◊ Cypress	
						CY7C172A-25M	◊† Cypress	15
						IDT71681LA-25	◊ IDT	
						IDT71681LA-25B	◊‡ IDT	
						IDT71681SA-25	◊ IDT	
						IDT71681SA-25B	◊‡ IDT	
						IDT71682LA-25	◊ IDT	20
						IDT71682LA-25B	◊‡ IDT	
						IDT71682SA-25	◊ IDT	
						IDT71682SA-25B	◊‡ IDT	
						L7C171C-25	◊ LogicDev	
						L7C171M-25	◊† LogicDev	25
						L7C172C-25	◊ LogicDev	
						L7C172M-25	◊† LogicDev	
						MCM62350-25	◊ Motorola	
						MCM62351-25	◊ Motorola	
						P4C1681-25C	Performance	30
						P4C1681-25M	† Performance	
						P4C1682-25C	Performance	
						P4C1682-25M	† Performance	
						VT20C72-25	VLSI Tech	
		TTL	OC	20	5	MB81C68A	◊ Fujitsu	35
			TS	20	5	MT5C1604-25	◊ MicronTech	
				22	5	MT5C1605-25	◊ MicronTech	
				24	5	MT5C1606-25	◊ MicronTech	
	30 nsF	CMOS	TS	20	5	MB81C69A-30	Fujitsu	
						P4C168-30C	Performance	40
						P4C168-30M	† Performance	
						P4C169-30C	Performance	
						P4C169-30M	† Performance	
				22	5	MCM4180-30	Motorola	
						P4C170-30C	Performance	45
						P4C170-30M	† Performance	
				24	5	MCM62350-30	◊ Motorola	
						MCM62351-30	◊ Motorola	
						P4C1681-30C	Performance	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x4	30 nsF	CMOS	TS	24	5		(Cont'd)	
						P4C1681-30M	† Performance	50
						P4C1682-30C	Performance	
						P4C1682-30M	† Performance	
	35 nsF	CMOS	TS	20	5	CY7C168A-35C	◊ Cypress	
						CY7C168A-35M	◊† Cypress	
						CY7C169A-35C	◊ Cypress	55
						CY7C169A-35M	◊† Cypress	
						HM6268-35	Hitachi	
						IDT6168LA-35	◊ IDT	
						IDT6168LA-35B	◊† IDT	
						IDT6168SA-35	◊ IDT	60
						IDT6168SA-35B	◊† IDT	
						L7C168C-35	◊ LogicDev	
						L7C168M-35	◊† LogicDev	
						MCM6268-35	Motorola	
						MCM6269-35	Motorola	65
						P4C168-35C	Performance	
						P4C168-35M	† Performance	
						P4C169-35C	Performance	
						P4C169-35M	† Performance	
						IMS1423-35	SGS-Thomson	70
						IMS1423-35M	◊† SGS-Thomson	
						MK41H68-35	† SGS-Thomson	
						MK41H69-35	† SGS-Thomson	
						CXK5416-35	Sony	
						CXK5416P-35L	Sony	75
						V61C68-35L	Vitelic	
						VT20C68-35	VLSI Tech	
						VT20C69-35	VLSI Tech	
				22	5	CY7C170A-35C	◊ Cypress	
						CY7C170A-35M	◊† Cypress	80
						IDT61970L-35	◊ IDT	
						IDT61970L-35B	◊† IDT	
						IDT61970S-35	◊ IDT	
						IDT61970S-35B	◊† IDT	
						L7C170C-35	◊ LogicDev	85
						L7C170M-35	◊† LogicDev	
						MCM6270-35	Motorola	
						P4C170-35C	Performance	
						P4C170-35M	† Performance	
						MK41H78-35	SGS-Thomson	90
						MK41H79-35	SGS-Thomson	
						MK41H80-35	SGS-Thomson	
						VT20C78-35	VLSI Tech	
						VT20C79-35	VLSI Tech	
				24	5	CY7C171A-35C	◊ Cypress	95
						CY7C171A-35M	◊† Cypress	
						CY7C172A-35C	◊ Cypress	
						CY7C172A-35M	◊† Cypress	
						IDT71681LA-35	◊ IDT	
						IDT71681LA-35B	◊† IDT	100
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4096x4	35 nsF	CMOS	TS	24	5	(Cont'd)	
						IDT71681SA-35	◊ IDT
						IDT71681SA-35B	◊† IDT
						IDT71682LA-35	◊ IDT
						IDT71682LA-35B	◊† IDT
						IDT71682SA-35	◊ IDT
						IDT71682SA-35B	◊† IDT
						L7C171C-35	◊ LogicDev
						L7C171M-35	◊† LogicDev
		CMOS	TS	24	5	L7C172C-35	◊ LogicDev
		CMOS	TS	24	5	L7C172M-35	◊† LogicDev
						P4C1681-35C	Performance
						P4C1681-35M	† Performance
						P4C1682-35C	Performance
						P4C1682-35M	† Performance
						VT20C72-35	VLSI Tech
		NMOS	TS	20	5	AM2168-35	AMD
						AM2169-35	AMD
		TTL	TS	20	5	MT5C1604-35	◊ MicronTech
				22	5	MT5C1605-35	◊ MicronTech
				24	5	MT5C1606-35	◊ MicronTech
	40 nsF	TTL	TS	20	5	AM2169-40	AMD
	45 nsF	CMOS	TS	20	5	CY7C168A-45C	◊ Cypress
						CY7C168A-45M	◊† Cypress
						CY7C169A-45C	◊ Cypress
						CY7C169A-45M	◊† Cypress
						IDT6168LA-45B	◊† IDT
						IDT6168SA-45B	◊† IDT
						6168H-45	**Krueger (3513)**
						L7C168C-45	◊ LogicDev
						L7C168M-45	◊† LogicDev
						MCM1423-45	Motorola
						MCM6168-45	Motorola
						P4C168-45M	† Performance
						P4C169-45M	† Performance
						IMS1423-45	SGS-Thomson
						IMS1423-45M	† SGS-Thomson
						CXK5416-45	Sony
						UM6168-45	UMC
						V61C68-45	Vitelic
						V61C68-45L	Vitelic
				22	5	CY7C170A-45C	◊ Cypress
						CY7C170A-45M	◊† Cypress
						IDT61970L-45	◊ IDT
						IDT61970L-45B	◊† IDT
						IDT61970S-45	◊ IDT
						IDT61970S-45B	◊† IDT
						L7C170C-45	◊ LogicDev
							(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4096x4	45 nsF	CMOS	TS	22	5	(Cont'd)	
						L7C170M-45	◊† LogicDev
						P4C170-45M	† Performance
				24	5	CY7C172A-45C	◊ Cypress
						CY7C172A-45M	◊† Cypress
						IDT71681LA-45	◊ IDT
						IDT71681LA-45B	◊† IDT
						IDT71681SA-45	◊ IDT
						IDT71681SA-45B	◊† IDT
						IDT71682LA-45	◊ IDT
						IDT71682LA-45B	◊† IDT
						IDT71682SA-45	◊ IDT
						IDT71682SA-45B	◊† IDT
						L7C171C-45	◊ LogicDev
						L7C171M-45	◊† LogicDev
						L7C172C-45	◊ LogicDev
						L7C172M-45	◊† LogicDev
						P4C1681-45M	† Performance
						P4C1682-45M	† Performance
						CXK5416P-45L	Sony
				424	5	CY7C171A-45C	◊ Cypress
						CY7C171A-45M	◊† Cypress
		NMOS	TS	20	5	AM2168-45	AMD
	50 nsF	TTL	TS	20	5	AM2169-50	AMD
	55 nsF	CMOS	TS	20	5	IDT6168LA-55B	◊† IDT
						IDT6168SA-55B	◊† IDT
						6168H-55	**Krueger (3513)**
						MCM6168-55	Motorola
						IMS1423-55M	† SGS-Thomson
						V61C68-55	Vitelic
						V61C68-55L	Vitelic
				22	5	IDT61970L-55B	◊† IDT
						IDT61970S-55B	◊† IDT
				24	5	IDT71681LA-55B	◊† IDT
						IDT71681SA-55B	◊† IDT
						IDT71682LA-55B	◊† IDT
						IDT71682SA-55B	◊† IDT
		NMOS	TS	20	5	AM2168-55	AMD
	70 nsF	CMOS	TS	20	5	IDT6168LA-70B	◊† IDT
						IDT6168SA-70B	◊† IDT
						MCM6168-70	Motorola
						V61C68-70	Vitelic
				24	5	IDT71681LA-70B	◊† IDT
						IDT71681SA-70B	◊† IDT
							(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4096x4	70 nsF	CMOS	TS	24	5	(Cont'd)	
						IDT71682LA-70B	◊† IDT
						IDT71682SA-70B	◊† IDT
		NMOS	TS	20	5	AM2168-70	AMD
						AM2169-70	AMD
	85 nsF	CMOS	TS	20	5	IDT6168LA-85B	◊† IDT
						IDT6168SA-85B	◊‡ IDT
						L7C168C-85	◊ LogicDev
						L7C168M-85	◊† LogicDev
				22	5	L7C170C-85	◊ LogicDev
						L7C170M-85	◊† LogicDev
				24	5	IDT71681LA-85B	◊† IDT
						IDT71681SA-85B	◊† IDT
						IDT71682LA-85B	◊† IDT
						IDT71682SA-85B	◊† IDT
						L7C171C-85	◊ LogicDev
						L7C171M-85	◊† LogicDev
						L7C172C-85	◊ LogicDev
						L7C172M-85	◊† LogicDev
		NMOS	TS	20	5	MBM8168-85W	† Fujitsu
	100 nsF	CMOS	TS	20	5	IDT6168LA-100B	◊† IDT
						IDT6168SA-100B	◊† IDT
				24	5	IDT71681LA-100B	◊† IDT
						IDT71681SA-100B	◊† IDT
						IDT71682LA-100B	◊† IDT
						IDT71682SA-100B	◊† IDT
	25 nsF	CMOS	TS	20	5	CY7C168-25	Cypress
				22	5	IDT61970S-25B	◊† IDT
4096x8	40 nsF	CMOS	TS	44	5	**MAP168-40**	**Waferscale (3716)**
	45 nsF	CMOS	TS	44	5	**MAP168-45**	**Waferscale (3716)**
				52	5	IDT71342L-45	◊‡ IDT
						IDT71342S-45	◊‡ IDT
		2-port	TS	68	5	IDT7134L-45	◊ IDT
	55 nsF	CMOS	TS	44	5	**MAP168-55**	**Waferscale (3716)**
				52	5	IDT71342L-55	◊‡ IDT
						IDT71342S-55	◊‡ IDT
		2-port	TS	68	5	IDT7134L-55	◊ IDT
	70 nsF	CMOS	TS	52	5	IDT71342L-70	◊‡ IDT
						IDT71342S-70	◊‡ IDT
		2-Port	TS	68	5	IDT7134L-70	◊ IDT
4096x9	25 nsF	CMOS	TS	28	5	MK45H04-25	SGS-Thomson
	35 nsF	CMOS	TS	28	5	MK45H04-35	SGS-Thomson
						(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4096x9						(Cont'd)	
	50 nsF	CMOS	TS	28	5	MK45H04-50	SGS-Thomson
	65 nsF	CMOS	TS	28	5	MK45H04-65	SGS-Thomson
	120 nsF	CMOS	TS	28	5	MK45H04-12	SGS-Thomson
4096x10							
	20 nsF	CMOS	TS	44	5	MCM62963-20	◊ Motorola
						MCM62964-20	◊ Motorola
	25 nsF	CMOS	TS	44	5	MCM62963-25	◊ Motorola
						MCM62964-25	◊ Motorola
	30 nsF	CMOS	TS	44	5	MCM62963-30	◊ Motorola
						MCM62964-30	◊ Motorola
4096x12							
	20 nsF	CMOS	TS	44	5	MCM62973-20	◊ Motorola
						MCM62974-20	◊ Motorola
	25 nsF	CMOS	TS	44	5	MCM62973-25	◊ Motorola
						MCM62974-25	◊ Motorola
	30 nsF	CMOS	TS	44	5	MCM62973-30	◊ Motorola
						MCM62974-30	◊ Motorola
4096x16							
	25 nsF	CMOS	TS	40	5	IDT71586S-25	◊ IDT
						IDT7186L-25	◊ IDT
						IDT7186S-25	◊ IDT
	35 nsF	CMOS	TS	40	5	IDT71586S-35	◊ IDT
						IDT71586S-35B	◊† IDT
						IDT7186L-35	◊ IDT
						IDT7186L-35B	◊† IDT
						IDT7186S-35	◊ IDT
						IDT7186S-35B	◊† IDT
				48	5	IDT71502L-35	◊‡ IDT
						IDT71502S-35	◊‡ IDT
	45 nsF	CMOS	TS	40	5	IDT71586S-45	◊ IDT
						IDT71586S-45B	◊† IDT
						IDT7186L-45	◊‡ IDT
						IDT7186L-45B	◊‡ IDT
						IDT7186S-45	◊‡ IDT
						IDT7186S-45B	◊‡ IDT
				48	5	IDT71502L-45	◊‡ IDT
						IDT71502S-45	◊‡ IDT
	55 nsF	CMOS	TS	40	5	IDT71586S-55B	◊† IDT
						IDT7186L-55	◊‡ IDT
						IDT7186L-55B	◊‡ IDT
						IDT7186S-55	◊‡ IDT
						IDT7186S-55B	◊‡ IDT
						(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
4096x16							(Cont'd)	
	55 nsF	CMOS	TS	48	5	IDT71502L-55	◊‡ IDT	
						IDT71502L-55B	◊‡ IDT	
						IDT71502S-55	◊‡ IDT	
						IDT71502S-55B	◊‡ IDT	
	70 nsF	CMOS	TS	40	5	IDT7186L-70B	◊‡ IDT	5
						IDT7186S-70B	◊‡ IDT	
				48	5	IDT71502L-70B	◊‡ IDT	
						IDT71502S-70B	◊‡ IDT	
8192x8	12 nsF	BiCMOS	OE	28	5	CY7B186-12C	◊ Cypress	
						CY7B186-12M	◊† Cypress	10
			TS	28	5	CY7B185-12C	◊ Aspen	
						KM68BC66-12	Samsung	
			TTL	28	5	CY7B186-12C	◊ Aspen	
		CMOS	TS	28	5	MT5C6408-12	MicronTech	
	15 nsF	BiCMOS	OE	28	5	CY7B185-15M	◊† Cypress	15
						CY7B186-15C	◊ Cypress	
						CY7B186-15M	◊† Cypress	
			TS	28	5	CY7B185-15C	◊ Aspen	
						CY7B185-15M	◊† Aspen	
						KM68BC66-15	Samsung	20
			TTL	28	5	CY7B186-15C	◊ Aspen	
						CY7B186-15M	◊† Aspen	
		CMOS	TS	28	5	AT3864-15	◊ ATMEL	
						MCM6264-15	◊ Motorola	
						P4C164-15C	◊ Performance	25
						TC5588-15	**Toshiba (3682)**	
						VT20C98-15	◊ VLSI Tech	
						VT20C98L-15	◊ VLSI Tech	
						VT20C99-15	◊ VLSI Tech	
		TTL	TS	28	5	M5M5178A-15	◊ Mitsubishi	30
	17 nsF	CMOS	TS	28	5	P4C164-17C	◊ Performance	
	20 nsF	BiCMOS	TS	28	5	KM68BC66-20	Samsung	
		CMOS	TS	28	5	CY7C185-20	Cypress	
						CY7C186-20	Cypress	
						IS61C64L-20	**ISSI (3510)**	35
						IS61C64S-20	**ISSI (3510)**	
						L7C185C-20	◊ LogicDev	
						MCM6264-20	◊ Motorola	
						P4C164-20C	Performance	
						P4C164-20M	◊† Performance	40
						P4C164L-20C	Performance	
						MK48H98-20	SGS-Thomson	
						TC5588-20	**Toshiba (3682)**	
						VT20C98-20	◊ VLSI Tech	
						VT20C98L-20	◊ VLSI Tech	45
						VT20C99-20	◊ VLSI Tech	
		TTL	TS	28	5	M5M5178A-20	◊ Mitsubishi	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8							(Cont'd)	
	25 nsF	CMOS	TS	28	5	CY7C185-25	† Cypress	
						CY7C185-25C	◊ Cypress	
						CY7C186-25	† Cypress	50
						CY7C186-25C	◊ Cypress	
						IS61C64L-25	**ISSI (3510)**	
						IS61C64S-25	**ISSI (3510)**	
						L7C185C-25	◊ LogicDev	
						L7C185M-25	◊† LogicDev	55
						MS6264AL-25	◊ Mosel	
						MCM6264-25	Motorola	
						P4C164-25C	Performance	
						P4C164-25M	† Performance	
						P4C164L-25C	Performance	60
						P4C164L-25M	† Performance	
						CXK5863J-25	Sony	
						CXK5863P-25	Sony	
						TC5588-25	**Toshiba (3682)**	
						UM6164-25	**◊ UMC (3688)**	65
						V63C64-25	◊ Vitelic	
						VT20C98-25	◊ VLSI Tech	
						VT20C98L-25	◊ VLSI Tech	
						VT20C99-25	◊ VLSI Tech	
		TTL	TS	28	5	SSM7164	† Saratoga	70
				32	5	MT5C6408-25	◊ MicronTech	
	30 nsF	CMOS	TS	28	5	IDT71C65L-30	◊‡ IDT	
						IDT71C65S-30	◊‡ IDT	
						IDT7164L-30	◊‡ IDT	
						IDT7164S-30	◊‡ IDT	75
						IDT7165L-30	◊‡ IDT	
						IDT7165S-30	◊‡ IDT	
						IS61C64L-30	**ISSI (3510)**	
						IS61C64S-30	**ISSI (3510)**	
						MCM62L64-30	◊ Motorola	80
						MCM6264-30	◊ Motorola	
						P4C164-30C	Performance	
						P4C164-30M	† Performance	
						P4C164L-30C	Performance	
						P4C164L-30M	† Performance	85
						MK48H98-30	SGS-Thomson	
						CXK5863J-30	Sony	
						CXK5863P-30	Sony	
						V63C64-30	◊ Vitelic	
				36	5	HC6364	◊‡ Honeywell	90
	35 nsF	CMOS	TS	28	5	CY7C185-35C	◊ Cypress	
						CY7C185-35M	◊† Cypress	
						CY7C186-35C	◊ Cypress	
						CY7C186-35M	◊† Cypress	
						EDI8808CA35B	**◊† EDI (3385)**	95
						MB81C78A-35	Fujitsu	
						MB81C79A-35	◊ Fujitsu	
						IDT71C65L-35	◊‡ IDT	
						IDT71C65L-35B	◊‡ IDT	
						IDT71C65S-35	◊‡ IDT	100

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	35 nsF	CMOS	TS	28	5	(Cont'd)		
						IDT71C65S-35B	◊‡ IDT	
						IDT7164L-35	◊‡ IDT	
						IDT7164L-35B	◊† IDT	
						IDT7164S-35	◊‡ IDT	
						IDT7164S-35B	◊† IDT	5
						IDT7165L-35	◊ IDT	
						IDT7165L-35B	◊† IDT	
						IDT7165S-35	◊ IDT	
						IDT7165S-35B	◊† IDT	
						IDT7174S-35	◊ IDT	10
						IDT7174S-35B	◊† IDT	
						L7C185C-35	◊ LogicDev	
						L7C185M-35	◊† LogicDev	
						MS6264AL-35C	Mosel	
						MCM62L64-35	◊ Motorola	15
						MCM6264-35	◊ Motorola	
						P4C164-35C	Performance	
						P4C164-35M	† Performance	
						P4C164L-35C	Performance	
						P4C164L-35M	† Performance	20
						MK48H65-35	◊ SGS-Thomson	
						MK48H74-35	SGS-Thomson	
						CXK5863J-35	Sony	
						CXK5863P-35	Sony	
						TC5588-35	**◊ Toshiba (3682)**	25
						UM6164-35	**◊ UMC (3688)**	
						V63C64-35	◊ Vitelic	
						V63C64-35L	◊ Vitelic	
						VT20C98-35	◊ VLSI Tech	
						VT20C98L-35	◊ VLSI Tech	30
						VT20C99-35	◊ VLSI Tech	
		TTL	OC	28	5	MB81C78A	Fujitsu	
			TS	32	5	MT5C6408-35	◊ MicronTech	
	40 nsF	CMOS	TS	28	5	MK48H98-40	SGS-Thomson	
		CMOS/SOS	TS	28	5	MAS9264	°‡ Marconi	35
	45 nsF	CMOS	TS	28	5	CY7C185-45C	◊ Cypress	
						CY7C185-45M	◊† Cypress	
						CY7C186-45C	◊ Cypress	
						CY7C186-45M	◊† Cypress	
						EDI8808CA45B	**◊† EDI (3385)**	40
						MB81C78A-45	Fujitsu	
						MB81C79A-45	◊ Fujitsu	
						IDT71C65L-45	◊‡ IDT	
						IDT71C65L-45B	◊‡ IDT	
						IDT71C65S-45	◊‡ IDT	45
						IDT71C65S-45B	◊‡ IDT	
						IDT7164L-45	◊‡ IDT	
						IDT7164L-45B	◊† IDT	
						IDT7164S-45	◊‡ IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	45 nsF	CMOS	TS	28	5	(Cont'd)		
						IDT7164S-45B	◊† IDT	50
						IDT7165L-45	◊ IDT	
						IDT7165L-45B	◊† IDT	
						IDT7165S-45	◊ IDT	
						IDT7165S-45B	◊† IDT	
						IDT7174S-45	◊ IDT	55
						IDT7174S-45B	◊† IDT	
						L7C185C-45	◊ LogicDev	
						L7C185M-45	◊† LogicDev	
						MS6264AL-45C	Mosel	
						MCM62L64-45	◊ Motorola	60
						MCM6264-45	◊ Motorola	
						P4C164-45M	† Performance	
						P4C164L-45M	† Performance	
						MK48H65-45	◊ SGS-Thomson	
						MK48H74-45	SGS-Thomson	65
						V63C64-45	◊ Vitelic	
						V63C64-45L	◊ Vitelic	
				58	5	IDT7M134S-45	◊‡ IDT	
						IDT7M144S-45	◊‡ IDT	
	50 nsF	TTL	TS	36	5	HC6264	◊°‡ Honeywell	70
	55 nsF	CMOS	TS	28	5	CY7C185-55C	◊ Cypress	
						CY7C186-55M	◊† Cypress	
						EDI8808CA55B	**◊† EDI (3385)**	
						EDI8810L55B	**† EDI (3385)**	
						IDT71C65L-55	◊‡ IDT	75
						IDT71C65L-55B	◊‡ IDT	
						IDT71C65S-55	◊‡ IDT	
						IDT71C65S-55B	◊‡ IDT	
						IDT7164L-55B	◊† IDT	
						IDT7164S-55B	◊† IDT	80
						IDT7165L-55	◊ IDT	
						IDT7165L-55B	◊† IDT	
						IDT7165S-55	◊ IDT	
						IDT7165S-55B	◊† IDT	
						IDT7174S-55B	◊† IDT	85
						MS6264AL-55C	Mosel	
						MCM6164C-55	Motorola	
						MCM6264-55	◊ Motorola	
						6164-55	◊† Motorola	
						MK48H65-55	◊ SGS-Thomson	90
						MK48H74-55	SGS-Thomson	
						UT67164-55	**‡ UTMC (3693)**	
						V63C64-55	◊ Vitelic	
						V63C64-55L	◊ Vitelic	
				55	5	MCM62L64-55	◊ Motorola	95
				428	5	**EDI8810H55B**	**† EDI (3385)**	
	60 nsF	CMOS	TS	58	5	IDT7M144S-60	◊‡ IDT	
	70 nsF	CMOS	TS	28	5	EDH8808ACL-70MHR	◊† EDI	
						EDI8808CA70B	**◊† EDI (3385)**	
						MB8464A-70	◊ Fujitsu	100
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	70 nsF	CMOS	TS	28	5		(Cont'd)	
						MB8464A-70L	◊ Fujitsu	
						MB8464A-70LL	◊ Fujitsu	
						IDT7164L-70B	◊† IDT	
						IDT7164S-70B	◊† IDT	
						IDT7165L-70	◊ IDT	5
						IDT7165L-70B	◊‡ IDT	
						IDT7165S-70	◊ IDT	
						IDT7165S-70B	◊‡ IDT	
						MS6264-70C	◊ Mosel	
						MS6264AL-70C	Mosel	10
						MS6264L-70C	◊ Mosel	
						MCM6164C-70	Motorola	
						MCM62L64-70	◊ Motorola	
						MCM6264-70	◊ Motorola	
						6164-70	◊† Motorola	15
						MK48H64-70	SGS-Thomson	
						MK48H64L-70	◊ SGS-Thomson	
						MK4864-70	◊ SGS-Thomson	
						CXK5864BM-70L	Sony	
						CXK5864BP-70L	Sony	20
						CXK5864BSP-70L	Sony	
						UM6264-70	**◊ UMC (3688)**	
		TTL	TS	28	5	KM6264A-07	Samsung	
						KM6264AL-07	Samsung	
	80 nsF	CMOS	TS	28	5	MB8464A-80	◊ Fujitsu	25
	85 nsF	CMOS	TS	28	5	GM76C88-85	GoldStar	
						IDT7164L-85B	◊† IDT	
						IDT7164S-85B	◊† IDT	
						IDT7165L-85B	◊‡ IDT	
						IDT7165S-85B	◊‡ IDT	30
						L7C185C-85	◊ LogicDev	
						L7C185M-85	◊† LogicDev	
			TTL	28	5	**HY6264-85**	**Hyundai (3475)**	
						HY6264L-85	**Hyundai (3475)**	
	90 nsF	CMOS	TS	28	5	**SRM2264C-90**	**S-MOS (3654)**	35
	100 nsF		TTL	28	5	AT3864L-10	◊ ATMEL	
		CMOS	TS	28	5	AT3864-10	◊ ATMEL	
						EDH8808ACL-10MHR	◊† EDI	
						MB8464A-10	◊ Fujitsu	
						MB8464A-10L	◊ Fujitsu	40
						MB8464A-10LL	◊ Fujitsu	
						MB8464A-10W	◊ Fujitsu	
						MB8464A-100	◊ Fujitsu	
						GM76C88-10	GoldStar	
						HM6264-10	Hitachi	45
						HM6264L-10	Hitachi	
						IDT7164L-100B	◊† IDT	
						IDT7164S-100B	◊† IDT	
						MS6264-10C	Mosel	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	100 nsF	CMOS	TS	28	5		(Cont'd)	
						MS6264L-100C	◊ Mosel	50
						BR6264	**ROHM (3584)**	
						SRM2264C-10	**S-MOS (3654)**	
						LH5164D-10L	Sharp	
						CXK5864BM-10L	Sony	
						CXK5864BP-10L	Sony	55
						CXK5864BSP-10L	Sony	
						TMS6264-10	TI	
						TMS6264L-10	TI	
						TC5565A-10	**Toshiba (3682)**	
						UM6264-10	**◊ UMC (3688)**	60
						UM6264L-10	**◊ UMC (3688)**	
			TTL	28	5	**HY6264-10**	**Hyundai (3475)**	
		CMOS, Refurbished						
			TS	28	5	**6264-100**	**◊ Krueger (3513)**	
						6264LP-100	**◊ Krueger (3513)**	
		TTL	TS	28	5	KM6264A-10	Samsung	65
						KM6264AL-10	Samsung	
	120 nsF		TTL	28	5	AT3864L-12	◊ ATMEL	
		CMOS	TS	28	5	AT3864-12	◊ ATMEL	
						DPS9264-120	**◊† Dense-Pac (3376)**	
						EDH8808ACL-12MHR	◊† EDI	70
						CDM6264-4	Harris	
						HM6264A-12	Hitachi	
						HM6264AL-12	Hitachi	
						IDT7164L-120B	◊† IDT	
						IDT7164S-120B	◊† IDT	75
						MSM5165L-12	OKI	
						SRM2264C-12	**S-MOS (3654)**	
						MK48H64-120	◊ SGS-Thomson	
						MK48H64L-120	◊ SGS-Thomson	
						MK4864-120	◊ SGS-Thomson	80
						CXK5864BM-12L	Sony	
						CXK5864BP-12L	Sony	
						CXK5864BSP-12L	Sony	
						TMS6264-12	TI	
						TMS6264L-12	TI	85
						TC5565A-12	**Toshiba (3682)**	
						UM6264-12	**◊ UMC (3688)**	
						UM6264L-12	**◊ UMC (3688)**	
			TTL	28	5	**HY6264-12**	**Hyundai (3475)**	
						HY6264L-12	**Hyundai (3475)**	90
		CMOS Module						
			TS	28	5	HM8808AB	Harris	
		CMOS, Refurbished						
			TS	28	5	**6264-120**	**Krueger (3513)**	
						6264LP-120	**Krueger (3513)**	
		TTL	TS	28	5	KM6264A-12	Samsung	
						KM6264AL-12	Samsung	95
	150 nsF		TTL	28	5	A3864L-15	◊† ATMEL	
		CMOS	TS	28	5	**DPS9264-150**	**◊† Dense-Pac (3376)**	
						EDH8808ACL-15MHR	◊† EDI	
						EDI8810150B	† EDI	
						MB8464A-15	◊ Fujitsu	100
						MB8464A-15L	◊ Fujitsu	
						MB8464A-15LL	◊ Fujitsu	
						MB8464A-15W	◊ Fujitsu	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	150 nsF	CMOS	TS	28	5		(Cont'd)	
						GM76C88L-15	**GoldStar (3432)**	
						CDM6264-3	Harris	
						CDM6264AC/3	Harris	
						HM65642 ◊†	Harris	
						HM8808-8 †	Harris	5
						HM8808-9	Harris	
						HM6264A-15	Hitachi	
						HM6264AL-15	Hitachi	
						IDT7164L-150B ◊†	IDT	
						IDT7164S-150B ◊†	IDT	10
						MSM5165L-15	OKI	
						SRM2064C-15	**S-MOS (3654)**	
						TMS6264-15	TI	
						TMS6264L-15	TI	
						TC5565A-15	**Toshiba (3682)**	15
			TTL	28	5	**HY6264-15**	**Hyundai (3475)**	
						HY6264L-15	**Hyundai (3475)**	
		CMOS Async						
			TTL	28	5	HM65642B ◊†	Harris	
						HM65642B/883 ◊†	Harris	
		CMOS, Refurbished						
			TS	28	5	**6264-150 ◊**	**Krueger (3513)**	20
						6264LP-150 ◊	**Krueger (3513)**	
	150nsF	CMOS	TS	28	5	**EDI8810H150B †**	**EDI (3385)**	
	200 nsF	CMOS	TS	28	5	**DPS9264-200 ◊†**	**Dense-Pac (3376)**	
						EDH8808ACL-20MHR ◊†	EDI	
						HM6264A-20	Hitachi	25
						HM6264AL-20	Hitachi	
						IDT7164L-200B ◊†	IDT	
						IDT7164S-200B ◊†	IDT	
						MK48Z08B-20	SGS-Thomson	
						MK48Z09B-20	SGS-Thomson	30
						MK48Z18B-20	SGS-Thomson	
						MK48Z19B-20	SGS-Thomson	
		CMOS Async						
			TTL	28	5	HM65642C ◊†	Harris	
						HM65642C/883 ◊†	Harris	
	250 nsF	CMOS	TS	28	5	MK48Z08B-25	SGS-Thomson	35
						MK48Z09B-25	SGS-Thomson	
						MK48Z18B-25	SGS-Thomson	
						MK48Z19B-25	SGS-Thomson	
	260 nsF*							
		CMOS	TS	40	5	HS6564RH ‡	Harris	
8192x9	15 nsF	BiCMOS	TS	28	5	MB82B79-15	Fujitsu	40
		CMOS	TS	28	5	MCM6265-15 ◊	Motorola	
						TC5589-15 ◊	**Toshiba (3682)**	
		TTL	TS	28	5	M5M5179A-15 ◊	Mitsubishi	
	20 nsF	BiCMOS	TS	28	5	MB82B79-20	Fujitsu	
		CMOS	TS	28	5	MCM6265-20 ◊	Motorola	45
						P4C163-20C ◊	Performance	
						P4C163L-20C ◊	Performance	
						MK48H89-20	SGS-Thomson	
						MK48H99-20	SGS-Thomson	
						TC5589-20 ◊	**Toshiba (3682)**	50
		TTL	TS	28	5	M5M5179A-20 ◊	Mitsubishi	
	25 nsF	CMOS	TS	28	5	MCM6265-25 ◊	Motorola	
						P4C163-25C ◊	Performance	
						P4C163-25M ◊†	Performance	
						P4C163L-25C ◊	Performance	55
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x9	25 nsF	CMOS	TS	28	5		(Cont'd)	
						P4C163L-25M ◊†	Performance	
						MK45H08-25	SGS-Thomson	
						MK48H89-25	SGS-Thomson	
						CXK5971P-25	Sony	
						TC5589-25 ◊	**Toshiba (3682)**	60
	30 nsF	CMOS	TS	28	5	P4C163-30C ◊	Performance	
						P4C163-30M ◊†	Performance	
						P4C163L-30C ◊	Performance	
						P4C163L-30M ◊†	Performance	
						MK48H99-30	SGS-Thomson	65
						CXK5971P-30	Sony	
	35 nsF	CMOS	TS	28	5	**EDI8908C35B ◊†**	**EDI (3385)**	
						EDI8908L35B †	**EDI (3385)**	
						EDI8908P35B †	**EDI (3385)**	
						P4C163-35C ◊	Performance	70
						P4C163-35M ◊†	Performance	
						P4C163L-35C ◊	Performance	
						P4C163L-35M ◊†	Performance	
						MK45H08-35	SGS-Thomson	
						MK48H89-35	SGS-Thomson	75
						CXK5971P-35	Sony	
		TTL	OC	28	5	MB81C79A ◊	Fujitsu	
	40 nsF	CMOS	TS	28	5	MK48H99-40	SGS-Thomson	
	45 nsF	CMOS	TS	28	5	**EDI8908C45B ◊†**	**EDI (3385)**	
						P4C163-45M ◊†	Performance	80
						P4C163L-45M ◊†	Performance	
	50 nsF	CMOS	TS	28	5	MK45H08-50	SGS-Thomson	
	55 nsF	CMOS	TS	28	5	**EDI8908C55B ◊†**	**EDI (3385)**	
	65 nsF	CMOS	TS	28	5	MK45H08-65	SGS-Thomson	
	70 nsF	CMOS	TS	28	5	**EDI8908C70B †**	**EDI (3385)**	85
						EDI8908L70B	**EDI (3385)**	
						EDI8908P70B †	**EDI (3385)**	
	120 nsF	CMOS	TS	28	5	MK45H08-12	SGS-Thomson	
8192x16								
	25 nsF	CMOS	TS	52	5	CY7C183-25 ◊	Cypress	
						CY7C184-25 ◊	Cypress	90
						MT56C0816 ◊	MicronTech	
8192x20								
	23 nsF	CMOS	TS	52	5	MCM62820-23 ◊	Motorola	
	30 nsF	CMOS	TS	52	5	MCM62820-30 ◊	Motorola	
8192x24								
	25 nsF	CMOS	TS	52	5	MCM56824-25 ◊	Motorola	
	30 nsF	CMOS	TS	52	5	MCM56824-30 ◊	Motorola	95
	35 nsF	CMOS	TS	52	5	MCM56824-35 ◊	Motorola	
12288x8								
	70 nsF	CMOS	TTL	28	5	MS6396-70 ◊	Mosel	
						MS6397-70 ◊	Mosel	
	100 nsF	CMOS	TTL	28	5	MS6396-10 ◊	Mosel	
						MS6397-10 ◊	Mosel	100
	150 nsF	CMOS	TTL	28	5	MS6396-15 ◊	Mosel	
						MS6397-15 ◊	Mosel	
16384x1								
	6 nsF	ECL 10K	OE		–5.2	**SY10480-6**	**Synergy (3667)**	
		ECL 100K	OE		–4.5	**SY100480-6**	**Synergy (3667)**	
		ECL 101K	OE		–5.2	**SY101480-6**	**Synergy (3667)**	105
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x1							(Cont'd)
	8 nsF	ECL 10K	OE		−5.2	**SY10480-8**	**Synergy (3667)**
		ECL 100K	OE		−4.5	**SY100480-8**	**Synergy (3667)**
		ECL 101K	OE		−5.2	**SY101480-8**	**Synergy (3667)**
	10 nsF	ECL	OE	20	−4.5	MBM100480A-10	◊ Fujitsu
						SSM100480	† Saratoga
					−5.2	MBM10480A-10	◊ Fujitsu
						μPB10480-10	NEC
						SSM10480	† Saratoga
				28	−4.5	μPB100480-10	NEC
		ECL 10K	OE		−5.2	**SY10480-10**	**Synergy (3667)**
		ECL 100K	OE		−4.5	**SY100480-10**	**Synergy (3667)**
		ECL 101K	OE		−5.2	**SY101480-10**	**Synergy (3667)**
	12 nsF	CMOS	TS	20	5	IDT6167LA-12	◊‡ IDT
						IDT6167SA-12	◊‡ IDT
						L7C167C-12	◊ LogicDev
	15 nsF	CMOS	TS	20	5	CY7C167A-15	Cypress
						CY7C167A-15C	◊ Cypress
						IDT6167LA-15	◊‡ IDT
						IDT6167SA-15	◊‡ IDT
						IS61C67-15	**ISSI (3510)**
						IS61C67L-15	**ISSI (3510)**
						L7C167C-15	◊ LogicDev
						L7C167M-15	◊† LogicDev
		ECL		20	−4.5	MBM100480-15	◊ Fujitsu
					−5.2	MBM10480-15	◊ Fujitsu
			OE	20	−5.2	μPB10480-15	NEC
				28	−4.5	μPB100480-15	NEC
	20 nsF	CMOS	TS	20	5	CY7C167A-20C	◊ Cypress
						CY7C167A-20M	◊† Cypress
						IDT6167LA-20	◊ IDT
						IDT6167LA-20B	◊‡ IDT
						IDT6167SA-20	◊ IDT
						IDT6167SA-20B	◊‡ IDT
						IS61C67-20	**ISSI (3510)**
						IS61C67L-20	**ISSI (3510)**
						L7C167M-20	◊† LogicDev
						MK41H66-20	† SGS-Thomson
						MK41H67-20	† SGS-Thomson
				420	5	L7C167C-20	◊ LogicDev
		TTL	TS	20	5	SSM6167	† Saratoga
	25 nsF	CMOS	TS	20	5	CY7C167A-25C	◊ Cypress
						CY7C167A-25M	◊† Cypress
						IDT6167LA-25	◊ IDT
						IDT6167LA-25B	◊† IDT
						IDT6167SA-25	◊ IDT

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x1							(Cont'd)
	25 nsF	CMOS	TS	20	5	IDT6167SA-25B	◊† IDT
						IS61C67-25	**ISSI (3510)**
						IS61C67L-25	**ISSI (3510)**
						L7C167C-25	◊ LogicDev
						L7C167M-25	◊† LogicDev
						MK41H66-25	† SGS-Thomson
						MK41H67-25	† SGS-Thomson
				22	5	LH5262-25	Sharp
		ECL	OE	20	−4.5	AM100480	AMD
						MBM100480-25	◊ Fujitsu
					−5.2	MBM10480-25	◊ Fujitsu
		TTL	TS	20	5	MT5C1601-25	◊ MicronTech
	35 nsF	CMOS	TS		5	IMS1403-35LM	† SGS-Thomson
						IMS1403-35M	SGS-Thomson
				20	5	CY7C167A-35C	◊ Cypress
						CY7C167A-35M	◊† Cypress
						HM6267-35	Hitachi
						IDT6167LA-35	◊ IDT
						IDT6167LA-35B	◊† IDT
						IDT6167SA-35	◊ IDT
						IDT6167SA-35B	◊† IDT
						L7C167C-35	◊ LogicDev
						L7C167M-35	◊† LogicDev
						IMS1403-35	SGS-Thomson
						MK41H66-35	† SGS-Thomson
						MK41H67-35	† SGS-Thomson
						UM6168-35	UMC
						V61C67-35	Vitelic
				22	5	LH5262-35	Sharp
		NMOS	TS	20	5	AM2167-35	AMD
		TTL	TS	20	5	MT5C1601-35	◊ MicronTech
	40 nsF	CMOS	TS	20	5	V61C67-40	Vitelic
		SOS	TS	20	5	MAS9167	◊‡ Marconi
	45 nsF	CMOS	TS		5	IMS1403-45LM	† SGS-Thomson
						IMS1403-45M	SGS-Thomson
				20	5	CY7C167A-45C	◊ Cypress
						CY7C167A-45M	◊† Cypress
						HM6267-45	Hitachi
						IDT6167LA-45B	◊† IDT
						IDT6167SA-45B	◊† IDT
						6167H-45	**Krueger (3513)**
						L7C167C-45	◊ LogicDev
						L7C167M-45	◊† LogicDev
						IMS1403-45	SGS-Thomson
						V61C67-45	Vitelic
		NMOS	TS	20	5	AM2167-45	AMD
	55 nsF	CMOS	TS	20	5	HM65262S	◊ Harris
						IDT6167LA-55B	◊† IDT
						IDT6167SA-55B	◊† IDT
						6167H-55	**Krueger (3513)**

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x1							(Cont'd)	
	55 nsF	CMOS	TS	20	5	IMS1403-55LM	† SGS-Thomson	
						STC6167M-55	† STC	
						UM6167-1	UMC	
		NMOS	TS	20	5	AM2167-55	AMD	
	70 nsF	CMOS	TS	20	5	HM65262B	◊ Harris	5
						IDT6167LA-70B	◊† IDT	
						IDT6167SA-70B	◊† IDT	
						STC6167M-70	† STC	
						UM6167	UMC	
						V61C67-70	Vitelic	10
		NMOS	TS	20	5	AM2167-70	AMD	
	80 nsF	TTL	TS	24	5	HC6167	◊°‡ Honeywell	
	85 nsF	CMOS	TS	20	5	HM65262	◊ Harris	
						HS65C262RH	‡ Harris	
						HS65C262RRH	‡ Harris	15
						HS65T262RH	‡ Harris	
						HS65T262RRH	‡ Harris	
						IDT6167LA-85B	◊† IDT	
						IDT6167SA-85B	◊† IDT	
						L7C167C-85	◊ LogicDev	20
						L7C167M-85	◊† LogicDev	
	100 nsF	CMOS	TS	20	5	IDT6167LA-100B	◊† IDT	
						IDT6167SA-100B	◊† IDT	
						STC6167M-100	† STC	
	120 nsF	CMOS/SOS	TS	24	5	MA6167SOS	‡ Marconi	25
16384x4								
	5 nsF	ECL 10K	OE		−5.2	**SY10494-5**	**Synergy (3667)**	
		ECL 100K	OE		−4.5	**SY100494-5**	**Synergy (3667)**	
		ECL 101K	OE		−5.2	**SY101494-5**	**Synergy (3667)**	
	7 nsF	ECL	TS	28	5	CY1E494	Cypress	
		ECL 10K/10KH	OE	28	−5.2	CY10E494-7C	◊ Aspen	30
		10K/10KH ECL	OE	28	−5.2	CY101E494-7C	◊ Aspen	
		10K/KH ECL		28	−5.2	CY10E494-7	◊ Cypress	
	8 nsF	BiCMOS	OE	28	−4.5	IDT100494	IDT	
		Bipolar	ECL	28	−5.2	MBM101494-8	◊ Fujitsu	
						MBM10494-8	◊ Fujitsu	35
		ECL 10K	OE	28	−5.2	IDT10494S-8	IDT	
		ECL 100K	OE	28	−4.5	IDT100494S-8	IDT	
	10 nsF	BiCMOS	OE	28	−4.5	IDT100494	◊ IDT	
						IDT100494S10C	◊ IDT	
					−5.2	IDT10494S10C	IDT	40
			TS	22	5	CY7B164-10C	◊ Aspen	
				24	5	CY7B166-10C	◊ Aspen	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4							(Cont'd)	
	10 nsF	BiCMOS	TS	28	5	CY7B161-10C	◊ Aspen	
						CY7B162-10C	◊ Cypress	
			TTL	28	5	CY7B162-10C	◊ Aspen	45
		ECL 10K	OE	28	−5.2	IDT10494S-10	IDT	
						NM10494-10	◊ National	
				32	−5.2	IDT10496LL-13	IDT	
						IDT10496RL-13	IDT	
		ECL 10K/10KH	OE	28	−5.2	CY10E494-10C	◊ Aspen	50
		ECL 100K	OE	28	−4.5	IDT100494S-10	IDT	
				32	−4.5	IDT100496LL-13	IDT	
						IDT100496RL-13	IDT	
		10K/10KH ECL	OE	28	−5.2	CY101E494-10C	◊ Aspen	
		10K/KH ECL		28	−5.2	CY10E494-10	◊ Cypress	55
	12 nsF	BiCMOS	TS	22	5	CY7B164-12C	◊ Aspen	
				24	5	CY7B166-12C	◊ Aspen	
				28	5	CY7B161-12C	◊ Aspen	
						CY100E494-12	Cypress	
			TTL	28	5	CY7B160-12C	◊ Aspen	60
						CY7B162-12C	◊ Aspen	
		CMOS	TS	22	5	MT5C6404-12	MicronTech	
						MCM6288-12	◊ Motorola	
						MCM6290-12	◊ Motorola	
				24	5	MT5C6405-12	MicronTech	65
		ECL	OE	24	5	CY7B164-12M	◊† Cypress	
						CY7B166-12M	◊† Cypress	
				28	5	CY7B161-12M	◊† Cypress	
						CY7B162-12C	◊ Cypress	
						CY7B162-12M	◊† Cypress	70
		ECL 10K	OE	28	−5.2	IDT10497S-12	IDT	
						NM10494-12	◊ National	
				32	−5.2	IDT10496LL-15	IDT	
						IDT10496RL-15	IDT	
						IDT10498S-12	IDT	75
		ECL 10K/10KH	OE	28	−5.2	CY10E494L-12C	◊ Aspen	
		ECL 100K	OE	28	−4.5	IDT100497S-12	IDT	
						IDT100498S-12	IDT	
				32	−4.5	IDT100496LL-15	IDT	
						IDT100496RL-15	IDT	80
		100K ECL	OE	28	−5.2	CY100E494L-12C	◊ Aspen	
		10K/KH ECL		28	−5.2	CY10E494L-12	◊ Cypress	
	15	ECL 10K	OE	28	−5.2	NM10494-15	◊ National	
	15 nsF	BiCMOS	OE	28	−4.5	IDT100494	◊ IDT	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4	15 nsF	BiCMOS	OE	28	−4.5		(Cont'd)	
						IDT100494S15C	◊ IDT	
						SSM100494	Saratoga	
						SSM10494	Saratoga	
					−5.2	IDT10494S15B	† IDT	
						IDT10494S15C	IDT	5
					5	CY7B162-15M	◊† Cypress	
			TS	22	5	CY7B164-15M	◊† Aspen	
						TMS6788-15	TI	
				24	5	CY7B166-15M	◊† Aspen	
						TMS6789-15	TI	10
				28	5	CY7B161-15M	◊† Aspen	
			TTL	28	5	CY7B160-15C	◊ Aspen	
						CY7B160-15M	◊† Aspen	
						CY7B162-15M	◊† Aspen	
		CMOS	TS	22	5	CY7C164A-15	Cypress	15
						IDT7188L-15	◊‡ IDT	
						IDT7188S-15	◊‡ IDT	
						IS61C66L-15	**ISSI (3510)**	
						IS61C66S-15	**ISSI (3510)**	
						MCM6288-15	◊ Motorola	20
						MCM6288B-15	◊ Motorola	
						MCM6290-15	◊ Motorola	
						P4C188-15C	◊ Performance	
						VT6288H-15	◊ VLSI Tech	
						VT6288HL-15	◊ VLSI Tech	25
						VT6290H-15	◊ VLSI Tech	
				24	5	CY7C166A-15	Cypress	
						IDT6198L-15	◊‡ IDT	
						IDT6198S-15	◊‡ IDT	
						IDT7198L-15	◊‡ IDT	30
						IDT7198S-15	◊‡ IDT	
						IS61C88L-15	**ISSI (3510, 3512)**	
						IS61C88S-15	**ISSI (3510, 3512)**	
						MCM6290B-15	◊ Motorola	
						P4C198-15C	◊ Performance	35
						P4C198-17C	◊ Performance	
						P4C198A-15C	◊ Performance	
						VT6289H-15	◊ VLSI Tech	
						VT6289HL-15	◊ VLSI Tech	
						VT6291H-15	◊ VLSI Tech	40
				28	5	CY7C161A-15	Cypress	
						CY7C162A-15	Cypress	
						IDT71981L-15	◊‡ IDT	
						IDT71981S-15	◊‡ IDT	
						IDT71982L-15	◊‡ IDT	45
						IDT71982S-15	◊‡ IDT	
						IS61C61-15	**ISSI (3510)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4	15 nsF	CMOS	TS	28	5		(Cont'd)	
						IS61C61L-15	**ISSI (3510)**	
						IS61C62-15	**ISSI (3517)**	
						IS61C62L-15	**ISSI (3510)**	50
						P4C1981-15C	◊ Performance	
						P4C1982-15C	◊ Performance	
						VT62HL-15	◊ VLSI Tech	
						VT6285H-15	◊ VLSI Tech	
						VT6285HL-15	◊ VLSI Tech	55
						VT6286H-15	◊ VLSI Tech	
		ECL	OE	28	−4.5	MBM100C494-15	◊ Fujitsu	
					−5.2	MBM10C494-15	◊ Fujitsu	
					5	CY7B162-15C	◊ Cypress	
		ECL 10K	OE	28	−5.2	IDT10494S-15	IDT	60
						IDT10494S-15B	† IDT	
						IDT10497S-15	IDT	
						IDT10498S-15	IDT	
		ECL 100K	OE	28	−4.5	IDT100494S-15	IDT	
						IDT100497S-15	IDT	65
						IDT100498S-15	IDT	
						NM100494-15	◊ National	
	17 nsF	CMOS	TS	22	5	P4C188-17C	Performance	
				24	5	P4C198A-17C	◊ Performance	
				28	5	P4C1981-17C	◊ Performance	70
						P4C1982-17C	◊ Performance	
	18 nsF	ECL 100K	OE	28	−4.5	NM100494-18	◊ National	
	19 nsF	CMOS	TS	24	5	IDT6198L-19	IDT	
						IDT6198S-19	IDT	
	20 nsF	BiCMOS	OE	28	−4.5	SSM10494	† Saratoga	75
					5	SSM100494	† Saratoga	
			TS	22	5	TMS6788-20	TI	
				24	5	TMS6789-20	TI	
		CMOS	TS	22	5	CY7C164-20C	◊ Cypress	
						IDT7188L-20	◊‡ IDT	80
						IDT7188S-20	◊‡ IDT	
						IS61C66L-20	**ISSI (3510)**	
						IS61C66S-20	**ISSI (3510)**	
						L7C164C-20	◊ LogicDev	
						MCM6288B-20	◊ Motorola	85
						P4C188-20C	Performance	
						P4C188-20M	◊† Performance	
						TC55416-20	**◊ Toshiba (3682)**	
						VT6288H-20	◊ VLSI Tech	
						VT6288HL-20	◊ VLSI Tech	90
						VT6290H-20	◊ VLSI Tech	
				24	5	CY7C166-20C	◊ Cypress	
						IDT6198L-20	◊‡ IDT	
						IDT6198L-20B	† IDT	
						IDT6198S-20	◊‡ IDT	95
						IDT6198S-20B	† IDT	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4								
	20 nsF	CMOS	TS	24	5		(Cont'd)	
						IDT7198L-20	◊‡ IDT	
						IDT7198S-20	◊‡ IDT	
						IS61C88L-20	**ISSI (3510, 3512)**	
						IS61C88S-20	**ISSI (3510, 3512)**	
						L7C165C-20	◊ LogicDev	5
						L7C166C-20	◊ LogicDev	
						MCM6288A-20	Motorola	
						MCM6290A-20	Motorola	
						MCM6290B-20	◊ Motorola	
						P4C198-20C	Performance	10
						P4C198-20M	◊† Performance	
						P4C1981-20C	Performance	
						P4C1981L-20C	Performance	
						P4C1982-20C	Performance	
						P4C1982L-20C	Performance	15
						TC55417-20	**◊ Toshiba (3682)**	
						VT6289H-20	◊ VLSI Tech	
						VT6289HL-20	◊ VLSI Tech	
						VT6291H-20	◊ VLSI Tech	
				28	5	CY7C161-20C	◊ Cypress	20
						CY7C162-20C	◊ Cypress	
						IDT71981L-20	◊‡ IDT	
						IDT71981S-20	◊‡ IDT	
						IDT71982L-20	◊‡ IDT	
						IDT71982S-20	◊‡ IDT	25
						IS61C61-20	**ISSI (3510)**	
						IS61C61L-20	**ISSI (3510)**	
						IS61C62-20	**ISSI (3510)**	
						IS61C62L-20	**ISSI (3510)**	
						L7C161C-20	◊ LogicDev	30
						L7C162C-20	◊ LogicDev	
						MCM6293-20	◊ Motorola	
						MCM6294-20	◊ Motorola	
						P4C1981-20M	◊† Performance	
						P4C1982-20M	◊† Performance	35
						VT6285H-20	◊ VLSI Tech	
						VT6285HL-20	◊ VLSI Tech	
						VT6286H-20	◊ VLSI Tech	
						VT6286HL-20	◊ VLSI Tech	
		ECL 10K	OE	28	-5.2	IDT10494S-20B	† IDT	40
		TTL	Latched					
				28	5	SSM7192	† Saratoga	
						SSM7195	† Saratoga	
			Reg.	28	5	SSM7193	† Saratoga	
						SSM7194	† Saratoga	
			TS	22	5	SSM7188	† Saratoga	45
				24	5	SSM7166	† Saratoga	
						SSM7198	† Saratoga	
				28	5	SSM7161	† Saratoga	
						SSM7162	† Saratoga	
	25 nsF	BiCMOS	TS	22	5	TMS6788-25	TI	50
				24	5	TMS6789-25	TI	
		CMOS	TS	22	5	CY7C164-25C	◊ Cypress	
						CY7C164-25M	◊† Cypress	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4								
	25 nsF	CMOS	TS	22	5		(Cont'd)	
						IDT7188L-25	◊‡ IDT	
						IDT7188L-25B	◊‡ IDT	55
						IDT7188S-25	◊‡ IDT	
						IDT7188S-25B	◊‡ IDT	
						IS61C66L-25	**ISSI (3510)**	
						IS61C66S-25	**ISSI (3510)**	
						6288-25	**◊ Krueger (3513)**	60
						L7C164C-25	◊ LogicDev	
						L7C164M-25	◊† LogicDev	
						MCM6288-25	◊ Motorola	
						F1620	National	
						F1620-25	National	65
						F1621	National	
						P4C188-25C	Performance	
						P4C188-25M	† Performance	
						P4C188L-25C	Performance	
						P4C188L-25M	† Performance	70
						LH5265-25	Sharp	
						CXK5464AJ-25	Sony	
						CXK5464AP-25	Sony	
						CXK5465P-25	Sony	
						TC55416-25	**◊ Toshiba (3682)**	75
						VT6288H-25	◊ VLSI Tech	
						VT6288HL-25	◊ VLSI Tech	
						VT6290H-25	◊ VLSI Tech	
				24	5	CY7C166-25C	◊ Cypress	
						CY7C166-25M	◊† Cypress	80
						IDT6198L-25	◊‡ IDT	
						IDT6198L-25B	† IDT	
						IDT6198S-25	◊‡ IDT	
						IDT6198S-25B	† IDT	
						IDT7198L-25	◊‡ IDT	85
						IDT7198L-25B	◊‡ IDT	
						IDT7198S-25	◊ IDT	
						IDT7198S-25B	◊‡ IDT	
						IS61C88L-25	**ISSI (3510, 3512)**	
						IS61C88S-25	**ISSI (3510, 3512)**	90
						L7C165C-25	◊ LogicDev	
						L7C165M-25	◊† LogicDev	
						L7C166C-25	◊ LogicDev	
						L7C166M-25	◊† LogicDev	
						MCM6290-25	Motorola	95
						F1621-25	National	
						F1624	National	
						F1624-25	National	
						P4C198-25C	Performance	
						P4C198-25M	† Performance	100
						P4C198A-25C	Performance	
						P4C198A-25M	† Performance	
						P4C198AL-25C	Performance	
						P4C198L-25C	Performance	
						P4C1981-25C	Performance	105
						P4C1981-25M	† Performance	
						P4C1981L-25C	Performance	
							(Continued)	

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4								
	25 nsF	CMOS	TS	24	5		(Cont'd)	
						P4C1981L-25M	† Performance	
						P4C1982-25C	Performance	
						P4C1982-25M	† Performance	
						P4C1982L-25C	Performance	
						P4C1982L-25M	† Performance	5
						LH5267-25	Sharp	
						TC55417-25	◊ **Toshiba (3682)**	
						VT6289H-25	◊ VLSI Tech	
						VT6289HL-25	◊ VLSI Tech	
						VT6291H-25	◊ VLSI Tech	10
				28	5	CY7C161-25C	◊ Cypress	
						CY7C161-25M	◊† Cypress	
						CY7C162-25C	◊ Cypress	
						CY7C162-25M	◊† Cypress	
						IDT61592L-25	IDT	15
						IDT61592S-25	IDT	
						IDT61593L-25	IDT	
						IDT61593S-25	IDT	
						IDT61594L-25	IDT	
						IDT61594S-25	IDT	20
						IDT61595L-25	IDT	
						IDT61595S-25	IDT	
						IDT71981L-25	◊‡ IDT	
						IDT71981L-25B	◊‡ IDT	
						IDT71981S-25	◊ IDT	25
						IDT71981S-25B	◊‡ IDT	
						IDT71982L-25	◊‡ IDT	
						IDT71982L-25B	◊‡ IDT	
						IDT71982S-25	◊‡ IDT	
						IDT71982S-25B	◊‡ IDT	30
						IS61C61-25	**ISSI (3510)**	
						IS61C61L-25	**ISSI (3510)**	
						IS61C62-25	**ISSI (3510)**	
						IS61C62L-25	**ISSI (3510)**	
						L7C161C-25	◊ LogicDev	35
						L7C161M-25	◊† LogicDev	
						L7C162C-25	◊ LogicDev	
						L7C162M-25	◊† LogicDev	
						MCM6292-25	◊ Motorola	
						MCM6293-25	◊ Motorola	40
						MCM6294-25	◊ Motorola	
						MCM6295-25	◊ Motorola	
						VT6285H-25	◊ VLSI Tech	
						VT6285HL-25	◊ VLSI Tech	
						VT6286H-25	◊ VLSI Tech	45
						VT6286HL-25	◊ VLSI Tech	
			TTL	22	5	HM6788	Hitachi	
		TTL	OC	22	5	MB81C74	Fujitsu	
			TS	22	5	MT5C6404-25	◊ MicronTech	
				24	5	MT5C6405-25	◊ MicronTech	50
				28	5	MT5C6406-25	◊ MicronTech	
	30 nsF	BiCMOS	TS	22	5	TMS6788-30	TI	
				24	5	TMS6789-30	TI	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4								
	30 nsF						(Cont'd)	
		CMOS	TS	22	5	IDT7188L-30	IDT	
						IDT7188L-30B	† IDT	55
						IDT7188S-30	IDT	
						IDT7188S-30B	† IDT	
						IS61C66L-30	**ISSI (3510)**	
						IS61C66S-30	**ISSI (3510)**	
						6288-30	◊ **Krueger (3513)**	60
						MCM6288-30	◊ Motorola	
						1620-30	† National	
						1621-30	† National	
						P4C188-30C	Performance	
						P4C188-30M	† Performance	65
						P4C188L-30C	Performance	
						P4C188L-30M	† Performance	
						CXK5464AJ-30	Sony	
						CXK5464AP-30	Sony	
				24	5	IDT6198L-30	◊‡ IDT	70
						IDT6198L-30B	† IDT	
						IDT6198S-30	◊‡ IDT	
						IDT6198S-30B	† IDT	
						IDT7198L-30	◊ IDT	
						IDT7198L-30B	◊† IDT	75
						IDT7198S-30	◊ IDT	
						IDT7198S-30B	◊† IDT	
						MCM6290-30	◊ Motorola	
						1624-30	† National	
						1625-30	† National	80
						P4C198-30C	Performance	
						P4C198-30M	† Performance	
						P4C198A-30C	Performance	
						P4C198A-30M	† Performance	
						P4C198AL-30C	Performance	85
						P4C198AL-30M	† Performance	
						P4C198L-30C	Performance	
						P4C198L-30M	† Performance	
						CXK5465P-30	Sony	
				28	5	IDT61592L-30B	† IDT	90
						IDT61592S-30B	† IDT	
						IDT61593L-30B	† IDT	
						IDT61593S-30B	† IDT	
						IDT61594L-30B	† IDT	
						IDT61594S-30B	† IDT	95
						IDT61595L-30B	† IDT	
						IDT61595S-30B	† IDT	
						IDT71981L-30	◊ IDT	
						IDT71981L-30B	◊† IDT	
						IDT71981S-30	◊ IDT	100
						IDT71981S-30B	◊† IDT	
						IDT71982L-30	◊ IDT	
						IDT71982L-30B	◊† IDT	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4	30 nsF	CMOS	TS	28	5	(Cont'd)		
						IDT71982S-30	◊ IDT	
						IDT71982S-30B	◊† IDT	
						MCM6292-30	◊ Motorola	
						MCM6293-30	◊ Motorola	
						MCM6294-30	◊ Motorola	5
						MCM6295-30	◊ Motorola	
						P4C1981-30C	Performance	
						P4C1981-30M	† Performance	
						P4C1981L-30C	Performance	
						P4C1981L-30M	† Performance	10
						P4C1982-30C	Performance	
						P4C1982-30M	† Performance	
						P4C1982L-30C	Performance	
						P4C1982L-30M	† Performance	
	35 nsF	CMOS	TS	22	5	CY7C164-35C	◊ Cypress	15
						CY7C164-35M	◊† Cypress	
						EDI8416C35B	◊† EDI	
						IDT7188L-35	IDT	
						IDT7188L-35B	† IDT	
						IDT7188S-35	IDT	20
						IDT7188S-35B	† IDT	
						L7C164C-35	◊ LogicDev	
						L7C164M-35	◊† LogicDev	
						L7C166M-35	◊† LogicDev	
						MCM62188-35	Motorola	25
						MCM6295-35	◊ Motorola	
						F1620-35	† National	
						F1620M	† National	
						F1621M	† National	
						1620-35	† National	30
						1621-35	† National	
						P4C188-35C	† Performance	
						P4C188-35M	† Performance	
						P4C188L-35C	Performance	
						P4C188L-35M	† Performance	35
						LH5265-35	Sharp	
						CXK5464AJ-35	Sony	
						CXK5464AP-35	Sony	
						TC55416-35	**Toshiba (3682)**	
						VT6288H-35	◊ VLSI Tech	40
						VT6288HL-35	◊ VLSI Tech	
						VT6290H-35	◊ VLSI Tech	
				24	5	CY7C166-35C	◊ Cypress	
						CY7C166-35M	◊† Cypress	
						EDI8417C35B	◊† EDI	45
						MB81C75-35	Fujitsu	
						IDT6198L-35	◊‡ IDT	
						IDT6198L-35B	† IDT	
						IDT6198S-35	◊‡ IDT	
						IDT6198S-35B	† IDT	50
						IDT7198L-35	◊ IDT	
						IDT7198L-35B	◊† IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4	35 nsF	CMOS	TS	24	5	(Cont'd)		
						IDT7198S-35	◊ IDT	
						IDT7198S-35B	◊† IDT	
						L7C165C-35	◊ LogicDev	55
						L7C165M-35	◊† LogicDev	
						L7C166C-35	◊ LogicDev	
						F1621-35	National	
						F1624-35	National	
						F1624M	† National	60
						1624-35	† National	
						1625-35	† National	
						P4C198-35C	Performance	
						P4C198-35M	† Performance	
						P4C198A-35C	Performance	65
						P4C198A-35M	† Performance	
						P4C198AL-35C	Performance	
						P4C198AL-35M	† Performance	
						P4C198L-35C	Performance	
						P4C198L-35M	† Performance	70
						LH5267-35	Sharp	
						CXK5465P-35	Sony	
						TC55417-35	**Toshiba (3682)**	
						VT6289H-35	◊ VLSI Tech	
						VT6289HL-35	◊ VLSI Tech	75
						VT6291H-35	◊ VLSI Tech	
				28	5	CY7C161-35C	◊ Cypress	
						CY7C161-35M	◊† Cypress	
						CY7C162-35C	◊ Cypress	
						CY7C162-35M	◊† Cypress	80
						IDT71981L-35	◊ IDT	
						IDT71981L-35B	◊† IDT	
						IDT71981S-35	◊ IDT	
						IDT71981S-35B	◊† IDT	
						IDT71982L-35	◊ IDT	85
						IDT71982L-35B	◊† IDT	
						IDT71982S-35	◊ IDT	
						IDT71982S-35B	◊† IDT	
						L7C161C-35	◊ LogicDev	
						L7C161M-35	◊† LogicDev	90
						L7C162C-35	◊ LogicDev	
						L7C162M-35	◊† LogicDev	
						MCM6292-35	◊ Motorola	
						P4C1981-35C	Performance	
						P4C1981-35M	† Performance	95
						P4C1981L-35C	Performance	
						P4C1981L-35M	† Performance	
						P4C1982-35C	Performance	
						P4C1982-35M	† Performance	
						P4C1982L-35C	Performance	100
						P4C1982L-35M	† Performance	
						VT6285H-35	◊ VLSI Tech	
						VT6285HL-35	◊ VLSI Tech	
						VT6286H-35	◊ VLSI Tech	
						VT6286HL-35	◊ VLSI Tech	105
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4							(Cont'd)	
	35 nsF							
		TTL	TS	22	5	MT5C6404-35	◊ MicronTech	
				24	5	MT5C6405-35	◊ MicronTech	
				28	5	MT5C6406-35	◊ MicronTech	
	45 nsF	CMOS	TS	22	5	CY7C164-45C	◊ Cypress	
						CY7C164-45M	◊† Cypress	5
						EDI8416C45B	◊† EDI	
						MB81C74-45	Fujitsu	
						IDT7188L-45	IDT	
						IDT7188L-45B	† IDT	
						IDT7188S-45	IDT	10
						IDT7188S-45B	† IDT	
						L7C164C-45	◊ LogicDev	
						L7C164M-45	◊† LogicDev	
						F1620-45	National	
						1620-45	† National	15
						1621-45	† National	
						μPD4362-45	NEC	
						MSM5188-45	OKI	
						P4C188L-45M	† Performance	
						IMS1620-45M	◊† SGS-Thomson	20
				24	5	CY7C166-45C	◊ Cypress	
						CY7C166-45M	◊† Cypress	
						EDI8417C45B	◊† EDI	
						MB81C75-45	Fujitsu	
						IDT6198L-45	◊‡ IDT	25
						IDT6198L-45B	† IDT	
						IDT6198S-45	◊‡ IDT	
						IDT6198S-45B	† IDT	
						IDT7198L-45	◊ IDT	
						IDT7198L-45B	◊† IDT	30
						IDT7198S-45	◊ IDT	
						IDT7198S-45B	◊† IDT	
						L7C165C-45	◊ LogicDev	
						L7C165M-45	◊† LogicDev	
						L7C166C-45	◊ LogicDev	35
						L7C166M-45	◊† LogicDev	
						F1621-45	National	
						F1624-45	National	
						1624-45	† National	
						1625-45	† National	40
						P4C198-45C	Performance	
						P4C198-45M	† Performance	
						P4C198A-45C	Performance	
						P4C198A-45M	† Performance	
						P4C198AL-45C	Performance	45
						P4C198AL-45M	† Performance	
						P4C198L-45C	Performance	
						P4C198L-45M	† Performance	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
16384x4							(Cont'd)	
	45 nsF	CMOS	TS	28	5	CY7C161-45C	◊ Cypress	
						CY7C161-45M	◊† Cypress	50
						CY7C162-45C	◊ Cypress	
						CY7C162-45M	◊† Cypress	
						IDT71981L-45	◊ IDT	
						IDT71981L-45B	◊† IDT	
						IDT71981S-45	◊ IDT	55
						IDT71981S-45B	◊† IDT	
						IDT71982L-45	◊ IDT	
						IDT71982L-45B	◊† IDT	
						IDT71982S-45	◊ IDT	
						IDT71982S-45B	◊† IDT	60
						L7C161C-45	◊ LogicDev	
						L7C161M-45	◊† LogicDev	
						L7C162C-45	◊ LogicDev	
						L7C162M-45	◊† LogicDev	
						P4C1981-45M	† Performance	65
						P4C1981L-45M	† Performance	
						P4C1982-45M	† Performance	
						P4C1982L-45M	† Performance	
						IMS1624-45M	◊† SGS-Thomson	
			TTL	22	5	IMS1620-45	SGS-Thomson	70
				24	5	IMS1624-45	SGS-Thomson	
	55 nsF	CMOS	TS	22	5	EDI8416C55B	◊† EDI	
						EDI8417C55B	◊† EDI	
						IDT7188L-55B	† IDT	
						IDT7188S-55B	† IDT	75
						1620-55	† National	
						1621-55	† National	
						μPD4362-55	NEC	
						MSM5188-55	OKI	
						P4C188-55M	† Performance	80
						P4C188L-55M	† Performance	
						IMS1620-55	SGS-Thomson	
						IMS1620-55M	◊† SGS-Thomson	
				24	5	IDT6198L-55B	† IDT	
						IDT6198S-55B	† IDT	85
						IDT7198L-55B	◊† IDT	
						IDT7198S-55B	◊† IDT	
						1624-55	† National	
						1625-55	† National	
						P4C198-55M	† Performance	90
						P4C198A-55M	† Performance	
						P4C198AL-55M	† Performance	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x4							(Cont'd)
	55 nsF	CMOS	TS	24	5	P4C198L-55M	† Performance
						IMS1624-55	SGS-Thomson
				28	5	IDT71981L-55B	◊† IDT
						IDT71981S-55B	◊† IDT
						IDT71982L-55B	◊† IDT
						IDT71982S-55B	◊† IDT
						P4C1981-55M	† Performance
						P4C1981L-55M	† Performance
						P4C1982-55M	† Performance
						P4C1982L-55M	† Performance
						IMS1624-55M	◊† SGS-Thomson
	70 nsF	CMOS	TS	22	5	IDT7188L-70B	† IDT
						IDT7188S-70B	† IDT
						1620-70	† National
						1621-70	† National
						μPD4362-70	NEC
						MSM5188-70	OKI
						IMS1620-70M	◊† SGS-Thomson
				24	5	IDT6198L-70B	† IDT
						IDT6198S-70B	† IDT
						IDT7198L-70B	◊† IDT
						IDT7198S-70B	◊† IDT
						1624-70	† National
						1625-70	† National
				28	5	IDT71981L-70B	◊† IDT
						IDT71981S-70B	◊† IDT
						IDT71982L-70B	◊† IDT
						IDT71982S-70B	◊† IDT
						IMS1624-70M	◊† SGS-Thomson
			TTL	24	5	IMS1624-70	SGS-Thomson
	85 nsF	CMOS	TS	22	5	IDT7188L-85B	† IDT
						IDT7188S-85B	† IDT
						L7C164C-85	◊ LogicDev
						L7C164M-85	◊† LogicDev
				24	5	IDT6198L-85B	† IDT
						IDT6198S-85B	† IDT
						IDT7198L-85B	◊† IDT
						IDT7198S-85B	◊† IDT
						L7C165C-85	◊ LogicDev
						L7C165M-85	◊† LogicDev

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x4							(Cont'd)
	85 nsF	CMOS	TS	24	5	L7C166C-85	◊ LogicDev
						L7C166M-85	◊† LogicDev
				28	5	IDT71981L-85B	◊† IDT
						IDT71981S-85B	◊† IDT
						IDT71982L-85B	◊† IDT
						IDT71982S-85B	◊† IDT
						L7C161C-85	◊ LogicDev
						L7C161M-85	◊† LogicDev
						L7C162C-85	◊ LogicDev
						L7C162M-85	◊† LogicDev
	350 nsF	CMOS	TS	40	5	HM6564	◊ Harris
16384x8							
	45 nsF	CMOS	TS	58	5	IDT7M135S-45	◊‡ IDT
						IDT7M145S-45	◊‡ IDT
	60 nsF	CMOS	TS	58	5	IDT7M145S-60	◊‡ IDT
	70 nsF	CMOS	TS	28	5	HM8816H-8	† Harris
16384x16							
	17 nsF	CMOS	TS	52	5	EDI2816017C	EDI
						EDI28165C17C	**EDI (3390)**
	20 nsF	CMOS	TS	52	5	CY7C157-20	◊ Cypress
						VT7C157-20	◊ VLSI Tech
	24 nsF	CMOS	TS	52	5	VT7C157-24	◊ VLSI Tech
	25 nsF	CMOS	TS	52	5	**EDI28160C25C**	**EDI (3390)**
	33 nsF	CMOS	TS	52	5	VT7C157-33	◊ VLSI Tech
	35 nsF	CMOS	TS	36	5	EDH816H16C-35C	EDI
				40	5	DPS257-35	◊‡ Dense-Pac
	45 nsF	CMOS	TS	36	5	EDH816H16C-45C	EDI
	50 nsF		TS	40	5	IDT8M656S-50	IDT
	60 nsF		TS	40	5	IDT8M656S-60	IDT
	70 nsF		TS	40	5	IDT8M656S-70	IDT
	85 nsF		TS	40	5	IDT8M656S-85	IDT
	150 nsF	CMOS	TS		5	HM92560	Harris
	250 nsF	CMOS	TS		5	HM92560-5	Harris
						HM92570	Harris
	300 nsF	CMOS	TS		5	HM92570-5	Harris
16384x25							
	25 nsF	CMOS	TS	52	5	**EDI28165C25C**	**EDI (3390)**
16384x32							
	30 nsF	CMOS	TS	88	5	IDT7MC4032-30	◊‡ IDT
32768x8							
	15 nsF	CMOS	TS	28	5	**CXK58258A-15**	**◊ Sony (3655)**
						VT62832UH-15	◊ VLSI Tech
						VT62832UHL-15	◊ VLSI Tech
	17 nsF	CMOS	TS	28	5	**TC55328-17**	**◊ Toshiba (3682)**
	20 nsF		TTL	28	5	AT38256-20	◊ ATMEL
		CMOS	TS	28	5	MT5C2568-20	MicronTech
						MCM6206-20	◊ Motorola
						PDM41256L-20	◊ Paradigm
						PDM41256S-20	◊ Paradigm
						CXK58258A-20	**◊ Sony (3655)**
						CXK58258B-20L	**◊ Sony (3656)**
						CXK58258B-20LL	◊ Sony
						TC55328-20	**◊ Toshiba (3682)**

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	20 nsF	CMOS	TS	28	5		(Cont'd)	
						VT62832H-20	◊ VLSI Tech	
						VT62832HL-20	◊ VLSI Tech	
						VT62832UH-20	◊ VLSI Tech	
	25 nsF		TTL	28	5	AT38256-25	◊† ATMEL	
		CMOS	TS	28	5	**DPS32M8A-25**	**Dense-Pac (3376)**	5
						DPS92256-25	**◊† Dense-Pac (3376)**	
						EDI8834C25B	**† EDI (3386)**	
						EDI8834C25C	**EDI (3386)**	
						IS61C256L-25	**ISSI (3510, 3512)**	
						IS61C256S-25	**ISSI (3510, 3512)**	10
						MS62256-25	◊ Mosel	
						MCM6206-25	◊ Motorola	
						PDM41256L-25	◊ Paradigm	
						PDM41256L-25B	◊† Paradigm	
						PDM41256S-25	◊ Paradigm	15
						PDM41256S-25B	◊† Paradigm	
						CXK58258A-25	◊ Sony	
						CXK58258B-25L	**◊ Sony (3656)**	
						CXK58258B-25LL	**◊ Sony (3656)**	
						TC55328-25	**◊ Toshiba (3682)**	20
						VT62832H-25	◊ VLSI Tech	
						VT62832HL-25	◊ VLSI Tech	
						VT62832UHL-20	◊ VLSI Tech	
						VT62832UHL-25	◊ VLSI Tech	
				32	5	MB8287-25	Fujitsu	25
	30 nsF	CMOS	TS	28	5	IDT71256L-30	◊ IDT	
						IDT71256S-30	◊ IDT	
						IS61C256L-30	**ISSI (3510, 3512)**	
						IS61C256S-30	**ISSI (3510, 3512)**	
	35 nsF		TTL	28	5	AT38256-35	◊† ATMEL	30
		CMOS	TS	28	5	CY7C198-35C	◊ Cypress	
						CY7C199-35C	◊ Cypress	
						DPS32M8A-35	**Dense-Pac (3376)**	
						DPS92256-35	**◊† Dense-Pac (3376)**	
						EDI8833C35B	**◊† EDI (3385)**	35
						EDI8833L35B	**† EDI (3385)**	
						EDI8833P35B	**† EDI (3386)**	
						IDT71256L-35	◊‡ IDT	
						IDT71256L-35B	◊† IDT	
						IDT71256S-35	◊‡ IDT	40
						IDT71256S-35B	◊† IDT	
						IS61C256L-35	**ISSI (3510, 3512)**	
						IS62C256S-35	**ISSI (3510)**	
						MS62256-35	◊ Mosel	
						MS62256L-35C	Mosel	45
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	35 nsF	CMOS	TS	28	5		(Cont'd)	
						MCM6206-35	Motorola	
						PDM41256L-35	◊ Paradigm	
						PDM41256L-35B	◊† Paradigm	
						PDM41256S-35	◊ Paradigm	
						PDM41256S-35B	◊† Paradigm	50
						KM68257-35	Samsung	
						LH52258-35	Sharp	
						CXK58258B-35L	**◊ Sony (3656)**	
						CXK58258B-35LL	**◊ Sony (3656)**	
						TC55328-35	**◊ Toshiba (3682)**	55
						VT62832-35	VLSI Tech	
						VT62832H-35	◊ VLSI Tech	
						VT62832HL-35	◊ VLSI Tech	
						VT62832UH-25	◊ VLSI Tech	
						V62832L-35	◊ VLSI Tech	60
				32	5	MB8287-35	Fujitsu	
		TTL	TS	32	5	MT5C2568-35	◊ MicronTech	
	45 nsF	CMOS	TS	28	5	CY7C198-45C	◊ Cypress	
						CY7C198-45M	◊† Cypress	
						CY7C199-45C	◊ Cypress	65
						CY7C199-45M	◊† Cypress	
						DPS32M8A-45	**Dense-Pac (3376)**	
						DPS92256-45	**◊† Dense-Pac (3376)**	
						EDH8832HC-45MHR	† EDI	
						EDI8833C45B	**◊† EDI (3385)**	70
						IDT71256L-45	◊ IDT	
						IDT71256L-45B	◊‡ IDT	
						IDT71256S-45	◊ IDT	
						IDT71256S-45B	◊‡ IDT	
						MS62256-45	◊ Mosel	75
						MS62256L-45C	Mosel	
						MCM6206-45	◊ Motorola	
						PDM41256L-45	◊ Paradigm	
						PDM41256L-45B	◊† Paradigm	
						PDM41256S-45	◊ Paradigm	80
						PDM41256S-45B	◊† Paradigm	
						KM68257-45	Samsung	
						LH52258-45	Sharp	
						VT62832-45	VLSI Tech	
						VT62832H-45	◊ VLSI Tech	85
						VT62832HL-45	◊ VLSI Tech	
						VT62832L-45	◊ VLSI Tech	
		TTL	TS	32	5	MT5C2568-45	◊ MicronTech	
	55 nsF	CMOS	TS	28	5	CY7C198-55C	◊ Cypress	
						CY7C198-55M	◊† Cypress	90
						CY7C199-55C	◊ Cypress	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	55 nsF	CMOS	TS	28	5	CY7C199-55M	◊† Cypress	
						DPS32M8A-55	**Dense-Pac (3376)**	
						DPS92256-55	**◊† Dense-Pac (3376)**	
						EDH8832HC-55MHR	† EDI	
						EDI8832C55B	**◊† EDI (3385)**	5
						EDI8833C55B	**◊† EDI (3385)**	
						EDI8833L55B	**† EDI (3385)**	
						EDI8833P55B	**† EDI (3386)**	
						EDI8834C55C	**EDI (3386)**	
						S32K8-55CC	**Inova (3476)**	10
						IDT71256L-55	◊ IDT	
						IDT71256L-55B	◊† IDT	
						IDT71256S-55	◊ IDT	
						IDT71256S-55B	◊† IDT	
						MS62256-55	◊ Mosel	15
						MS62256L-55C	◊ Mosel	
						PDM41256L-55B	◊† Paradigm	
						PDM41256S-55B	◊† Paradigm	
						KM68257-55	Samsung	
			TTL	28	5	**S32K8L-55CC**	**Inova (3476)**	20
		TTL	TS	28	5	LH52256-55	Sharp	
	60 nsF	CMOS	TS	28	5	**EDI8832C60B**	**◊† EDI (3385)**	
	70 nsF	CMOS	TS	28	5	**DPS32M8A-70**	**Dense-Pac (3376)**	
						DPS92256-70	**◊† Dense-Pac (3376)**	
						EDH8832C-70MHR	◊† EDI	25
						EDH8832P-70MHR	◊† EDI	
						EDI8832C70B	**◊† EDI (3385)**	
						EDI8832P70B	**◊† EDI (3385)**	
						MB84256A-70	**◊ Fujitsu (3413)**	
						MB84256A-70L	**◊ Fujitsu (3413)**	30
						MB84256A-70LL	**◊ Fujitsu (3413)**	
						S32K8-70CC	**Inova (3476)**	
						S32K8-70IC	**Inova (3476)**	
						S32K8-70MC	**† Inova (3476)**	
						IDT71256L-70B	◊† IDT	35
						IDT71256S-70B	◊† IDT	
						IS62C256L-70	**ISSI (3510)**	
						IS62C256S-70	**ISSI (3510)**	
						MS62256L-70C	◊ Mosel	
						MK4832-70	SGS-Thomson	40
						LH52256L-70	Sharp	
						CXK58257M-70L	Sony	
						CXK58257P-70L	Sony	
						CXK58257SP-70L	Sony	
			TTL	28	5	**S32K8L-70CC**	**Inova (3476)**	45
						S32K8L-70IC	**Inova (3476)**	
						S32K8L-70MC	**† Inova (3476)**	
		Mix MOS	TS	28	5	TC55257B-70	Toshiba	
		TTL	TS	28	5	LH52256-70	Sharp	
	80 nsF	CMOS	TS	28	5	MB84256A-80	Fujitsu	50
						HY63C256-80	**Hyundai (3475)**	
						HY63C256L-80	**Hyundai (3475)**	
		TTL	TS	28	5	KM62256A-08	Samsung	
						KM62256AL-08	Samsung	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	85 nsF	CMOS	TS	28	5	**CAT71C256L-85**	**Catalyst Semi (3352)**	55
						CAT71C256LI-85	**Catalyst Semi (3352)**	
						DPS32M8A-85	**Dense-Pac (3376)**	
						DPS92256-85	**◊‡ Dense-Pac (3376)**	
						EDH8832C-85MHR	◊† EDI	
						EDH8832P-85MHR	◊† EDI	60
						EDI8832C85B	**◊† EDI (3385)**	
						EDI8832P85B	**◊† EDI (3385)**	
						GM76C256L-85	**GoldStar (3432, 3436)**	
						HM62256-8	Hitachi	
						HM62256L-8	Hitachi	65
						HM62256SL-8	Hitachi	
						S32K8-85CC	**Inova (3476)**	
						S32K8-85IC	**Inova (3476)**	
						S32K8-85MC	**† Inova (3476)**	
						IDT71256L-85B	◊† IDT	70
						IDT71256S-85B	◊† IDT	
						IS62C256L-85	**ISSI (3510)**	
						IS62C256S-85	**ISSI (3510)**	
						MS62256L-85C	Mosel	
						MCM60L256A-85	◊ Motorola	75
						MCM60256-85	◊ Motorola	
						MCM60256A-85	◊ Motorola	
						60L256A-85	◊ Motorola	
						μPD43256A-85L	◊ NEC	
						μPD43256A-85LL	◊ NEC	80
						CXK58257M-85L	Sony	
						CXK58257P-85L	Sony	
						CXK58257SP-85L	Sony	
						TMS62256-85	TI	
						TMS62256L-85	TI	85
						TC55257A-85	Toshiba	
			TTL	28	5	**S32K8L-85CC**	**Inova (3476)**	
						S32K8L-85IC	**Inova (3476)**	
						S32K8L-85MC	**† Inova (3476)**	
		Mix MOS	TS	28	5	**TC55257B-85**	**Toshiba (3682)**	90
	90 nsF	CMOS	TS	28	5	LH52256L-90	Sharp	
		TTL	TS	28	5	LH52256-90	Sharp	
	100	CMOS	TS	28	5	**65256-10**	**◊ Krueger (3513)**	
	100 nsF	CMOS	TS	28	5	**DPS92256-100**	**◊‡ Dense-Pac (3376)**	
						EDH8832C-10MHR	◊† EDI	95
						EDH8832P-10MHR	◊† EDI	
						EDI8832C100B	**◊† EDI (3385)**	
						EDI8832P100B	**◊† EDI (3385)**	
						MB84256A-10	**◊ Fujitsu (3413)**	
						MB84256A-10L	**◊ Fujitsu (3413)**	100
						MB84256A-10LL	**◊ Fujitsu (3413)**	
						MB84256A-100	Fujitsu	
						GM76C256-10	**GoldStar (3432)**	
						GM76C256L-10	**GoldStar (3432, 3436)**	
						CDM62256	Harris	105
						HM62256-10	Hitachi	
						HM62256L-10	Hitachi	
						HM62256SL-10	Hitachi	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	100 nsF	CMOS	TS	28	5		(Cont'd)	
						HY63C256-10	**Hyundai (3475)**	
						HY63C256L-10	**Hyundai (3475)**	
						S32K8-100IC	**Inova (3478)**	
						S32K8-100MC		
							† Inova	
						IS62C256L-10	**ISSI (3510)**	5
						IS62C256S-10	**ISSI (3510)**	
						62256-10	**Krueger (3513)**	
						MS62256L-10		
							◊ Mosel	
						MCM60L256A-10		
							◊ Motorola	
						MCM60256A-V10		
							◊ Motorola	10
						MCM60256A-10		
							◊ Motorola	
						60L256A-10	◊ Motorola	
						NM43256A-10	National	
						μPD43256A-10L		
							◊ NEC	
						μPD43256A-10LL		
							◊ NEC	15
						MSM51257L-10		
							◊ OKI	
						BR62256A	**ROHM (3584)**	
						SRM20256C-10	**S-MOS (3654)**	
						LC36256L	Sanyo	
						LH51256-10	Sharp	20
						CXK58257M-10L		
							Sony	
						CXK58257P-10L		
							Sony	
						CXK58257SP-10L		
							Sony	
						TMS62256-10	TI	
						TMS62256L-10	TI	25
						TC55256-10	Toshiba	
						TC55258-10	**Toshiba (3682)**	
				32	5	**UM62256-10**	**◊ UMC (3688)**	
			TTL	28	5	**S32K8L-100IC**	**Inova (3476)**	
						S32K8L-100MC	**† Inova (3476)**	30
		Mix MOS						
			TS	28	5	TC55257B-10	Toshiba	
		NMOS	TS	28	5	TC55257A-10	Toshiba	
		TS	28	5		CDM62256-10	Harris	
		TTL	TS	28	5	MCM60L256A-C10		
							Motorola	
						MCM60L256A-V10		
							Motorola	35
						KM62256A-10	Samsung	
						KM62256AL-10	Samsung	
	120	CMOS	TS	28	5	**65256-12**	**◊ Krueger (3513)**	
	120 nsF	CMOS	TS	28	5	**DPS92256-120**		
							◊‡ Dense-Pac (3376)	
						EDH8832C-12MHR		
							◊† EDI	40
						EDH8832P-12MHR		
							◊† EDI	
						EDI8832C120B		
							◊† EDI (3385)	
						EDI8832P120B		
							◊† EDI (3385)	
						MB84256A-12	**◊ Fujitsu (3413)**	
						MB84256A-12L	**◊ Fujitsu (3413)**	45
						MB84256A-12LL	**◊ Fujitsu (3413)**	
						GM76C256-12	**GoldStar (3432)**	
						GM76C256L-12	**GoldStar (3432, 3436)**	
						HM62256-12	Hitachi	
						HM62256L-12	Hitachi	50
						HM62256SL-12	Hitachi	
						HY63C256-12	**Hyundai (3475)**	
						HY63C256L-12	**Hyundai (3475)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8								
	120 nsF	CMOS	TS	28	5		(Cont'd)	
						62256-12	**Krueger (3513)**	
						MCM60L256A-12		
							◊ Motorola	55
						MCM60256-12		
							◊ Motorola	
						MCM60256A-12		
							◊ Motorola	
						60L256A-12	◊ Motorola	
						NM43256A-12	National	
						μPD43256A-12L		
							◊ NEC	60
						μPD43256A-12LL		
							◊ NEC	
						MSM51257L-12		
							◊ OKI	
						SRM20256C-12	**S-MOS (3654)**	
						MK4832-120	SGS-Thomson	
						LH51256-12	Sharp	65
						LH52256L-12	◊ Sharp	
						CXK58257M-12L		
							Sony	
						CXK58257P-12L		
							Sony	
						CXK58257SP-12L		
							Sony	
						TMS62256-12	TI	70
						TMS62256L-12	TI	
						TC55256-12	Toshiba	
						TC55257A-12	Toshiba	
						TC55258-12	**Toshiba (3682)**	
						UM62256A-10	**◊ UMC (3688)**	75
				32	5	**UM62256-12**	**◊ UMC (3688)**	
		Pseudo	TS	28	5	HM65256B-12	Hitachi	
		TS	28	5		CDM62256-12	Harris	
		TTL	TS	28	5	KM62256A-12	Samsung	
						KM62256AL-12	Samsung	80
	150 nsF	CMOS	TS	28	5	**DPS92256-150**		
							◊‡ Dense-Pac (3376)	
						EDH8832C-15MHR		
							◊† EDI	
						EDH8832P-15MHR		
							◊† EDI	
						EDI8832C150B		
							◊† EDI (3385)	
						EDI8832P150B		
							◊† EDI (3385)	85
						MBM27C256A		
							◊ Fujitsu	
						MB84256A-15	**◊ Fujitsu (3413)**	
						MB84256A-15L	**◊ Fujitsu (3413)**	
						MB84256A-15LL	**◊ Fujitsu (3413)**	
						GM76C256-85	**GoldStar (3432)**	90
						HM62256-15	Hitachi	
						HM62256L-15	Hitachi	
						HY63C256-15	**Hyundai (3475)**	
						HY63C256L-15	**Hyundai (3475)**	
						62256-15	**Krueger (3513)**	95
						NM43256A-15	National	
						μPD43256A-15L		
							◊ NEC	
						μPD43256A-15LL		
							◊ NEC	
						BR62256	◊ ROHM	
						LH51256-15	Sharp	100
						CXK58257SP-15L		
							Sony	
						TMS62256-15	TI	
						TMS62256L-15	TI	
						TC55256-15	Toshiba	
						TC55258-15	Toshiba	105
						UM62256-15	**◊ UMC (3688)**	
						UM62256A-15	**◊ UMC (3688)**	
		Pseudo	TS	28	5	HM65256B-15	Hitachi	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	170 nsF	CMOS	TS	28	5	**DPS92256-170**	◊‡ **Dense-Pac (3376)**	
	55 nsF	CMOS	TS	28	5	**EDI8834C55B**	† **EDI (3386)**	
32768x8 (x4)								
	55 nsF	CMOS	TS	46	5	MEM84002	◊ ILC-DDC	
32768x9								
	14	CMOS	TS	44	5	MK62486-14	◊ SGS-Thomson	
	14 nsF	CMOS	TS	44	5	MK62940-14	◊ SGS-Thomson	5
	15 nsF	CMOS	TS	32	5	VT62D932-15	◊ VLSI Tech	
						VT62D932L-15	◊ VLSI Tech	
						VT62932-15	◊ VLSI Tech	
						VT62932L-15	◊ VLSI Tech	
	17 nsF	CMOS	TS	28	5	**TC55329-17**	◊ **Toshiba (3682)**	10
	19 nsF	CMOS	TS	44	5	MK62486-19	◊ SGS-Thomson	
						MK62940-19	◊ SGS-Thomson	
	20 nsF	CMOS	TS	32	5	IDT71259L-20	◊ IDT	
						IDT71259S-20	◊ IDT	
						IDT71559L-20	◊ IDT	15
						IDT71559S-20	◊ IDT	
						IS61C259-20	**ISSI (3510)**	
						IS61C259L-20	**ISSI (3510)**	
						MCM6205-20	◊ Motorola	
						TC55329-20	◊ **Toshiba (3682)**	20
						VT62D932-20	◊ VLSI Tech	
						VT62D932L-20	◊ VLSI Tech	
						VT62932-20	◊ VLSI Tech	
						VT62932L-20	◊ VLSI Tech	
	25 nsF	CMOS	TS	32	5	MB8289-25	Fujitsu	25
						IDT71259L-25	◊ IDT	
						IDT71259S-25	◊ IDT	
						IDT71559L-25	◊ IDT	
						IDT71559S-25	◊ IDT	
						IS61C259-25	**ISSI (3510)**	30
						IS61C259L-25	**ISSI (3510)**	
						MCM6205-25	◊ Motorola	
						TC55329-25	◊ **Toshiba (3682)**	
						VT62D932-25	◊ VLSI Tech	
						VT62D932L-25	◊ VLSI Tech	35
						VT62932-25	◊ VLSI Tech	
						VT62932L-25	◊ VLSI Tech	
				44	5	MK62486-25	◊ SGS-Thomson	
						MK62940-25	◊ SGS-Thomson	
	30 nsF	CMOS	TS	32	5	IDT71259L-30	◊ IDT	40
						IDT71259L-30B	◊† IDT	
						IDT71259S-30	◊ IDT	
						IDT71259S-30B	◊† IDT	
						IDT71559L-30	◊ IDT	
						IDT71559L-30B	◊† IDT	45
						IDT71559S-30	◊ IDT	
						IDT71559S-30B	◊† IDT	
	35 nsF	CMOS	TS	32	5	MB8289-35	Fujitsu	
						IDT71259L-35	◊ IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x9							(Cont'd)	
	35 nsF	CMOS	TS	32	5	IDT71259L-35B	◊† IDT	50
						IDT71259S-35	◊ IDT	
						IDT71259S-35B	◊† IDT	
						IDT71559L-35	◊ IDT	
						IDT71559L-35B	◊† IDT	
						IDT71559S-35	◊ IDT	55
						IDT71559S-35B	◊† IDT	
						IS61C259-35	**ISSI (3510)**	
						IS61C259L-35	**ISSI (3510)**	
						LH52259-35	Sharp	
						TC55329-35	◊ **Toshiba (3682)**	60
	45 nsF	CMOS	TS	32	5	IDT71259L-45	◊ IDT	
						IDT71259L-45B	◊† IDT	
						IDT71259S-45	◊ IDT	
						IDT71259S-45B	◊† IDT	
						IDT71559L-45	◊ IDT	65
						IDT71559L-45B	◊† IDT	
						IDT71559S-45	◊ IDT	
						IDT71559S-45B	◊† IDT	
						LH52259-45	Sharp	
	55 nsF	CMOS	TS	32	5	IDT71259L-55B	◊† IDT	70
						IDT71259S-55B	◊† IDT	
						IDT71559L-55	◊ IDT	
						IDT71559S-55	◊ IDT	
65336x4								
	25 nsF	TTL	TS	28	5	KM64257L-25	Samsung	
	45 nsF	TTL	TS	28	5	KM64257L-45	Samsung	75
65536x1								
	8 nsF	BiCMOS	OE	22	–4.5	IDT100490S8D	◊ IDT	
					–5.2	IDT10490S8D	IDT	
	10 nsF	BiCMOS	OE	22	–4.5	IDT100490	IDT	
						IDT100490S10	IDT	
					–5.2	IDT10490S10	IDT	80
	12 nsF	BiCMOS	OE	22	–4.5	IDT100490S12	IDT	
					–5.2	IDT10490S12	IDT	
		CMOS	TS	22	5	MT5C6401-12	MicronTech	
						MCM6287-12	◊ Motorola	
						P4C187-12C	Performance	85
	15 nsF	BiCMOS	OE	22	–4.5	IDT100490S15	IDT	
						IDT100490S15D	◊ IDT	
				24	–4.5	IDT100490	◊ IDT	
				27	–5.2	IDT10490	IDT	
			TS	22	5	TMS6787-15	TI	90
		CMOS	TS	22	5	IDT7187L-15	◊‡ IDT	
						IDT7187S-15	◊‡ IDT	
						L7C187C-15	◊ LogicDev	
						MCM6287-15	◊ Motorola	
						MCM6287B-15	◊ Motorola	95
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x1								
	15 nsF	CMOS	TS	22	5		(Cont'd)	
						P4C187-15C	Performance	
						P4C187-15M	† Performance	
						VT6287H-15	◊ VLSI Tech	
						VT6287HL-15	◊ VLSI Tech	
		ECL	OE	22	−4.5	MBM100C490-15	◊ Fujitsu	5
					−5.2	MBM10C490-15	◊ Fujitsu	
					4.5	MBM100490-15	◊ Fujitsu	
		ECL 10K	OE	22	−5.2	IDT10490S-15B	† IDT	
	20 nsF	BiCMOS	OE	22	−4.5	IDT100490S20	IDT	
				24	−4.5	IDT100490S20D	◊ IDT	10
			TS	22	5	TMS6787-20	TI	
		CMOS	TS	22	5	CY7C187-20	Cypress	
						IDT7187L-20	◊ IDT	
						IDT7187S-20	◊ IDT	
						L7C187C-20	◊ LogicDev	15
						L7C187M-20	◊† LogicDev	
						MCM6287-20	◊ Motorola	
						MCM6287B-20	◊ Motorola	
						P4C187-20C	Performance	
						P4C187-20M	† Performance	20
						VT6287H-20	◊ VLSI Tech	
						VT6287HL-20	◊ VLSI Tech	
		ECL 10K	OE	22	−5.2	IDT10490S-20B	† IDT	
	25 nsF	BiCMOS	TS	22	5	TMS6787-25	TI	
		CMOS	TS	22	5	CY7C187-25	† Cypress	25
						CY7C187-25C	◊ Cypress	
						MB81C71A-25	◊ Fujitsu	
						IDT7187L-25	◊ IDT	
						IDT7187L-25B	◊‡ IDT	
						IDT7187S-25	◊‡ IDT	30
						IDT7187S-25B	◊‡ IDT	
						L7C187C-25	◊ LogicDev	
						L7C187M-25	◊† LogicDev	
						MCM6287-25	◊ Motorola	
						F1600A	National	35
						F1601A	National	
						P4C187-25C	Performance	
						P4C187-25M	† Performance	
						P4C187L-25C	Performance	
						P4C187L-25M	† Performance	40
						MK41H87-25	SGS-Thomson	
						LH5261-25	Sharp	
						LH5263-25	Sharp	
						CXK5164J-25	Sony	
						CXK5164P-25	Sony	45
						VT6287H-25	◊ VLSI Tech	
						VT6287HL-25	◊ VLSI Tech	
			TTL	22	5	HM6787	◊ Hitachi	
		ECL	OE	22	−5.2	MBM10490-25	◊ Fujitsu	
					4.5	MBM100490-25	◊ Fujitsu	50
		TTL	OC	22	5	MB81C71A	◊ Fujitsu	
			TS	22	5	MT5C6401-25	◊ MicronTech	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x1							(Cont'd)	
	28 nsF	CMOS	TS	36	5	HC6464	◊‡ Honeywell	
	30 nsF	BiCMOS	TS	22	5	TMS6787-30	TI	
		CMOS	TS	22	5	IDT7187L-30	◊ IDT	55
						IDT7187L-30B	◊† IDT	
						IDT7187S-30	◊ IDT	
						IDT7187S-30B	◊† IDT	
						1600A-30	† National	
						1601A-30	† National	60
						P4C187-30M	† Performance	
						P4C187L-30M	† Performance	
						CXK5164P-30	Sony	
	35 nsF	CMOS	TS	22	5	CY7C187-35C	◊ Cypress	
						CY7C187-35M	◊† Cypress	65
						EDI8164C35B	◊† EDI	
						EDI8164P35B	◊† EDI	
						MB81C71A-35	◊ Fujitsu	
						IDT7187L-35	◊ IDT	
						IDT7187L-35B	◊† IDT	70
						IDT7187S-35	◊ IDT	
						IDT7187S-35B	◊† IDT	
						L7C187C-35	◊ LogicDev	
						L7C187M-35	◊† LogicDev	
						F1600AM	† National	75
						F1601AM	† National	
						1600A-35	† National	
						1601A-35	† National	
						P4C187-35M	† Performance	
						P4C187L-35M	† Performance	80
						IMS1600-35	SGS-Thomson	
						MK41H87-35	SGS-Thomson	
						LH5261-35	Sharp	
						LH5263-35	Sharp	
						CXK5164J-35	Sony	85
						CXK5164P-35	Sony	
						TC5562-35	**◊ Toshiba (3682)**	
						VT6287H-35	◊ VLSI Tech	
						VT6287HL-35	◊ VLSI Tech	
		TTL	TS	22	5	MT5C6401-35	◊ MicronTech	90
	40 nsF	CMOS/SOS	TS	22	5	MAS9187	°‡ Marconi	
	45 nsF	CMOS	TS	22	5	CY7C187-45C	◊ Cypress	
						CY7C187-45M	◊† Cypress	
						EDI8164C45B	◊† EDI	
						EDI8164P45B	◊† EDI	95
						HM6287-45	◊ Hitachi	
						IDT7187L-45	◊ IDT	
						IDT7187L-45B	◊† IDT	
						IDT7187S-45	◊ IDT	
						IDT7187S-45B	◊† IDT	100
						L7C187C-45	◊ LogicDev	
						L7C187M-45	◊† LogicDev	
						F1600A-45	National	
						F1601-45	National	
						1600A-45	† National	105
						1601A-45	† National	
						μPD4361-45	◊ NEC	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x1							(Cont'd)	
	45 nsF	CMOS	TS	22	5	IMS1600-45	SGS-Thomson	
						IMS1600-45M	◊† SGS-Thomson	
						MK41H87-45	SGS-Thomson	
		TTL	TS	36	5	HS6464	◊‡ Honeywell	
	50 nsF	CMOS	TS	24	5	M61064	‡ AT&T	5
	55 nsF	CMOS	TS	22	5	EDI8164C55B	◊† EDI	
						EDI8164P55B	◊† EDI	
						HM6287-55	◊ Hitachi	
						IDT7187L-55B	◊† IDT	
						IDT7187S-55B	◊† IDT	10
						F1600AM-55	† National	
						1600A-55	† National	
						1601A-55	† National	
						μPD4361-55	◊ NEC	
						IMS1600-55	SGS-Thomson	15
						IMS1600-55M	† SGS-Thomson	
						IMS1601L-55M	◊† SGS-Thomson	
	70 nsF	CMOS	TS	22	5	HM6287-70	◊ Hitachi	
						IDT7187L-70B	◊† IDT	
						IDT7187S-70B	◊† IDT	20
						1600A-70	† National	
						1601A-70	† National	
						μPD4361-70	◊ NEC	
						IMS1600-70M	† SGS-Thomson	
						TC5561-70	**◊ Toshiba (3682)**	25
	85 nsF	CMOS	TS	22	5	IDT7187L-85B	◊† IDT	
						IDT7187S-85B	◊† IDT	
						L7C187C-85	◊ LogicDev	
						L7C187M-85	◊† LogicDev	
	100 nsF	NMOS	TS	16	5	MT4264-10/883C	◊† MicronTech	30
	120 nsF	NMOS	TS	16	5	MT4264-12/883C	◊† MicronTech	
	150 nsF	NMOS	TS	16	5	MT4264-15/883C	◊† MicronTech	
	200 nsF	NMOS	TS	16	5	MT4264-20/883C	◊† MicronTech	
	30 nsF	CMOS	TS	22	5	CXK5164J-30	Sony	
65536x4	12 nsF	ECL 10K	OE	32	−5.2	IDT10504S-12	IDT	35
						IDT10506LL-12	IDT	
						IDT10506RL-12	IDT	
						IDT10507S-12	IDT	
						IDT10508S-12	IDT	
		ECL 100K	OE	32	−4.5	IDT100504S-12	IDT	40
						IDT100506LL-15	IDT	
						IDT100506RL-12	IDT	
						IDT100507S-12	IDT	
						IDT100508S-12	IDT	
	15 nsF	BiCMOS	ECL	32	−5.2	MBM10C504-15	◊ Fujitsu	45
			TTL	24	5	MB82B84	◊ Fujitsu	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4	15 nsF						(Cont'd)	
		Bipolar	ECL	32	−4.5	MBM100C504-15	◊ Fujitsu	
					−5.2	MBM101C504-15	◊ Fujitsu	
		CMOS	TS	24	5	MCM6208-15	◊ Motorola	
						MCM6209-15	◊ Motorola	50
				28	5	**EDI2840C15C**	**EDI (3390)**	
						EDI2842C15C	**EDI (3390)**	
				32	5	**EDI2841C15C**	**EDI (3390)**	
						EDI2843C15C	**EDI (3390)**	
		ECL	OE	22	−5.2	MBM10490-15	◊ Fujitsu	55
		ECL 10K	OE	28	−5.2	NM5104-15	◊ National	
				32	−5.2	IDT10504S-15	IDT	
						IDT10506LL	IDT	
						IDT10506RL-15	IDT	
						IDT10507S-15	IDT	60
						IDT10508S-15	IDT	
		ECL 100K	OE	28	−4.5	NM100504-15	◊ National	
				32	−4.5	IDT100504S-15	IDT	
						IDT100506RL-15	IDT	
						IDT100507S-15	IDT	65
						IDT100508S-15	IDT	
		TTL	TS	24	5	M5M5257B-15	◊ Mitsubishi	
	18	ECL 100K	OE	28	−4.5	NM100504-18	◊ National	
	18 nsF	ECL 10K	OE	28	−5.2	NM5104-18	◊ National	
	20 nsF	BiCMOS	TS	24	5	TMS6708-20	TI	70
		CMOS	TS	24	5	MT5C2564-20	MicronTech	
						MCM6208-20	◊ Motorola	
						PDM41258L-20	◊ Paradigm	
						PDM41258L-45	◊ Paradigm	
						PDM41258S-20	◊ Paradigm	75
						P4C1258-20C	◊ Performance	
						P4C1258L-20C	◊ Performance	
						TC55464-20	**◊ Toshiba (3682)**	
				28	5	IDT61298L-20	IDT	
						IDT61298S-20	IDT	80
						MT5C2565-20	MicronTech	
						MCM6209-20	◊ Motorola	
						PDM41251L-20	◊ Paradigm	
						PDM41251S-20	◊ Paradigm	
						PDM41252L-20	◊ Paradigm	85
						PDM41252S-20	◊ Paradigm	
						PDM41298L-20	◊ Paradigm	
						PDM41298L-35	◊ Paradigm	
						PDM41298L-45	◊ Paradigm	
						PDM41298L-55B	◊† Paradigm	90
						PDM41298S-20	◊ Paradigm	
						PDM41298S-45	◊ Paradigm	
						P4C1256-20C	◊ Performance	
						P4C1256L-20C	◊ Performance	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	20 nsF	CMOS	TS	28	5	P4C1281-20C	◊ Performance	
						P4C1281L-20C	◊ Performance	
						P4C1282-20C	◊ Performance	
						P4C1282L-20C	◊ Performance	
						P4C1298-20C	◊ Performance	5
						P4C1298L-20C	◊ Performance	
						P4C1299-20C	◊ Performance	
						P4C1299L-20C	◊ Performance	
						TC55465-20	**◊ Toshiba (3682)**	
		TTL	TS	24	5	M5M5257B-20	◊ Mitsubishi	10
	25 nsF	BiCMOS	TS	24	5	TMS6708-25	TI	
		CMOS	TS	24	5	CY7C194-25C	◊ Cypress	
						MB81C84A-25	Fujitsu	
						IDT71258L-25	◊‡ IDT	
						IDT71258S-25	◊‡ IDT	15
						MCM6208-25	Motorola	
						PDM41258L-25	◊ Paradigm	
						PDM41258L-25B	◊† Paradigm	
						PDM41258S-25	◊ Paradigm	
						PDM41258S-25B	◊† Paradigm	20
						P4C1258-25C	◊ Performance	
						P4C1258-25M	◊† Performance	
						P4C1258L-25C	◊ Performance	
						P4C1258L-25M	◊† Performance	
						TC55464-25	**◊ Toshiba (3682)**	25
						VT6208H-25	◊ VLSI Tech	
						VT6208HL-25	◊ VLSI Tech	
				28	5	CY7C191-25C	◊ Cypress	
						CY7C192-25C	◊ Cypress	
						CY7C196-25C	◊ Cypress	30
						EDI2840C25C	**EDI (3390)**	
						EDI2842C25C	**EDI (3390)**	
						EDI8466C25B	**† EDI (3386)**	
						EDI8466C25C	**EDI (3386)**	
						IDT61298L-25	◊‡ IDT	35
						IDT61298L-25B	† IDT	
						IDT61298S-25	◊‡ IDT	
						IDT61298S-25B	† IDT	
						IDT7MP456-25	◊‡ IDT	
						IDT71281L-25	◊‡ IDT	40
						IDT71281S-25	◊‡ IDT	
						IDT71282L-25	◊‡ IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	25 nsF	CMOS	TS	28	5	IDT71282S-25	◊‡ IDT	
						MCM6209-25	◊ Motorola	
						PDM41251L-25	◊ Paradigm	45
						PDM41251L-25B	◊† Paradigm	
						PDM41251S-25	◊ Paradigm	
						PDM41251S-25B	◊† Paradigm	
						PDM41252L-25	◊ Paradigm	
						PDM41252L-25B	◊† Paradigm	50
						PDM41252S-25	◊ Paradigm	
						PDM41252S-25B	◊† Paradigm	
						PDM41298L-25	◊ Paradigm	
						PDM41298L-25B	◊† Paradigm	
						PDM41298S-25	◊ Paradigm	55
						PDM41298S-25B	◊† Paradigm	
						P4C1256-25C	◊ Performance	
						P4C1256-25M	◊† Performance	
						P4C1256L-25C	◊ Performance	
						P4C1256L-25M	◊† Performance	60
						P4C1281-25C	◊ Performance	
						P4C1281-25M	◊† Performance	
						P4C1281L-25C	◊ Performance	
						P4C1281L-25M	◊† Performance	
						P4C1282-25C	◊ Performance	65
						P4C1282L-25C	◊ Performance	
						P4C1298-25C	◊ Performance	
						P4C1298-25M	◊† Performance	
						P4C1298L-25C	◊ Performance	
						P4C1298L-25M	◊† Performance	70
						P4C1299-25C	◊ Performance	
						P4C1299-25M	◊† Performance	
						P4C1299L-25C	◊ Performance	
						P4C1299L-25M	◊† Performance	
						TC55465-25	**◊ Toshiba (3682)**	75
				32	5	EDI284IC25C	EDI	
						EDI2843C25C	**EDI (3390)**	
		TTL	TS	28	5	KM64257-25	Samsung	
	30 nsF	CMOS	TS	24	5	P4C1258-30C	◊ Performance	
						P4C1258-30M	◊† Performance	80
						P4C1258L-30C	◊ Performance	
						P4C1258L-30M	◊† Performance	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	30 nsF	CMOS	TS	28	5	P4C1256-30C	◊ Performance	
						P4C1256-30M	◊† Performance	
						P4C1256L-30C	◊ Performance	
						P4C1256L-30M	◊† Performance	
						P4C1281-30C	◊ Performance	5
						P4C1281-30M	◊† Performance	
						P4C1281L-30C	◊ Performance	
						P4C1281L-30M	◊† Performance	
						P4C1282-30C	◊ Performance	
						P4C1282-30M	◊† Performance	10
						P4C1282L-30C	◊ Performance	
						P4C1282L-30M	◊† Performance	
						P4C1298-30C	◊ Performance	
						P4C1298-30M	◊† Performance	
						P4C1298L-30C	◊ Performance	15
						P4C1298L-30M	◊† Performance	
						P4C1299-30C	◊ Performance	
						P4C1299-30M	◊† Performance	
						P4C1299L-30C	◊ Performance	
						P4C1299L-30M	◊† Performance	20
	35 nsF	CMOS	TS	24	5	CY7C194-35C	◊ Cypress	
						CY7C194-35M	◊† Cypress	
						EDH84H64C-35C	EDI	
						EDH84H64C-35MHR	† EDI	
						EDI8464C35B	**◊† EDI (3386)**	25
						EDI8465C35B	**◊† EDI (3386)**	
						EDI8465P35B	**◊† EDI (3386)**	
						MB81C84A-35	Fujitsu	
						IDT71258L-35	IDT	
						IDT71258S-35	IDT	30
						MCM6208-35	Motorola	
						μPD43254-35	NEC	
						PDM41258L-35	◊ Paradigm	
						PDM41258L-35B	◊† Paradigm	
						PDM41258S-35	◊ Paradigm	35
						PDM41258S-35B	◊† Paradigm	
						P4C1258-35C	◊ Performance	
						P4C1258-35M	◊† Performance	
						P4C1258L-35C	◊ Performance	
						P4C1258L-35M	◊† Performance	40
						LH52252-35	Sharp	
						LH52255-35	Sharp	
						CXK54256P-35	Sony	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	35 nsF	CMOS	TS	24	5	**TC55464-35**	**◊ Toshiba (3682)**	
						VT6208-35	VLSI Tech	45
						VT6208H-35	◊ VLSI Tech	
						VT6208HL-35	◊ VLSI Tech	
						VT6208L-35	VLSI Tech	
				28	5	CY7C191-35C	◊ Cypress	
						CY7C191-35M	◊† Cypress	50
						CY7C192-35C	◊ Cypress	
						CY7C192-35M	◊† Cypress	
						CY7C196-35C	◊ Cypress	
						CY7C196-35M	◊† Cypress	
						EDI8464L35B	**† EDI (3386)**	55
						EDI8464P35B	**† EDI (3386)**	
						EDI8466C35B	**† EDI (3386)**	
						EDI8466C35C	**EDI (3386)**	
						IDT61298I-35	◊‡ IDT	
						IDT61298L-35B	† IDT	60
						IDT61298S-35	◊‡ IDT	
						IDT61298S-35B	† IDT	
						IDT71281L-35	◊‡ IDT	
						IDT71281S-35	◊‡ IDT	
						IDT71282L-35	◊‡ IDT	65
						IDT71282S-35	◊‡ IDT	
						PDM41251L-35	◊ Paradigm	
						PDM41251L-35B	◊† Paradigm	
						PDM41251S-35	◊ Paradigm	
						PDM41251S-35B	◊† Paradigm	70
						PDM41252L-35	◊ Paradigm	
						PDM41252L-35B	◊† Paradigm	
						PDM41252S-35	◊ Paradigm	
						PDM41252S-35B	◊† Paradigm	
						PDM41298L-35B	◊† Paradigm	75
						PDM41298S-35	◊ Paradigm	
						PDM41298S-35B	◊† Paradigm	
						P4C1256-35C	◊ Performance	
						P4C1256-35M	◊† Performance	
						P4C1256L-35C	◊ Performance	80
						P4C1256L-35M	◊† Performance	
						P4C1281-35C	◊ Performance	
						P4C1281-35M	◊† Performance	
						P4C1281L-35C	◊ Performance	
						P4C1281L-35M	◊† Performance	85
						P4C1282-35C	◊ Performance	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4								
	35 nsF	CMOS	TS	28	5		(Cont'd)	
						P4C1282-35M	◊† Performance	
						P4C1282L-35C	◊ Performance	
						P4C1282L-35M	◊† Performance	
						P4C1298-35C	◊ Performance	
						P4C1298-35M	◊† Performance	5
						P4C1298L-35C	◊ Performance	
						P4C1298L-35M	◊† Performance	
						P4C1299-35C	◊ Performance	
						P4C1299-35M	◊† Performance	
						P4C1299L-35C	◊ Performance	10
						P4C1299L-35M	◊† Performance	
						TC55465-35	**◊ Toshiba (3682)**	
		TTL	OC	24	5	MB81C84A	◊ Fujitsu	
			TS	24	5	MT5C2564-35	◊ MicronTech	
				28	5	MT5C2565-35	◊ MicronTech	15
						KM64257-35	Samsung	
						KM64257L-35	Samsung	
	45 nsF	CMOS	TS	24	5	CY7C194-45C	◊ Cypress	
						CY7C194-45M	◊† Cypress	
						EDH84H64C-45C	EDI	20
						EDH84H64C-45MHR	† EDI	
						EDI8464C45B	**◊† EDI (3386)**	
						EDI8465C45B	**◊† EDI (3386)**	
						EDI8465P45B	**◊† EDI (3386)**	
						MB81C84A-45	Fujitsu	25
						IDT71258L-45	IDT	
						IDT71258L-45B	† IDT	
						IDT71258S-45	IDT	
						IDT71258S-45B	† IDT	
						μPD43254-45	NEC	30
						PDM41258L-45B	◊† Paradigm	
						PDM41258S-45	◊ Paradigm	
						PDM41258S-45B	◊† Paradigm	
						P4C1258-45M	◊† Performance	
						P4C1258L-45M	◊† Performance	35
						LH52252-45	Sharp	
						LH52255-45	Sharp	
						CXK54256P-45	Sony	
						VT6208-45	VLSI Tech	
						VT6208L-45	VLSI Tech	40
				28	5	CY7C191-45C	◊ Cypress	
						CY7C191-45M	◊† Cypress	
						CY7C192-45C	◊ Cypress	
						CY7C192-45M	◊† Cypress	
						CY7C196-45C	◊ Cypress	45
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4								
	45 nsF	CMOS	TS	28	5		(Cont'd)	
						CY7C196-45M	◊† Cypress	
						EDI8464L45B	**† EDI (3386)**	
						EDI8464P45B	**† EDI (3386)**	
						EDI8466C45B	**† EDI (3386)**	
						EDI8466C45C	**EDI (3386)**	50
						IDT61298L-45	◊‡ IDT	
						IDT61298L-45B	◊‡ IDT	
						IDT61298S-45	◊‡ IDT	
						IDT61298S-45B	◊‡ IDT	
						IDT71281L-45	◊‡ IDT	55
						IDT71281L-45B	◊‡ IDT	
						IDT71281S-45	◊‡ IDT	
						IDT71281S-45B	◊‡ IDT	
						IDT71282L-45	◊‡ IDT	
						IDT71282L-45B	◊‡ IDT	60
						IDT71282S-45	◊‡ IDT	
						IDT71282S-45B	◊‡ IDT	
						PDM41251L-45	◊ Paradigm	
						PDM41251L-45B	◊† Paradigm	
						PDM41251S-45	◊ Paradigm	65
						PDM41251S-45B	◊† Paradigm	
						PDM41252L-45	◊ Paradigm	
						PDM41252L-45B	◊† Paradigm	
						PDM41252S-45	◊ Paradigm	
						PDM41252S-45B	◊† Paradigm	70
						PDM41298L-45B	◊† Paradigm	
						PDM41298S-45B	◊† Paradigm	
						P4C1256-45M	◊† Performance	
						P4C1256L-45M	◊† Performance	
						P4C1281-45M	◊† Performance	75
						P4C1281L-45M	◊† Performance	
						P4C1282-45M	◊† Performance	
						P4C1282L-45M	◊† Performance	
						P4C1298-45M	◊† Performance	
						P4C1298L-45M	◊† Performance	80
						P4C1299-45M	◊† Performance	
						P4C1299L-45M	◊† Performance	
		TTL	TS	24	5	MT5C2564-45	◊ MicronTech	
				28	5	MT5C2565-45	◊ MicronTech	
						KM64257-45	Samsung	85
							(Continued)	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	55 nsF	CMOS	TS	24	5	EDH84H64C-55C	EDI	
						EDH84H64C-55MHR	† EDI	
						EDI8464C55B	**◊† EDI (3386)**	
						EDI8465C55B	**◊† EDI (3386)**	
						EDI8465P55B	**◊† EDI (3386)**	5
						IDT71258L-55	IDT	
						IDT71258L-55B	† IDT	
						IDT71258S-55	IDT	
						IDT71258S-55B	† IDT	
						μPD43254-55	NEC	10
						PDM41258L-55B	◊† Paradigm	
						PDM41258S-55B	◊† Paradigm	
						P4C1258-55M	◊† Performance	
						P4C1258L-55M	◊† Performance	
						LH52252-55	Sharp	15
						CXK54256P-55	Sony	
				28	5	**EDI8464P55B**	**† EDI (3386)**	
						EDI8466C55B	**† EDI (3386)**	
						EDI8466C55C	**EDI (3386)**	
						IDT61298L-55	◊‡ IDT	20
						IDT61298L-55B	◊‡ IDT	
						IDT61298S-55	◊‡ IDT	
						IDT61298S-55B	◊‡ IDT	
						IDT71281L-55	◊‡ IDT	
						IDT71281L-55B	◊‡ IDT	25
						IDT71281S-55	◊‡ IDT	
						IDT71281S-55B	◊‡ IDT	
						IDT71282L-55	◊‡ IDT	
						IDT71282L-55B	◊‡ IDT	
						IDT71282S-55	◊‡ IDT	30
						IDT71282S-55B	◊‡ IDT	
						PDM41251L-55B	◊† Paradigm	
						PDM41251S-55B	◊† Paradigm	
						PDM41252L-55B	◊† Paradigm	
						PDM41252S-55B	◊† Paradigm	35
						PDM41298S-55B	◊† Paradigm	
						P4C1256-55M	◊† Performance	
						P4C1256L-55M	◊† Performance	
						P4C1281-55M	◊† Performance	
						P4C1281L-55M	◊† Performance	40
						P4C1282-55M	◊† Performance	
						P4C1282L-55M	◊† Performance	
						P4C1298-55M	◊† Performance	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x4							(Cont'd)	
	55 nsF	CMOS	TS	28	5	P4C1298L-55M	◊† Performance	
						P4C1299-55M	◊† Performance	45
						P4C1299L-55M	◊† Performance	
	70 nsF	CMOS	TS	24	5	IDT71258L-70B	† IDT	
						IDT71258S-70B	† IDT	
				28	5	IDT61298L-70B	◊‡ IDT	
						IDT61298S-70B	◊‡ IDT	50
						IDT71281L-70B	◊‡ IDT	
						IDT71281S-70B	◊‡ IDT	
						IDT71282L-70B	◊‡ IDT	
						IDT71282S-70B	◊‡ IDT	
				32	5	EDH84H64C-70MHR	† EDI	55
	100 nsF	NMOS	TS	18	5	MT4067-10/883C	◊† MicronTech	
	120 nsF	NMOS	TS	18	5	MT4067-12/883C	◊† MicronTech	
	150 nsF	NMOS	TS	18	5	MT4067-15/883C	◊† MicronTech	
	200 nsF	NMOS	TS	18	5	MT4067-20/883C	◊† MicronTech	
65536x8								
	25 nsF	CMOS	TS	40	5	IDT7M812-25	◊‡ IDT	60
	35 nsF	CMOS	TS	40	5	IDT7M812-35	◊‡ IDT	
	40 nsF	CMOS	TS	40	5	IDT7MP6025-40	◊‡ IDT	
	45 nsF	CMOS	TS	40	5	IDT7M812-45	◊‡ IDT	
	60 nsF	CMOS	TS	32	5	**EDI8M864C60C**	**EDI (3387)**	
	70 nsF	CMOS	TS	32	5	**EDI8M864C70B**	**† EDI (3387)**	65
						EDI8M864C70C	**EDI (3387)**	
	80 nsF	CMOS	TS	32	5	**EDI8M864C80B**	**† EDI (3387)**	
	90 nsF	CMOS	TS	32	5	**EDI8M864C90B**	**† EDI (3387)**	
						EDI8M864C90C	**EDI (3387)**	
	100 nsF	CMOS	TS	32	5	**EDI8M864C100B**	**† EDI (3387)**	70
						EDI8M864C100C	**EDI (3387)**	
	120 nsF	CMOS	TS	32	5	**EDI8M864C120B**	**† EDI (3387)**	
						EDI8M864C120C	**EDI (3387)**	
	150 nsF	CMOS	TS	28	5	MBM27C512	◊ Fujitsu	
				32	5	**EDI8M864C150B**	**† EDI (3387)**	75
						EDI8M864C150C	**EDI (3387)**	
				40	5	MBM27C1024	◊ Fujitsu	
	180 nsF	CMOS Module	TS	48	5	HM91M2-9	Harris	
65536x9								
	17 nsF	CMOS	TS	24	5	**TC55464-17**	**◊ Toshiba (3682)**	
						TC55465-17	**◊ Toshiba (3682)**	80
	25 nsF	CMOS	TS	40	5	IDT7M912-25	◊‡ IDT	
	35 nsF	CMOS	TS	40	5	IDT7M912-35	◊‡ IDT	
	45 nsF	CMOS	TS	40	5	IDT7M912-45	◊‡ IDT	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x16								
	25 nsF	CMOS	TS	40	5	IDT7M624S-25	◊‡ IDT	
	35 nsF	CMOS	TS	40	5	**EDH816H64C-35C**	**EDI (3387)**	
						EDH816H64C-35MHR	**† EDI (3387)**	
						IDT7M624S-35	◊‡ IDT	
	45 nsF	CMOS	TS	40	5	**EDH816H64C-45C**	**EDI (3387)**	5
						EDH816H64C-45MHR	**† EDI (3387)**	
	55 nsF	CMOS	TS	40	5	**EDH816H64C-55C**	**EDI (3387)**	
						EDH816H64C-55MHR	**† EDI (3387)**	
						S64K16-55CC	**Inova (3479)**	
						S64K16-55IC	**Inova (3479)**	10
			TTL	40	5	**S64K16L-55CC**	**Inova (3479)**	
						S64K16L-55IC	**Inova (3479)**	
	60 nsF	CMOS	TS	40	5	**EDI8M1664C60C**	**EDI (3387)**	
	70 nsF	CMOS	TS	40	5	**EDH816H64C-70C**	**EDI (3387)**	
						EDH816H64C-70MHR	**† EDI (3387)**	15
						EDI8M1664C70B	**† EDI (3387)**	
						EDI8M1664C70C	**EDI (3387)**	
						S64K16-70CC	**Inova (3479)**	
						S64K16-70IC	**Inova (3479)**	
			TTL	40	5	**S64K16-70MC**	**† Inova (3479)**	20
						S64K16L-70CC	**Inova (3479)**	
						S64K16L-70IC	**Inova (3479)**	
						S64K16L-70MC	**† Inova (3479)**	
	85 nsF	CMOS	TS	40	5	**EDI8M1664C85B**	**† EDI (3387)**	
						EDI8M1664C85C	**EDI (3387)**	25
						S64K16-85CC	**Inova (3479)**	
						S64K16-85IC	**Inova (3479)**	
			TTL	40	5	**S64K16-85MC**	**† Inova (3479)**	
						S64K16L-85CC	**Inova (3479)**	
						S64K16L-85IC	**Inova (3479)**	30
						S64K16L-85MC	**† Inova (3479)**	
	100 nsF	CMOS	TS	40	5	**EDI8M1664C100B**	**† EDI (3387)**	
						EDI8M1664C100C	**EDI (3387)**	
						S64K16-100CC	**Inova (3479)**	
						S64K16-100IC	**Inova (3479)**	35
			TTL	40	5	**S64K16-100MC**	**† Inova (3479)**	
						S64K16L-100CC	**Inova (3479)**	
						S64K16L-100IC	**Inova (3479)**	
						S64K16L-100MC	**† Inova (3479)**	
	120 nsF	CMOS	TTL	40	5	**S64K16-120IC**	**Inova (3479)**	40
						S64K16-120MC	**† Inova (3479)**	
						S64K16L-120IC	**Inova (3479)**	
						S64K16L-120MC	**† Inova (3479)**	
	150 nsF	CMOS	TS	48	5	HM91M2	† Harris	
	200 nsF	CMOS	TS	40	5	**CAT27C210-20**	**Catalyst Semi (3352)**	45
	250 nsF	CMOS	TS	40	5	**CAT27C210-25**	**Catalyst Semi (3352)**	
65536x18								
	15 nsF	CMOS	TS	52	5	**EDI2018XC15C**	**EDI (3390)**	
	25 nsF	CMOS	TS	52	5	**EDI2018XC25C**	**EDI (3390)**	
131072x8								
	20 nsF	CMOS	TS	32	5	VT62A8128-20	◊ VLSI Tech	
	25 nsF	CMOS	TS	32	5	**EDI88130L25B**	**† EDI (3388)**	50
						EDI88130L35B	**† EDI (3388)**	
						MT5C1008-25	† MicronTech	
				42	5	**DPS1024-25**	**◊‡ Dense-Pac (3376)**	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8								
	25 nsF	CMOS					(Cont'd)	
			TTL	32	5	FS128K8T-25CC	Inova	
	35 nsF	CMOS	TS	32	5	**EDI88128L35C**	**EDI (3387)**	55
						IS61C1024L-35	**ISSI (3510, 3512)**	
						IS61C1024S-35	**ISSI (3510, 3512)**	
						MT5C1008-35	† MicronTech	
						CXK581020-35	**◊ Sony (3660)**	
			TTL	32	5	FS128K8T-35CC	Inova	60
						FS128K8T-35IC	Inova	
						FS128K8T-35MC	† Inova	
	45 nsF	CMOS	TS	32	5	IDT71024L-45	◊‡ IDT	
						IDT71024S-45	◊‡ IDT	
						IS61C1024L-45	**ISSI (3510, 3512)**	65
						IS61C1024S-45	**ISSI (3510, 3512)**	
						CXK581020-45	**◊ Sony (3660)**	
				64	5	IDT7M824S-45	◊‡ IDT	
			TTL	32	5	FS128K8T-45CC	Inova	
						FS128K8T-45IC	Inova	70
						FS128K8T-45MC	† Inova	
	50 nsF	CMOS	TS	30	5	IDT8MP824-50	◊‡ IDT	
	55 nsF	CMOS	TS	32	5	**EDI88128L55C**	**EDI (3387)**	
						S128K8-55CC	**Inova (3477)**	
						S128K8-55IC	**Inova (3477)**	75
						S128K8-55MC	**† Inova (3477)**	
						IDT71024L-55	◊‡ IDT	
						IDT71024L-55B	◊‡ IDT	
						IDT71024S-55	◊‡ IDT	
						IDT71024S-55B	◊‡ IDT	80
						IS61C1024L-55	**ISSI (3510, 3512)**	
						IS61C1024S-55	**ISSI (3510, 3512)**	
						CXK581020-55	**◊ Sony (3660)**	
				64	5	IDT7M824S-55	◊‡ IDT	
			TTL	32	5	**S128K8L-55CC**	**Inova (3477)**	85
						S128K8L-55IC	**Inova (3477)**	
						S128K8L-55MC	**† Inova (3477)**	
						S128K8T-55CC	**Inova (3478)**	
						S128K8T-55IC	**Inova (3478)**	
						S128K8TL-55CC	**Inova (3478)**	90
						S128K8TL-55IC	**Inova (3478)**	
	60 nsF	CMOS	TS	30	5	IDT8MP824-60	◊‡ IDT	
				32	5	**EDI8M8128C60C**	**EDI (3388)**	
	70 nsF	CMOS	TS	32	5	**EDI8M8128C70B**	**† EDI (3388)**	
						EDI8M8128C70C	**EDI (3388)**	95
						EDI88128C70B	**◊† EDI (3387)**	
						EDI88128L70B	**† EDI (3387)**	
						EDI88128P70B	**◊† EDI (3387)**	
						EDI88130C70B	**◊† EDI (3388)**	

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	
131072x8								
	70 nsF	CMOS	TS	32	5			(Cont'd)
						EDI88130P70B		
							◊† **EDI**	**(3388)**
						S128K8-70CC	**Inova**	**(3477)**
						S128K8-70IC	**Inova**	**(3477)**
						S128K8-70MC †	**Inova**	**(3477)**
						IDT71024L-70		
							◊‡ IDT	
						IDT71024L-70B		
							◊‡ IDT	
						IDT71024S-70		
							◊‡ IDT	
						IDT71024S-70B		
							◊‡ IDT	
						IS62C1024L-70	**ISSI**	**(3510)**
						IS62C1024S-70	**ISSI**	**(3510)**
						MCM60M01-70		
							◊ Motorola	
						MCM60M01L-70		
							◊ Motorola	
						MCM60M01LL-70		
							◊ Motorola	
						BR621024	**ROHM**	**(3584)**
						KM681000	◊ Samsung	
						CXK581001-70L		
							◊ Sony	
			TTL	28	5	MB841000	◊ Fujitsu	
				32	5	**S128K8L-70CC**	**Inova**	**(3477)**
						S128K8L-70IC	**Inova**	**(3477)**
						S128K8L-70MC †	**Inova**	**(3477)**
						S128K8T-70CC	**Inova**	**(3478)**
						S128K8T-70IC	**Inova**	**(3478)**
						S128K8T-70MC †	**Inova**	**(3478)**
						S128K8TL-70CC	**Inova**	**(3478)**
						S128K8TL-70IC	**Inova**	**(3478)**
						S128K8TL-70MC †	**Inova**	**(3478)**
						CXK581001M-70L	**Sony**	**(3658)**
						CXK581001P-70L	**Sony**	**(3658)**
		CMOSS Mix MOS	TS	32	5	**UM621024-70**	◊ **UMC**	**(3688)**
			TS	32	5	**TC551001-70**	**Toshiba**	**(3683)**
		TTL	TS	32	5	MCM60M01L-70L		
							Motorola	
	80 nsF	CMOS	TS	32	5	**EDI8M8128C80B**		
							† **EDI**	**(3388)**
						EDI8M8128C80C	**EDI**	**(3388)**
						MB841000-80	◊ **Fujitsu**	**(3414)**
						MB841000-80L	◊ **Fujitsu**	**(3414)**
		TTL	TS	32	5	MCM51LV8129F80		
							Motorola	
						MCM51L8129F80		
							Motorola	
	85 nsF	CMOS	TS	28	5	**SRM20100L-85**	**S-MOS**	**(3654)**
				32	5	**DPS128M8-85**	◊ **Dense-Pac**	**(3367)**
						EDI88128C85B		
							◊† **EDI**	**(3387)**
						EDI88128P85B		
							◊† **EDI**	**(3387)**
						EDI88130C85B		
							◊† **EDI**	**(3388)**
						EDI88130P85B		
							◊† **EDI**	**(3388)**
						S128K8-85CC	**Inova**	**(3477)**
						S128K8-85IC	**Inova**	**(3477)**
						S128K8-85MC †	**Inova**	**(3477)**
						IS62C1024L-85	**ISSI**	**(3510)**
						IS62C1024S-85	**ISSI**	**(3510)**
						MCM60M01-85		
							◊ Motorola	
						MCM60M01L-85		
							◊ Motorola	
						MCM60M01LL-85		
							◊ Motorola	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	
131072x8								
	85 nsF	CMOS	TS	32	5			(Cont'd)
						μPD431000-85		
							◊ NEC	
						CXK581001-85L		
							◊ Sony	
						TMS62828-85	TI	
						TMS62828L-85	TI	
			TTL	32	5	**S128K8L-85CC**	**Inova**	**(3477)**
						S128K8L-85IC	**Inova**	**(3477)**
						S128K8L-85MC †	**Inova**	**(3477)**
						S128K8T-85CC	**Inova**	**(3478)**
						S128K8T-85IC	**Inova**	**(3478)**
						S128K8T-85MC †	**Inova**	**(3478)**
						S128K8TL-85CC	**Inova**	**(3478)**
						S128K8TL-85IC	**Inova**	**(3478)**
						S128K8TL-85MC †	**Inova**	**(3478)**
						CXK581001M-85L	**Sony**	**(3658)**
						CXK581001P-85L	**Sony**	**(3658)**
		CMOSS Mix MOS	TS	32	5	**UM621024-85**	◊ **UMC**	**(3688)**
			TS	32	5	**TC551001-85**	**Toshiba**	**(3683)**
		TTL	TS	32	5	MCM60M01L-85L		
							Motorola	
	90 nsF	CMOS	TS	32	5	**EDI8M8128C90B**		
							† **EDI**	**(3388)**
						EDI8M8128C90C	**EDI**	**(3388)**
						EDI8M8128P90B		
							† **EDI**	**(3388)**
						EDI8M8128P90C	**EDI**	**(3388)**
						IDT71024L-90B		
							◊‡ IDT	
						IDT71024S-90B		
							◊‡ IDT	
	100	CMOS	TS	32	5	**658128-10**	◊ **Krueger**	**(3513)**
	100 nsF	CMOS	TS	28	5	**SRM20100L-100**	**S-MOS**	**(3654)**
				32	5	**DPS128M8-100**	◊ **Dense-Pac**	**(3367)**
						EDI8M8128C100B		
							† **EDI**	**(3388)**
						EDI8M8128C100C	**EDI**	**(3388)**
						EDI8M8128P100B		
							† **EDI**	**(3388)**
						EDI8M8128P100C	**EDI**	**(3388)**
						EDI88128C100B		
							◊† **EDI**	**(3387)**
						EDI88128LI00B	**EDI**	**(3387)**
						EDI88128P100B		
							◊† **EDI**	**(3387)**
						EDI88130C100B		
							◊† **EDI**	**(3388)**
						EDI88130P100B		
							◊† **EDI**	**(3388)**
						MB841000-10	◊ **Fujitsu**	**(3414)**
						MB841000-10L	◊ **Fujitsu**	**(3414)**
						HM658128-10	Hitachi	
						S128K8-100CC	**Inova**	**(3477)**
						S128K8-100IC	**Inova**	**(3477)**
						S128K8-100MC †	**Inova**	**(3477)**
						IS62C1024L-10	**ISSI**	**(3510)**
						IS62C1024S-10	**ISSI**	**(3510)**
						MCM518128-10		
							◊ Motorola	
						MCM60M01-10		
							◊ Motorola	
						MCM60M01L-10		
							◊ Motorola	
						MCM60M01LL-10		
							◊ Motorola	
						μPD431000-100		
							◊ NEC	
						BPS41288P	ROHM	
						CXK581000-10L		
							◊ Sony	
						CXK581000-10LL		
							◊ Sony	
						CXK581100-10L	◊ **Sony**	**(3659)**

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
131072x8							(Cont'd)
	100 nsF	CMOS	TS	32	5	**CXK581100-10LL**	◊ **Sony (3659)**
						TMS62828-10	TI
						TMS62828L-10	TI
						UM621024-10	◊ **UMC (3688)**
			TTL	32	5	**S128K8L-100CC**	**Inova (3477)**
						S128K8L-100IC	**Inova (3477)**
						S128K8L-100MC	† **Inova (3477)**
						S128K8T-100CC	**Inova (3477)**
						S128K8T-100IC	**Inova (3478)**
						S128K8T-100MC	† **Inova (3478)**
						S128K8TL-100CC	**Inova (3478)**
						S128K8TL-100IC	**Inova (3478)**
						S128K8TL-100MC	† **Inova (3478)**
						CXK581000M-10L	**Sony (3657)**
						CXK581000P-10L	**Sony (3657)**
		Mix MOS					
			TS	32	5	**TC551001-10**	**Toshiba (3682)**
		NVRAM	TS	32	5	DS1245-100	Dallas
		TTL	TS	32	5	MCM51LV8129F10	Motorola
						MCM51L8129F10	Motorola
						MCM518129F10	Motorola
						MCM60M01L-10L	Motorola
	120 nsF	CMOS	TS	32	5	**DPS128M8-120**	◊ **Dense-Pac (3367)**
						EDI8M8128C120B	† **EDI (3388)**
						EDI8M8128C120C	**EDI (3388)**
						EDI8M8128P120B	† **EDI (3388)**
						EDI8M8128P120C	**EDI (3388)**
						EDI88128C120B	◊† **EDI (3387)**
						EDI88128P120B	◊† **EDI (3387)**
						EDI88130C120B	† **EDI (3388)**
						EDI88130P120B	◊† **EDI (3388)**
						MB841000-12	◊ **Fujitsu (3414)**
						MB841000-12L	◊ **Fujitsu (3414)**
						HM658128-12	Hitachi
						S128K8-120IC	**Inova (3477)**
						S128K8-120MC	† **Inova (3477)**
						μPD431000-120	◊ NEC
						CXK581000-12L	◊ Sony
						CXK581000-12LL	◊ Sony
						CXK581100-12L	◊ **Sony (3659)**
						CXK581100-12LL	◊ **Sony (3659)**
						TMS62828-12	TI
						TMS62828L-12	TI
						WS128K8-120	White Tech
			TTL	32	5	**S128K8L-120IC**	**Inova (3477)**
						S128K8L-120MC	† **Inova (3477)**
						S128K8T-120IC	**Inova (3478)**
						S128K8T-120MC	† **Inova (3478)**
						S128K8TL-120IC	**Inova (3478)**
						S128K8TL-120MC	† **Inova (3478)**
						CXK581000M-12L	**Sony (3657)**
						CXK581000P-12L	**Sony (3657)**
		NVRAM	TS	32	5	DS1245-120	Dallas

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
131072x8							(Cont'd)
	150 nsF	CMOS	TS	32	5	**DPS128M8-150**	◊† **Dense-Pac (3367)**
						EDI8M8128C150B	† **EDI (3388)**
						EDI8M8128C150C	**EDI (3388)**
						EDI8M8128P150B	† **EDI (3388)**
						EDI8M8128P150C	**EDI (3388)**
						MBM27C1001	◊ Fujitsu
						CXK581000-15L	◊ Sony
						CXK581000-15LL	◊ Sony
						CXK581100-15L	◊ **Sony (3659)**
						CXK581100-15LL	◊ **Sony (3659)**
			TTL	32	5	MH12808TNA-15	Mitsubishi
						CXK581000M-15L	**Sony (3657)**
						CXK581000P-15L	**Sony (3657)**
	170 nsF	CMOS	TS	32	5	**DPS128M8-170**	◊† **Dense-Pac (3367)**
	180 nsF	CMOS	TS	48	5	HM91M2-8	† Harris
	200 nsF	CMOS	TS	32	5	**DPS128M8-200**	◊† **Dense-Pac (3367)**
						X28C010	† **Xicor (3748)**
131072x8, Pseudo							
	80 nsF	CMOS	TS	32	5	MCM51LV8128-80	◊ Motorola
						MCM51LV8129-80	◊ Motorola
						MCM51L8128-80	◊ Motorola
						MCM51L8129-80	◊ Motorola
	100 nsF	CMOS	TS	32	5	MCM51LV8128-10	◊ Motorola
						MCM51LV8129-10	◊ Motorola
						MCM51L8128-10	◊ Motorola
						MCM51L8129-10	◊ Motorola
						MCM518129-10	◊ Motorola
131072x9							
	20 nsF	CMOS	TS	32	5	VT62A9128-20	◊ VLSI Tech
131072x24							
	35 nsF	CMOS	TS	66	5	**DPS128X24AV3-35**	**Dense-Pac (3377, 3380)**
	45 nsF	CMOS	TS	66	5	**DPS128X24AV3-45**	**Dense-Pac (3377, 3380)**
	55 nsF	CMOS	TS	66	5	**DPS128X24AV3-55**	**Dense-Pac (3377, 3380)**
	70 nsF	CMOS	TS	66	5	**DPS128X24AV3-70**	**Dense-Pac (3377, 3380)**
131072x32							
	120 nsF	CMOS	TS	76	5	M4194	White Tech
262144x1							
	15 nsF	BiCMOS	ECL	24	−4.5	MBM100C500-15	◊ Fujitsu
					−5.2	MBM10C500-15	◊ Fujitsu
						MBM101C500-15	◊ Fujitsu
			OE	24	−4.5	μPD100500-15	NEC
					−5.2	μPD10500-15	NEC
			TS	24	5	MB82B81-15	Fujitsu
			TTL	24	5	MB82B81	◊ Fujitsu
		CMOS	TS	24	5	MCM6207-15	◊ Motorola
		ECL 10K	OE	24	−5.2	NM5100-15	◊ National

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x1								
	15 nsF						(Cont'd)	
		ECL 100K						
			OE	24	−4.5	NM100500-15	◊ National	
		TTL	TS	24	5	M5M5257B-15	◊ Mitsubishi	
	18	ECL 100K						
			OE	24	−4.5	NM100500-18	◊ National	
	18 nsF	ECL 10K	OE	24	−5.2	NM5100-18	◊ National	
	20 nsF	BiCMOS	OE	24	−4.5	μPD100500-20	NEC	5
					−5.2	μPD10500-20	NEC	
			TS	24	5	MB82B81-20	Fujitsu	
						μPD46251-20	◊ NEC	
						TMS6707-20	TI	
		CMOS	TS	24	5	MT5C2561-20	MicronTech	10
						MCM6207-20	◊ Motorola	
						PDM41257L-20	◊ Paradigm	
						PDM41257S-20	◊ Paradigm	
						PDM41257S-45B	◊† Paradigm	
						P4C1257-20C	◊ Performance	15
						P4C1257L-20C	◊ Performance	
		TTL	TS	24	5	M5M5257B-20	◊ Mitsubishi	
	25 nsF	BiCMOS	TS	24	5	μPD46251-25	◊ NEC	
						TMS6707-25	TI	
		CMOS	TS	24	5	CY7C197-25C	◊ Cypress	20
						MB81C81A-25	Fujitsu	
						IDT71257L-25	◊‡ IDT	
						IDT71257S-25	◊‡ IDT	
						MCM6207-25	Motorola	
						PDM41257L-25	◊ Paradigm	25
						PDM41257L-25B	◊† Paradigm	
						PDM41257S-25	◊ Paradigm	
						PDM41257S-25B	◊† Paradigm	
						P4C1257-25C	◊ Performance	
						P4C1257L-25C	◊ Performance	30
				28	5	**EDI81257C25C**	**EDI (3387)**	
		TTL	TS	28	5	KM61257-25	Samsung	
						KM61257L-25	Samsung	
	30 nsF	CMOS	TS	24	5	P4C1257-30C	◊ Performance	
						P4C1257-30M	◊† Performance	35
						P4C1257L-30C	◊ Performance	
	35 nsF	CMOS	TS	24	5	CY7C197-35M	◊† Cypress	
						EDI81256C35B	**◊† EDI (3386)**	
						EDI81256P35B	**◊† EDI (3386)**	
						MB81C81A-35	Fujitsu	40
						IDT71257L-35	◊‡ IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x1								
	35 nsF	CMOS	TS	24	5		(Cont'd)	
						IDT71257S-35	◊‡ IDT	
						MCM6207-35	Motorola	
						μPD43251-35	◊ NEC	
						PDM41257L-35	◊ Paradigm	45
						PDM41257L-35B	◊† Paradigm	
						PDM41257S-35	◊ Paradigm	
						PDM41257S-35B	◊† Paradigm	
						P4C1257-35C	◊ Performance	
						P4C1257-35M	◊† Performance	50
						P4C1257L-35C	◊ Performance	
						P4C1257L-35M	◊† Performance	
						LH52251-35	Sharp	
						CXK51256P-35	Sony	
				28	5	CY7C197-35C	◊ Cypress	55
						EDI81257C35C	**EDI (3387)**	
		TTL	OC	24	5	MB81C81A	Fujitsu	
			TS	24	5	MT5C2561-35	◊ MicronTech	
				28	5	KM61257-35	Samsung	
	45 nsF	CMOS	TS	24	5	CY7C197-45C	◊ Cypress	60
						CY7C197-45M	◊† Cypress	
						EDI81256C45B	**◊† EDI (3386)**	
						EDI81256P45B	**◊† EDI (3386)**	
						MB81C81A-45	Fujitsu	
						IDT71257L-45	IDT	65
						IDT71257L-45B	† IDT	
						IDT71257S-45	IDT	
						IDT71257S-45B	† IDT	
						μPD43251-45	◊ NEC	
						PDM41257L-45	◊ Paradigm	70
						PDM41257L-45B	◊† Paradigm	
						PDM41257S-45	◊ Paradigm	
						P4C1257-45M	◊† Performance	
						P4C1257L-45M	◊† Performance	
						LH52251-45	Sharp	75
						CXK51256P-45	Sony	
		TTL	TS	24	5	MT5C2561-45	◊ MicronTech	
				28	5	KM61257-45	Samsung	
	50 nsF	CMOS	TS	24	5	M61256H-05	‡ AT&T	
	55 nsF	CMOS	TS	24	5	**EDI81256C55B**	**◊† EDI (3386)**	80
						EDI81256P55B	**◊† EDI (3386)**	
						IDT71257L-55	IDT	
						IDT71257L-55B	† IDT	
						IDT71257S-55	IDT	
						IDT71257S-55B	† IDT	85
						μPD43251-55	◊ NEC	
							(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x1							(Cont'd)	
	55 nsF	CMOS	TS	24	5	PDM41257L-55B	◊† Paradigm	
						PDM41257S-55B	◊† Paradigm	
						P4C1257-55M	◊† Performance	
						P4C1257L-55M	◊† Performance	
						CXK51256P-55	Sony	5
	70 nsF	CMOS	TS	24	5	IDT71257L-70B	† IDT	
						IDT71257S-70B	† IDT	
	100 nsF	NMOS	TS	16	5	MT1259-10/883C	◊† MicronTech	
	120 nsF	NMOS	TS	16	5	MT1259-12/883C	◊† MicronTech	
	150 nsF	NMOS	TS	16	5	MT1259-15/883C	◊† MicronTech	10
	200 nsF	NMOS	TS	16	5	MT1259-20/883C	◊† MicronTech	
262144x4								
	20 nsF	CMOS	TS	28	5	**EDI84258C20C**	**EDI (3388)**	
	25 nsF	BiCMOS	TS	28	5	**MB82B005-25**	**◊ Fujitsu (3416)**	
			TTL	28	5	MB82B006	◊ Fujitsu	
				32	5	MB82B005	◊ Fujitsu	15
		CMOS	TS	28	5	**EDI84256L25B**	**† EDI (3388)**	
						EDI84256P25B	**† EDI (3388)**	
						EDI84258L25C	**EDI (3388)**	
						EDI84258P25C	**EDI (3388)**	
						FS256K4-25CC	Inova	20
						MT5C1005-25	† MicronTech	
			TTL	32	5	M5M51004-25	◊ Mitsubishi	
	35 nsF	BiCMOS	TS	28	5	**MB82B005-35**	**◊ Fujitsu (3416)**	
		CMOS	TS	24	5	VT624256L-35	◊ VLSI Tech	
				28	5	**EDI84256C35B**	**◊† EDI (3388)**	25
						EDI84258C35C	**EDI (3388)**	
						HM624256-35	◊ Hitachi	
						HM624256L-35	◊ Hitachi	
						FS256K4-35CC	Inova	
						FS256K4-35IC	Inova	30
						FS256K4-35MC	† Inova	
						MT5C1005-35	† MicronTech	
						TMS62456-35	TI	
						VT624256-35	◊ VLSI Tech	
				32	5	HM624257-35	◊ Hitachi	35
						HM624257L-35	◊ Hitachi	
						TMS62457-35	TI	
						TMS62457L-35	TI	
			TTL	32	5	M5M51004-35	◊ Mitsubishi	
	45 nsF	CMOS	TS	24	5	VT624256L-45	◊ VLSI Tech	40
				28	5	**EDI84256C45B**	**◊† EDI (3388)**	
						HM624256-45	◊ Hitachi	
						HM624256L-45	◊ Hitachi	
						FS256K4-45CC	Inova	
						FS256K4-45IC	Inova	45
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x4							(Cont'd)	
	45 nsF	CMOS	TS	28	5	FS256K4-45MC	† Inova	
						IDT71028L-45	◊‡ IDT	
						IDT71028S-45	◊‡ IDT	
						TMS62456-45	TI	
						VT624256-45	◊ VLSI Tech	50
				32	5	HM624257-45	◊ Hitachi	
						HM624257L-45	◊ Hitachi	
						TMS62457-45	TI	
						TMS62457L-45	TI	
			TTL	32	5	M5M51004-45	◊ Mitsubishi	55
	55 nsF	CMOS	TS	28	5	**EDI84256C55B**	**◊† EDI (3388)**	
						EDI84256P55B	**EDI (3388)**	
						EDI84258L55C	**EDI (3388)**	
						EDI84258P55C	**EDI (3388)**	
						EDI8426L55B	† EDI	60
						EDI8464L55B	**EDI (3388)**	
						IDT71028L-55	◊‡ IDT	
						IDT71028L-55B	◊‡ IDT	
						IDT71028S-55	◊‡ IDT	
						IDT71028S-55B	◊‡ IDT	65
			TTL	32	5	M5M51004-55	Mitsubishi	
	70 nsF	CMOS	TS	28	5	**EDI84256C70B**	**◊† EDI (3388)**	
						IDT71028L-70	◊‡ IDT	
						IDT71028L-70B	◊‡ IDT	
						IDT71028S-70	◊‡ IDT	70
						IDT71028S-70B	◊‡ IDT	
	90 nsF	CMOS	TS	28	5	IDT71028L-90B	◊‡ IDT	
						IDT71028S-90B	◊‡ IDT	
	100 nsF	CMOS	TS	20	5	MT4C4256-10/883C	◊† MicronTech	
	120 nsF	CMOS	TS	20	5	MT4C4256-12/883C	◊† MicronTech	75
	150 nsF	CMOS	TS	20	5	MT4C4256-15/883C	◊† MicronTech	
262144x8								
	100 nsF	CMOS	TS	35	5	**DPS256P8-100**	**† Dense-Pac (3376)**	
	120 nsF	CMOS	TS	32	5	WS256K8-120	White Tech	
	150 nsF	CMOS	TS	40	5	MBM27C4096	◊ Fujitsu	
262144x16								
	55 nsF	CMOS	TS	48	5	**S256K16-55CC**	**Inova (3482)**	80
						S256K16-55IC	**Inova (3482)**	
						S256K16L-55CC	**Inova (3482)**	
						S256K16L-55IC	**Inova (3482)**	
	70 nsF	CMOS	TS	48	5	**S256K16-70CC**	**Inova (3482)**	
						S256K16-70IC	**Inova (3482)**	85
						S256K16-70MC	**† Inova (3482)**	
						S256K16L-70CC	**Inova (3482)**	
						S256K16L-70IC	**Inova (3482)**	
						S256K16L-70MC	**† Inova (3482)**	
	85 nsF	CMOS	TS	48	5	**S256K16-85IC**	**Inova (3482)**	90
						S256K16-85MC	**† Inova (3482)**	
						S256K16L-85CC	**Inova (3482)**	
						S256K16L-85MC	**† Inova (3482)**	
						S256L16L-85IC	Inova	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—General Purpose (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x16							(Cont'd)	
	100 nsF	CMOS	TS	48	5	**S256K16-100IC**	**Inova (3482)**	
						S256K16-100MC †	**Inova (3482)**	
						S256K16L-100CC	**Inova (3482)**	
						S256K16L-100IC	**Inova (3482)**	
						S256K16L-100MC †	**Inova (3482)**	5
	120 nsF	CMOS	TS	48	5	**S256K16-120IC**	**Inova (3482)**	
						S256K16-120MC †	**Inova (3482)**	
						S256K16L-120MC †	**Inova (3482)**	
				76	5	M4194	White Tech	
	100 nsf	CMOS	TS	48	5	**S256K16-100CC**	**Inova (3482)**	10
	120 nsF	CMOS	TS	48	5	**S256K16L-120IC**	**Inova (3482)**	
524288x8								
	45 nsF	CMOS	TS	32	5	**S512K8-45CC**	**Inova (3481)**	
						S512K8L-45CC	**Inova (3481)**	
	55 nsF	CMOS	TS	32	5	**S512K8-55CC**	**Inova (3481)**	
						S512K8-55MC †	**Inova (3481)**	15
						S512K8L-55CC	**Inova (3481)**	
						S512K8L-55IC	**Inova (3481)**	
						S512K8L-55MC †	**Inova (3481)**	
	70 nsF	CMOS	TS	32	5	**S512K8-70CC**	**Inova (3481)**	
						S512K8-70IC	**Inova (3481)**	20
						S512K8-70MC †	**Inova (3481)**	
						S512K8L-70CC	**Inova (3481)**	
						S512K8L-70IC	**Inova (3481)**	
						S512K8L-70MC †	**Inova (3481)**	
	85 nsF		TS	32	5	**DPS512S8AN-85**	**Dense-Pac (3367, 3376, 3380)**	25
	120 nsF	CMOS	TS	76	5	M4194	White Tech	
	150 nsF	CMOS	TS	32	5	MBM27C4001	◊ Fujitsu	
1048576x1								
	15 nsF	BiCMOS	ECL	28	-5.2	MBM10C510-15	◊ Fujitsu	
						MBM101C510-15	◊ Fujitsu	
	25 nsF	BiCMOS	TS	32	5	**MB82B001-25**	**◊ Fujitsu (3415)**	30
			TTL	32	5	MB82B001	◊ Fujitsu	
		CMOS	TS	28	5	FS1M1-25CC	Inova	
						S1M1L-25C	**Inova (3480)**	
						MT5C1001-25	† MicronTech	
			TTL	32	5	M5M51001-25	◊ Mitsubishi	35
	35 nsF	BiCMOS	TS	32	5	**MB82B001-35**	**◊ Fujitsu (3415)**	
		CMOS	TS	28	5	**EDI811024C35B**	**◊† EDI (3389)**	
						FS1M1-35CC	Inova	
						FS1M1-35IC	Inova	
						FS1M1-35MC †	Inova	40
						S1M1L-35C	**Inova (3480)**	
						S1M1L-35I	**Inova (3480)**	
						S1M1L-35M †	**Inova (3480)**	
						MT5C1001-35	† MicronTech	
			TTL	32	5	M5M51001-35	◊ Mitsubishi	45
	45 nsF	CMOS	TS	28	5	**EDI811024C45B**	**◊† EDI (3389)**	
						FS1M1-45CC	Inova	
						FS1M1-45IC	Inova	
						FS1M1-45MC †	Inova	
						S1M1L-45C	**Inova (3480)**	50
						S1M1L-45I	**Inova (3480)**	
						S1M1L-45M †	**Inova (3480)**	
						IDT71027L-45	◊‡ IDT	
						IDT71027S-45	◊‡ IDT	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x1							(Cont'd)	
	45 nsF	CMOS	TTL	32	5	M5M51001-45	◊ Mitsubishi	55
	55 nsF	CMOS	TS	28	5	**EDI811024C55B**	**◊† EDI (3389)**	
						IDT71027L-55	◊‡ IDT	
						IDT71027L-55B	◊‡ IDT	
						IDT71027S-55	◊‡ IDT	
						IDT71027S-55B	◊‡ IDT	60
			TTL	32	5	M5M51001-55	◊ Mitsubishi	
	60 nsF	CMOS	TS	18	5	AAA1M202-06	NMB	
	70 nsF	CMOS	TS	18	5	AAA1M202-07	NMB	
				28	5	**EDI811024C70B**	**◊† EDI (3389)**	
						IDT71027L-70	◊‡ IDT	65
						IDT71027L-70B	◊‡ IDT	
						IDT71027S-70	◊‡ IDT	
						IDT71027S-70B	◊‡ IDT	
	80 nsF	CMOS	TS	18	5	AAA1M202-08	NMB	
	90 nsF	CMOS	TS	28	5	IDT71027L-90B	◊‡ IDT	70
						IDT71027S-90B	◊‡ IDT	
	100 nsF	CMOS	TS	18	5	MT4C1024C-10/883C	◊† MicronTech	
						AAA1M202-10	NMB	
	120 nsF	CMOS	TS	18	5	MT4C1024C-12/883C	◊† MicronTech	
	150 nsF	CMOS	TS	18	5	MT4C1024C-15/883C	◊† MicronTech	75
262144x16								
	85 nsF	CMOS	TS	48	5	**S256K16-85CC**	**Inova (3482)**	
131072x8								
	70 nsF	CMOS	TS	28	5	**SRM20100L-70**	**S-MOS (3654)**	
262144x8								
	100 nsF	CMOS	TS	32	5	**BPS81288P**	**ROHM (3584)**	

Static—Modules

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2x8192x15								
	20 nsF		TTL	52	5	P4C92816	◊ Performance	
2x8192x16								
	20 nsF		TTL	52	5	P4C91616	◊† Performance	80
						P4C92815	◊ Performance	
2x8192x60								
	20 nsF		TTL		5	PMC92860	◊ Performance	
4096x8	25 nsF	CMOS	TS	24	5	DPS88H04-25	◊‡ Dense-Pac	
	35 nsF	CMOS	TS	24	5	DPS88H04-35	◊‡ Dense-Pac	
	45 nsF	CMOS	TS	24	5	DPS88H04-45	◊‡ Dense-Pac	85
	55 nsF	CMOS	TS	24	5	DPS88H04-55	◊‡ Dense-Pac	
4096x16								
	25 nsF	CMOS	TS	36	5	DPS4X16-25	‡ Dense-Pac	
	35 nsF	CMOS	TS	36	5	DPS4X16-35	‡ Dense-Pac	
	45 nsF	CMOS	TS	36	5	DPS4X16-45	‡ Dense-Pac	
	55 nsF	CMOS	TS	36	5	DPS4X16-55	‡ Dense-Pac	90
8192x4	25 nsF	CMOS	TS	22	5	DPS84H08-25	◊‡ Dense-Pac	
	45 nsF	CMOS	TS	22	5	DPS84H08-45	◊‡ Dense-Pac	

(Continued)

† Military Temperature Range (-55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x4						(Cont'd)		
	55 nsF	CMOS	TS	22	5	DPS84H08-55	◊‡ Dense-Pac	
	70 nsF	CMOS	TS	22	5	DPS84H08-70	◊‡ Dense-Pac	
	85 nsF	CMOS	TS	22	5	DPS84H08-85	◊‡ Dense-Pac	
8192x8	25 nsF	CMOS	TS	28	5	DPS88H08-25	◊‡ Dense-Pac	
	35 nsF	CMOS	TS	28	5	DPS88H08-35	◊‡ Dense-Pac	5
	45 nsF	CMOS	TS	28	5	DPS88H08-45	◊‡ Dense-Pac	
	55 nsF	CMOS	TS	28	5	DPS88H08-55	◊‡ Dense-Pac	
	70 nsF	2-port	TS	58	5	IDT7M134S-70	IDT	
		2-port slave	TS	58	5	IDT7M144S-70	IDT	
	90 nsF	2-port	TS	58	5	IDT7M134S-90 IDT7M134S-90B	IDT † IDT	10
		2-port slave	TS	58	5	IDT7M144S-90 IDT7M144S-90B	IDT † IDT	
	100 nsF	CMOS	TS	28	5	HM8808AS-8 HM8808AS-9 HM8808S-8 HM8808S-9	† Harris Harris † Harris Harris	15
	120 nsF	CMOS	TS	28	5	HM8808AB-8 HM8808B-8 HM8808B-9	† Harris † Harris Harris	20
		2-port	TS	58	5	IDT7M134S-120B	† IDT	
		2-port slave	TS	58	5	IDT7M144S-120B	† IDT	
	140 nsF	2-port	TS	58	5	IDT7M134S-140B	† IDT	
		2-port slave	TS	58	5	IDT7M144S-140B	† IDT	
	150 nsF	CMOS	TS	28	5	HM8808A-8 HM8808A-9	† Harris Harris	25
	350 nsF	CMOS	TS	40	5	HM5-6564-2	Harris	
	400 nsF	CMOS	TS	40	5	HM6564-8 HM6564-9	† Harris Harris	
	450 nsF	CMOS	TS	40	5	HM6564-5	Harris	30
8192x16								
	25 nsF	CMOS	TS	40	5	**DPS8X16A-25**	**† Dense-Pac (3376, 3381)**	
	35 nsF	CMOS	TS	40	5	**DPS8M628-35** **DPS8X16A-35**	**◊‡ Dense-Pac (3377)** **† Dense-Pac (3376, 3381)**	
	45 nsF		TS	40	5	**DPS8M628**	**Dense-Pac (3377)**	
		CMOS	TS	40	5	**DPS8M628-45** **DPS8X16A-45**	**◊‡ Dense-Pac (3377)** **† Dense-Pac (3376, 3381)**	35
	50 nsF		TS	40	5	IDT8MP628-50 IDT8M628S-50	IDT IDT	
	55 nsF	CMOS	TS	40	5	**DPS8M628-55** **DPS8X16A-55**	**◊‡ Dense-Pac (3377)** **† Dense-Pac (3376, 3381)**	40
	60 nsF		TS	40	5	IDT8M628S-60 IDT8M628S-60B	IDT † IDT	
	70 nsF		TS	40	5	IDT8M628S-70 IDT8M628S-70B	IDT † IDT	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x16						(Cont'd)		
	70 nsF	CMOS	TS	40	5	**DPS8M628-70** **DPS8X16A-70**	**◊‡ Dense-Pac (3377)** **† Dense-Pac (3376, 3381)**	45
	85 nsF		TS	40	5	IDT8M628S-85 IDT8M628S-85B	IDT † IDT	
		CMOS	TS	40	5	**DPS8M628-85** **DPS8X16A-85**	**◊‡ Dense-Pac (3377)** **† Dense-Pac (3376, 3381)**	50
	100 nsF		TS	40	5	IDT8M628S-100B	† IDT	
		CMOS	TS	40	5	**DPS8M628-100** **DPS8X16A-10**	**◊‡ Dense-Pac (3377)** **† Dense-Pac (3376, 3381)**	
	120 nsF	CMOS	TS	40	5	**DPS8X16A-12**	**† Dense-Pac (3376, 3381)**	
	150 nsF	CMOS	TS	40	5	**DPS8M628-150**	**◊‡ Dense-Pac (3377)**	55
	200 nsF	CMOS	TS	40	5	**DPS8M628-200**	**◊‡ Dense-Pac (3377)**	
8192x32								
	25 nsF	CMOS	TS	66	5	**DPS832V-25**	**† Dense-Pac (3376, 3381)**	
	35 nsF		TS	66	5	**DPS832V-35**	**‡ Dense-Pac (3376, 3381)**	
	55 nsF		TS	66	5	**DPS832V-55**	**‡ Dense-Pac (3376, 3381)**	
	70 nsF		TS	66	5	**DPS832V-70**	**‡ Dense-Pac (3376, 3381)**	60
	100 nsF		TS	66	5	**DPS832V-100**	**‡ Dense-Pac (3376, 3381)**	
	120 nsF		TS	66	5	**DPS832V-120**	**‡ Dense-Pac (3376, 3381)**	
	150 nsF		TS	66	5	**DPS832V-150**	**‡ Dense-Pac (3376, 3381)**	
16384x4								
	350 nsF	CMOS	TS	40	5	HM5-6564	Harris	
16384x8								
	25 nsF	CMOS	TS	28	5	DPS88H16-25	◊‡ Dense-Pac	65
				36	5	DPS129-25	◊‡ Dense-Pac	
	35 nsF	CMOS	TS	28	5	DPS88H16-35	◊‡ Dense-Pac	
				36	5	DPS129-35	◊‡ Dense-Pac	
	45 nsF	CMOS	TS	28	5	DPS88H16-45	◊‡ Dense-Pac	
				36	5	DPS129-45	◊‡ Dense-Pac	70
	55 nsF	CMOS	TS	28	5	DPS88H16-55	◊‡ Dense-Pac	
				36	5	DPS129-55	◊‡ Dense-Pac	
	70 nsF	CMOS	TS	28	5	HM8816H-9	Harris	
		2-port	TS	58	5	IDT7M135S-70	IDT	
		2-port slave	TS	58	5	IDT7M145S-70	IDT	75
	90 nsF	2-port	TS	58	5	IDT7M135S-90 IDT7M135S-90B	IDT † IDT	
		2-port slave	TS	58	5	IDT7M145S-90 IDT7M145S-90B	IDT † IDT	
	120 nsF	2-port	TS	58	5	IDT7M135S-120B	† IDT	80
		2-port slave	TS	58	5	IDT7M145S-120B	† IDT	
	140 nsF	2-port	TS	58	5	IDT7M135S-140B	† IDT	
		2-port slave	TS	58	5	IDT7M145S-140B	† IDT	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x16							
	12 nsF	CMOS	TS	36	5	CYM1611-12	Cypress
				40	5	CYM1610-12	Cypress
	15 nsF		TTL	52	5	P4C9157	◊† Performance
	20 nsF	CMOS	TS	38	5	**DPS16X16-20**	**‡ Dense-Pac (3376)**
	25 nsF		TS	40	5	IDT7M656L-25	IDT
		CMOS	TS	36	5	EDH816H16C-25C	EDI
						EDH816H16C-25MHR	† EDI
				38	5	**DPS16X16-25**	**‡ Dense-Pac (3376)**
				40	5	DPS257-25	◊‡ Dense-Pac
				66	5	**DPS832V-25**	**† Dense-Pac (3376, 3381)**
	30 nsF	CMOS	TS	36	5	MB85402-30	Fujitsu
	35 nsF		TS	40	5	IDT7M656L-35	IDT
						IDT7M656L-35B	† IDT
				66	5	**DPS832V-35**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	36	5	EDH816H16C-35MHR	† EDI
				38	5	**DPS16X16-35**	**‡ Dense-Pac (3376)**
				40	5	DPS257-35	◊‡ Dense-Pac
						DPS8M656-35	**◊‡ Dense-Pac (3377)**
	45 nsF		TS	40	5	**DPS8M656**	**Dense-Pac (3377)**
		CMOS	TS	36	5	EDH816H16C-45MHR	† EDI
				38	5	**DPS16X16-45**	**‡ Dense-Pac (3376)**
				40	5	DPS257-45	◊‡ Dense-Pac
						DPS8M656-45	**◊‡ Dense-Pac (3377)**
	50 nsF		TS	40	5	IDT8MP656-50	IDT
	55 nsF		TS	66	5	**DPS832V-55**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	40	5	DPS257-55	◊‡ Dense-Pac
						DPS8M656-55	**◊‡ Dense-Pac (3377)**
			TTL	40	5	IDT7M656L-55B	† IDT
	60 nsF		TS	40	5	IDT8M656S-60B	† IDT
	70 nsF		TS	40	5	IDT8M656S-70B	† IDT
				66	5	**DPS832V-70**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	40	5	**DPS8M656-70**	**◊‡ Dense-Pac (3377)**
	85 nsF		TS	40	5	IDT8M656S-85B	† IDT
		CMOS	TS	40	5	**DPS8M656-85**	**◊‡ Dense-Pac (3377)**
	100 nsF		TS	40	5	IDT8M656S-100B	† IDT
				66	5	**DPS832V-100**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	40	5	**DPS8M656-100**	**◊‡ Dense-Pac (3377)**
	120 nsF		TS	66	5	**DPS832V-120**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	40	5	**DPS8M656-120**	**◊‡ Dense-Pac (3377)**
	150 nsF		TS	66	5	**DPS832V-150**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	40	5	**DPS8M656-150**	**◊‡ Dense-Pac (3377)**
16384x32							
	15 nsF	CMOS	TS	64	5	CYM1821-15	Cypress
				88	5	CYM1822-15	Cypress
	17 nsF	CMOS	TS	64	5	PMC1632-17M	† Performance
	20 nsF	CMOS	TS	64	5	PMC1632-20M	† Performance

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x32							(Cont'd)
	25 nsF	CMOS	TS	64	5	PMC1632-25M	† Performance
	30	CMOS	TS	64	5	MB85414-30	Fujitsu
	35 nsF	CMOS	TS	64	5	PMC1632-35M	† Performance
	40 nsF	CMOS	TS	64	5	MB85414-40	Fujitsu
16384x36							
	30 nsF	CMOS	TS	70	5	MB85415-30	Fujitsu
	40 nsF	CMOS	TS	70	5	MB85415-40	Fujitsu
16384x60							
	20 nsF		TTL		5	PMC91660	◊ Performance
16384x68							
	25 nsF	CMOS	TS	104	5	CYM1910-25	Cypress
						CYM1911-25	Cypress
32768x8							
	10 nsF	CMOS	TS	28	5	CYM1400-10	Cypress
	20 nsF	CMOS	TS	36	5	**DPS16X16-20**	**‡ Dense-Pac (3376)**
						DPS16X17-20	‡ Dense-Pac
	25 nsF		TS	40	5	IDT7M656L-25	IDT
		CMOS	TS	36	5	DPS16X17-25	‡ Dense-Pac
				40	5	DPS257-25	◊‡ Dense-Pac
				66	5	**DPS832V-25**	**† Dense-Pac (3376, 3381)**
	35 nsF		TS	40	5	IDT7M656L-35	IDT
						IDT7M656L-35B	† IDT
				66	5	**DPS832V-35**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	28	5	DPS41257-35	◊‡ Dense-Pac
				36	5	**DPS16X16-35**	**‡ Dense-Pac (3376)**
						DPS16X17-35	‡ Dense-Pac
				40	5	DPS257-35	◊‡ Dense-Pac
	40 nsF		TS	28	5	IDT7M856S-40	IDT
	45 nsF		TS	28	5	IDT8M856L-45	IDT
		CMOS	TS	28	5	DPS41257-45	◊‡ Dense-Pac
				36	5	**DPS16X16-45**	**‡ Dense-Pac (3376)**
						DPS16X17-45	‡ Dense-Pac
				40	5	DPS257-45	◊‡ Dense-Pac
	50 nsF		TS	28	5	IDT7M856S-50	IDT
						IDT8M856L-50	IDT
	55 nsF		TS	28	5	IDT7M856S-55B	† IDT
						IDT8M856L-55B	† IDT
				66	5	**DPS832V-55**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	28	5	DPS41257-55	◊‡ Dense-Pac
				36	5	DPS16X17-55	‡ Dense-Pac
	60 nsF		TS	28	5	IDT8M856L-60	IDT
		CMOS	TTL	28	5	IDT7M856S-60	IDT
	65 nsF		TS	28	5	IDT7M856S-65B	† IDT
						IDT8M856L-65B	† IDT
	70 nsF		TS	28	5	IDT8M856L-70	IDT
				66	5	**DPS832V-70**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	28	5	DPS41257-70	◊‡ Dense-Pac

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
32768x8							(Cont'd)
	75 nsF		TS	28	5	IDT8M856L-75B	† IDT
		CMOS	TTL	28	5	IDT7M856S-75B	† IDT
	85 nsF		TS	28	5	IDT8M856L-85	IDT
		CMOS	TS	28	5	DPS41257-85	◊‡ Dense-Pac
	90 nsF		TS	28	5	IDT8M856L-90B	† IDT
		CMOS	TTL	28	5	IDT7M856S-90B	† IDT
	100 nsF		TS	28	5	IDT8M856L-100B	† IDT
				66	5	**DPS832V-100**	**‡ Dense-Pac (3376, 3381)**
		CMOS	TS	28	5	DPS41257-100	◊‡ Dense-Pac
						IDT7M856S-100B	† IDT
	120 nsF		TS	66	5	**DPS832V-120**	**‡ Dense-Pac (3376, 3381)**
	150 nsF		TS	66	5	**DPS832V-150**	**‡ Dense-Pac (3376, 3381)**
	180 nsF	CMOS	TS	28	5	HM8832-8	† Harris
						HM8832-9	Harris
						HM8832B-8	† Harris
						HM8832B-9	Harris
32768x9							
	14 nsF		TTL	32	5	P4C91589	◊† Performance
32768x16							
	25 nsF	CMOS	TS	40	5	**DPS32X16A-25**	**† Dense-Pac (3376, 3380)**
	35 nsF	CMOS	TS	40	5	**DPS32X16A-35**	**† Dense-Pac (3376, 3380)**
						DPS8M612-35	**◊† Dense-Pac (3377)**
						MT85C1632	MicronTech
	45 nsF		TS	40	5	**DPS8M612**	**Dense-Pac (3377)**
		CMOS	TS	40	5	**DPS32X16A-45**	**† Dense-Pac (3376, 3380)**
						DPS8M612-45	**◊† Dense-Pac (3377)**
	55 nsF	CMOS	TS	40	5	**DPS32X16A-55**	**† Dense-Pac (3376, 3380)**
						DPS8M612-55	**◊‡ Dense-Pac (3377)**
	60 nsF		TS	40	5	IDT8MP612	IDT
						IDT8M612	IDT
	70 nsF	CMOS	TS	40	5	**DPS32X16A-70**	**† Dense-Pac (3376, 3380)**
						DPS8M612-70	**◊‡ Dense-Pac (3377)**
	75 nsF		TS	40	5	IDT8M612-B	† IDT
	85 nsF	CMOS	TS	40	5	**DPS32X16A-85**	**† Dense-Pac (3376, 3380)**
						DPS8M612-85	**◊‡ Dense-Pac (3377)**
	100 nsF	CMOS	TS	40	5	**DPS32X16A-10**	**† Dense-Pac (3376, 3380)**
						DPS8M612-100	**◊‡ Dense-Pac (3377)**
	120 nsF	CMOS	TS	40	5	**DPS32X16A-12**	**† Dense-Pac (3376, 3380)**
						DPS8M612-120	**◊‡ Dense-Pac (3377)**
	150 nsF	CMOS	TS	40	5	**DPS8M612-150**	**◊‡ Dense-Pac (3377)**
	250 nsF	TTL	TS	68	5	MB98A9060-25	Fujitsu
32768x24							
	25 nsF	CMOS	TS	56	5	CYM1720-25	Cypress
32768x32							
	25 nsF	CMOS	TS	66	5	**DPS3232V-25**	**† Dense-Pac (3376, 3380)**
	35 nsF		TS	66	5	**DPS3232V-35**	**‡ Dense-Pac (3376, 3380)**
	45 nsF		TS	66	5	**DPS3232V-45**	**‡ Dense-Pac (3376, 3380)**
	55 nsF	CMOS	TS	66	5	**DPS3232V-55**	**† Dense-Pac (3376, 3380)**
	70 nsF		TS	66	5	**DPS3232V-70**	**‡ Dense-Pac (3376, 3380)**
	85 nsF	CMOS	TS	66	5	**DPS3232V-85**	**† Dense-Pac (3376, 3380)**
	100 nsF		TS	66	5	**DPS3232V-100**	**‡ Dense-Pac (3376, 3380)**
	120 nsF		TS	66	5	**DPS3232V-120**	**‡ Dense-Pac (3376, 3380)**
	150 nsF		TS	66	5	**DPS3232V-150**	**‡ Dense-Pac (3376, 3380)**
65536x4							
	10 nsF	CMOS	TS	24	5	CYM1220-10	Cypress
	25 nsF		TS	40	5	IDT7M656L-25	IDT
		CMOS	TS	28	5	DPS8645-25	‡ Dense-Pac
				30	5	DPS8644-25	‡ Dense-Pac
				40	5	DPS257-25	◊‡ Dense-Pac
	35 nsF		TS	30	5	DPS8644	Dense-Pac
						DPS8645	Dense-Pac
				40	5	IDT7M656L-35	IDT
						IDT7M656L-35B	† IDT
		CMOS	TS	28	5	DPS8645-35	‡ Dense-Pac
				30	5	DPS8644-35	‡ Dense-Pac
				40	5	DPS257-35	◊‡ Dense-Pac
	45 nsF	CMOS	TS	28	5	DPS8645-45	‡ Dense-Pac
				30	5	DPS8644-45	‡ Dense-Pac
				40	5	DPS257-45	◊‡ Dense-Pac
	55 nsF	CMOS	TS	28	5	DPS8645-55	‡ Dense-Pac
				30	5	DPS8644-55	‡ Dense-Pac
65536x8							
	30 nsF	CMOS	TS	60	5	MB85410-30	Fujitsu
	40 nsF	CMOS	TS	60	5	MB85410-40	Fujitsu
	45	CMOS	TS	32	5	DPS4648-45	† Dense-Pac
	45 nsF		TS	40	5	IDT7M812S-45	IDT
	50 nsF	CMOS	TS	32	5	**EDI8M864C50B**	**† EDI (3387)**
						EDI8M864C50C	**EDI (3387)**
	55 nsF		TS	40	5	IDT7M812S-55	IDT
						IDT7M812S-55B	† IDT
		CMOS	TS	32	5	DPS4648-55	† Dense-Pac
	60 nsF	CMOS	TS	32	5	**EDI8M864C60B**	**† EDI (3387)**
	65 nsF		TS	40	5	IDT7M812S-65B	† IDT
	70 nsF	CMOS	TS	32	5	DPS4648-70	◊‡ Dense-Pac
	80 nsF	CMOS	TS	32	5	**EDI8M864C80C**	**EDI (3387)**
	85 nsF		TS	40	5	IDT7M812S-85B	† IDT
		CMOS	TS	32	5	DPS4648-85	◊‡ Dense-Pac
	100 nsF	CMOS	TS	32	5	DPS4648-100	◊‡ Dense-Pac
	120 nsF	CMOS	TS	32	5	DPS4648-120	◊‡ Dense-Pac
	125 nsF		TS	32	5	DPS4648	Dense-Pac
	150 nsF	CMOS	TS	32	5	DPS4648-150	◊‡ Dense-Pac
	160 nsF	CMOS	TS	48	5	HM91M2B-8	† Harris
						HM91M2B-9	Harris
	250 nsF	TTL	TS	68	5	**MB98A9060-25**	**Fujitsu (3423)**
65536x9							
	30 nsF	CMOS	TS	70	5	MB85411-30	Fujitsu
	40 nsF	CMOS	TS	70	5	MB85411-40	Fujitsu
	45 nsF		TS	40	5	IDT7M912S-45	IDT

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
65536x9							(Cont'd)
	55 nsF		TS	40	5	IDT7M912S-55	IDT
						IDT7M912S-55B	† IDT
	65 nsF		TS	40	5	IDT7M912S-65B	† IDT
	85 nsF		TS	40	5	IDT7M912S-85B	† IDT
	100 nsF		TS	40	5	IDT7M912S-100B	† IDT
	120 nsF		TS	33	5	**S64KX9**	**Peps (3573)**
65536x16							
	15 nsF	CMOS	TS	40	5	**DPS1037-15**	**◊‡ Dense-Pac (3376)**
				42	5	**DPS1024-15**	**◊‡ Dense-Pac (3376)**
	20 nsF	CMOS	TS	40	5	CYM1621-20	Cypress
						DPS1037-20	**◊‡ Dense-Pac (3376)**
				42	5	**DPS1024-20**	**◊‡ Dense-Pac (3376)**
	25 nsF	CMOS	TS	40	5	CYM1622-25	Cypress
						CYM1624-25	Cypress
						DPS1037-25	**◊‡ Dense-Pac (3376)**
						PMC6416-25M	† Performance
				42	5	**DPS1024-25**	**◊‡ Dense-Pac (3376)**
				66	5	**DPS3232V-25**	**† Dense-Pac (3376, 3380)**
	30 nsF		TS	40	5	IDT7M624S-30	IDT
		CMOS	TS	40	5	CYM1620-30	Cypress
						CYM1626-30	Cypress
						MT85C1664	MicronTech
						PMC6416-30M	† Performance
	35 nsF		TS	66	5	**DPS3232V-35**	**‡ Dense-Pac (3376, 3380)**
		CMOS	TS	40	5	**DPS1037-35**	**◊‡ Dense-Pac (3376)**
						DPS8M624-35	**◊† Dense-Pac (3377)**
						PMC6416-35M	† Performance
				42	5	**DPS1024-35**	**◊‡ Dense-Pac (3376)**
	40 nsF	CMOS	TS	40	5	PMC6416-40M	† Performance
	45 nsF		TS	40	5	**DPS8M624**	**Dense-Pac (3377)**
						IDT7M624S-45	IDT
						IDT7M624S-45B	† IDT
				66	5	**DPS3232V-45**	**‡ Dense-Pac (3376, 3380)**
		CMOS	TS	40	5	**DPS1037-45**	**◊‡ Dense-Pac (3376)**
						DPS8M624-45	**◊† Dense-Pac (3377)**
						PMC6416-45M	† Performance
				42	5	**DPS1024-45**	**◊‡ Dense-Pac (3376)**
	50 nsF	CMOS	TS	40	5	**EDI8M1664C50B**	**† EDI (3387)**
						EDI8M1664C50C	**EDI (3387)**
						PMC6416-50M	† Performance
	55 nsF		TS	40	5	IDT7M624S-55	IDT
						IDT7M624S-55B	† IDT
		CMOS	TS	40	5	**DPS8M624-55**	**◊‡ Dense-Pac (3377)**
	60 nsF		TS	40	5	IDT8MP624	IDT
						IDT8M624	IDT
		CMOS	TS	40	5	**EDI8M1664C60B**	**† EDI (3387)**
	65 nsF	CMOS	TS	48	5	IDT7M624S-65	IDT
						IDT7M624S-65B	IDT
							(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
65536x16							(Cont'd)
	70 nsF		TS	66	5	**DPS3232V-70**	**‡ Dense-Pac (3376, 3380)**
		CMOS	TS	40	5	CYM1623-70	Cypress
						DPS8M624-70	**◊‡ Dense-Pac (3377)**
	75 nsF		TS	40	5	IDT8M624-B	† IDT
	85 nsF	CMOS	TS	40	5	**DPS8M624-85**	**◊‡ Dense-Pac (3377)**
				48	5	IDT7M624S-85B	IDT
	100 nsF		TS	66	5	**DPS3232V-100**	**‡ Dense-Pac (3376, 3380)**
		CMOS	TS	40	5	**DPS8M624-100**	**◊‡ Dense-Pac (3377)**
						EDI8F1664C100C	**EDI (3387)**
	120 nsF		TS	66	5	**DPS3232V-120**	**‡ Dense-Pac (3376, 3380)**
		CMOS	TS	40	5	**DPS8M624-120**	**◊‡ Dense-Pac (3377)**
						EDI8F1664C120C	**EDI (3387)**
	150 nsF		TS	66	5	**DPS3232V-150**	**‡ Dense-Pac (3376, 3380)**
		CMOS	TS	40	5	**DPS8M624-150**	**◊‡ Dense-Pac (3377)**
						EDI8F1664C150C	**EDI (3387)**
	250 nsF	TTL	TS	68	5	MB98A9070-25	Fujitsu
65536x18							
	15 nsF	CMOS	TS	50	5	**DPS1152-15**	**◊‡ Dense-Pac (3376)**
	20 nsF	CMOS	TS	50	5	**DPS1152-20**	**◊‡ Dense-Pac (3376)**
	25 nsF	CMOS	TS	50	5	**DPS1152-25**	**◊‡ Dense-Pac (3376)**
	35 nsF	CMOS	TS	50	5	**DPS1152-35**	**◊‡ Dense-Pac (3376)**
	45 nsF	CMOS	TS	50	5	**DPS1152-45**	**◊‡ Dense-Pac (3376)**
65536x32							
	20 nsF	CMOS	TS	64	5	**EDI8F3264C20C**	**EDI (3389)**
	25 nsF	CMOS	TS	60	5	CYM1830-25	Cypress
						CYM1832-25	Cypress
				64	5	CYM1831-25	Cypress
	30	CMOS	TS	64	5	MB85424-30	Fujitsu
	35 nsF	CMOS	TS	60	5	**DPS6433-35**	**† Dense-Pac (3376)**
						DPS6434-35	**Dense-Pac (3376)**
				64	5	**EDI8M3264C35C**	**EDI (3389)**
	40 nsF	CMOS	TS	64	5	MB85424-40	Fujitsu
	45 nsF	CMOS	TS	60	5	**DPS6433-45**	**Dense-Pac (3376)**
						DPS6434-45	**◊‡ Dense-Pac (3376)**
	55 nsF	CMOS	TS	60	5	**DPS6433-55**	**◊† Dense-Pac (3376)**
						DPS6434-55	**◊‡ Dense-Pac (3376)**
				64	5	**EDI8F3264C55C**	**EDI (3389)**
						EDI8M3264C55C	**EDI (3389)**
	70 nsF	CMOS	TS	60	5	**DPS6433-70**	**◊† Dense-Pac (3376)**
						DPS6434-70	**◊‡ Dense-Pac (3376)**
	85 nsF	CMOS	TS	60	5	**DPS6433-85**	**† Dense-Pac (3376)**
						DPS6434-85	**◊‡ Dense-Pac (3376)**
	100 nsF	CMOS	TS	60	5	**DPS6433-100**	**◊‡ Dense-Pac (3376)**
						DPS6434-100	**◊‡ Dense-Pac (3376)**
	120 nsF	CMOS	TS	60	5	**DPS6433-120**	**◊† Dense-Pac (3376)**
						DPS6434-120	**◊‡ Dense-Pac (3376)**
	150 nsF	CMOS	TS	60	5	**DPS6433-150**	**◊† Dense-Pac (3376)**
						DPS6434-150	**◊‡ Dense-Pac (3376)**
65536x36							
	30 nsF	CMOS	TS	70	5	MB85425-30	Fujitsu
	40 nsF	CMOS	TS	70	5	MB85425-40	Fujitsu
131072x16							
	120 nsF	CMOS	TS	60	5	**DPS6433-120**	**◊‡ Dense-Pac (3376)**
131072x8							
	15 nsF	CMOS	TS	40	5	**DPS1037-15**	**◊‡ Dense-Pac (3376)**
				42	5	**DPS1024-15**	**◊‡ Dense-Pac (3376)**
	20 nsF	CMOS	TS	40	5	**DPS1037-20**	**◊‡ Dense-Pac (3376)**
				42	5	**DPS1024-20**	**◊‡ Dense-Pac (3376)**
							(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8							(Cont'd)	
	25 nsF	CMOS	TS	32	5	MT85C8128	MicronTech	
						PMC1288-25M	† Performance	
				40	5	**DPS1037-25 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-25 ◊‡**	**Dense-Pac (3376)**	
				66	5	**DPS3232V-25 †**	**Dense-Pac (3376, 3380)**	5
	30 nsF	CMOS	TS	30	5	CYM1422-30	Cypress	
				32	5	CYM1420-30	Cypress	
						PMC1288-30M	† Performance	
	35 nsF		TS	66	5	**DPS3232V-35 ‡**	**Dense-Pac (3376, 3380)**	
		CMOS	TS	32	5	**DPS41288-35 ◊†**	**Dense-Pac (3376)**	10
						EDI8F8128C35M6C	**EDI (3388)**	
						PMC1288-35M	† Performance	
				40	5	**DPS1037-35 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-35 ◊‡**	**Dense-Pac (3376)**	
				50	5	DPS128X8A3-35	Dense-Pac	15
	40 nsF	CMOS	TS	32	5	PMC1288-40M	† Performance	
	45 nsF		TS	40	5	IDT7M624S-45B	† IDT	
				66	5	**DPS3232V-45 ‡**	**Dense-Pac (3376, 3380)**	
		CMOS	TS	32	5	CYM1423-45	Cypress	
						DPS41288-45 ◊†	**Dense-Pac (3376)**	20
						EDI8F8128C45M6C	**EDI (3388)**	
						PMC1288-45M	† Performance	
				40	5	**DPS1037-45 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-45 ◊‡**	**Dense-Pac (3376)**	
				50	5	DPS128X8A3-45	† Dense-Pac	25
	50 nsF	CMOS	TS	32	5	**EDI8M8128C50B**	**† EDI (3388)**	
						EDI8M8130C50B	† EDI	
						EDI8M8130C50C	EDI	
						PMC1288-50M	† Performance	
	55 nsF		TS	40	5	IDT7M624S-55	IDT	30
						IDT7M624S-55B	† IDT	
		CMOS	TS	32	5	**DPS41288-55 ◊‡**	**Dense-Pac (3376)**	
						EDI8F8128C55M6C	**EDI (3388)**	
				50	5	DPS128X8A3-55	† Dense-Pac	
	60 nsF		TS	32	5	IDT8M824	IDT	35
				64	5	IDT7M824	IDT	
		CMOS	TS	32	5	**EDI8M8128C60B**	**† EDI (3388)**	
						EDI8M8128C60C	**EDI (3388)**	
						EDI8M8130C60B	† EDI	
						EDI8M8130C60C	EDI	40
	65 nsF	CMOS	TS	48	5	IDT7M624S-65	IDT	
						IDT7M624S-65B	IDT	
	70 nsF		TS	66	5	**DPS3232V-70 ‡**	**Dense-Pac (3376, 3380)**	
		CMOS	TS	32	5	CYM1421-70	Cypress	
						DPS41288-70 ◊‡	**Dense-Pac (3376)**	45
						DPS51288-70	◊‡ Dense-Pac	
						EDI8F8128C70B4C	**EDI (3388)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8							(Cont'd)	
	70 nsF	CMOS	TS	32	5	EDI8M8130C70B	† EDI	
						EDI8M8130C70C	EDI	
				50	5	DPS128X8A3-70	† Dense-Pac	50
	75 nsF		TS	32	5	IDT8M824-B	† IDT	
				64	5	IDT7M824-B	† IDT	
	80 nsF	CMOS	TS	32	5	EDI8M8130C80B	† EDI	
						EDI8M8130C80C	EDI	
	85 nsF	CMOS	TS	32	5	**DPS41288-85 ◊‡**	**Dense-Pac (3376)**	55
						DPS51288-85	◊‡ Dense-Pac	
				48	5	IDT7M624S-85B	IDT	
				50	5	DPS128X8A3-85	† Dense-Pac	
	90 nsF	CMOS	TS	32	5	**EDI8M8128P90B**	**† EDI (3388)**	
						EDI8M8130C90B	† EDI	60
						EDI8M8130C90C	EDI	
						EDI8M8130P90B	† EDI	
	100 nsF		TS	66	5	**DPS3232V-100 ‡**	**Dense-Pac (3376, 3380)**	
		CMOS	TS	32	5	**DPS41288-100**	**◊‡ Dense-Pac (3376)**	
						DPS41288P-100	**Dense-Pac (3376)**	65
						DPS51288-100	◊‡ Dense-Pac	
						EDI8F8128C100B4C	**EDI (3388)**	
						EDI8M8128P100B	**† EDI (3388)**	
						EDI8M8130C100B	† EDI	
						EDI8M8130C100C	EDI	70
						EDI8M8130P100B	† EDI	
						MS88128-100	Mosel	
				50	5	DPS128X8A3-100	† Dense-Pac	
	120 nsF		TS	32	5	**S128KX8**	**Peps (3573)**	
				66	5	**DPS3232V-120 ‡**	**Dense-Pac (3376, 3380)**	75
		CMOS	TS	32	5	**DPS41288-120**	**◊‡ Dense-Pac (3376)**	
						DPS41288P-120	**Dense-Pac (3376)**	
						DPS51288-120	◊‡ Dense-Pac	
						EDI8F8128C120B4C	**EDI (3388)**	
						EDI8M8128P120B	**† EDI (3388)**	80
						EDI8M8130C120B	† EDI	
						EDI8M8130C120C	EDI	
						EDI8M8130P120B	† EDI	
						MS88128-120	Mosel	
				50	5	DPS128X8A3-120	† Dense-Pac	85
				68	5	DPS91288-120	◊‡ Dense-Pac	
	125 nsF		TS	32	5	**DPS41288**	**Dense-Pac (3376)**	
	150 nsF		TS	66	5	**DPS3232V-150 ‡**	**Dense-Pac (3376, 3380)**	

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x8		CMOS	TS	32	5	**DPS41288-150**	**◊‡ Dense-Pac (3376)**	
						DPS41288P-150	**Dense-Pac (3376)**	
						DPS51288-150	◊‡ Dense-Pac	
						EDI8F8128C150B4C	**EDI (3388)**	
						EDI8M8128P150B	**† EDI (3388)**	5
						EDI8M8130C150B	† EDI	
						EDI8M8130C150C	EDI	
						EDI8M8130P150B	† EDI	
				50	5	DPS128X8A3-150	† Dense-Pac	
	170 nsF	CMOS	TS	32	5	**DPS41288P-170**	**Dense-Pac (3376)**	10
						DPS51288-170	◊‡ Dense-Pac	
	250 nsF	TTL	TS	68	5	**MB98A9070-25**	**Fujitsu (3423)**	
131072x9								
	15 nsF	CMOS	TS	50	5	**DPS1152-15**	**◊‡ Dense-Pac (3376)**	
	20 nsF	CMOS	TS	50	5	**DPS1152-20**	**◊‡ Dense-Pac (3376)**	
	25 nsF	CMOS	TS	50	5	**DPS1152-25**	**◊‡ Dense-Pac (3376)**	15
	35 nsF	CMOS	TS	50	5	**DPS1152-35**	**◊‡ Dense-Pac (3376)**	
	45 nsF	CMOS	TS	50	5	**DPS1152-45**	**◊‡ Dense-Pac (3376)**	
131072x16								
	35 nsF	CMOS	TS	50	5	**DPS128X16A3-35**	**Dense-Pac (3376, 3380)**	
				60	5	**DPS6433-35**	**† Dense-Pac (3376)**	
						DPS6434-35	**Dense-Pac (3376)**	20
				66	5	**DPS128X16V3-35**	**Dense-Pac (3376, 3380)**	
	45 nsF	CMOS	TS	50	5	**DPS128X16A3-45**	**† Dense-Pac (3376, 3380)**	
				60	5	**DPS6433-45**	**Dense-Pac (3376)**	
						DPS6434-45	**◊‡ Dense-Pac (3376)**	
				66	5	**DPS128X16V3-45**	**† Dense-Pac (3376, 3380)**	25
	55 nsF	CMOS	TS	50	5	**DPS128X16A3-55**	**† Dense-Pac (3376, 3380)**	
				60	5	**DPS6433-55**	**◊‡ Dense-Pac (3376)**	
						DPS6434-55	**◊‡ Dense-Pac (3376)**	
				66	5	**DPS128X16V3-55**	**† Dense-Pac (3376, 3380)**	
	70 nsF	CMOS	TS	50	5	**DPS128X16A3-70**	**† Dense-Pac (3376, 3380)**	30
				60	5	**DPS6433-70**	**◊‡ Dense-Pac (3376)**	
						DPS6434-70	**◊‡ Dense-Pac (3376)**	
				66	5	**DPS128X16V3-70**	**† Dense-Pac (3376, 3380)**	
	85 nsF	CMOS	TS	50	5	**DPS128X16A3-85**	**† Dense-Pac (3376, 3380)**	
				60	5	**DPS6433-85**	**◊‡ Dense-Pac (3376)**	35
						DPS6434-85	**◊‡ Dense-Pac (3376)**	
				66	5	**DPS128X16V3-85**	**† Dense-Pac (3376, 3380)**	
	100 nsF	CMOS	TS	50	5	**DPS128X16A3-100**	**† Dense-Pac (3376, 3380)**	
				60	5	**DPS6433-100**	**◊‡ Dense-Pac (3376)**	
						DPS6434-100	**◊‡ Dense-Pac (3376)**	40

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x16								
	100 nsF	CMOS	TS				(Cont'd)	
				66	5	**DPS128X16V3-100**	**† Dense-Pac (3376, 3380)**	
	120 nsF	CMOS	TS	50	5	**DPS128X16A3-120**	**† Dense-Pac (3376, 3380)**	
				60	5	**DPS6434-120**	**◊‡ Dense-Pac (3376)**	
				66	5	**DPS128X16V3-120**	**† Dense-Pac (3376, 3380)**	
	150 nsF	CMOS	TS	50	5	**DPS128X16A3-150**	**† Dense-Pac (3376, 3380)**	45
				60	5	**DPS6433-150**	**◊‡ Dense-Pac (3376)**	
						DPS6434-150	**Dense-Pac (3376)**	
				66	5	**DPS128X16V3-150**	**† Dense-Pac (3376, 3380)**	
	250 nsF	TTL	TS	68	5	MB98A9080-25	Fujitsu	
131072x24								
	35 nsF	CMOS	TS	66	5	**DPS128X24V3-35**	**Dense-Pac (3377, 3380)**	50
	45 nsF	CMOS	TS	66	5	**DPS128X24V3-45**	**† Dense-Pac (3377, 3380)**	
	55 nsF	CMOS	TS	66	5	**DPS128X24V3-55**	**† Dense-Pac (3377, 3380)**	
	70 nsF	CMOS	TS	66	5	**DPS128X24V3-70**	**† Dense-Pac (3377, 3380)**	
	85 nsF	CMOS	TS	66	5	**DPS128X24V3-85**	**† Dense-Pac (3377, 3380)**	
	100 nsF	CMOS	TS	66	5	**DPS128X24V3-100**	**† Dense-Pac (3377, 3380)**	55
	120 nsF	CMOS	TS	66	5	**DPS128X24V3-120**	**† Dense-Pac (3377, 3380)**	
	150 nsF	CMOS	TS	66	5	**DPS128X24V3-150**	**† Dense-Pac (3377, 3380)**	
131072x32								
	35 nsF	CMOS	TS	66	5	**DPS128X32V3-35**	**Dense-Pac (3376)**	
	45 nsF		TS	66	5	DPS12832V-45	‡ Dense-Pac	
		CMOS	TS	66	5	**DPS128X32V3-45**	**† Dense-Pac (3376)**	60
	55 nsF		TS	66	5	DPS12832V-55	‡ Dense-Pac	
		CMOS	TS	66	5	**DPS128X32V3-55**	**† Dense-Pac (3376)**	
	70 nsF		TS	66	5	DPS12832V-70	‡ Dense-Pac	
		CMOS	TS	66	5	**DPS128X32V3-70**	**† Dense-Pac (3376)**	
	85 nsF	CMOS	TS	66	5	**DPS128X32V3-85**	**† Dense-Pac (3376)**	65
	100 nsF		TS	66	5	DPS12832V-100	‡ Dense-Pac	
		CMOS	TS	66	5	**DPS128X32V3-100**	**† Dense-Pac (3376)**	
	120 nsF		TS	66	5	DPS12832V-120	‡ Dense-Pac	
		CMOS	TS	66	5	**DPS128X32V3-120**	**† Dense-Pac (3376)**	
	150 nsF		TS	66	5	DPS12832V-150	‡ Dense-Pac	70
		CMOS	TS	66	5	**DPS128X32V3-150**	**† Dense-Pac (3376)**	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2097152x8								
	100 nsF	CMOS	TS	48	5	**DPS1MS16P-10**	**Dense-Pac (3371, 3376)**	
262144x1								
	25 nsF	CMOS	TS	30	5	DPS8256-25 ‡	Dense-Pac	
	35 nsF	CMOS	TS	30	5	DPS8256-35 ‡	Dense-Pac	
	45 nsF		TS	30	5	DPS8256	Dense-Pac	
		CMOS Module						
			TS	30	5	DPS8256-45 ‡	Dense-Pac	5
262144x4								
	15 nsF	CMOS	TS	40	5	**DPS1037-15 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-15 ◊‡**	**Dense-Pac (3376)**	
	20 nsF	CMOS	TS	40	5	**DPS1037-20 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-20 ◊‡**	**Dense-Pac (3376)**	
	25 nsF	CMOS	SEP	30	5	**DPS256P4-25**	**Dense-Pac (3376)**	10
			TS	28	5	CYM1240-25	Cypress	
				40	5	**DPS1037-25 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-25 ◊‡**	**Dense-Pac (3376)**	
	35 nsF	CMOS	SEP	30	5	**DPS256P4-35**	**Dense-Pac (3376)**	
			TS	28	5	**EDI8M4257C35B**	**◊† EDI (3388)**	15
						EDI8M4257C35C	**◊ EDI (3388)**	
						EDI8M4257P35B	**◊† EDI (3388)**	
						EDI8M4257P35C	**◊ EDI (3388)**	
				30	5	**EDI8F4258C35C**	**EDI (3388)**	
				40	5	**DPS1037-35 ◊‡**	**Dense-Pac (3376)**	20
				42	5	**DPS1024-35 ◊‡**	**Dense-Pac (3376)**	
	45 nsF		TS	40	5	IDT7M624S-45B	† IDT	
		CMOS	SEP	30	5	**DPS256P4-45**	**Dense-Pac (3376)**	
			TS	28	5	**EDI8M4257C45B**	**◊† EDI (3388)**	
						EDI8M4257C45C	**◊ EDI (3388)**	25
						EDI8M4257P45B	**◊† EDI (3388)**	
						EDI8M4257P45C	**◊ EDI (3388)**	
				30	5	**EDI8F4258C45C**	**EDI (3388)**	
				40	5	**DPS1037-45 ◊‡**	**Dense-Pac (3376)**	
				42	5	**DPS1024-45 ◊‡**	**Dense-Pac (3376)**	30
	55 nsF		TS	40	5	IDT7M624S-55	IDT	
						IDT7M624S-55B	† IDT	
		CMOS	SEP	30	5	**DPS256P4-55**	**Dense-Pac (3376)**	
			TS	28	5	**EDI8M4257C55C**	**◊ EDI (3388)**	
						EDI8M4257P55B	**◊† EDI (3388)**	35
						EDI8M4257P55C	**◊ EDI (3388)**	
				30	5	**EDI8F4258C55C**	**EDI (3388)**	
				64	5	**EDI8M32256C55C6B**	**† EDI (3389)**	
			TSD	28	5	**EDI8M4257C55B**	**◊† EDI (3388)**	
	65 nsF	CMOS	TS	48	5	IDT7M624S-65	IDT	40
						IDT7M624S-65B	IDT	
	70 nsF	CMOS	TS	28	5	**EDI8M4257C70B**	**◊† EDI (3388)**	
						EDI8M4257C70C	**◊ EDI (3388)**	
						EDI8M4257P70B	**◊† EDI (3388)**	
						EDI8M4257P70C	**◊ EDI (3388)**	45

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x4								
	70 nsF	CMOS	TS				(Cont'd)	
				30	5	**EDI8F4258C70C**	**EDI (3388)**	
				32	5	**EDI8M8256C70B**	**◊† EDI (3389)**	
	85 nsF	CMOS	TS	48	5	IDT7M624S-85B	IDT	
	120 nsF	CMOS	TS	32	5	**EDI8M8256C120C**	**◊ EDI (3389)**	
						HM66204L-12	Hitachi	50
	150 nsF	CMOS	TS	32	5	HM66204L-15	Hitachi	
262144x8								
	20 nsF	CMOS	TS	60	5	**EDI8F8258C20C**	**EDI (3389)**	
	25 nsF	CMOS	SEP	44	5	**DPS8256P8-25**	**Dense-Pac (3376)**	
			TS	32	5	**EDI8F8259C25M6C**	**EDI (3389)**	
				42	5	**DPS256Q8-25 ‡**	**Dense-Pac (3376)**	55
				60	5	CYM1441-25	Cypress	
	30 nsF	CMOS	TS	60	5	MB85420-30	Fujitsu	
	35 nsF	CMOS	SEP	44	5	**DPS8256P8-35**	**Dense-Pac (3376)**	
			TS	42	5	**DPS256Q8-35 ‡**	**Dense-Pac (3376)**	
				50	5	**DPS128X16AA3-35**	**Dense-Pac (3377, 3380)**	60
						DPS256X8A3-35	Dense-Pac	
				60	5	**DPS6433-35**	**Dense-Pac (3376)**	
						DPS6434-35	**Dense-Pac (3376)**	
				66	5	DPS256X8V3-35	Dense-Pac	
	40 nsF	CMOS	TS	60	5	MB85420-40	Fujitsu	65
	45 nsF	CMOS	SEP	44	5	**DPS8256P8-45**	**Dense-Pac (3376)**	
			TS	32	5	**DPS256S8AN-45**	**Dense-Pac (3376)**	
				42	5	**DPS256Q8-45 ‡**	**Dense-Pac (3376)**	
				50	5	**DPS128X16AA3-45**	**Dense-Pac (3377, 3380)**	
						DPS256S8A3-45	Dense-Pac	70
						DPS256X8A3-45	† Dense-Pac	
				60	5	**DPS6433-45**	**Dense-Pac (3376)**	
						DPS6434-45 ◊‡	**Dense-Pac (3376)**	
						EDI8F8258C45C	**EDI (3389)**	
				66	5	DPS256X8V3-45	† Dense-Pac	75
	55 nsF	CMOS	SEP	44	5	**DPS8256P8-55**	**Dense-Pac (3376)**	
			TS	32	5	**DPS256S8AN-55 †**	**Dense-Pac (3376)**	
						EDI8F8259C55M6C	**EDI (3389)**	
				42	5	**DPS256Q8-55 ‡**	**Dense-Pac (3376)**	
				50	5	**DPS128X16AA3-55**	**Dense-Pac (3377, 3380)**	80
						DPS256S8A3-55	† Dense-Pac	
						DPS256X8A3-55	† Dense-Pac	
				60	5	**DPS6433-55 ◊‡**	**Dense-Pac (3376)**	
						DPS6434-55 ◊‡	**Dense-Pac (3376)**	
				66	5	DPS256X8V3-55	† Dense-Pac	85
	70 nsF	CMOS	TS	32	5	**DPS256S8AN-70 †**	**Dense-Pac (3376)**	
						EDI8M8256C70C	**◊ EDI (3389)**	
						EDI8M8256P70B	**◊† EDI (3389)**	
						EDI8M8256P70C	**◊ EDI (3389)**	
				42	5	**DPS256Q8-70 ‡**	**Dense-Pac (3376)**	90
				50	5	**DPS128X16AA3-70**	**Dense-Pac (3377, 3380)**	
						DPS256S8A3-70	† Dense-Pac	
						DPS256X8A3-70	† Dense-Pac	
				60	5	**DPS6433-70 ◊‡**	**Dense-Pac (3376)**	
						DPS6434-70 ◊‡	**Dense-Pac (3376)**	95

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x8							(Cont'd)	
	85 nsF	CMOS	TS	32	5	**DPS256S8AN-85**	**† Dense-Pac (3376)**	
						DPS256S8N-85	**† Dense-Pac (3376)**	
						DPS256S8P-85	**Dense-Pac (3376)**	
						EDI8F8257C85C	**EDI (3389)**	
						EDI8F8257L85C	**EDI (3389)**	5
						EDI8F8257P85C	**EDI (3389)**	
				35	5	**DPS256P8-85**	**† Dense-Pac (3376)**	
				42	5	**DPS256Q8-85**	**‡ Dense-Pac (3376)**	
				50	5	DPS256S8A3-85	† Dense-Pac	
						DPS256X8A3-85	† Dense-Pac	10
				60	5	**DPS6433-85**	**◊‡ Dense-Pac (3376)**	
						DPS6434-85	**◊‡ Dense-Pac (3376)**	
				66	5	DPS256X8V3-85	† Dense-Pac	
	100 nsF	CMOS	TS	32	5	**DPS256S8N-10**	**† Dense-Pac (3376)**	
						DPS256S8P-10	**Dense-Pac (3376)**	15
						EDI8M8256C100B	**◊† EDI (3389)**	
						EDI8M8256C100C	**◊ EDI (3389)**	
						EDI8M8256P100B	**◊† EDI (3389)**	
						EDI8M8256P100C	**◊ EDI (3389)**	
				42	5	**DPS256Q8-100**	**‡ Dense-Pac (3376)**	20
				50	5	DPS256S8A3-100	† Dense-Pac	
						DPS256X8A3-100	† Dense-Pac	
				60	5	**DPS6433-100**	**◊‡ Dense-Pac (3376)**	
						DPS6434-100	**◊‡ Dense-Pac (3376)**	
				66	5	DPS256X8V3-100	† Dense-Pac	25
	120 nsF	CMOS	TS	32	5	**DPS256S8N-12**	**† Dense-Pac (3376)**	
						DPS256S8P-12	**Dense-Pac (3376)**	
						EDI8M8256C120B	**◊† EDI (3389)**	
						EDI8M8256P120B	**◊† EDI (3389)**	
						EDI8M8256P120C	**◊ EDI (3389)**	30
				35	5	**DPS256P8-120**	**† Dense-Pac (3376)**	
				42	5	**DPS256Q8-120**	**‡ Dense-Pac (3376)**	
				50	5	DPS256S8A3-120	† Dense-Pac	
						DPS256X8A3-120	† Dense-Pac	
				60	5	**DPS6433-120**	**◊‡ Dense-Pac (3376)**	35
						DPS6434-120	**◊‡ Dense-Pac (3376)**	
				66	5	DPS256X8V3-120	† Dense-Pac	
	150 nsF	CMOS	TS	32	5	**DPS256S8N-15**	**† Dense-Pac (3376)**	
						DPS256S8P-15	**Dense-Pac (3376)**	
						EDI8F8257C150C	**EDI (3389)**	40
						EDI8F8257L150C	**EDI (3389)**	
						EDI8F8257P150C	**EDI (3389)**	
						EDI8M8256C150B	**◊† EDI (3389)**	
						EDI8M8256P150B	**◊† EDI (3389)**	
						EDI8M8256P150C	**◊ EDI (3389)**	45
				35	5	**DPS256P8-150**	**† Dense-Pac (3376)**	
				42	5	**DPS256Q8-150**	**‡ Dense-Pac (3376)**	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
262144x8							(Cont'd)	
	150 nsF	CMOS	TS	50	5	DPS256S8A3-150	† Dense-Pac	
						DPS256X8A3-150	† Dense-Pac	
				60	5	**DPS6433-150**	**◊‡ Dense-Pac (3376)**	50
						DPS6434-150	**Dense-Pac (3376)**	
				66	5	DPS256X8V3-150	† Dense-Pac	
	250 nsF	TTL	TS	68	5	**MB98A9080-25**	**Fujitsu (3423)**	
262144x9								
	30 nsF	CMOS	TS	44	5	CYM1540-30	Cypress	
				70	5	MB85420-30	Fujitsu	55
	40 nsF	CMOS	TS	70	5	MB85420-40	Fujitsu	
262144x16								
	25 nsF	CMOS	TS	48	5	CYM1641-25	Cypress	
	35 nsF	cmos	TS	40	5	**EDI8F16257C35C**	**EDI (3389)**	
		CMOS	TS	40	5	**EDI8M16257C35B**	**† EDI (3389)**	
				48	5	**EDI8M16256C35B**	**◊† EDI (3389)**	60
						EDI8M16256C35C	**◊ EDI (3389)**	
				50	5	**DPS256X16AA3-35**	**Dense-Pac (3377, 3380)**	
						DPS256X16A3-35	**Dense-Pac (3377, 3380)**	
				66	5	DPS256X16V3-35	Dense-Pac	
	45 nsF		TS	66	5	DPS12832V-45	‡ Dense-Pac	65
		CMOS	TS	48	5	**EDI8M16256C45B**	**◊† EDI (3389)**	
						EDI8M16256C45C	**◊ EDI (3389)**	
				50	5	**DPS256X16AA3-45**	**Dense-Pac (3377, 3380)**	
						DPS256X16A3-45	**† Dense-Pac (3377, 3380)**	
				66	5	DPS256X16V3-45	† Dense-Pac	70
	55 nsF		TS	66	5	DPS12832V-55	‡ Dense-Pac	
		CMOS	TS	40	5	**EDI8M16257C55B**	**† EDI (3389)**	
				48	5	**EDI8M16256C55B**	**◊† EDI (3389)**	
						EDI8M16256C55C	**◊ EDI (3389)**	
				50	5	**DPS256X16AA3-55**	**Dense-Pac (3377, 3380)**	75
						DPS256X16A3-55	**† Dense-Pac (3377, 3380)**	
				66	5	DPS256X16V3-55	† Dense-Pac	
	70 nsF		TS	66	5	DPS12832V-70	‡ Dense-Pac	
		CMOS	TS	48	5	**EDI8M16256C70B**	**◊† EDI (3389)**	
						EDI8M16256C70C	**◊ EDI (3389)**	80
				50	5	**DPS256X16AA3-70**	**Dense-Pac (3377, 3380)**	
						DPS256X16A3-70	**† Dense-Pac (3377, 3380)**	
				66	5	DPS256X16V3-70	† Dense-Pac	
				68	5	**DPS96122-70**	**◊‡ Dense-Pac (3376)**	
							(Continued)	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
262144x16							(Cont'd)
	85 nsF	CMOS	TS	50	5	**DPS256X16A3-85**	**† Dense-Pac (3377, 3380)**
				66	5	DPS256X16V3-85	† Dense-Pac
				68	5	**DPS96122-85**	**◊‡ Dense-Pac (3376)**
	100 nsF		TS	66	5	DPS12832V-100	‡ Dense-Pac
		CMOS	TS	50	5	**DPS256X16A3-100**	**† Dense-Pac (3377, 3380)**
				66	5	DPS256X16V3-100	† Dense-Pac
				68	5	**DPS96122-100**	**◊‡ Dense-Pac (3376)**
	120 nsF		TS	66	5	DPS12832V-120	‡ Dense-Pac
		CMOS	TS	50	5	**DPS256X16A3-120**	**† Dense-Pac (3377, 3380)**
				66	5	DPS256X16V3-120	† Dense-Pac
				68	5	**DPS96122-120**	**◊‡ Dense-Pac (3376)**
	150 nsF		TS	66	5	DPS12832V-150	‡ Dense-Pac
		CMOS	TS	50	5	**DPS256X16A3-150**	**† Dense-Pac (3377, 3380)**
				66	5	DPS256X16V3-150	† Dense-Pac
	250 nsF	TTL	TS	68	5	MB98A9090-25	Fujitsu
262144x24							
	35 nsF	CMOS	TS	66	5	DPS256X24V3-35	Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS256X24V3-45	† Dense-Pac
	55 nsF	CMOS	TS	66	5	DPS256X24V3-55	† Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS256X24V3-70	† Dense-Pac
	85 nsF	CMOS	TS	66	5	DPS256X24V3-85	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS256X24V3-100	† Dense-Pac
	120 nsF	CMOS	TS	66	5	DPS256X24V3-120	† Dense-Pac
	150 nsF	CMOS	TS	66	5	DPS256X24V3-150	† Dense-Pac
262144x32							
	25 nsF	CMOS	TS	64	5	**EDI8F32256C25C**	**EDI (3389)**
	35 nsF	CMOS	TS	64	5	CYM1841-35	Cypress
						EDI8M32256C35C6B	**† EDI (3389)**
						EDI8M32256C35C6C	**EDI (3389)**
				66	5	**DPS256X32V3-35**	**Dense-Pac (3376, 3380)**
	45 nsF	CMOS	TS	66	5	**DPS256X32V3-45**	**† Dense-Pac (3376, 3380)**
	55 nsF	CMOS	TS	64	5	**EDI8M32256C55C6C**	**EDI (3389)**
				66	5	**DPS256X32V3-55**	**† Dense-Pac (3376, 3380)**
	70 nsF	CMOS	TS	66	5	**DPS256X32V3-70**	**† Dense-Pac (3376, 3380)**
	85 nsF	CMOS	TS	66	5	**DPS256X32V3-85**	**† Dense-Pac (3376, 3380)**

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
262144x32							(Cont'd)
	100 nsF	CMOS	TS	66	5	**DPS256X32V3-100**	**† Dense-Pac (3376, 3380)**
	120 nsF	CMOS	TS	66	5	**DPS256X32V3-120**	**† Dense-Pac (3376, 3380)**
	150 nsF	CMOS	TS	66	5	**DPS256X32V3-150**	**† Dense-Pac (3376, 3380)**
393216x8							
	35 nsF	CMOS	TS	50	5	DPS384X8A3-35	Dense-Pac
				66	5	DPS384X8V3-35	Dense-Pac
	45 nsF	CMOS	TS	50	5	DPS384S8A3-45	Dense-Pac
						DPS384X8A3-45	† Dense-Pac
				66	5	DPS384X8V3-45	† Dense-Pac
	55 nsF	CMOS	TS	50	5	DPS384S8A3-55	† Dense-Pac
						DPS384X8A3-55	† Dense-Pac
				66	5	DPS384X8V3-55	† Dense-Pac
	70 nsF	CMOS	TS	50	5	DPS384S8A3-70	† Dense-Pac
						DPS384X8A3-70	Dense-Pac
				66	5	DPS384X8V3-70	† Dense-Pac
	85 nsF	CMOS	TS	50	5	DPS384S8A3-85	† Dense-Pac
						DPS384X8A3-85	† Dense-Pac
				66	5	DPS384X8V3-85	† Dense-Pac
	100 nsF	CMOS	TS	50	5	DPS384S8A3-100	† Dense-Pac
						DPS384X8A3-100	† Dense-Pac
				66	5	DPS384X8V3-100	† Dense-Pac
	120 nsF	CMOS	TS	50	5	DPS384S8A3-120	† Dense-Pac
						DPS384X8A3-120	† Dense-Pac
				66	5	DPS384X8V3-120	† Dense-Pac
	150 nsF	CMOS	TS	50	5	DPS384S8A3-150	† Dense-Pac
						DPS384X8A3-150	† Dense-Pac
				66	5	DPS384X8V3-150	† Dense-Pac
393216x16							
	35 nsF	CMOS	TS	50	5	DPS384X16A3-35	Dense-Pac
				66	5	DPS384X16V3-35	Dense-Pac
	45 nsF	CMOS	TS	50	5	DPS384X16A3-45	† Dense-Pac
				66	5	DPS384X16V3-45	† Dense-Pac
	55 nsF	CMOS	TS	50	5	DPS384X16A3-55	† Dense-Pac
				66	5	DPS384X16V3-55	† Dense-Pac

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
393216x16							(Cont'd)
	70 nsF	CMOS	TS	50	5	DPS384X16A3-70	† Dense-Pac
				66	5	DPS384X16V3-70	† Dense-Pac
	85 nsF	CMOS	TS	50	5	DPS384X16A3-85	† Dense-Pac
				66	5	DPS384X16V3-85	† Dense-Pac
	100 nsF	CMOS	TS	50	5	DPS384X16A3-100	† Dense-Pac
				66	5	DPS384X16V3-100	† Dense-Pac
	120 nsF	CMOS	TS	50	5	DPS384X16A3-120	† Dense-Pac
				66	5	DPS384X16V3-120	† Dense-Pac
	150 nsF	CMOS	TS	50	5	DPS384X16A3-150	† Dense-Pac
				66	5	DPS384X16V3-150	† Dense-Pac
393216x24							
	35 nsF	CMOS	TS	66	5	DPS384X24V3-35	Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS384X24V3-45	† Dense-Pac
	55 nsF	CMOS	TS	66	5	DPS384X24V3-55	† Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS384X24V3-70	† Dense-Pac
	85 nsF	CMOS	TS	66	5	DPS384X24V3-85	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS384X24V3-100	† Dense-Pac
	120 nsF	CMOS	TS	66	5	DPS384X24V3-120	† Dense-Pac
	150 nsF	CMOS	TS	66	5	DPS384X24V3-150	† Dense-Pac
393216x32							
	35 nsF	CMOS	TS	66	5	DPS384X32V3-35	† Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS384X32V3-45	† Dense-Pac
	55 nsF	CMOS	TS	66	5	DPS384X32V3-55	† Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS384X32V3-70	† Dense-Pac
	85 nsF	CMOS	TS	66	5	DPS384X32VS-85	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS384X32V3-100A	† Dense-Pac
	120 nsF	CMOS	TS	66	5	DPS384X32V3-120	† Dense-Pac
	150 nsF	CMOS	TS	66	5	DPS384X32V3-150	† Dense-Pac
524288x8							
	35 nsF	CMOS	TS	36	5	CYM1460-35	Cypress
				50	5	DPS512X8A3-35	Dense-Pac
				66	5	DPS512X8V3-35	Dense-Pac
	45 nsF		TS	66	5	DPS12832V-45	‡ Dense-Pac
		CMOS	TS	32	5	CYM1464-45	Cypress
						DPS512S8AN-45	**Dense-Pac (3367, 3376, 3380)**
				50	5	**DPS512S8A3-45**	**Dense-Pac (3367, 3376, 3380)**
						DPS512X8A3-45	† Dense-Pac
				66	5	DPS512X8V3-45	Dense-Pac

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
524288x8							(Cont'd)
	55 nsF		TS	66	5	DPS12832V-55	‡ Dense-Pac
		CMOS	TS	32	5	**DPS512S8AN-55**	**Dense-Pac (3367, 3376, 3380)**
				48	5	**DPS45128-55**	**◊† Dense-Pac (3376)**
				50	5	**DPS512S8AA3-55**	**Dense-Pac (3380)**
						DPS512S8A3-55	**† Dense-Pac (3367, 3376, 3380)**
						DPS512X8A3-55	† Dense-Pac
				66	5	DPS512X8V3-55	† Dense-Pac
	70 nsF		TS	66	5	DPS12832V-70	‡ Dense-Pac
		CMOS	TS	32	5	**DPS512S8AN-70**	**Dense-Pac (3367, 3376, 3380)**
				36	5	CYM1461-70	Cypress
				48	5	**DPS45128-70**	**◊‡ Dense-Pac (3376)**
				50	5	**DPS512S8AA3-70**	**Dense-Pac (3380)**
						DPS512S8A3-70	**† Dense-Pac (3367, 3376, 3380)**
						DPS512X8A3-70	† Dense-Pac
				66	5	DPS512X8V3-70	† Dense-Pac
				68	5	**DPS96122-70**	**Dense-Pac (3376)**
	85 nsF	CMOS	TS	32	5	**DPS512S8N-85**	**◊† Dense-Pac (3367, 3376, 3380)**
						EDI8F8512C85B6C	**EDI (3389)**
						EDI8F8512L85B6C	**EDI (3389)**
				38	5	DPS51258P-85	◊† Dense-Pac
				48	5	**DPS45128-85**	**◊‡ Dense-Pac (3376)**
				50	5	**DPS512S8AA3-85**	**Dense-Pac (3380)**
						DPS512S8A3-85	**† Dense-Pac (3367, 3376, 3380)**
						DPS512X8A3-85	† Dense-Pac
				66	5	DPS512X8V3-85	† Dense-Pac
				68	5	**DPS96122-85**	**◊† Dense-Pac (3376)**
	90 nsF	CMOS	TS	32	5	**EDI8M8512C90B**	**◊† EDI (3389)**
						EDI8M8512C90C	**◊ EDI (3389)**
	100 nsF		TS	66	5	DPS12832V-100	‡ Dense-Pac
		CMOS	TS	32	5	**DPS512S8N-100**	**◊† Dense-Pac (3367, 3376, 3380)**
						EDI8M8512C100B	**◊† EDI (3389)**
						EDI8M8512C100C	**◊ EDI (3389)**
				38	5	**DPS512S8P-100**	**◊† Dense-Pac (3367, 3376, 3380)**
				48	5	**DPS45128-100**	**◊‡ Dense-Pac (3376)**
				50	5	**DPS512S8AA3-100**	**Dense-Pac (3380)**
						DPS512S8A3-100	**† Dense-Pac (3367)**
						DPS512X8A3-100	† Dense-Pac
				66	5	DPS512X8V3-100	† Dense-Pac
				68	5	**DPS96122-100**	**◊† Dense-Pac (3376)**
	120 nsF		TS	32	5	**S512KX8**	**Peps (3573)**
				66	5	DPS12832V-120	‡ Dense-Pac

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† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
524288x8							
	120 nsF						(Cont'd)
		CMOS	TS	32	5	**DPS512S8N-120**	**◊† Dense-Pac (3367, 3376, 3380)**
						EDI8M8512C120B	**◊† EDI (3389)**
						EDI8M8512C120C	**◊ EDI (3389)**
				38	5	**DPS512S8P-120**	**◊† Dense-Pac (3367, 3376, 3380)**
				48	5	**DPS45128-120**	**◊‡ Dense-Pac (3376)**
				50	5	**DPS512S8A3-120**	**† Dense-Pac (3367, 3376, 3380)**
						DPS512X8A3-120	† Dense-Pac
				66	5	DPS512X8V3-120	† Dense-Pac
				68	5	**DPS96122-120**	**◊† Dense-Pac (3376)**
	135 nsF	CMOS	TS	32	5	**DPS512S8N-135**	**◊† Dense-Pac (3367, 3376, 3380)**
	150 nsF		TS	66	5	DPS12832V-150	‡ Dense-Pac
		CMOS	TS	32	5	**DPS512S8N-150**	**◊† Dense-Pac (3367, 3376, 3380)**
						EDI8F8512C150B6C	**EDI (3389)**
						EDI8M8512C150B	**◊† EDI (3389)**
						EDI8M8512C150C	**◊ EDI (3389)**
				38	5	**DPS512S8P-150**	**◊† Dense-Pac (3367, 3376, 3380)**
				48	5	**DPS45128-150**	**◊‡ Dense-Pac (3376)**
				50	5	**DPS512S8A3-150**	**† Dense-Pac (3367, 3376, 3380)**
						DPS512X8A3-150	† Dense-Pac
				66	5	DPS512X8V3-150	† Dense-Pac
	170 nsF	CMOS	TS	48	5	**DPS45128-170**	**◊‡ Dense-Pac (3376)**
	250 nsF	TTL	TS	68	5	**MB98A9090-25**	**Fujitsu (3423)**
524288x16							
	35 nsF	CMOS	TS	50	5	**DPS512X16A3-35**	**Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-35	Dense-Pac
	45 nsF	CMOS	TS	50	5	**DPS512X16A3-45**	**† Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-45	† Dense-Pac
	55 nsF	CMOS	TS	50	5	**DPS512X16A3-55**	**† Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-55	† Dense-Pac
	70 nsF	CMOS	TS	50	5	**DPS512X16A3-70**	**† Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-70	† Dense-Pac

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Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
524288x16							(Cont'd)
	85 nsF	CMOS	TS	50	5	**DPS512X16A3-85**	**† Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-85	† Dense-Pac
	100 nsF	CMOS	TS	50	5	**DPS512X16A3-100**	**† Dense-Pac (3376, 3380)**
	120 nsF	CMOS	TS	50	5	**DPS512X16A3-120**	**† Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-120	† Dense-Pac
	150 nsF	CMOS	TS	50	5	**DPS512X16A3-150**	**† Dense-Pac (3376, 3380)**
				66	5	DPS512X16V3-150	† Dense-Pac
524288x24							
	35 nsF	CMOS	TS	66	5	DPS512X24V3-35	Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS512X24V3-45	† Dense-Pac
	55 nsF	CMOS	TS	66	5	DPS512X24V3-55	† Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS512X24V3-70	† Dense-Pac
	85 nsF	CMOS	TS	66	5	DPS512X24V3-85	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS512X24V3-100	† Dense-Pac
	120 nsF	CMOS	TS	66	5	DPS512X24V3-120	† Dense-Pac
	150 nsF	CMOS	TS	66	5	DPS512X24V3-150	† Dense-Pac
524288x32							
	35 nsF	CMOS	TS	66	5	**DPS512X32V3-35**	**Dense-Pac (3376, 3380)**
	45 nsF	CMOS	TS	66	5	**DPS512X32V3-45**	**† Dense-Pac (3376, 3380)**
	55 nsF	CMOS	TS	66	5	**DPS512X32V3-55**	**† Dense-Pac (3376, 3380)**
	70 nsF	CMOS	TS	66	5	**DPS512X32V3-70**	**† Dense-Pac (3376, 3380)**
	85 nsF	CMOS	TS	66	5	**DPS512X32V3-85**	**† Dense-Pac (3376, 3380)**
	100 nsF	CMOS	TS	66	5	**DPS512X32V3-100**	**† Dense-Pac (3376, 3380)**
	120 nsF	CMOS	TS	66	5	**DPS512X32V3-120**	**† Dense-Pac (3376, 3380)**
	150 nsF	CMOS	TS	66	5	**DPS512X32V3-150**	**† Dense-Pac (3376, 3380)**
655360x8							
	35 nsF	CMOS	TS	50	5	DPS640X8A3-35	Dense-Pac
				66	5	DPS640X8V3-35	Dense-Pac
	45 nsF	CMOS	TS	50	5	DPS640S8A3-45	Dense-Pac
						DPS640X8A3-45	† Dense-Pac
				66	5	DPS640X8V3-45	† Dense-Pac
	55 nsF	CMOS	TS	50	5	DPS640S8A3-55	† Dense-Pac
						DPS640X8A3-55	† Dense-Pac
				66	5	DPS640X8V3-55	† Dense-Pac

(Continued)

† Military Temperature Range (-55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
655360x8							(Cont'd)
	70 nsF	CMOS	TS	50	5	DPS640S8A3-70	† Dense-Pac
						DPS640X8A3-70	† Dense-Pac
				66	5	DPS640X8V3-70	† Dense-Pac
	85 nsF	CMOS	TS	50	5	DPS640S8A3-85	† Dense-Pac
						DPS640X8A3-85	† Dense-Pac
				66	5	DPS640X8V3-85	† Dense-Pac
	100 nsF	CMOS	TS	50	5	DPS640S8A3-100	† Dense-Pac
						DPS640X8A3-100	† Dense-Pac
				66	5	DPS640X8V3-100	† Dense-Pac
	120 nsF	CMOS	TS	50	5	DPS640S8A3-120	† Dense-Pac
						DPS640X8A3-120	† Dense-Pac
				66	5	DPS640X8V3-120	† Dense-Pac
	150 nsF	CMOS	TS	50	5	DPS640S8A3-150	† Dense-Pac
						DPS640X8A3-150	† Dense-Pac
				66	5	DPS640X8V3-150	† Dense-Pac
655360x16							
	35 nsF	CMOS	TS	66	5	DPS640X16V3-35	Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS640X16V3-45	† Dense-Pac
	55 nsF	CMOS	TS	66	5	DPS640X16V3-55	† Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS640X16V3-70	† Dense-Pac
	85 nsF	CMOS	TS	66	5	DPS640X16V3-85	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS640X16V3-100	† Dense-Pac
	120 nsF	CMOS	TS	66	5	DPS640X16V3-120	† Dense-Pac
	150 nsF	CMOS	TS	6	5	DPS640X16V3-150	† Dense-Pac
786432x8							
	35 nsF	CMOS	TS	50	5	DPS768X8A3-35	Dense-Pac
				66	5	DPS768X8V3-35	Dense-Pac
	45 nsF	CMOS	TS	50	5	DPS768S8A3-45	Dense-Pac
						DPS768X8A3-45	† Dense-Pac
				66	5	DPS768X8V3-45	† Dense-Pac
	55 nsF	CMOS	TS	50	5	DPS768S8A3-55	† Dense-Pac
						DPS768X8A3-55	† Dense-Pac
				66	5	DPS768X8V3-55	† Dense-Pac
	70 nsF	CMOS	TS	50	5	DPS768S8A3-70	† Dense-Pac
						DPS768X8A3-70	† Dense-Pac
				66	5	DPS768X8V3-70	† Dense-Pac
							(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
786432x8							(Cont'd)
	85 nsF	CMOS	TS	50	5	DPS768S8A3-85	† Dense-Pac
						DPS768X8A3-85	† Dense-Pac
				66	5	DPS768X8V3-85	† Dense-Pac
	100 nsF	CMOS	TS	50	5	DPS768S8A3-100	† Dense-Pac
						DPS768X8A3-100	† Dense-Pac
				66	5	DPS768X8V3-100	† Dense-Pac
	120 nsF	CMOS	TS	50	5	DPS768S8A3-120	† Dense-Pac
						DPS768X8A3-120	† Dense-Pac
				66	5	DPS768X8V3-120	† Dense-Pac
	150 nsF	CMOS	TS	50	5	DPS768S8A3-150	† Dense-Pac
						DPS768X8A3-150	† Dense-Pac
				66	5	DPS768X8V3-150	† Dense-Pac
786432x16							
	35 nsF	CMOS	TS	6	5	DPS768X16V3-35	Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS768X16V3-45	† Dense-Pac
	55 nsF	CMOS	TS	66	5	DPS768X16V3-55	† Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS768X16V3-70	† Dense-Pac
	85 nsF	CMOS	TS	66	5	DPS768X16V3-85	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS768X16V3-100	† Dense-Pac
	120 nsF	CMOS	TS	66	5	DPS768X16V3-120	† Dense-Pac
	150 nsF	CMOS	TS	66	5	DPS768X16V3-150	† Dense-Pac
917504x8							
	35 nsF	CMOS	TS	50	5	DPS896X8A3-35	Dense-Pac
				66	5	DPS896X8V3-35	Dense-Pac
	45 nsF	CMOS	TS	50	5	DPS896S8A3-45	Dense-Pac
						DPS896X8A3-45	† Dense-Pac
				66	5	DPS896X8V3-45	† Dense-Pac
	55 nsF	CMOS	TS	50	5	DPS896S8A3-55	† Dense-Pac
						DPS896X8A3-55	† Dense-Pac
				66	5	DPS896X8V3-55	† Dense-Pac
	70 nsF	CMOS	TS	50	5	DPS896S8A3-70	† Dense-Pac
						DPS896X8A3-70	† Dense-Pac
				66	5	DPS896X8V3-70	† Dense-Pac
	85 nsF	CMOS	TS	50	5	DPS896S8A3-85	† Dense-Pac
						DPS896X8A3-85	† Dense-Pac
				66	5	DPS896X8V3-85	† Dense-Pac
							(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
917504x8							(Cont'd)	
	100 nsF	CMOS	TS	50	5	DPS896S8A3-100	† Dense-Pac	
						DPS896X8A3-100	† Dense-Pac	
			TSD	66	5	DPS896X8V3-100	† Dense-Pac	
	120 nsF	CMOS	TS	50	5	DPS896S8A3-120	† Dense-Pac	
						DPS896X8A3-120	† Dense-Pac	5
				66	5	DPS896X8V3-120	† Dense-Pac	
	150 nsF	CMOS	TS	50	5	DPS896S8A3-150	† Dense-Pac	
						DPS896X8A3-150	† Dense-Pac	
				66	5	DPS896X8V3-150	† Dense-Pac	
917504x16								
	35 nsF	CMOS	TS	66	5	DPS896X16V3-35	Dense-Pac	10
	45 nsF	CMOS	TS	66	5	DPS896X16V3-45	† Dense-Pac	
	55 nsF	CMOS	TS	66	5	DPS896X16V3-55	† Dense-Pac	
	70 nsF	CMOS	TS	66	5	DPS896X16V3-70	† Dense-Pac	
	85 nsF	CMOS	TS	66	5	DPS896X16V3-85	† Dense-Pac	
	100 nsF	CMOS	TS	66	5	DPS896X16V3-100	† Dense-Pac	15
	120 nsF	CMOS	TS	66	5	DPS896X16V3-120	† Dense-Pac	
	150 nsF	CMOS	TS	66	5	DPS896X16V3-150	† Dense-Pac	
1048576x1								
	35 nsF	CMOS	TS	28	5	EDI8M11024C35C4C	EDI	
	70 nsF	CMOS	TS	28	5	**EDI8M11024C70C4C**	**EDI (3389)**	
1048576x8								
	35 nsF	CMOS	TS	50	5	DPS1MX8A3-35	Dense-Pac	20
						DPS512X16AA3-35	Dense-Pac	
				66	5	DPS1MX8V3-35	Dense-Pac	
		CMSO	TS	66	5	**DPS256X32AV3-35**	**Dense-Pac (3376, 3380)**	
	45 nsF	CMOS	TS	50	5	**DPS1MS8A3-45**	**Dense-Pac (3376, 3380)**	
						DPS1MX8A3-45	† Dense-Pac	25
						DPS512X16AA3-45	**Dense-Pac (3380)**	
				66	5	DPS1MX8V3-45	† Dense-Pac	
						DPS256X32AVS-45	Dense-Pac	
	55 nsF	CMOS	TS	50	5	**DPS1MS8AA3-55**	**Dense-Pac (3376, 3380)**	
						DPS1MS8A3-55 †	**Dense-Pac (3376, 3380)**	30
						DPS1MX8A3-55	† Dense-Pac	
						DPS512X16AA3-55	**Dense-Pac (3376, 3380)**	
				66	5	DPS1MX8V3-55	† Dense-Pac	
						DPS256X32AVS-55	Dense-Pac	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x8							(Cont'd)	
	70 nsF	CMOS	TS	50	5	**DPS1MS8AA3-70**	**Dense-Pac (3376, 3380)**	35
						DPS1MS8A3-70 †	**Dense-Pac (3376, 3380)**	
						DPS1MX8A3-70	† Dense-Pac	
						DPS512X16AA3-70	Dense-Pac	
				66	5	DPS1MX8V3-70	† Dense-Pac	
						DPS256X32AVS-70	Dense-Pac	40
	85 nsF	CMOS	TS	50	5	**DPS1MS8A3-85 †**	**Dense-Pac (3376, 3380)**	
						DPS1MX8A3-85	† Dense-Pac	
				66	5	DPS1MX8V3-85	† Dense-Pac	
	100 nsF	CMOS	TS	50	5	**DPS1MS8A3-100 †**	**Dense-Pac (3376, 3380)**	
						DPS1MX8A3-100	† Dense-Pac	45
				66	5	DPS1MX8V3-100	† Dense-Pac	
	120 nsF	CMOS	TS	50	5	**DPS1MS8A3-120 †**	**Dense-Pac (3376, 3380)**	
						DPS1MX8A3-120	† Dense-Pac	
				66	5	DPS1MX8V3-120	† Dense-Pac	
	150 nsF	CMOS	TS	50	5	**DPS1MS8A3-150 †**	**Dense-Pac (3376, 3380)**	50
						DPS1MX8A3-150	† Dense-Pac	
				66	5	DPS1MX8V3-150	† Dense-Pac	
1048576x16								
	100 nsF	CMOS	TS	48	5	**DPS1MS16XP-100**	**Dense-Pac (3371, 3376)**	
	35 nsF	CMOS	TS	66	5	DPS1MX16V3-35	Dense-Pac	
						DPS512X32AV3-35	**Dense-Pac (3377, 3380)**	55
	45 nsF	CMOS	TS	66	5	DPS1MX16V3-45	† Dense-Pac	
						DPS512X32AVS-45	Dense-Pac	
	55 nsF	CMOS	TS	66	5	DPS1MX16V3-55	† Dense-Pac	
						DPS512X32AV3-55	Dense-Pac	
	70 nsF	CMOS	TS	66	5	DPS1MX16V3-70	† Dense-Pac	60
						DPS512X32AV3-70	**Dense-Pac (3377, 3380)**	
	85 nsF	CMOS	TS	48	5	**DPS1MS16P-85**	**Dense-Pac (3371, 3376)**	
						DPS1MS16X-85 ◊	**Dense-Pac (3371, 3376)**	
						DPS1MS16XP-85	**Dense-Pac (3371, 3376)**	
				66	5	DPS1MX16V3-85	† Dense-Pac	65
				68	5	DPS1MS8P-85	◊‡ Dense-Pac	
	100 nsF	CMOS	TS	48	5	**DPS1MS16P-10**	**Dense-Pac (3371, 3376)**	
						DPS1MS16X-10 ◊	**Dense-Pac (3371, 3376)**	
				68	5	DPS1MS8P-100	◊‡ Dense-Pac	

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—Modules (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
1048576x16							(Cont'd)
	120 nsF	CMOS	TS	48	5	**DPS1MS16P-12**	**Dense-Pac (3371, 3376)**
						DPS1MS16X-12	**◊ Dense-Pac (3371, 3376)**
						DPS1MS16XP-120	**Dense-Pac (3371, 3376)**
				66	5	DPS1MX16V3-120	† Dense-Pac
				68	5	DPS1MS8P-120	◊‡ Dense-Pac
	150 nsF	CMOS	TS	48	5	**DPS1MS16P-15**	**Dense-Pac (3371, 3376)**
						DPS1MS16X-15	**◊ Dense-Pac (3371, 3376)**
						DPS1MS16XP-150	**Dense-Pac (3371, 3376)**
				66	5	DPS1MX16V3-150	† Dense-Pac
	100 nsF	CMOS	TS	66	5	DPS1MX16V3-100	† Dense-Pac
2097152x8							
	35 nsF	CMOS	TS	66	5	DPS2MX8V3-35	Dense-Pac
						DPS512X32AV3-35	Dense-Pac
	45 nsF	CMOS	TS	66	5	DPS2MX8V3-45	† Dense-Pac
						DPS512X32AV3-45	**Dense-Pac (3380)**
	55 nsF	CMOS	TS	66	5	DPS2MX8V3-55	† Dense-Pac
						DPS512X32AV3-55	Dense-Pac
	70 nsF	CMOS	TS	66	5	DPS2MX8V3-70	† Dense-Pac
						DPS512X32AV3-70	Dense-Pac
	85 nsF	CMOS	TS	48	5	**DPS1MS16P-85**	**Dense-Pac (3371, 3376)**
						DPS1MS16X-85	**◊ Dense-Pac (3371, 3376)**
						DPS1MS16XP-85	Dense-Pac
				66	5	DPS2MX8V3-85	† Dense-Pac
				68	5	DPS1MS8P-85	◊‡ Dense-Pac
	100 nsF	CMOS	TS	48	5	**DPS1MS16X-10**	**◊ Dense-Pac (3371, 3376)**
						DPS1MS16XP-100	Dense-Pac
				66	5	DPS2MX8V3-100	† Dense-Pac
				68	5	DPS1MS8P-100	◊‡ Dense-Pac
	120 nsF	CMOS	TS	48	5	**DPS1MS16P-12**	**Dense-Pac (3371, 3376)**
						DPS1MS16X-12	**◊ Dense-Pac (3371, 3376)**
						DPS1MS16XP-120	Dense-Pac
				66	5	DPS2MX8V3-120	† Dense-Pac
				68	5	DPS1MS8P-120	◊‡ Dense-Pac
	150 nsF	CMOS	S	48	5	**DPS1MS16X-15**	**◊ Dense-Pac (3371, 3376)**
			TS	48	5	**DPS1MS16P-15**	**Dense-Pac (3371, 3376)**
						DPS1MS16XP-150	Dense-Pac
							(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
2097152x8							(Cont'd)
	150 nsF	CMOS	TS	66	5	DPS2MX8V3-150	† Dense-Pac

Static—Multiport

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
64x5x2	55 nsF	CMOS	TS	24	5	MK45264-55	SGS-Thomson
						MK45265-55	SGS-Thomson
	70 nsF	CMOS	TS	24	5	MK45264-70	SGS-Thomson
						MK45265-70	SGS-Thomson
256x8	240 nsF	2-port	TS	40	5	MCM68HC34	Motorola
1024x8	25 nsF	CMOS 2-Port	TS	48	5	CY7C130-25C	◊ Cypress
						CY7C132-25C	◊ Cypress
				52	5	CY7C131-25C	◊ Cypress
						CY7C141-25C	◊ Cypress
		CMOS, 4-Port	TS	108	5	IDT7050L-25	◊ IDT
						IDT7050S-25	◊ IDT
	30 nsF	CMOS, 4-Port	TS	108	5	IDT7050L-30B	◊† IDT
						IDT7050S-30B	◊† IDT
	35 nsF	CMOS, 2-Port	TS	48	5	CY7C130-35M	◊† Cypress
						CY7C140-35C	◊ Cypress
		CMOS 2-Port	TS	52	5	CY7C131-35C	◊ Cypress
						CY7C131-35M	◊† Cypress
						CY7C141-35C	◊ Cypress
						CY7C141-35M	◊† Cypress
		CMOS, 4-Port	TS	108	5	IDT7050L-35	◊ IDT
						IDT7050L-35B	◊† IDT
						IDT7050S-35	◊ IDT
						IDT7050S-35B	◊† IDT
		2-Port	TS	48	5	CY7C130-35C	Cypress
		2-Port	TS	48	5	IDT7130LA-35	◊ IDT
						IDT7130SA-35	◊ IDT
						IDT7140LA-35	◊ IDT
						IDT7140SA-35	◊ IDT
	45 nsF	CMOS, 2-port	TS	48	5	CY7C140-45C	Cypress
		CMOS 2-Port	TS	52	5	CY7C131-45C	◊ Cypress
						CY7C131-45M	◊† Cypress
						CY7C141-45C	◊ Cypress
						CY7C141-45M	◊† Cypress
		CMOS, 4-Port	TS	108	5	IDT7050L-45	◊ IDT
						IDT7050L-45B	◊† IDT
							(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Multiport (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x8	45 nsF	CMOS, 4-Port	TS	108	5	IDT7050S-45	◊ IDT	
						IDT7050S-45B	◊† IDT	
		CMOS, 2-port	TS	48	5	CY7C140-45M	◊† Cypress	
		2-Port	TS	48	5	CY7C130-45C	Cypress	
		2-Port	TS	48	5	IDT7130LA-45	◊ IDT	5
						IDT7130LA-45B	◊‡ IDT	
						IDT7130SA-45	◊ IDT	
						IDT7130SA-45B	◊‡ IDT	
						IDT7140LA-45	◊ IDT	
						IDT7140LA-45B	◊‡ IDT	10
						IDT7140SA-45	◊ IDT	
						IDT7140SA-45B	◊‡ IDT	
	55 nsF	CMOS, 2-port	TS	48	5	CY7C140-55C	Cypress	
						CY7C140-55M	◊† Cypress	
		CMOS 2-Port	TS	48	5	MS6130-55	Mosel	15
						MS6130L-55	Mosel	
				52	5	CY7C131-55C	◊ Cypress	
						CY7C131-55M	◊† Cypress	
						CY7C141-55C	◊ Cypress	
						CY7C141-55M	◊† Cypress	20
		NMOS, 2-Port	TS	48	5	AM2130-55	AMD	
						AM2140-55	AMD	
		2-Port	TS	48	5	IDT7130LA-55	◊ IDT	
						IDT7130LA-55B	◊‡ IDT	
						IDT7130SA-55	◊ IDT	25
						IDT7130SA-55B	◊‡ IDT	
						IDT7140LA-55	◊ IDT	
						IDT7140LA-55B	◊‡ IDT	
						IDT7140SA-55	◊ IDT	
						IDT7140SA-55B	◊‡ IDT	30
	70 nsF	CMOS 2-Port	TS	48	5	MS6130-70	Mosel	
						MS6130L-70	Mosel	
		NMOS, 2-Port	TS	48	5	AM2130-70	AMD	
						AM2140-70	AMD	
		2-Port	TS	48	5	IDT7130LA-70	◊ IDT	35
						IDT7130LA-70B	◊‡ IDT	
						IDT7130SA-70	◊ IDT	
						IDT7130SA-70B	◊‡ IDT	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1024x8	70 nsF	2-Port	TS	48	5	IDT7140LA-70	◊ IDT	
						IDT7140LA-70B	◊‡ IDT	40
						IDT7140SA-70	◊ IDT	
						IDT7140SA-70B	◊‡ IDT	
	90 nsF	CMOS 2-Port	TS	48	5	MS6130-90	Mosel	
		2-Port	TS	48	5	IDT7130LA-90	◊ IDT	
						IDT7130LA-90B	◊‡ IDT	45
						IDT7130SA-90	◊ IDT	
						IDT7130SA-90B	◊‡ IDT	
						IDT7140LA-90	◊ IDT	
						IDT7140LA-90B	◊‡ IDT	
						IDT7140SA-90	◊ IDT	50
						IDT7140SA-90B	◊‡ IDT	
	100 nsF	NMOS, 2-Port	TS	48	5	AM2140-10	AMD	
		2-Port	TTL	48	5	AM2130-10	AMD	
		2-Port	TS	48	5	IDT7130LA-100B	◊‡ IDT	
						IDT7130SA-100	◊ IDT	55
						IDT7130SA-100B	◊‡ IDT	
						IDT7140LA-100	◊ IDT	
						IDT7140LA-100B	◊‡ IDT	
						IDT7140SA-100	◊ IDT	
						IDT7140SA-100B	◊‡ IDT	60
	120 nsF	NMOS, 2-Port	TS	48	5	AM2130-12	AMD	
						AM2140-12	AMD	
		2-Port	TS	48	5	IDT7130LA-120B	◊‡ IDT	
						IDT7130SA-120	◊ IDT	
						IDT7130SA-120B	◊‡ IDT	65
						IDT7140LA-120	◊ IDT	
						IDT7140LA-120B	◊‡ IDT	
						IDT7140SA-120	◊ IDT	
						IDT7140SA-120B	◊‡ IDT	
1024x9	20 nsF	CMOS, 2-Port	TS	48	5	IDT7010L-20	◊ IDT	70
						IDT7010S-20	◊ IDT	
						IDT70104L-20	◊ IDT	
						IDT70104S-20	◊ IDT	
				52	5	IDT70101L-20	◊ IDT	
						IDT70101S-20	◊ IDT	75
						IDT70105L-20	◊ IDT	
						IDT70105S-20	◊ IDT	

(Continued)

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—Multiport (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
1024x9							(Cont'd)
	25 nsF	CMOS, 2-Port	TS	48	5	IDT7010L-25	◊ IDT
						IDT7010L-25B	◊† IDT
						IDT7010S-25	◊ IDT
						IDT7010S-25B	◊† IDT
						IDT70104L-25	◊ IDT
						IDT70104L-25B	◊† IDT
						IDT70104S-25	◊ IDT
						IDT70104S-25B	◊† IDT
				52	5	IDT70101L-25	◊ IDT
						IDT70101L-25B	◊† IDT
						IDT70101S-25	◊ IDT
						IDT70101S-25B	◊† IDT
						IDT70105L-25	◊ IDT
						IDT70105L-25B	◊† IDT
						IDT70105S-25	◊ IDT
						IDT70105S-25B	◊† IDT
	35 nsF	CMOS, 2-Port	TS	48	5	IDT7010L-35	◊ IDT
						IDT7010L-35B	◊† IDT
						IDT7010S-35	◊ IDT
						IDT7010S-35B	◊† IDT
						IDT70104L-35	◊ IDT
						IDT70104L-35B	◊† IDT
						IDT70104S-35	◊ IDT
						IDT70104S-35B	◊† IDT
				52	5	IDT70101L-35	◊ IDT
						IDT70101L-35B	◊† IDT
						IDT70101S-35	◊ IDT
						IDT70101S-35B	◊† IDT
						IDT70105L-35	◊ IDT
						IDT70105L-35B	◊† IDT
						IDT70105S-35	◊ IDT
						IDT70105S-35B	◊† IDT
	45 nsF	CMOS, 2-Port	TS	48	5	IDT7010L-45	◊ IDT
						IDT7010L-45B	◊† IDT
						IDT7010S-45	◊ IDT
						IDT7010S-45B	◊† IDT
						IDT70104L-45	◊ IDT
						IDT70104L-45B	◊† IDT
							(Continued)
1024x9	45 nsF	CMOS, 2-Port	TS	48	5		(Cont'd)
						IDT70104S-45	◊ IDT
						IDT70104S-45B	◊† IDT
				52	5	IDT70101L-45	◊ IDT
						IDT70101L-45B	◊† IDT
						IDT70101S-45	◊ IDT
						IDT70101S-45B	◊† IDT
						IDT70105L-45	◊ IDT
						IDT70105L-45B	◊† IDT
						IDT70105S-45	◊ IDT
						IDT70105S-45B	◊† IDT
	55 nsF	CMOS, 2-Port	TS	48	5	IDT7010L-55	◊ IDT
						IDT7010L-55B	◊† IDT
						IDT7010S-55	◊ IDT
						IDT7010S-55B	◊† IDT
						IDT70104L-55	◊ IDT
						IDT70104L-55B	◊† IDT
						IDT70104S-55	◊ IDT
						IDT70104S-55B	◊† IDT
				52	5	IDT70101L-55	◊ IDT
						IDT70101L-55B	◊† IDT
						IDT70101S-55	◊ IDT
						IDT70101S-55B	◊† IDT
						IDT70105L-55	◊ IDT
						IDT70105L-55B	◊† IDT
						IDT70105S-55	◊ IDT
						IDT70105S-55B	◊† IDT
	70 nsF	CMOS, 2-Port	TS	48	5	IDT7010L-70B	◊† IDT
						IDT7010S-70B	◊† IDT
						IDT70104L-70B	◊† IDT
						IDT70104S-70B	◊† IDT
				52	5	IDT70101L-70B	◊† IDT
						IDT70101S-70B	◊† IDT
						IDT70105L-70B	◊† IDT
						IDT70105S-70B	◊† IDT
1024x16	70 nsF	2-Port 8/16	TS	64	5	VT16DP8	† VLSI Tech
2038x84	45 nsF	CMOS, 2-port	TS	48	5	CY7C142-45C	◊ Cypress

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY—RAMs (Cont'd)

Static—Multiport (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8	25 nsF	CMOS	TS	48	5	VT7132-25	◊ VLSI Tech	
						VT7132A-25	◊ VLSI Tech	
						VT7142-25	◊ VLSI Tech	
						VT7142A-25	◊ VLSI Tech	
				52	5	VT71321-25	◊ VLSI Tech	5
						VT71421-25	◊ VLSI Tech	
		CMOS, 2-Port						
			TS	48	5	CY7C140-25C	◊ Cypress	
						CY7C142-25C	◊ Cypress	
		CMOS 2-Port						
			TS	52	5	CY7C136-25C	◊ Cypress	
						CY7C146-25C	◊ Cypress	10
		CMOS, 4-Port						
			TS	108	5	IDT7052L-25	◊ IDT	
						IDT7052S-25	◊ IDT	
	30 nsF	CMOS	TS	48	5	VT7132-30	◊ VLSI Tech	
						VT7142-30	◊ VLSI Tech	
		CMOS, 4-Port						
			TS	108	5	IDT7052L-30B	◊† IDT	15
						IDT7052S-30B	◊† IDT	
		CMOS, 2-Port						
			TS	48	5	VT7132A-30	VLSI Tech	
						VT7142A-30	VLSI Tech	
		Master		48	5	VT71321-30	VLSI Tech	
		Slave		48	5	VT71421-30	VLSI Tech	20
	35 nsF	CMOS	TS	48	5	VT7132-35	◊ VLSI Tech	
						VT7142-35	◊ VLSI Tech	
		CMOS, 2-port						
			TS	48	5	CY7C142-35C	◊ Cypress	
		CMOS, 2-Port						
			TS	48	5	CY7C142-35M	◊† Cypress	
		CMOS 2-Port						
			TS	52	5	CY7C136-35C	◊ Cypress	25
						CY7C136-35M	◊† Cypress	
						CY7C146-35C	◊ Cypress	
						CY7C146-35M	◊† Cypress	
		CMOS, 4-Port						
			TS	108	5	IDT7052L-35	◊ IDT	
						IDT7052L-35B	◊† IDT	30
						IDT7052S-35	◊ IDT	
						IDT7052S-35B	◊† IDT	
		CMOS, 2-Port						
			TS	48	5	VT7132A-35	VLSI Tech	
						VT7142A-35	VLSI Tech	
		Master		48	5	VT71321-35	VLSI Tech	35
		Slave		48	5	VT71421-35	VLSI Tech	
		2-Port	TS	48	5	CY7C132-35C	Cypress	
		2-Port	TS	48	5	IDT7132LA-35	◊ IDT	
						IDT7132SA-35	◊ IDT	
						IDT7142SA-35	◊ IDT	40
				52	5	IDT71421LA-35	◊ IDT	
						IDT71421SA-35	◊ IDT	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8							(Cont'd)	
	45 nsF	CMOS, 2-port						
			TS	48	5	CY7C142-45M	◊† Cypress	
		CMOS 2-Port						
			TS	52	5	CY7C136-45C	◊ Cypress	
						CY7C136-45M	◊† Cypress	45
						CY7C146-45C	◊ Cypress	
						CY7C146-45M	◊† Cypress	
		CMOS, 4-Port						
			TS	108	5	IDT7052L-45	◊ IDT	
						IDT7052L-45B	◊† IDT	
						IDT7052S-45	◊ IDT	50
						IDT7052S-45B	◊† IDT	
		CMOS, 2-Port						
			TS	48	5	VT7132A-45	VLSI Tech	
						VT7142A-45	VLSI Tech	
		Master		48	5	VT71321-45	VLSI Tech	
		Slave		48	5	VT71421-45	VLSI Tech	55
		2-Port	TS	48	5	CY7C132-45C	Cypress	
						CY7C132-45M	† Cypress	
		2-Port	TS	48	5	IDT7132LA-45	◊ IDT	
						IDT7132LA-45B	◊‡ IDT	
						IDT7132SA-45	◊ IDT	60
						IDT7132SA-45B	◊‡ IDT	
						IDT71322L-45B	◊‡ IDT	
						IDT71322S-45B	◊‡ IDT	
						IDT7142LA-45B	◊‡ IDT	
						IDT7142SA-45	◊ IDT	65
						IDT7142SA-45B	◊‡ IDT	
				52	5	IDT71321LA-45B	◊‡ IDT	
						IDT71421LA-45	◊ IDT	
						IDT71421LA-45B	◊‡ IDT	
						IDT71421SA-45	◊ IDT	70
	55 nsF	CMOS 2-Port						
			TS	52	5	CY7C136-55C	◊ Cypress	
						CY7C136-55M	◊† Cypress	
						CY7C146-55C	◊ Cypress	
						CY7C146-55M	◊† Cypress	
		CMOS, 2-Port						
			TS	48	5	VT7132-55	VLSI Tech	75
						VT7142-55	VLSI Tech	
		2-Port	TS	48	5	CY7C132-55C	Cypress	
						CY7C132-55M	† Cypress	
						IDT71322L-55	◊ IDT	
						IDT71322L-55B	◊† IDT	80

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—Multiport (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
2048x8	55 nsF	2-Port	TS	48	5	(Cont'd)	
						IDT71322S-55	◊ IDT
						IDT71322S-55B	◊† IDT
		2-Port	TS	48	5	IDT7132LA-55	◊ IDT
						IDT7132LA-55B	◊‡ IDT
						IDT7132SA-55B	◊‡ IDT
						IDT7142LA-55B	◊‡ IDT
						IDT7142SA-55	◊ IDT
						IDT7142SA-55B	◊‡ IDT
				52	5	IDT71321LA-55B	◊‡ IDT
						IDT71421LA-55	◊ IDT
						IDT71421LA-55B	◊‡ IDT
						IDT71421SA-55	◊ IDT
						IDT71421SA-55B	◊‡ IDT
	70 nsF	CMOS, 2-Port	TS	48	5	V61C32-70	Vitelic
						V61C32-70L	Vitelic
						VT7132-70	VLSI Tech
						VT7142-70	VLSI Tech
		2-Port	TS	48	5	IDT71322L-70	◊ IDT
						IDT71322L-70B	◊† IDT
						IDT71322S-70	◊ IDT
						IDT71322S-70B	◊† IDT
		2-Port	TS	48	5	IDT7132LA-70	◊ IDT
						IDT7132LA-70B	◊‡ IDT
						IDT7132SA-70B	◊‡ IDT
						IDT7142LA-70B	◊‡ IDT
						IDT7142SA-70	◊ IDT
						IDT7142SA-70B	◊‡ IDT
				52	5	IDT71321SA-70B	◊‡ IDT
						IDT71421LA-70B	◊‡ IDT
						IDT71421SA-70B	◊‡ IDT
	90 nsF	CMOS, 2-Port	TS	48	5	V61C32-90	Vitelic
						V61C32-90L	Vitelic
						VT7132-90	VLSI Tech
						VT7142-90	VLSI Tech
		2-Port	TS	48	5	IDT7132LA-90	◊ IDT
						IDT7132LA-90B	◊‡ IDT
						IDT7132SA-90B	◊‡ IDT
						IDT7142LA-90B	◊‡ IDT
						(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
2048x8	90 nsF	2-Port	TS	48	5	(Cont'd)	
						IDT7142SA-90	◊ IDT
						IDT7142SA-90B	◊‡ IDT
	100 nsF	2-Port	TS	48	5	IDT7132LA-100	◊ IDT
						IDT7132LA-100B	◊‡ IDT
						IDT7132SA-100	◊ IDT
						IDT7132SA-100B	◊‡ IDT
						IDT7142LA-100	◊ IDT
						IDT7142LA-100B	◊‡ IDT
						IDT7142SA-100	◊ IDT
						IDT7142SA-100B	◊‡ IDT
	120 nsF	2-Port	TS	48	5	IDT7132LA-120	◊ IDT
						IDT7132LA-120B	◊‡ IDT
						IDT7132SA-120	◊ IDT
						IDT7132SA-120B	◊‡ IDT
						IDT7142LA-120	◊ IDT
						IDT7142LA-120B	◊‡ IDT
						IDT7142SA-120	◊ IDT
						IDT7142SA-120B	◊‡ IDT
2048x9	20 nsF	CMOS, 2-Port	TS	48	5	IDT7012L-20	◊ IDT
						IDT7012S-20	◊ IDT
				52	5	IDT70121L-20	◊ IDT
						IDT70121S-20	◊ IDT
						IDT70125L-20	◊ IDT
						IDT70125S-20	◊ IDT
	25 nsF	CMOS, 2-Port	TS	48	5	IDT7012L-25	◊ IDT
						IDT7012L-25B	◊† IDT
						IDT7012S-25	◊ IDT
						IDT7012S-25B	◊† IDT
				52	5	IDT70121L-25	◊ IDT
						IDT70121L-25B	◊† IDT
						IDT70121S-25	◊ IDT
						IDT70121S-25B	◊† IDT
						IDT70125L-25	◊ IDT
						IDT70125L-25B	◊† IDT
						IDT70125S-25	◊ IDT
						IDT70125S-25B	◊† IDT
	35 nsF	CMOS, 2-Port	TS	48	5	IDT7012L-35	◊ IDT
						IDT7012L-35B	◊† IDT
						(Continued)	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY—RAMs (Cont'd)

Static—Multiport (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
2048x9	35 nsF	CMOS, 2-Port	TS	48	5	IDT7012S-35	◊ IDT
						IDT7012S-35B	◊† IDT
				52	5	IDT70121L-35	◊ IDT
						IDT70121L-35B	◊† IDT
						IDT70121S-35	◊ IDT
						IDT70121S-35B	◊† IDT
						IDT70125L-35	◊ IDT
						IDT70125L-35B	◊† IDT
						IDT70125S-35	◊ IDT
						IDT70125S-35B	◊† IDT
	45 nsF	CMOS, 2-Port	TS	48	5	IDT7012L-45	◊ IDT
						IDT7012L-45B	◊† IDT
						IDT7012S-45	◊ IDT
						IDT7012S-45B	◊† IDT
				52	5	IDT70121L-45	◊ IDT
						IDT70121L-45B	◊† IDT
						IDT70121S-45	◊ IDT
						IDT70121S-45B	◊† IDT
						IDT70125L-45	◊ IDT
						IDT70125L-45B	◊† IDT
						IDT70125S-45	◊ IDT
						IDT70125S-45B	◊† IDT
	55 nsF	CMOS, 2-Port	TS	48	5	IDT7012L-55	◊ IDT
						IDT7012L-55B	◊† IDT
						IDT7012S-55	◊ IDT
						IDT7012S-55B	◊† IDT
				52	5	IDT70121L-55	◊ IDT
						IDT70121L-55B	◊† IDT
						IDT70121S-55	◊ IDT
						IDT70121S-55B	◊† IDT
						IDT70125L-55	◊ IDT
						IDT70125L-55B	◊† IDT
						IDT70125S-55	◊ IDT
						IDT70125S-55B	◊† IDT
	70 nsF	CMOS, 2-Port	TS	48	5	IDT7012L-70B	◊† IDT
						IDT7012S-70B	◊† IDT
2048x9	70 nsF	CMOS, 2-Port	TS	52	5	IDT70121L-70B	◊† IDT
						IDT70121S-70B	◊† IDT
						IDT70125L-70B	◊† IDT
						IDT70125S-70B	◊† IDT
2048x16	70 nsF	2-Port	TS	68	5	IDT7133L-70B	◊‡ IDT
						IDT7133S-70B	◊‡ IDT
						IDT7143L-70B	◊‡ IDT
						IDT7143S-70B	◊‡ IDT
	90 nsF	2-port	TS	68	5	IDT7133L-90	◊ IDT
						IDT7133L-90B	◊† IDT
		2-port slave	TS	68	5	IDT7143L-90	◊ IDT
						IDT7143L-90B	◊† IDT
		2-Port	TS	68	5	IDT7133S-90	◊ IDT
						IDT7133S-90B	◊‡ IDT
						IDT7143S-90	◊ IDT
						IDT7143S-90B	◊‡ IDT
4096x8	35 nsF	CMOS, 2-Port	TS	48	5	AM99C134	AMD
				52	5	AM99C1341	◊ AMD
						AM99C1441	◊ AMD
	45 nsF	2-port slave	TS	68	5	IDT7134S-45	◊ IDT
		2-Port	TS	52	5	IDT71342L-45B	◊‡ IDT
						IDT71342S-45B	◊‡ IDT
				68	5	IDT7134L-45B	◊‡ IDT
						IDT7134S-45B	◊‡ IDT
	55 nsF	2-port	TS	68	5	IDT7134L-55B	◊† IDT
		2-port slave	TS	68	5	IDT7134S-55	◊ IDT
						IDT7134S-55B	◊† IDT
		2-Port	TS	52	5	IDT71342L-55B	◊‡ IDT
						IDT71342S-55B	◊‡ IDT
	70 nsF	2-Port	TS	52	5	IDT71342L-70B	◊‡ IDT
						IDT71342S-70B	◊‡ IDT
				68	5	IDT7134L-70B	◊‡ IDT
						IDT7134S-70	◊ IDT
						IDT7134S-70B	◊‡ IDT
4096x16	30 nsF	CMOS, 2-Port	TS	84	5	IDT7024L-30	◊ IDT
						IDT7024S-30	◊ IDT
	35 nsF	CMOS, 2-Port	TS	84	5	IDT7024L-35	◊ IDT
						IDT7024S-35	◊ IDT

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—RAMs (Cont'd)

Static—Multiport (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
4096x16							(Cont'd)
	45 nsF	CMOS, 2-Port	TS	84	5	IDT7024L-45	◊ IDT
						IDT7024L-45B	◊† IDT
						IDT7024S-45	◊ IDT
						IDT7024S-45B	◊† IDT
	55 nsF	CMOS, 2-Port	TS	84	5	IDT7024L-55	◊ IDT
						IDT7024L-55B	◊† IDT
						IDT7024S-55	◊ IDT
						IDT7024S-55B	◊† IDT
	70 nsF	CMOS, 2-Port	TS	84	5	IDT7024L-70B	◊† IDT
						IDT7024S-70B	◊† IDT
8192x8	35 nsF	CMOS, 2-Port	TS	68	5	IDT7005L-35	◊ IDT
						IDT7005S-35	◊ IDT
	45 nsF	CMOS, 2-Port	TS	68	5	IDT7005L-45	◊ IDT
						IDT7005L-45B	◊ IDT
						IDT7005S-45	◊ IDT
						IDT7005S-45B	◊ IDT
	55 nsF	CMOS, 2 Port	TS	68	5	IDT7005L-55B	◊ IDT
		CMOS, 2-Port	TS	68	5	IDT7005L-55	◊ IDT
						IDT7005S-55	◊ IDT
						IDT7005S-55B	◊ IDT
	70 nsF	CMOS, 2-Port	TS	68	5	IDT7005L-70B	◊ IDT
						IDT7005S-70B	◊ IDT
8192x16							
	30 nsF	CMOS, 2-Port	TS	84	5	IDT7025L-30	◊ IDT
						IDT7025S-30	◊ IDT
	35 nsF	CMOS, 2-Port	TS	84	5	IDT7025L-35	◊ IDT
						IDT7025S-35	◊ IDT
	45 nsF	CMOS, 2-Port	TS	84	5	IDT7025L-45	◊ IDT
						IDT7025L-45B	◊† IDT
						IDT7025S-45	◊ IDT
						IDT7025S-45B	◊† IDT
	55 nsF	CMOS, 2-Port	TS	84	5	IDT7025L-55	◊ IDT
						IDT7025L-55B	◊† IDT
						IDT7025S-55	◊ IDT
						IDT7025S-55B	◊† IDT
	70 nsF	CMOS, 2-Port	TS	84	5	IDT7025L-70B	◊† IDT
						IDT7025S-70B	◊† IDT
16384x8							
	35 nsF	CMOS, 2-Port	TS	68	5	IDT7006L-35	◊ IDT
						IDT7006S-35	◊ IDT

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
16384x8							(Cont'd)
	45 nsF	CMOS, 2-Port	TS	68	5	IDT7006L-45	◊ IDT
						IDT7006L-45B	◊† IDT
						IDT7006S-45	◊ IDT
						IDT7006S-45B	◊† IDT
	55 nsF	CMOS, 2-Port	TS	68	5	IDT7006L-55	◊ IDT
						IDT7006L-55B	◊† IDT
						IDT7006S-55	◊ IDT
						IDT7006S-55B	◊† IDT
	70 nsF	CMOS, 2-Port	TS	68	5	IDT7006L-70B	◊† IDT
						IDT7006S-70B	◊† IDT
262144x4							
	100 nsF	CMOS 2-Port Graphics Buffer	TS	28	5	μPD42273-10	NEC
						μPD42274-10	NEC
	120 nsF	CMOS 2-Port Graphics Buffer	TS	28	5	μPD42273-12	NEC
						μPD42274-12	NEC

Static—NOVRAMs

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
8x8	750 nsF	CMOS	TS	8	5	S2430	◊ Seiko Instr
16x16	400 nsF	CMOS Serial	TS	8	5	**CAT24C44**	**Catalyst Semi (3352)**
						CAT24C44I	**Catalyst Semi (3352)**
	750 nsF	CMOS	TS	8	5	S2444	Seiko Instr
						S2445	◊ Seiko Instr
64x4	200 nsF	CMOS	TS	18	5	**CAT22C10-20**	**Catalyst Semi (3352)**
						CAT22C10I-20	**Catalyst Semi (3352)**
	300 nsF	CMOS	TS	18	5	**CAT22C10-30**	**Catalyst Semi (3352)**
						CAT22C10I-30	**Catalyst Semi (3352)**
						S2210	Seiko Instr
64x8		CMOS	TS	24	5	MK48T87B	SGS-Thomson
128x8	100 nsF	NVRAM	TS	24	5	FM1008	Ramtron
256x4	200 nsF	CMOS	TS	18	5	**CAT22C12-20**	**Catalyst Semi (3352)**
						CAT22C12I-20	**Catalyst Semi (3352)**
	300 nsF	CMOS	TS	18	5	**CAT22C12-30**	**Catalyst Semi (3352)**
						CAT22C12I-30	**Catalyst Semi (3352)**
						S2212	Seiko Instr
256x8	100 nsF	NVRAM	TS	24	5	FM1108	Ramtron
512x8	100 nsF	NVRAM	TS	24	5	FM1208	Ramtron
1024x8	100 nsF	NVRAM	TS	24	5	FM1308	◊ Ramtron
2048x8	20 nsF	CMOS	TS	24	5	STK10C48-20	Simtek
				28	5	STK10C48-20	Simtek
	25 nsF	CMOS	TS	24	5	**STK10C48-25**	**Simtek (3650)**
						STK11C48-25	**Simtek (3650)**
						STK11C48-25M	† Simtek
				28	5	STK10C48-25M	† Simtek

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—NOVRAMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
2048x8							(Cont'd)	
	30 nsF	CMOS	TS	24	5	**STK10C48-30**	**Simtek (3650)**	
						STK11C48-30	**Simtek (3650)**	
						STK11C48-30M	† Simtek	
				28	5	STK10C48-30M	† Simtek	
	35 nsF	CMOS	TS	24	5	**STK10C48-35**	**Simtek (3650)**	5
						STK11C48-35	**Simtek (3650)**	
	45 nsF	CMOS	TS	24	5	**STK10C48-45**	**Simtek (3650)**	
						STK11C48-45	**Simtek (3650)**	
	55 nsF	CMOS	TS	24	5	**STK10C48-55**	**Simtek (3650)**	
						STK11C48-55	**Simtek (3650)**	10
	100 nsF	NVRAM	TS	24	5	FM1408	◊ Ramtron	
	200 nsF	NVRAM, Battery						
			TS	24	5	GR281	Greenwich	
						NVR2	Greenwich	
8192x8	25 nsF	CMOS	TS	28	5	**STK10C68-25**	**Simtek (3650)**	
						STK10C68-30	**Simtek (3651)**	15
						STK11C68-25	**Simtek (3651)**	
	30 nsF	CMOS	TS	28	5	STK10C68-30M	† Simtek	
						STK11C68-30	**Simtek (3650)**	
						STK11C68-30M	† Simtek	
	35 nsF	CMOS	TS	28	5	STK10C68-35	◊ Simtek	20
						STK10C68-35M	† Simtek	
						STK11C68-35	◊ Simtek	
						STK11C68-35M	† Simtek	
	45 nsF	CMOS	TS	28	5	STK10C68-45	◊ Simtek	
						STK10C68-45M	◊† Simtek	25
						STK11C68-45	◊ Simtek	
						STK11C68-45M	◊† Simtek	
	55 nsF	CMOS	TS	28	5	MK48Z08-55	SGS-Thomson	
						STK10C68-55M	◊† Simtek	
						STK11C68-55M	◊† Simtek	30
	70 nsF	CMOS	TS	28	5	MK48Z08-70	SGS-Thomson	
	85 nsF	NVSRAM						
			TS	28	5	bq4010-85	Benchmarq	
	100 nsF	CMOS	TS	28	5	MK48T08-10	SGS-Thomson	
						MK48Z08-10	SGS-Thomson	
						MK48Z18-10	SGS-Thomson	35
						MK48Z19-10	SGS-Thomson	
	150 nsF	CMOS	TS	28	5	MK48T08-15	SGS-Thomson	
						MK48Z08-15	SGS-Thomson	
						MK48Z18-15	SGS-Thomson	
						MK48Z19-15	SGS-Thomson	40
		NVRAM, Battery						
			TS	28	5	GR881	Greenwich	
		NVSRAM						
			TS	28	5	bq4010-150	Benchmarq	
	200 nsF	CMOS	TS	28	5	MK48T08-20	SGS-Thomson	
		NVSRAM						
			TS	28	5	bq4010-200	Benchmarq	
16384x1								
	400 nsF	Magnetoresistive			5	MRAM	‡ Honeywell	45
32768x8								
	35 nsF	NVSRAM						
			TS	28	5	bq4011H-35	Benchmarq	
	45 nsF	NVSRAM						
			TS	28	5	bq4011H-45	Benchmarq	
	100 nsF	CMOS	TS	28	5	MK48Z30-10	SGS-Thomson	
		NVSRAM						
			TS	28	5	bq4011-100	Benchmarq	
							(Continued)	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
32768x8							(Cont'd)	
	120 nsF	CMOS	TS	28	5	MK48Z30-12	SGS-Thomson	50
	150 nsF	CMOS	TS	28	5	MK48Z30-15	SGS-Thomson	
		CMOS with Battery, NVRAM						
			TS	28	5	GR3281	Greenwich	
		NVSRAM						
			TS	28	5	bq4011-150	Benchmarq	
	200 nsF	NVSRAM						
			TS	28	5	bq4011-200	Benchmarq	
131072x8								
	70 nsF	NVRAM	TS	32	5	DS1245-70	Dallas	55
	85 nsF	NVSRAM						
			TS	32	5	bq4013-85	Benchmarq	
	120 nsF	NVSRAM						
			TS	32	5	bq4013-120	Benchmarq	
	150 nsF	CMOS	TS	32	5	GR12882	Greenwich	
131072x8 (NVRAM)						GR12881	Greenwich	
131072x16								
	85 nsF	NVSRAM						
			TS	40	5	bq4024-85	Benchmarq	60
	120 nsF	NVSRAM						
			TS	40	5	bq4024-120	Benchmarq	
262144x8								
	85 nsF	NVSRAM						
			TS	32	5	bq4014-85	Benchmarq	
	120 nsF	NVSRAM						
			TS	32	5	bq4014-120	Benchmarq	
262144x16								
	85 nsF	NVSRAM						
			TS	40	5	bq4025-85	Benchmarq	
	120 nsF	NVSRAM						
			TS	40	5	bq4025-120	Benchmarq	65
524288x8								
	85 nsF	NVSRAM						
			TS	32	5	bq4015-85	Benchmarq	
	120 nsF	NVSRAM						
			TS	32	5	bq4015-120	Benchmarq	

Static—Cache Tag

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
1Kx12	25 nsF	CMOS	OC	28	5	SN74ACT2153-25	◊ TI	
			TS	28	5	SN74ACT2151-25	◊ TI	
	28 nsF	CMOS	OC	28	5	SN74ACT2153-28	◊ TI	70
			TS	28	6	SN74ACT2151-28	◊ TI	
2Kx8	20 nsF	CMOS	OC	28	5	SN74ACT2154A-20	◊ TI	
			TS	28	5	SN74ACT2152A-20	◊ TI	
	22 nsF	CMOS	TS	44	5	SN74ACT2155-22	◊ TI	
	25 nsF	CMOS	OC	28	5	SN74ACT2154A-25	◊ TI	75
			TS	28	5	SN74ACT2152A-25	◊ TI	
	28	CMOS	TS	44	5	SN74ACT2155-28	◊ TI	
2Kx16	22 nsF	CMOS	TS	44	5	SN74ACT2157-22	◊ TI	
	25 nsF	CMOS	TS	44	5	SN74ACT2155-25	◊ TI	
2x2048x16								
	25 nsF	CMOS	TS	44	5	**IS61C308-25**	**ISSI (3509)**	80
						UM61165L-25	**◊ UMC (3688)**	
	35 nsF	CMOS	TS	44	5	**IS61C308-35**	**ISSI (3509)**	
						UM61165L-35	**◊ UMC (3688)**	
	45 nsF	CMOS	TS	44	5	**IS61C308-45**	**ISSI (3509)**	
						UM61165L-45	**◊ UMC (3688)**	85

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY

MEMORY—RAMs (Cont'd)

Static—Cache Tag (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source
2x4096x8							
	25 nsF	CMOS	TS	28	5	UM6188-25	◊ UMC
	35 nsF	CMOS	TS	28	5	UM6188-35	◊ UMC
	45 nsF	CMOS	TS	28	5	UM6188-45	◊ UMC
2x4096x16							
	25 nsF	CMOS	TS	52	5	**UM61168L-25**	**◊ UMC (3688)**
	35 nsF	CMOS	TS	52	5	**UM61168L-35**	**◊ UMC (3688)**
	45 nsF	CMOS	TS	52	5	**UM61168L-45**	**◊ UMC (3688)**
2x4096x18							
	25 nsF	CMOS	TS	52	5	**IS61C818-25**	**ISSI (3509)**
	35 nsF	CMOS	TS	52	5	**IS61C818-35**	**ISSI (3509)**
	45 nsF	CMOS	TS	52	5	**IS61C818-45**	**ISSI (3509)**
16Kx5	20 nsF	CMOS	TS	32	5	SN74ACT2163-20	◊ TI
	25 nsF	CMOS	TS	32	5	SN74ACT2163-25	◊ TI
512x9	20 nsF	CMOS	TS	24	5	SN74ACT2150A-20	◊ TI
	30 nsF	CMOS	TS	24	5	SN74ACT2150A-30	◊ TI
1024x4	10 nsF	CMOS	TS	24	5	CY7C150-10C	◊ Cypress
	12 nsF	CMOS	TS	24	5	CY7C150-12C	◊ Cypress
						CY7C150-12M	† Cypress
	15 nsF	CMOS	TS	24	5	CY7C150-15M	† Cypress
16384x18							
	24 nsF	CMOS	TS	52	5	IS61C618-24	ISSI
2048x8	20 nsF	CMOS	TS	28	5	VT7152-20	VLSI Tech
						VT7154-20	VLSI Tech
	25 nsF	Cache Tag	TS	28	5	VT7152-25	VLSI Tech
						VT7154-25	VLSI Tech
	35 nsF	Cache Tag	TS	28	5	VT7152-35	VLSI Tech
						VT7154-35	VLSI Tech
2048x20							
	20 nsF	CMOS	TS	68	5	MK4202-20	◊ SGS-Thomson
	22 nsF	CMOS	TS	68	5	MK4202-22	◊ SGS-Thomson
	25 nsF	CMOS	TS	68	5	MK4202-25	◊ SGS-Thomson
4096x4	12 nsF	CMOS	TS	22	5	IDT6177S-12	IDT
						IDT6178S-12	IDT
						IS61C180-12	**ISSI (3509, 3511)**
						MK41S80-12	SGS-Thomson
	15 nsF	CMOS	TS	22	5	IDT6177S-15B	† IDT
						IDT6178S-15B	† IDT
						IS61C180-15	**ISSI (3509, 3511)**
						MK41S80-15	SGS-Thomson
	20 nsF	CMOS	TS	22	5	**IS61C180-20**	**ISSI (3509, 3511)**
						MK41H80-20	SGS-Thomson
	22 nsF	CMOS	TS	22	5	MCM4180-22-5	Motorola
						MK41H80-22	SGS-Thomson
				24	5	MCM62351-22-5	Motorola
	25 nsF	CMOS	TS	22	5	MK41H80-25	SGS-Thomson
	35 nsF	CMOS	TS	22	5	4180-35	† Motorola
						MK41H80-35	SGS-Thomson
				24	5	62350-35	† Motorola
						62351-35	† Motorola
	45 nsF	CMOS	TS	22	5	4180-45	† Motorola
				24	5	62350-45	† Motorola
						62351-45	† Motorola
4096x10							
	17 nsF	CMOS	TS	68	5	MK45180-17	◊ SGS-Thomson
	20 nsF	CMOS	TS	68	5	MK45180-20	◊ SGS-Thomson
4096x16							
	25 nsF	CMOS	TTL	44	5	**IS61C416-25**	**◊ ISSI (3509)**
	35 nsF	CMOS	TTL	44	5	**IS61C416-35**	**◊ ISSI (3509)**
						V63C308-12	◊ Vitelic
	45 nsF	CMOS	TTL	44	5	**IS61C416-45**	**◊ ISSI (3509)**
						V63C308-11	◊ Vitelic
	55 nsF	CMOS	TTL	44	5	V63C308-10	◊ Vitelic
4096x16x2							
	25 nsF	CMOS	TS	52	5	CY7C183-25C	◊ Cypress
						CY7C184-25C	◊ Cypress
	35 nsF	CMOS	TS	48	5	CY7C183-35M	◊† Cypress
						CY7C184-35M	◊† Cypress
				52	5	CY7C183-35C	◊ Cypress
						CY7C184-35C	◊ Cypress
	45	CMOS	TS	52	5	CY7C184-45c	◊ Cypress
	45 nsF	CMOS	TS	48	5	CY7C183-45M	◊† Cypress
				52	5	CY7C183-45C	◊ Cypress
						CY7C184-45C	◊ Cypress
	45 nsF	CMOS	TS	48	5	CY7C184-45M	◊† Cypress
8129x9	20 nsF	CMOS	TS	28	5	**IS61C89-20**	**ISSI (3509)**
8192x8	15 nsF	CMOS	TS	28	5	CY7C185-15	◊ Cypress
						CY7C185-15C	◊ Cypress
						CY7C186-15	◊ Cypress
	17 nsF	CMOS	TS	28	5	MK48S80-17	◊ SGS-Thomson
	20 nsF	CMOS	TS	28	5	CY7C185-20	† Cypress
						CY7C186-20	† Cypress
						IS61C81-20	**ISSI (3509, 3511)**
						MK48H74-20	SGS-Thomson
						MK48S74-20	◊ SGS-Thomson
						MK48S80-20	◊ SGS-Thomson
	25 nsF	CMOS	TS	28	5	**IS61C81-25**	**ISSI (3509, 3511)**
						MK48S80-25	◊ SGS-Thomson
	30 nsF	CMOS	TS	28	5	**IS61C81-30**	**ISSI (3509, 3511)**
	35 nsF	CMOS	TS	28	5	MK48S74-25	◊ SGS-Thomson
8192x9	25 nsF	CMOS	TS	28	5	**IS61C89-25**	**ISSI (3509)**
	30 nsF	CMOS	TS	28	5	**IS61C89-30**	**ISSI (3509)**
8192x16							
	25 nsF	CMOS	TS	52	5	**IS61C816-25**	**ISSI (3509, 3511)**
						CXK7701A-25	**◊ Sony (3662)**
			TTL	52	5	VT62A168	VLSI Tech
	30 nsF	CMOS	TS	52	5	**CXK7701-30**	**◊ Sony (3661)**
			TTL	52	5	V63C328-03	◊ Vitelic
						V63C329-03	◊ Vitelic
						V63C330-03	◊ Vitelic
	35 nsF	CMOS	TS	52	5	**IS61C816-35**	**ISSI (3509, 3511)**
						CXK7701-35	**◊ Sony (3661)**
						CXK7701A-35	**◊ Sony (3662)**
						VT62A168-35	◊ VLSI Tech
	40 nsF	CMOS	TTL	52	5	V63C328-02	◊ Vitelic
						V63C329-02	◊ Vitelic
						V63C330-02	◊ Vitelic

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY—RAMs (Cont'd)

Static—Cache Tag (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x16							(Cont'd)	
	45 nsF	CMOS	TS	52	5	**IS61C816-45**	**ISSI (3509, 3511)**	
						CXK7701-45	◊ Sony	
						CXK7701A-45	**◊ Sony (3662)**	
						VT62A168-45	◊ VLSI Tech	
			TTL	52	5	V63C328-01	◊ Vitelic	5
						V63C329-01	◊ Vitelic	
						V63C330-01	◊ Vitelic	
8192x18								
	25 nsF	CMOS	TS	52	5	VT62A188-25	◊ VLSI Tech	
	35 nsF	CMOS	TS	52	5	VT62A188-35	◊ VLSI Tech	
	45 nsF	CMOS	TS	52	5	VT62A188-45	◊ VLSI Tech	10
8192x20x2								
	17 nsF	CMOS	TS	68	5	VT62A2016-17	◊ VLSI Tech	
	20 nsF	CMOS	TS	68	5	VT62A2016-20	◊ VLSI Tech	
	25 nsF	CMOS	TS	68	5	VT62A2016-25	◊ VLSI Tech	
	30 nsF	CMOS	TS	68	5	VT62A2016-30	◊ VLSI Tech	
16384x4								
	15 nsF	CMOS	TS	22	5	CY7C164-15	◊ Cypress	15
				24	5	CY7C166-15	◊ Cypress	
				28	5	CY7C161-15	◊ Cypress	
						CY7C162-15	◊ Cypress	
	20 nsF	CMOS	TS	22	5	CY7C164-20	† Cypress	
				24	5	CY7C166-20	† Cypress	20
				28	5	CY7C161-20	† Cypress	
						CY7C162-20	† Cypress	
16384x18								
	35 nsF	CMOS	TS	52	5	**IS61C618-35**	**ISSI (3509)**	
65536x1								
	15 nsF	CMOS	TS	22	5	CY7C187-15	◊ Cypress	
	20 nsF	CMOS	TS	22	5	CY7C187-20	† Cypress	25

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—ROMs

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
64		Sequential		8	5	**S2100**	**Seiko Instr (3585)**	
256x8	725 nsF	PMOS		24	±12	NCM4230Z	NCM	
512x8	1.5 nsF	GaAs	TS		5	14GM048	GigaBit	
	500 nsF	CMOS	TS	24	10	CDP1831	† Harris	
						CDP1832	† Harris	5
						HB1831	† Hughes	
						HB1832	† Hughes	
						HC1831	◊ Hughes	
						HC1832	◊ Hughes	
	1000 nsF	CMOS	TS	24	5	CDP1832C	† Harris	10
						HB1831C	† Hughes	
						HB1832C	† Hughes	
						HC1831C	◊ Hughes	
						HC1832C	◊ Hughes	
1024x8	350 ns *	CMOS	TS	24	10	CDP1833	† Harris	15
						CDP1834	† Harris	
						HB1833	† Hughes	
						HB1834	† Hughes	
						HC1833	◊ Hughes	
						HC1834	◊ Hughes	20
	850 ns *	CMOS	TS	24	5	CDP1833C	† Harris	
						CDP1834C	† Harris	
		NMOS	TS	24	5	HB1833C	† Hughes	
						HB1834C	† Hughes	
						HC1833C	◊ Hughes	25
						HC1834C	◊ Hughes	
2048x4	60 nsF	NMOS	TS	24	5	82HM185C	Harris	
2048x8	—	Emulator (RAM w/Bat.)				GR2516	Greenwich	
		NMOS	—	16	5	SPR016	Microchip	
	45 nsF	CMOS	TS	24	5	HC6616	◊‡ Honeywell	30
	300 nsF	CMOS	TS	24	5	CDP1835C	† Harris	
	900 nsF	CMOS	TS	24	5	HB23C16	◊† Hughes	
						HC23C16	Hughes	
4096x4	45 nsF	TTL	TS	20	5	MB7134H	◊ Fujitsu	
4096x8	—	Emulator (RAM w/Bat.)				GR2532	Greenwich	35
	200 ms	NMOS	TS	24	5	2333	Commodore	
	200 nsF	NMOS	TS	24	5	2332	Commodore	
	250 nsF	NMOS	TS	24	5	UM2300	UMC	
						UM2332	UMC	
	300 nsF	CMOS	TS	24	5	883C23C32	† Allegro Micro	40
						883C23C33	† Allegro Micro	
	350 nsF	CMOS	TS	24	4–6.5	CDM5332	Harris	
						CDM5333	Harris	
	500 µsF	CMOS	TS	24	4–6.5	CDP1837C	Harris	
	750 nsF	CMOS	TS	24	5	HB23C32	◊† Hughes	45
						HC23C32	Hughes	
8192x8	—	Emulator (RAM w/Bat.)				GR2364	Greenwich	
	30 nsF	CMOS	TS	36	5	HC6664	◊‡ Honeywell	
	35 nsF	CMOS	TS	28	5	HB12C64	◊† Hughes	
						HC12C64	Hughes	50
	100 nsF	CMOS	TS	24	5	**UM23C64-10**	**UMC (3688)**	
	110 nsF	NMOS	TS	28	–0.5 to 7	IMP23064	◊ IMP	
	120 nsF	CMOS	TS	24	5	**UM23C64-12**	**UMC (3688)**	
	150 nsF	CMOS	TS	24	5	**UM23C64-15**	**UMC (3688)**	
				28	5	UM2310	UMC	55
	200 nsF	Mask ROM						
			TS	28	5	LH2369	Sharp	
		NMOS	TS	28	5	MSM3864	OKI	
	250 nsF	CMOS	TS	24	5	CDM5364	Harris	
				28	5	CDM5365	Harris	
						SMM6365	S-MOS	60
		NMOS	24	28	5	2364	Commodore	
	300 nsF	CMOS	TS	24	5	883C23C64	† Allegro Micro	
						HC23C64C	◊ Hughes	

(Continued)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
8192x8	300 nsF	CMOS	TS				(Cont'd)	
				28	5	883C23C65	† Allegro Micro	
						HB23C65	◊† Hughes	65
						HC23C65	Hughes	
	350 nsF	CMOS	TS	24	5	SMM2364	S-MOS	
				28	5	SMM2365	S-MOS	
16384x8								
	—	NMOS	TS	28	5	SPR128	Microchip	
	110 nsF	NMOS	TS	28	–0.5 to 7	IMP23128	◊ IMP	70
	120 nsF	CMOS	TS	28	5	RP23C128H	Ricoh	
						RP23C129H	Ricoh	
	150 nsF	CMOS	TS	28	5	**UM23C128-A/-B**	**UMC (3688)**	
						UM23C128-15	**UMC (3688)**	
			TTL	28	5	MS310128-15	Mosel	75
	200 nsF	CMOS	TS	28	5	RP23C128E	Ricoh	
						RP23C129E	Ricoh	
		NMOS	TS	28	5	S23128C-200	◊ Gould AMI	
	250 nsF	CMOS	TS	28	5	24C128	Commodore	
						CDM53128	Harris	80
						RP23C128D	Ricoh	
						RP23C129D	Ricoh	
						SMM6313-25	S-MOS	
		Mask ROM						
			TS	28	5	LH23126	Sharp	
		NMOS	TS	28	5	23128	Commodore	85
						24128	Commodore	
						S23128B	◊ Gould AMI	
						MSM38128A	OKI	
	300 nsF	NMOS	TS	28	5	S23128I-300	◊ Gould AMI	
						S23128M-300	◊† Gould AMI	90
	350 nsF	NMOS	TS	28	5	S23128A	◊ Gould AMI	
32768x8								
	25 nsF	BiCMOS	TS	28	5	MBM71C256	◊ Fujitsu	
	110 nsF	NMOS	TS	28	–0.5 to 7	IMP23256	◊ IMP	
	120 nsF	CMOS	TS	28	5	KM23C256	Samsung	
	150 nsF	CMOS	TS	28	5	S63256D-150	Gould AMI	95
						NCR23C256-15	◊ NCR	
						LH53259	Sharp	
			TTL	28	5	MS310256-15	Mosel	
	175 nsF	CMOS	TS	28	5	S63256I-175	Gould AMI	
	200 nsF	CMOS	TS	28	5	S63256M-200	† Gould AMI	100
						MSM53256	OKI	
						RP23C256E	Ricoh	
						RP23C257E	Ricoh	
						TC53257	Toshiba	
		NMOS	TS	28	5	MSM38256A	OKI	105
						RP23256E	Ricoh	
						RP23257E	Ricoh	
						LH23259	Sharp	
						23256A-20	Signetics	
	250 nsF	CMOS	TS	28	5	24C256	Commodore	110
						CDM53256	Harris	
						RP23C256D	Ricoh	
						RP23C257D	Ricoh	
						SMM6325	S-MOS	
						SMM6326	S-MOS	115
						LH53257	Sharp	
		NMOS	TS	28	5	24256	Commodore	
						MSM38256	OKI	
						RP23256D	Ricoh	
						RP23257D	Ricoh	120
	450 nsF	CMOS	TS	28	5	SMM2325	S-MOS	
						SMM2326	S-MOS	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

MEMORY

MEMORY–ROMs (Cont'd)

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
65536x8								
	100 nsF	NMOS	TS	28	5	GM23512-10	GoldStar	
	110 nsF	NMOS	TS	28	–0.5 to 7	IMP23512	◊ IMP	
	120 nsF	CMOS	TS	28	5	KM23C512	Samsung	
	150 nsF	CMOS	TS	28	5	S63512D-150	Gould AMI	
						UM23C512-15	◊ **UMC (3688)**	5
			TTL	28	5	MS310512-15	Mosel	
		NMOS	TS	28	5	GM23512-15	GoldStar	
	200 nsF	CMOS	TS	28	5	S63512C-200	Gould AMI	
						NCR23C512-20	◊ NCR	
						LH53514	Sharp	10
		NMOS	TS	28	5	GM23512-20	GoldStar	
						LH23512	Sharp	
	250 nsF	NMOS	TS	28	5	24512	Commodore	
						RP23512D	Ricoh	
	300 nsF	NMOS	TS	28	5	RP23512B	Ricoh	15
65536x16								
	120 nsF	CMOS	TS	40	5	TC531024-12	Toshiba	
	150 nsF	CMOS	TS	40	5	TC531024-15	Toshiba	
	200 nsF	CMOS	TS	40	5	μPD23C1024E	NEC	
131072x8								
	100 nsF	CMOS	TS	28	5	SMM4310	S-MOS	
				32	5	**UM23C1025-10**	**UMC (3688)**	20
	110 nsF	NMOS	TS	28	–0.5 to 7	IMP23100	◊ IMP	
				32	–0.5 to 7	IMP23101	◊ IMP	
	120 nsF	CMOS	TS	28	5	KM23C1000	Samsung	
						TC531000C-12	Toshiba	
				32	5	TC531001C-12	Toshiba	25
						UM23C1025-12	**UMC (3688)**	
	150 nsF	CMOS	TS	28	5	MB831000	◊ Fujitsu	
						S631000	◊† Gould AMI	
						LH531000A	Sharp	
						TC531000A	◊ Toshiba	30
						TC531000C-15	Toshiba	
						UM23C1024-15	◊ **UMC (3688)**	
				32	5	LH530800	Sharp	
						LH530900	Sharp	
						TC531001C-15	Toshiba	35
						UM23C1025-15	**UMC (3688)**	
				40	5	KM23C21000	Samsung	
			TTL	28	5	MS311024-15	Mosel	
	200 nsF	CMOS	TS	28	5	μPD23C1010A	NEC	
						NCR23C1000-20	◊ NCR	40
						μPD23C1000-1	NEC	
						μPD23C1000A	NEC	
						UM23C1024-20	◊ **UMC (3688)**	
				32	5	S631001	◊† Gould AMI	
						μPD23C1000EA	NEC	45
						μPD23C1001E	NEC	
			TTL	28	5	MS311024-20	Mosel	
		NMOS	TS	28	5	**GM231000-20**	**GoldStar (3438)**	
						GM231024-20	GoldStar	
				32	5	LH231100	Sharp	50
	250 nsF	Mask ROM						
			TS	28	5	LH231000	Sharp	
						LH531000	Sharp	
		NMOS	TS	28	5	**GM231000-25**	**GoldStar (3438)**	
						GM231024-25	GoldStar	
						RP231024D	Ricoh	55
	270 nsF	CMOS	TS	28	5	LH531100	Sharp	
	300 nsF	NMOS	TS	28	5	RP231024B	Ricoh	

Organization	Access Time (Max)	Type	Output	No. Pins	Supply Voltage, V	Device	Source	Line
131072x16								
	200 nsF	CMOS	TS	40	5	LH532000A	Sharp	
	250 nsF	CMOS	TS	40	5	μPD23C2000	◊ NEC	
	150 nsF	Mask	TS	40	5	YM90242D	Yamaha	60
262144x8								
	110 nsF	NMOS	TS	32	–0.5 to 7	IMP23200	◊ IMP	
	120 nsF	CMOS	TS	32	5	**UM23C2001-12**	**UMC (3688)**	
	150 nsF	CMOS	TS	32	5	S632000-15	◊ Gould AMI	
						S632000-150	◊† Gould AMI	
						KM23C2000	Samsung	65
						LH532300	Sharp	
						LH532400	Sharp	
						UM23C2001-15	**UMC (3688)**	
				40	5	KM23C41000	Samsung	
	200 nsF		TTL	32	12.5	MB832000	Fujitsu	70
		CMOS	TS	32	5	S632000-20	◊ Gould AMI	
						S632000-200	◊† Gould AMI	
						LH532100A	Sharp	
						LH532200A	Sharp	
				40	5	LH532000A	Sharp	75
	250 nsF	CMOS	TS	32	5	μPD23C2001	NEC	
		NMOS	TS	32	5	LH532100	Sharp	
				40	5	LH532000	Sharp	
						LH534000	Sharp	
	150 nsF	Mask	TS	32	5	TM90212D	Yamaha	80
262144x8/131072x16								
	250 nsF	CMOS	TS	32	5	LH532200	Sharp	
262144x16								
	120 nsF	CMOS	TTL	40	5	M5M27C402	◊ Mitsubishi	
	150 nsF	CMOS	TS	40	5	MB834200B	◊ Fujitsu	
	200 nsF	CMOS	TS	40	5	MB834200	Fujitsu	
						LH534000A	Sharp	85
	250 nsF	CMOS	TS	40	5	μPD23C4000	NEC	
	150 nsF	Mask	TS	40	5	YM90442D	Yamaha	
	250 nsF		TTL	40	12.5	MB834100	Fujitsu	
524288x8								
	110 nsF	NMOS	TS	32	–0.5 to 7	IMP23400	◊ IMP	
	120 nsF	CMOS	TS	40	5	**TC574000-12**	**Toshiba (3676)**	90
			TTL	32	5	M5M27C401	◊ Mitsubishi	
	150	CMOS	TS	40	5	**UM23C4000-15**	**UMC (3688)**	
	150 nsF	CMOS	TS	32	5	MB834000B	◊ Fujitsu	
						GM23C4000-15	**GoldStar (3432, 3435)**	
						S634000-150	◊† Gould AMI	95
						KM23C4000	◊ Samsung	
				44	5	KM23C81000	Samsung	
	200 nsF	CMOS	TS	32	5	MB834000	◊ Fujitsu	
						GM23C4000-20	**GoldStar (3432, 3435)**	
						S634000-200	◊† Gould AMI	100
						LH534100A	Sharp	
						LH534200A	Sharp	
						UM23C4001	**UMC (3688)**	
				40	5	LH534000A	Sharp	
						UM23C4000-20	**UMC (3688)**	105
	250 nsF	CMOS	TS	32	5	**GM23C4000-25**	**GoldStar (3432, 3435)**	
						μPD23C4001E	NEC	
						LH534100	Sharp	
						LH534200	Sharp	
						TC534000	**Toshiba (3678)**	110
	150 nsF	Mask	TS	32	5	YM90412D	Yamaha	
524288x16								
	200 nsF	CMOS	TS	42	5	LH538000	Sharp	

† Military Temperature Range (–55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—ROMs (Cont'd)

Organi-zation	Access Time (Max)	Type	Out-put	No. Pins	Supply Voltage, V	Device	Source	Line
1048576x8								
	150 nsF	CMOS	TS	42	5	KM23C8000	Samsung	
	200 nsF	CMOS	TS	32	5	MB838000	Fujitsu	
				42	5	LH538000	Sharp	
1048576x16								
	150 nsF	CMOS	TS	44	5	MB831620 ◊	Fujitsu	
	200 nsF	CMOS	TS	128	5	LH5316000	Sharp	5
	250 nsF	CMOS	TS	42	5	μPD23C16000	NEC	
2097152x8								
	200 nsF	CMOS	TS	128	5	LH5316000	Sharp	
	250 nsF	CMOS	TS	42	5	μPD23C16000	NEC	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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MEMORY

MEMORY—Shift Registers

Static

Bits Per Register	No. of Reg.	Operation	Process	Frequency (Hz - Spec)	Supply Voltage, V	Device	Source	Line
4	PP	CMOS		2–6		MC54HC194	† Motorola	
						MC54HC195	† Motorola	
						MC74HC194	Motorola	
						MC74HC195	Motorola	
	1	PP	Bipolar					
				3 M	12	375A/C	TeledyneS	5
					15	375B/M	TeledyneS	
				15 M	5	93L00M	† National	
						N8271	Signetics	
						S8271	† Signetics	
				25 M	5	HD74LS194A	Hitachi	10
						DM54194	† National	
						DM5495	† National	
						DM74194	National	
						DM7495	National	
						5495	† National	15
						7495	National	
						54194	† Signetics	
						5495A	† Signetics	
						74LS95B	Signetics	
						74194	Signetics	20
						7495A	Signetics	
						SN54LS194A	◊† TI	
						SN54LS95B	◊† TI	
						SN54178	† TI	
						SN5495A	† TI	25
						SN74LS194A	TI	
						SN74LS95B	TI	
						SN74194	TI	
						SN7495A	TI	
				30 M	5	HD74LS195A	Hitachi	30
						SN54LS194A	† Motorola	
						SN54LS195A	† Motorola	
						SN54LS295A	† Motorola	
						SN54LS395	† Motorola	
						SN54LS95B	† Motorola	35
						SN74LS194A	Motorola	
						SN74LS195A	Motorola	
						SN74LS295A	Motorola	
						SN74LS395	Motorola	
						SN74LS95B	Motorola	40
						54LS194A	National	
						54LS195A	† National	
						54LS295A	† National	
						54LS395	† National	
						54LS95B	† National	45
						74LS194A	National	
						74LS195A	◊ National	
						74LS295A	◊ National	
						74LS395	◊ National	
						74LS95B	◊ National	50
						9300C	National	
						9300M	† National	
						T54LS395	† SGS-Thomson	
						54LS195A	† Signetics	
						74LS195A	Signetics	55
						SN54LS195A	◊† TI	
						SN54LS295B	◊† TI	
						SN54LS395A	◊† TI	
						SN54195	† TI	
						SN74LS195A	TI	60
						SN74LS295B	TI	
						SN74LS395A	TI	
						SN74195	TI	
				35 M	5	MC4312	† Motorola	
				70 M	5	74S194	National	65
						74S194	Signetics	
						74S195	Signetics	
						SN54S194	† TI	

(Continued)

Bits Per Register	No. of Reg.	Operation	Process	Frequency (Hz - Spec)	Supply Voltage, V	Device	Source	Line
4	1	PP	Bipolar					
				70 M	5		(Cont'd)	
						SN54S195	† TI	
						SN74S194	TI	70
						SN74S195	TI	
				150 M	−5.2	MC10141	Motorola	
						MC10541	◊† Motorola	
						10141	Signetics	
			CMOS	2 M	3–15	CD4035BE	Harris	75
						MC14035BC	Motorola	
						CD4035BC	National	
						MM54C195	† National	
				3 M	3–15	CD4035B	† Harris	
						CD4035B	‡ Micrel	80
						MC14035BA	† Motorola	
						CD4035BM	† National	
						MM74C195	National	
				4.5 M	3–15	MC14194BA	† Motorola	
				6.5 M	3–15	MM74C95	National	85
		PS	Bipolar					
				10 M	5	5494	Signetics	
						SN5494	† TI	
		SP	Bipolar					
				325 M	−5.2	MC1694	† Motorola	
		SS		0.5 M	15	MC686	Motorola	
	2	SP	CMOS	2.5 M	3–15	CD4015BE	Harris	90
						MC14015BC	Motorola	
				3 M	3–15	CD4015B	‡ Micrel	
					3–18	MC14015BA	† Motorola	
5	1	PP	Bipolar					
				10 M	5	54LS96	Signetics	
						5496	† Signetics	95
						74LS96	Signetics	
						SN5496	† TI	
						SN7496	TI	
				25	5	SN74LS96	TI	
	4	SS	CMOS	2 M	3–15	CD4006BE	Harris	100
				4 M	5–15	MC14006BC	Motorola	
				7 M	5–15	MC14006BA	† Motorola	
8	PS	CMOS		2–6		MC54HC589	† Motorola	
						MC74HC589	Motorola	
						MC74HC597	Motorola	105
	SP	CMOS		2–6		MC54HC164	† Motorola	
						MC54HC595A	† Motorola	
						MC74HC164	Motorola	
						MC74HC595A	Motorola	
	SS/PS	CMOS		2–6		MC54HC165	† Motorola	110
						MC74HC165	Motorola	
	1	PP	Bipolar					
				25 M	5	74199	Signetics	
						SN54198	† TI	
						SN54199	† TI	
						SN74198	TI	115
						SN74199	† TI	
				35 M	5	54LS299	† National	
						54LS323	† National	
						74LS299	◊ National	
						74LS323	National	120
						SN54LS299	◊† TI	
						SN54LS323	◊† TI	
						SN74LS323	TI	
				50 M	5	SN54S299	† TI	
						SN74S299	TI	125
			CMOS	2.5 M	3–18	MC14034BC	Motorola	
				3 M	3–15	CD4034B	† Harris	
						CD4034B	‡ Micrel	
						CD4034BC	National	

(Continued)

† Military Temperature Range (−55° to 125°C) ns*–Nanoseconds Typical nsF–Nanoseconds over Full Temperature Range nsR–Nanoseconds at Room Temperature
OC–Open Collector TS–Three-State OE–Open Emitter

MEMORY—Shift Registers (Cont'd)

Static (Cont'd)

Bits Per Register	No. of Reg.	Operation	Process	Frequency (Hz - Spec)	Supply Voltage, V	Device	Source	Line
8	1	PP	CMOS	3 M	3–15		(Cont'd)	
						CD4034BM	National	
						TC4034B	Toshiba	
					3–18	MC14034BA	Motorola	
		PS	Bipolar					
				20 M	5	54165	† National	
						74165	National	5
						54165	† Signetics	
						SN54165	† TI	
						SN74165	TI	
				25 M	5	HD74LS165A	Hitachi	
						SN54LS165	† Motorola	10
						SN74LS165	Motorola	
						SN74LS166	Motorola	
						DM74LS166	National	
						DM74166	National	
						54LS165	† National	15
						74LS165	◊ National	
						54166	† Signetics	
						74166	Signetics	
						SN54ALS165	◊† TI	
						SN54LS165A	◊† TI	20
						SN54LS166A	◊† TI	
						SN54166	† TI	
						SN74LS165A	TI	
						SN74LS166A	TI	
						SN74166	TI	25
			CMOS	2.5 M	3–15	CD4014BE	Harris	
						CD4021BE	Harris	
						MC14021BC	Motorola	
						CD4021A	National	
				3 M	3–15	CD4014B	† Harris	30
						CD4014B	‡ Micrel	
						MC14014BA	† Motorola	
						MC14021BA	† Motorola	
				5 M	3–15	MM54C165	† National	
						MM74C165	National	35
		SP	Bipolar					
				25 M	5	HD74LS164	Hitachi	
						SN54LS164	† Motorola	
						SN74LS164	Motorola	
						DM54LS164	† National	
						DM74LS164	National	40
						DM74164	National	
						DM8570	National	
						54LS164	† National	
						54164	◊† National	
						74LS164	◊ National	45
						74164	National	
						DN74LS164	◊ Panasonic	
						54LS164	† Signetics	
						54164	† Signetics	
						74LS164	Signetics	50
						74164	Signetics	
						SN54LS164	◊† TI	
						SN54164	† TI	
						SN74164	TI	
						TD3503	Toshiba	55
			CMOS	5.5 M	3–15	MM54C164	† National	
						MM74C164	National	
		SS	Bipolar					
				10 M	5	MC5491A	† Motorola	
						SN54LS91	† TI	
						SN5491A	† TI	60
						SN74LS91	TI	
			CMOS	2.5 M	3–15	CD4094B	† Harris	
						CD4094BE	Harris	
						CD4094B	‡ Micrel	
						MC14094BA	† Motorola	65

(Continued)

Bits Per Register	No. of Reg.	Operation	Process	Frequency (Hz - Spec)	Supply Voltage, V	Device	Source	Line
8	1	SS	CMOS	2.5 M	3–15		(Cont'd)	
						MC14094BC	Motorola	
						TC4094B	Toshiba	
	2	SS	Bipolar					
				10 M	5	93L28C	National	
						93L28M	† National	
				20 M	5	9328C	National	70
						9328M	† National	
10	1	PP	Bipolar					
				25 M	5	S8274	† Signetics	
		SP	Bipolar					
				25 M	5	N8273	Signetics	
						S8273	† Signetics	
16	1	S/SP	Bipolar					
				20M	5	54F673	National	75
						54F674	National	
						54F675	National	
						54F676	National	
						74F673	◊ National	
						74F675	◊ National	80
						74F676	◊ National	
						74F674	Signetics	
		SP	NMOS	3.0M	5	TSC9403	TeledyneS	
						TSC9404	TeledyneS	
16–128	1	SS	CMOS	1.5 M	3–15	MC14562BC	Motorola	85
				3 M	3–15	MC14562BA	† Motorola	
18–3	8	PP	Bipolar					
				20M	5	TDC1011	TRWLSI	
64	1	SS	CMOS	1 M	3–15	CD4031BE	Harris	
				2 M	3–15	CD4031B	† Harris	
						CD4031B	‡ Micrel	90
				2.7 M	3–16	MC1455BC	Motorola	
				4 M	3–15	CD4031BC	National	
						CD4031BM	† National	
				5 M	3–18	MC14557BA	† Motorola	
	2	SS	CMOS	4 M	3–15	CD4517BE	† Harris	95
						MC14517BC	Motorola	
				5 M	3–15	MC14517BA	† Motorola	
			TTL	30 M	5	TDC1005	† TRWLSI	
						TDC1005	TRWLSI	
100	2	SS	PMOS	10M	–30	NCM4231Z	† NCM	100
256	1	SS	TTL	30 M	5	TDC1006	† TRWLSI	
						TDC1006	TRWLSI	
480	2	PP	NMOS	3.0M	5	**MIC2535**	**Micrel**	**(3540)**
512	2	PP	NMOS	3.0M	5	**MIC2534**	**Micrel**	**(3540)**
1024	1	SS	NMOS	1.5M	5	**MIC2533**	**Micrel**	**(3540)** 105
				2.0M	5	MIC2833	Micrel	
						MIC2833M	† Micrel	
				3.0M	5	MIC2833A	Micrel	
				4.0M	5	MIC2833B	Micrel	
				5.0M	5	MIC2833C	Micrel	110

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value •Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

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INTRODUCTION TO ASIC/CUSTOM CIRCUITS

This section describes ASIC/Custom products and services. It shows interrelationships, covering the devices and manufacturers' capabilities as well as the design tools for use by OEM engineers and system designers. The first guide lists custom capabilities. The subsequent guides cover devices and the specific tools that can be applied.

For more detailed information on devices and tools you can review the manufacturer-supplied technical data.

Category

Capabilities Charts 1102
Gate Arrays 1131
Linear and Linear/Digital
Arrays 1148
Standard Cells 1154
Gate Array Design Automation
Tools 1160
Linear and Linear/Digital Design
Automation Tools.....1162
Standard Cell Design
Automation Tools.....1163

ASIC/CUSTOM

Manufacturer FOR DETAILED DATA SEE:	ABB HAFO	Advanced Linear Devices	Advanced Micro Devices
Customized Standard Circuits	Digital, combined digital/linear	Linear, combined linear/digital	
Gate Array			Programmable Array Logic
Chip Density Range (equiv. gates)	Up to 10,000 gates		200 to 800
Cell Library	Metal- or silicon-gate CMOS, silicon-gate CMOS/SOS	CMOS	CMOS
Design Kit Available		Yes	Yes
Full Custom Circuits Digital	Silicon-gate CMOS, metal-gate CMOS, silicon-gate CMOS/SOS (radiation hardened)		
Linear	Silicon-gate CMOS, metal-gate CMOS, silicon-gate CMOS/SOS (radiation hardened)	Silicon-gate CMOS	
Combined Digital Linear	Silicon-gate CMOS, metal-gate CMOS, silicon-gate CMOS/SOS (radiation hardened)	Silicon-gate CMOS	
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Verified netlist, test vectors, logic diagram, circuit diagram, PG tape, black box.	Circuit diagram, block diagram, circuit inputs and outputs breadboard	
Design Aids	Schematic entry, circuit simulation, design rule checks, test program generation.	Macrocell, circuit stimulation, hardware kit part simulation, design rule checks	AMPALASM–20 software for Boolean equation generation. AMPLPL software provides similar capability for advanced products.
Production	In-house	Procured and in-house	In-house
Preferred Delivered Product	Wafers, dice packaged test units	Packaged ceramic and plastic DIPS, leadless chip carriers, dice.	Ceramic and plastic DIPs, leadless chip carriers, dice; all available in commercial and military
Test Program Generation	Yes	Yes	
Production Test	Functional, parametric, MIL: burn-in, environmental	Functional, parametric, burn-in, thermal shock, environmental	100% dc, ac and functional testing; burn-in, thermal shock, environmental, MIL
Electrical Test Systems Available	LTX, Sentry VII, Teradyne VLSI Tester.	Industry standard and custom test systems	Xincom, Accutest
Comments	Standard cell libraries for various workstations, quality level to MIL 883C Level S	Supply voltage range: 1V to 12V Standard cells are also standard products PSPICE software simulation Kit Part hardware simultation	Commercial programmers available. Software output JEDEC PLDTF. Most complex programmable logic parts available.

Manufacturer FOR DETAILED DATA SEE:	Allegro Micro Systems	Analog Devices	Applied Micro Circuits
Customized Standard Circuits		Linear	
Gate Array		From customer-owned-tooling	ECL and BiCMOS
Chip Density Range (equiv. gates)			1,300 to 2,800
Cell Library		Standard parts available in chip form	ECL, BiCMOS, mixed ECL, and TTL
Design Kit Available		Kit parts	Yes
Full Custom Circuits Digital	Silicon-gate CMOS, NMOS, metal-gate CMOS	TTL, LSTTL, ISL, I^2L, ECL, ISO/CMOS Si-gate, BiCMOS	1.5m BiCMOS 3.2 & 1m Bipolar process up to 224 pin Design Rules, Test Capability.
Linear	Silicon-gate CMOS, NMOS	20, 40, 60V supply voltage Bipolar, Complementary Bipolar, CMOS	
Combined Digital Linear	Silicon-gate NMOS, CMOS	I^2L, ECL, TTL, LSTTL, BiCMOS	Same as Digital
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Minimum of functional diagram, breadboard, pattern generator tape or database tape	Customer-owned-tooling (pattern generator tape, composite drawing), known good device schematics, performance specs	a) Database tape & vectors - customer designed. b) Schematics & vectors for full turnkey design.
Design Aids	Logic simulator assistance, bread-board assistance, design rule checks	Kit parts CAD, SPICE evaluation parts	Predesigned transistor & resistor structures ECL refrence generator cells designed & proven. Device and sub circuit spice files.
Production	In-house	In-house; 4″ lines	4″ wafer's up to 3 levels of metal (ALCu 1%)
Preferred Delivered Product	No preference	Mapped wafers, probed wafers, packaged units	1) Packaged & tested finished goods. 2) Tested/probed wafers.
Test Program Generation	Yes	Yes	Yes
Production Test	Full screening available including burn-in and full environmental screening	Functional, parametric, burn-in, thermal shock, environmental, MIL, linear	Sentry 10 & 21 120 pintesters Trillium Gate Master 224 pins.
Electrical Test Systems Available	Sentry VII, Sentinel, Teradyne	LTX, F-5000, LTS2020	IMS
Comments	Capabilities include: design layout, CAP, mask shop, wafer fabrication assembly, and test	Ion implantation, dual layer metalization, nitride passivation, thin film resistors, MIL 38510 qualified; laser trimming, radiation hardening	Offers contact design service thru authorized third party design companies.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Aptek Microsystems	AT&T	ATMEL
Customized Standard Circuits	Linear, Digital, combined Digital/ Linear	Digital	Digital
Gate Array			Poly Silicon-gate CMOS
Chip Density Range (equiv. gates)		1,000 to 15,000 2-input gates	4,000 to 157,000
Cell Library		ECL	CMOS
Design Kit Available			Yes
Full Custom Circuits Digital	Silicon- or metal-gate CMOS, NMOS, PMOS, Bipolar		Yes CMOS
Linear	CMOS, Bipolar, Switched capacitor filters	Complementary bipolar, CMOS, bipolar (dielectric isolation), BCDMOS	Yes CMOS
Combined Digital Linear	Yes	I^2L, bipolar/MOS (dielectric isolation), CMOS	Yes CMOS
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Logic diagram, circuit diagram, functional specification, breadboard	Functional diagram, schematic, specification, breadboard.	Netlist, schematic, VHDL description
Design Aids	Circuit simulation, logic simulation, schematic entry, test program generation, breadboard assistance complete CAD system, design rule checks, engineering assistance.	CAD assistance, linear simulation, engineering and breadboard assistance	Design manuals; functional and timing simulation, design rule checks
Production	Wafer production procured from outside foundries. Testing and packaging done in-house.	In-house	In-House; MIL-STD–883C certified sub-contractors, off-shore sub-contractors
Preferred Delivered Product	Dual-in-line package, chip carriers, hybrid package	Probed wafers or packaged dice	Packaged tested units; military or commercial specifications
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, Parametric, Environmental, burn-in	Functional, parametric, burn-in, environmental	Functional (up to 80 MHz); AC/DC parametric; burn-in, MIL-STD–883C, Class B screening.
Electrical Test Systems Available	HP based test system	LTX, AT&T Stetzler (bipolar)	ANDO (various models); Sentry (all)
Comments	Independent design center, access to multiple foundries. In-house multichip hybrid capability.	Wafer fabrication services, products include 30 and 90 volt linear arrays, microwave arrays.	Custom and Tab Packaging available

Manufacturer FOR DETAILED DATA SEE:	Avasem Corp.	Bipolar Integrated Technology	Cherry Semiconductor
Customized Standard Circuits	Digital/analog		Digital, linear, combined digital/linear
Gate Array			I^2L, LSI^2L, ECL and other bipolar
Chip Density Range (equiv. gates)			64 to 256 gates
Cell Library	Silicon-gate CMOS, digital and analog		I^2L, ECL and other bipolar
Design Kit Available	Yes		Yes
Full Custom Circuits Digital	Silicon-gate CMOS and NMOS, logic and memory, non-volatile memory	High Density Bipolar	I^2L, ECL and other bipolar
Linear	Silicon-gate CMOS and NMOS, CCD, switched capacitor filters	Bipolar	Bipolar only
Combined Digital Linear	CMOS	Bipolar	I^2L, ECL and other bipolar
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Logic diagram, circuit diagram, functional specification, bread-board	Functional specs, logic diagram, circuit diagram, database tape	Circuit diagram, logic diagram, bread-board, functional spec
Design Aids	In house: Calma GDS II, VAX11/780 and Mentor	Logic simulation, design rule check, electrical rule check, cell library	Logic simulation, breadboard assis-tance, design rule checks, simula-tion models
Production	Procured	In-house Fab, test and packaging	In-house
Preferred Delivered Product	As requested	Wafers or packaged units	Packaged dice, flip chips
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric	Functional, ac and dc parametric	All except military
Electrical Test Systems Available		MegaTest, IMS	Teradyne J259, A311, A312, A3602, A370, A510
Comments	Independent design center, multiple sources, design aids	State of the art VLSI Bipolar Fabrica-tion process	Dice can be solder-bump flip chips with nitride passivation; packaged dice can be delivered from COT for full custom.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	California Micro Devices	Comlinear	Digital RF Solutions
Customized Standard Circuits		Yes	Yes, and Combined Digital & Linear
Gate Array	2μ and 3μ silicon-gate CMOS		Si CMOS and GaAs
Chip Density Range (equiv. gates)	500 to 10,000		As Rec'd to over 50,000
Cell Library	1.5μ silicon gate CMOS		No
Design Kit Available	Daisy, Montor, Viewlogic		No
Full Custom Circuits Digital	1.5μ to 5μ silicon gate CMOS		Yes, For DDS NCMO Designs
Linear	Silicon gate CMOS, double poly available		Yes, For DDS NCMO Designs
Combined Digital Linear	ADV-CMOS		Yes, For DDs NCMO Designs
Provide Design Assistance	Yes	Yes	Yes, under contracts
Acceptable Customer Input (in order of preference)	Netlist, Calma tapes, PG tapes, masks, logic diagrams	Functional specification	System Specification Functional requirements on-site consultation
Design Aids	Design rule checks, logic simulation	Computer simulation	Application notes papers & conference reports CAD analysis tools
Production	In-house	In-house or procured	Outside Foundries, Testing & Design In-House
Preferred Delivered Product	Packaged die, probed wafers, mapped wafers	Packaged circuit, printed card mounted units, hybrid circuits	Hybrids, Boards & Sub-system Modules
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in optional	Functional, burn-in, thermal shock, linear, MIL	Outside service support of all needs
Electrical Test Systems Available	Sentry, LTX, Tektronix	Complete time domain and frequency domain testing from dc to 18 GHz	Yes, all standards
Comments		Specialities include amplifiers with extremely wide bandwidth and fast settling time, fast sample-hold and A/D conversion products.	State-of-art digital freq. generation & precision with complex modulability; mil & com'l screening and classfied projects

Manufacturer FOR DETAILED DATA SEE:	Dionics	Exar	Fujitsu
Customized Standard Circuits	Linear	Digital, linear, combined digital/linear	Digital
Gate Array			Silicon-gate CMOS, LSTTL, ECL, BiCMOS, GaAs
Chip Density Range (equiv. gates)			200 to 200,000 (CMOS) 1,000 to 40,000 (ECL)
Cell Library	No	I^2L, Si-gate CMOS, linear bipolar	Silicon-gate CMOS, LSTTL, ECL, 7400/4000 + memory.
Design Kit Available	Yes	Yes	Yes
Full Custom Circuits Digital		Metal-gate CMOS, I^2L, Si-gate CMOS	Silicon-gate CMOS, LSTTL, ECL, BiCMOS, GaAs
Linear	High and low voltage Bipolar, DMOS, Dielectric Isolation, Optoelectronic Arrays	Bipolar, CMOS	
Combined Digital Linear		I^2L, other Bipolar, CMOS	
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Circuit schematic, circuit function specifications, breadboard	Database tapes, complete layout, breadboard, circuit diagram, logic diagram, functional diagram, standard cell netlist	Logic data and test timing data (Fujitsu format); Tegas netlist, schematic and test vectors, EDIF
Design Aids		Logic simulation, breadboard assistance, design rule checks, cell libraries, design manual; schematic capture, simulation, layout on IBM PC/AT standard cell-mentor	Logic simulatuon, timing verification, logic design rule check, including logic synthesis; third-party libraries for Daisy, Mentor, Valid, Viewlogic, Lasar, Verilog-XL, HP, Synopsys, AutoLogic; proprietary complete CAD system ViewCAD,Cell compiler BankCAD
Production	In-house wafer Fab and test; in-house Hi Rel packaging - Procured masks and plastic packaging	In-house	In-house
Preferred Delivered Product	Chips, plastic and side brazed dips	Packaged devices, dice, dice in wafer form, wafers	Packaged dice
Test Program Generation	Yes	Yes	Automatic
Production Test	Functional, parametric	Functional, parametric, environmental, burn-in, 883C	Functional, ac and dc parametric
Electrical Test Systems Available	Sentry series 81	Fairchild 5000, Teradyne J273, A311, A312, A360, A360D, A370, Sentry 10, 20, EPRO 140, EPRO 210 and 8832 Loadstar	In-house
Comments	Hybrid circuit capability in-house	2 micron CMOS, 30 analog cells; 30 EEPROM cells; 120 digital cells	Dual - and triple-layer metal; CAD system verifies designs; auto placementand routing from customer's inputs; manual place and route through Gate Ensemble; Gauranteed up to 90% gate utilization on channelled arrays and 50% on chanel-less arrays.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Gennum	GigaBit Logic	Gould AMI
Customized Standard Circuits	Linear and combined digital/linear	GaAs, Digital, Analog, Memory	Digital, linear, combined digital/linear
Gate Array			1.25μ and 2μ silicon-gate CMOS
Chip Density Range (equiv. gates)	Linear bipolar 100–479	50 to 15,000	1000 to 100K 2-input gates (gate array), to 15,000 (standard cell)
Cell Library	Common circuit block and micro cells	SC5000, SC10000 (E/D)	Yes
Design Kit Available	Yes	Yes	Yes
Full Custom Circuits Digital		Depletion Mode, Enhancement/ Depletion Mode (E/D), 0.8μm MESFET GaAs	Silicon-gate CMOS with high-voltage output capability, up to 60V
Linear	Yes		Silicon-gate CMOS, filter, amplifier to rf
Combined Digital Linear	TL, I^2L, some linear functions	Yes	Silicon-gate NMOS, CMOS, 14-bit resolution, VHF-rf
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Pencil connected layout, logic diagram spec, PG tape, circuit diagram and breadboard, reticles	Calma GDSII tape, cell library schematic, block diagram	Layout database, PG tape, validated netlist, semi-validated netlist, functionally validated netlist, unvalidated netlist, logic diagram, functional specifications, masks
Design Aids	Design rule checks, CAD, circuit simulation, design manual, bread board parts, layout sheets, seminar, proto-chips.	Comprehensive design rules and manuals; ERC, DRC, LVS, SPICE simulation, logic simulation, cell libraries, prototype tools	Expert-based design software services to optimize and speed designs, including netlist conversions
Production	In-house	In-house	In-house
Preferred Delivered Product	Packaged dice, bare dice, probed wafers	Wafers, die, or packaged units	DIP, plastic chip carriers, SOIC packages, wafers, die to commercial or military specifications
Test Program Generation	Yes	Yes	Yes, Automatic Test Generation
Production Test	Functional, parametric, environmental	Functional (less than 10 MHz), high speed (less than 3 GHz)	Functional,parametric, burn-in, thermal shock, environmental, MIL
Electrical Test Systems Available	Industry standard tester, custom tester	MegaTest, IMS, custom high speed, ASIX	Sentry, Teradyne, Xincom, LTX, General Radio
Comments	Complete in-house services; design layout, PG, masking, wafer fabrication, assembly, test, Q.A.	All customer-interface levels supported. Guaranteed high speed performance to customer specifications.	Complete custom capability including design, instruction, cell library licensing

Manufacturer FOR DETAILED DATA SEE:	Harris Semiconductor	Harris Microwave Semiconductor	Hitachi
Customized Standard Circuits	Digital, linear, combined digital/linear	GaAs Analog (MMIC)	Digital, Gate Array, Standard Cell, Full Custom
Gate Array	1.5μ and 2.0μ Silicon-Gate CMOS		CMOS, BiCMOS, TTL/ECL I/O
Chip Density Range (equiv. gates)	Up to 30,000 (CMOS) (Rad Hard)		CMOS up to 24k gates (1μ); BiCMOS up to 14k gates (1μ); with TTL and/or ECL I/O
Cell Library	1.5, 2.0 μm silicon-gate CMOS; DLM silicon-gate CMOS		Yes
Design Kit Available	Yes	Yes	Yes, Training Course
Full Custom Circuits Digital	Metal-gate and silicon-gate CMOS silicon-gate PMOS, LSTTL, ALSTTL, STTL, N^2L.		Yes, and Standard Cell
Linear	Bipolar (dielectric isolation); metal-gate CMOS/bipolar; silicon-gate CMOS.	Selective ion implantation into GaAs subtrates employing 0.5 and 1.0 micron gate lengths.	Limited Functions
Combined Digital Linear	Silicon-Gate CMOS; Bipolar, BiCMOS, BiMOS		Yes, with limited analog macros
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Logic diagram, logic database, Calma masks; database	Calma GDS tape, SCD, part specification	Verified Netlist, PG Tape, Circuit Diagram and specifications
Design Aids	Proven cell library macros, logic simulation, layout programs and test grading, parasitic extraction, logic to layout verification	Comprehensive design rule manuals	Training course and manuals; software for simulation, ERC, Timing Analysis, Fault Simulation, Automatic Test Pattern Generation if using Hitachi Autodiagnosis design; Works with all popular workstations
Production	In-house	Completely vertically integrated in-house	Japan
Preferred Delivered Product	Wafer, packaged dice, scribed dice, and packaged devices	Wafers, die, packaged units	Packaged parts
Test Program Generation	Yes, CAD Supported	Offered as option	Yes
Production Test	Up to and including equivalent class S military flow; also in-house total dose testing	Up to and including equivalent class S military flow, vector and scalar on- or off-wafer up to 26.5 GHz	Functional, parametric, burn-in, thermal cycle
Electrical Test Systems Available	Sentry, IMS, Trillium	HP8510, HP8409, cascadable microwave on-wafer probe, Keithly 5900	Sentry, Takeda
Comments	Also offer low voltage CMOS; radiation hardening for most process technologies; also provides silicon foundry	Merchant supplier of GaAs products and services with a major strength in the military and high reliability areas. Complete custom capability as well as semicustom and foundry.	Alternate source to VLSI Standard Cell 1.5μ, 1.0μ

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Holt Integrated Circuits	Honeywell	Hughes
Customized Standard Circuits	Linear, digital, combined linear/digital	Digital	Digital, Linear, EEPROM combinations
Gate Array	Metal-gate CMOS; silicon gate CMOS	1.2μ, 3-level metal ADB-III (bipolar; 1.2μ, 2-level metal CMOS-III; 1.2μ, 2-level metal RICMOS-III.	Silicon-gate CMOS DLM 2μ and 1.5μ gate arrays
Chip Density Range (equiv. gates)	80 to 2,000	60,000	Up to 15,000 gates (gate array);up to 40,000 gates (standard cells)
Cell Library	Metal-gate CMOS; silicon-gate CMOS	Boundary/Internal Scan; VHSIC Testability Protocols	1.5 and 2 μ silicon-gate CMOS DLM; 3μ silicon-gate CMOS 1 level metal, Analog, EEPROM
Design Kit Available	Yes	Mentor,VAX	Yes (Mentor)
Full Custom Circuits Digital	Single and double poly silicon-gate CMOS metal-gate CMOS	CMOS Gate Arrays, Rad Hard Arrays, Bipolar Gate Arrays TTL Replacement parts	3μ, 1.5 and 2μ silicon-gate DLM
Linear	Single and double poly; silicon-gate, metal-gate CMOS		Standard cells, Si-gate CMOS, 2μ and 3μ Low and High Voltage Double Poly SCF Process
Combined Digital Linear	Metal-gate CMOS, silicon-gate CMOS		Standard cells, Si-gate CMOS, 2μ and 3μ and EEPROM
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Any	Netlist,GDS2 Database RTL VHDL description	Verified netlist, circuit diagram and specs, database tape with simulation,test vectors, and bonding diagrams, GDS-II Layout.
Design Aids	Logic simulation, breadboard assistance, DRC, ERC.	VDS Toolkit, including proven macro-cell library, logic simulation, static timing analyzer. Design for a test methodologies provided; ATPG available, VHDL	Supports Mentor Graphics Workstations
Production	In-house	In-House	In-House fab and test, in-house and procured masks and packaging
Preferred Delivered Product	Packaged devices, scribed die	Packaged Devices	Packaged units in DIPs, LCC, PGA, probed wafers or dice, flatpacks
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in, thermal shock, environmental, MIL, SEM	Functional, 100% dc, and selected ac parameters, MIL-STD–883C and Class B, and modified Class S screening	AC and DC functional and parametric, voltage/frequency corners
Electrical Test Systems Available	Eagle LSI–4, plus IEEE–488 Analog instrumentation, IT–200, In-House Analog/Digital Tester	Sentry; ANDO	LTX, Sentry Series, Sentinel, Advantest/Takeda-Riken
Comments		High-performance CMOS Gate Arrays; Strategic Radiation Hardened RICMOS-III process; VHSIC built-in self-test (BIST) testability protocols	Complete standard cell and gate array compatibility; applications support; in-house mask shop; manufacturing and assembly; second source LSI Logic for Gate Arrays

Manufacturer FOR DETAILED DATA SEE:	Hyundai	IC DESIGNS	ILC Data Device
Customized Standard Circuits	Yes	CMOS 1.25 and 2μm silicon-gate	Digital, linear, power
Gate Array	CMOS		
Chip Density Range (equiv. gates)	880–85,000 usable gates	Up to 5,000 gates (2μ);up to 15,000 gates(1.25μm)	
Cell Library	Yes	1.25 μm and 2μm silicon-gate CMOS, 2 metal.Digital and Analog	
Design Kit Available	Yes	Yes	
Full Custom Circuits Digital			Bipolar, CMOS
Linear			Bipolar
Combined Digital Linear		Standard cells, silicon-gate CMOS, 2μm and 1.25μm	Bipolar, CMOS
Provide Design Assistance		Yes	Yes
Acceptable Customer Input (in order of preference)		Verified netlist, circuit diagram, specs, and simulation vectors	Logic diagram, circuit diagram, test vectors, functional specifications
Design Aids	Turn-Key Service	IC Works-proprietary desktop ASIC design system for PC-AT	
Production	In-House	Via proprietary foundry relationship	In-house
Preferred Delivered Product	Packaged Devices, Dice	Packaged units (DIPs, PLCC, PGA); wafers or dice	Packaged units
Test Program Generation	Yes	Yes	Yes
Production Test	Yes	AC and DC functional and parametric	Functional, parametric, burn-in, thermal shock, environmental, MIL
Electrical Test Systems Available	Sentry, Trillium	Sentry Series, Sentinel	Custom equipment
Comments		Cell library, design tools and foundry services all available from single supplier.	New packaging technology and materials enable DDC to develop power hybrids with typical power dissipation of 100 watts, and are capable of handling typical currents of 50 amperes with low junction-to-case thermal resistance.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Integrated Circuit Systems	Integrated Logic Systems	International Microcircuits
Customized Standard Circuits	Digital, linear, combined digital/linear		Digital
Gate Array	CMOS	1.5 micron CMOS—double-level metal	Silicon- or metal-gate CMOS
Chip Density Range (equiv. gates)	65,000	1,000 to 100,000	75 to 16,000
Cell Library	Metal-gate CMOS, Silicon-gate CMOS	Full 7400 series, user definable ROM,RAM, PLA is standard cell density; 2900 family	Yes
Design Kit Available	No	Daisy, Mentor, OrCAD	Yes
Full Custom Circuits Digital	Metal-gate or silicon-gate CMOS, double level metal or poly, EE, high voltage, low voltage	Yes	
Linear	CMOS		
Combined Digital Linear	CMOS		
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	No minimum required. Full turn-key service available	Simulated schematic or functional description	Functional spec, logic diagram, circuit diagram, test vectors, PG tape and netlist
Design Aids	Full design capability including schematic capture, analog and digital simulation,layout tools, data base verification, and test program generation.	Schematic capture, logic simulation, automated R-C extraction, timing verification, design rule checking, electrical rule checking, auto place and route, customer training, design center	Logic simulation, design rule check; Daisy and Mentor CAE capabilities + PC Based
Production	Yes	Procured wafer production	In-house and procured
Preferred Delivered Product	Packaged parts, dice or chips on board available	Packaged dice available in commercial and military	Scribed dice, packaged dice wafers + special pkgs.
Test Program Generation	Yes	Automated test program generation	Yes
Production Test	Yes	95% fault coverage typical, 100% dc/ac and functional testing; burn-in military reliability	Functional, parametric, burn-in, thermal shock, environmental, MIL
Electrical Test Systems Available	Megatest, Sentry	Sentry XXI, IMS	Genrad, Sentry
Comments	Since ICS purchases wafers from several foundaries, it has the flexibilityto choose the optimum process for an application. Second sourcing is straight-forward. 883 screening available.	Gate array architecture offering complex functions with standard cell density; full scan path test program generation and fault grading; available in commercial and military	100% burn-in, Mil spec manufacturing in line

Manufacturer **FOR DETAILED DATA SEE:**	**International Microelectronic** Products	**IXYS**	**Lambda**
Customized Standard Circuits	Digital, combined linear/digital		Linear, Combined digital/linear
Gate Array	No		
Chip Density Range (equiv. gates)	200 to 10,000		
Cell Library	Silicon-gate CMOS		Yes
Design Kit Available	Yes		No
Full Custom Circuits Digital	Silicon-gate NMOS and CMOS	Power control, Motion control, Industrial control and Telecommunications related circuits	
Linear	Si-Gate CMOS	Power control, Motion control, Industrial control and Telecommunications related circuits	Bipolar
Combined Digital Linear	Silicon-gate NMOS and CMOS	Power control, Motion control, Industrial control and Telecommunications related circuits	Bipolar
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Functional specification, logic diagram, circuit diagram, breadboard, test vectors, customer-owned-tooling (pattern-generator tape, composite drawing)	Specifications, circuit diagrams, netlist	Functional specs, circuit diagram, breadboard, samples
Design Aids	Schematic capture, digital/analog simulation, place and route, RDC, ERC, LVS.		SPICE, breadboarding, design rule check
Production	In-house	Included	In-house fab and test
Preferred Delivered Product	Mapped wafers, probed wafers, scribed dice, packaged dice, or special packages.	Packaging ICs in standard plastic, ceramic or SMD	Packaged units, dice, assemblies
Test Program Generation	Yes	Included	Yes
Production Test	Functional, parametric, burn-in	Included	Functional, parametric, burn-in, thermal cycle
Electrical Test Systems Available	Sentry, Trillium, LTX, Kiethly		Teradyne test systems
Comments			

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Lansdale Semiconductor	Lattice	Logical Solutions
Customized Standard Circuits	Digital, Bipolar, Memories		Digital, testable functional
Gate Array		E2CMOS Generic Array Logic	1.5μ and 2μ silicon-gate CMOS
Chip Density Range (equiv. gates)		300 to 500 gates	1,000 to 50,000
Cell Library		Electrically Erasable CMOS	Yes
Design Kit Available			
Full Custom Circuits Digital	ECL, LS, TTL, DTL, RTL, Bipolar, SUHL	Electrically Erasable CMOS	Silicon-gate CMOS
Linear	Yes		
Combined Digital Linear			
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	PG tape, mask, functional specs, schematic capture, circuit diagram	Device Master, Jedec Fuse Map, Logic Equations, State Machine, Truth Tables, Schematic Entry, Wave Form	Logic diagram
Design Aids	Design rule checks	PLD Developement Software.	Testability advisor
Production	In-house wafer fabrication	Procured	Sub-contracted
Preferred Delivered Product	Packaged tested dice, wafers	Plastic and Ceramic DIPs, PLCC, LCC	DIP, PCC, SOIC, Wafers, ceramic leaded and leadless packages, die to commercial and military specifications
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric	Programmability, Functional, Parametric, AC.	Functional, parametric, burn-in, thermal shock, environmental, military
Electrical Test Systems Available		Sentry, Impact	Sentry
Comments		Programmers Available	Will license patented testability circuit architecture for inclusion in customer devices

Manufacturer FOR DETAILED DATA SEE:	LSI Computer Systems	LSI Logic	Marconi Circuit Technology
Customized Standard Circuits		Digital	
Gate Array		Silicon-gate HCMOS, BiCMOS	Silicon on sapphire
Chip Density Range (equiv. gates)		300 to 100,000	700 to 20,000
Cell Library		7400/4000 CMOS and HCMOS, 500 cells includes 2900 series, 8200, 6800, multipliers, adders, DSP cells, etc.	Silicon on Sapphire
Design Kit Available		9-day class	Yes
Full Custom Circuits Digital	Metal-gate PMOS, CMOS, silicon-gate NMOS, silicon gate CMOS		Silicon on sapphire
Linear	Metal-gate PMOS, CMOS, silicon-gate CMOS		Silicon on sapphire
Combined Digital Linear	Metal-gate PMOS, CMOS, Silicon-gate CMOS		Yes
Provide Design Assistance	Yes	Over 37 LSI design centers	Yes
Acceptable Customer Input (in order of preference)	Logic diagram, customer-owned tooling (pattern-generation tape, composite drawing), circuit diagram, breadboard, functional specification		Netlist and simulation vectors, post layout, full turnkey
Design Aids	Design rule checks, computer aided transient analysis, Applicon 760	LSI Logic design system, including design entry, circuit simulation, logic simulation, floorplanning, design synthesis and compilation, multi-chip simulation, behavioral simulation; workstation tools for Sun, Apollo, Mentor and Digital	Mentor, Dazix, Intergraph Design Systems
Production	Procured	In-House, on-shore, Europe, Japan, Canada	In-house
Preferred Delivered Product	Packaged dice, dice	Packaged dice, dice	Packaged Devices, Dice
Test Program Generation	Yes	Yes, automatic	Yes
Production Test	Functional, parametric, burn-in, thermal shock, environmental, MIL	Functional test to full test vector set; AC critical path; full parametric test Level B and S screening	Up to Mil-STD–883C Level 'S'
Electrical Test Systems Available	Macrodata107 and customized equipment	Industry standard testers, Sentry Series 10,20, Ando 256 pin 40 MHz, Trillium 256-pin (512-pin in development)	Sentry
Comments	Multiple-sourced production	Multiple sourced; over 37 LSI design centers	Full Radiation-Hardened Product Range;Second Source;Secure Design Centre

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	MCE	Micrel	Micro Linear
Customized Standard Circuits	Linear, digital, combined linear/ digital, bipolar, CMOS	Combined CMOS/DMOS linear/ digital	Analog semicustom ASIC with some digital
Gate Array	CMOS, ECL, dielectric isolation,,I^2L, Linear		Bipolar tile array
Chip Density Range (equiv. gates)	50 to 10,000		500 to 3,000 analog components
Cell Library	Yes	Yes	Macrocells available
Design Kit Available	Yes		Yes
Full Custom Circuits Digital	CMOS, TTL, LSTTL, I^2L, ECL, linear	PMOS, CMOS, DMOS, NMOS silicon or metal-gate, isopolar type processing	
Linear	Up to 75 volts	Bipolar, CMOS, DMOS	Yes
Combined Digital Linear	Up to 20 volts	Up to 200 volts	Yes
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	MCE will interface with customer anywhere in design sequence; UniDES software	Customer owned tooling, PG tape, database tape; circuit logic, functional specifications	Analog schematic diagram, CAD schematic with simulations, GDSII tape
Design Aids	Logic simulation, breadboard assistance, design rule checks, UniDES	Design rule checks. Calma CAD, breadboard, logic simulation, circuit simulation	Engineering support, Analog Design Tools and Daisy CAD libraries, kit parts, Viewlogic workstation
Production	In-house manufacturing; 4-inch wafer fabrication	In-house wafer fabrication; 4-inch lines. Procured assembly	In-house and procured
Preferred Delivered Product	Mapped wafers; probed wafers; scribed dice; substrate-mounted dice; packaged dice; custom packaging	Packaged tested die, probed wafers, mapped wafers	Dice or packaged units
Test Program Generation	Yes	Yes	Yes
Production Test	Functional; parametric	Functional, parametric, burn-in, MIL STD 883. Rad hard Class B,S	Functional, parametric, burn-in, full MIL-STD–883C
Electrical Test Systems Available	Teradyne J273 and A300 with laser trim; Pragmatic Inspector 200 (72 pin digital IC); Keithley 300	Sentry VII, Series 20	Sentry
Comments	Functional arrays available CMOS MGA and SGA series; also linear function cells	Bipolar-linear, CMOS, DMOS power devices combined; 60V, 100V, 200V; 3μ CMOS Si-gate dual poly; 1 GHz DMOS power FET	Mostly linear arrays with some digital capacity (120 gates)

Manufacturer FOR DETAILED DATA SEE:	Micro Power Systems	Micro-Rel	Mitel Corp.
Customized Standard Circuits	2,000 digital, linear and digital/linear cells		N/A
Gate Array			N/A
Chip Density Range (equiv. gates)	Up to 10,000 gates	500–10,000 gates (2-input NAND)	N/A
Cell Library	CMOS, bipolar, with BiMOS with thin film resistors	Silicon-gate CMOS	N/A
Design Kit Available	Yes	Yes	N/A
Full Custom Circuits Digital	Moly gate CMOS, bipolar, BiMOS, all compatible with thin film resistors	Silicon-gate CMOS	2.0μ double layer metal p-well CMOS
Linear	High gain/low current analog bipolar, CMOS, BiMOS with thin film resistor; (10 ohms to megohms)	Silicon-gate CMOS, bipolar, BiMOS	2.0μ double layer poly, two layer metal p-well CMOS
Combined Digital Linear	CMOS digital/linear bipolar digital/linear BiMOS digital/linear all compatible with thin film resistors	Silicon-gate CMOS, BiMOS	2.0μ double layer poly, two layer metal p-well CMOS
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Circuit logic diagrams, functional specifications, customer owned tooling, PG tapes, database tapes, breadboards	Logic or circuit diagram, functional specification, breadboard, database tape	Functional specification, logic diagram, circuit schematics, or CAD interface
Design Aids	Cooperative design, logic/circuit diagrams, Calma CAD, workstation based, and design tools	Logic and circuit simulation, kit parts available for linear bipolar design, schematic entry, DRC, ERC, LVS, LPE	Logic simulation, design verification, SPICE, post layout checks
Production	In-house wafer fabrication, two second sources	In-house	In-house
Preferred Delivered Product	Customer specified: wafers, die, final test, custom and standard packages available	Packaged devices, hybrid modules	Wafers, probed wafers, scribed wafers, packaged/tested devices
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in, environmental, linear, full MIL STD 883, rad hard	MIL STD, DESC 1772 certified	Functional parametric, burn-in, thermal shock, environmental, MIL linear
Electrical Test Systems Available	Custom testers, BTS, Datatron, Fairchild, LTS, Macrodata	Sentry 7, Series 80	LTX DX89, DX90
Comments	Combination COMOS and bipolar, 1 to 5V CMOS, 1 to 200 + V bipolar, 2-micron 250 MHz CMOS (Flash-MOS); bipolar linear combined with digital CMOS and thin film resistors (HallMOS)	Radiation-hardened bipolar circuits available	Complete standard cell and macrocell array family available, specializing in linear and telecommunication circuits, second source: IMP

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Mitsubishi Electronics	Motorola	National Semiconductor
Customized Standard Circuits	Digital	Digital	Digital
Gate Array	1.0μ, 1.3μ, 2.0μ silicon-gate CMOS	HCMOS, ECL, TTL-LS	ECL, 2μ silicon-gate CMOS
Chip Density Range (equiv. gates)	200 to 50,000 2-input NAND	Up to 6,000 gates (gate arrays); up to 10,000 gates (standard cells)	ECL: 500 to 2,000 3-input NAND; CMOS: 500 to 6,000 2-input NAND
Cell Library	CMOS	Extensive digital, analog, functional block, μP core	Yes
Design Kit Available	Yes	Training course, manuals	Yes
Full Custom Circuits Digital		NMOS, CMOS, ECL, TTL-LS, FAST	Implemented in gate array format ECL or 2μ CMOS
Linear		Standard cells- HCMOS functional blocks	
Combined Digital Linear		Standard cells- HCMOS functional blocks	
Provide Design Assistance		21 Design Support Centers	Yes
Acceptable Customer Input (in order of preference)	Netlist and test vectors, schematic using macrocell and test vectors, schematic and test vector or timing diagram.	CAD interface, verified netlist, circuit documentation.	Logic diagram to PG tape - depending on customer interface required
Design Aids	Circuit simulation, logic simulation, schematic entry, test program generation, design rule checks, fault simulation	Training course and manuals, software for simulation, timing analysis and test programs; popular engineering workstations	Logic simulation, breadboard assistance, design rule checks. FairCAD design system provides full design capability.
Production	In-house	High volume production; in-house fab, assembly and test	In-house
Preferred Delivered Product	Packaged	Choice of packages- DIPs, PLCC, PGA, LCC for surface mount or thru board mount	Packaged die preferred
Test Program Generation	Automatic	Yes, evaluation and production	Yes
Production Test	Functional, parametric, burn-in standard	100% ac and dc parametric and functional	Functional parametric to MIL 883B
Electrical Test Systems Available	Mitsubishi in-house tester, Ando.	Sentry Series, Sentinel, Trillium up to 256 I/O	In-house
Comments	Gate isolation; compatible with standard cell macrolibrary	Complete standard cell and macrocell array families with mapability of designs; second source: NCR	High performance ECL and 2μ silicon-gate CMOS gate arrays in volume production

Manufacturer FOR DETAILED DATA SEE:	NCM Corporation	NCR Microelectronics	NEC Electronics
Customized Standard Circuits	Linear, digital, combination	Digital, linear mixed-signal, μC, memory, combinations	Digital, μP, Memory, Combined Digital/Linear
Gate Array	CMOS (si-gate, metal-gate), bipolar	Si-gate- CMOS DLM, .7μ L-effective, .95μ drawn. Si-gate CMOS DLM, 1.1μ L-effective, 1.5μ drawn	CMOS, ECL, BiCMOS
Chip Density Range (equiv. gates)	What ever is feasable	Up to 70,000 gates (gate array); up to 100,000 gates(standard cell)	CMOS: up to 177,000gates; ECL: up to 35,000gates;BiCMOS; up to 24,000gates
Cell Library	Yes	2μ Si-gate CMOS DLM; 1.1μ L-effective, 1.5μ drawn CMOS, DLM, compilers, supercells, analog μP, 74xx, 82xx	Extensive digital, analog, RAM, ROM, 74LS, 82XX, many mega macros
Design Kit Available	No	Training course, manuals, license	Yes, Training Manuals
Full Custom Circuits Digital	CMOS (Si-gate, metal-gate), bipolar, PMOS (si-gate, metal-gate)	Same as gate array and cell library sections above	1.5μm CMOS I.0μm CMOS standard cells
Linear	CMOS (si-gate, metal-gate), bipolar	Same as above	
Combined Digital Linear	CMOS (si-gate, metal-gate), bipolar	Same as above	Si-gate CMOS standard cells; 1.5μm and 1.2μm
Provide Design Assistance	Yes	25 Design Centers worldwide	7 U.S. Design Centers
Acceptable Customer Input (in order of preference)	Functional specs, logic diagram, circuit diagram, breadboard, test vectors, customer-owned-tooling, known good devices	Verified netlist, circuit diagram and specs, database tape	Logic data and test vectors; verified netlists
Design Aids	Logic simulation, breadboarding, design rule check, cell library	Training course snd manuals, software for simulation, timing analysis and test programs, popular engineering workstations	Design kits for most EWS; training courses, detailed manuals; local engineering support
Production	Procured	In-house fab and test, in-house packaging	In-House; U.S. and Japan fabrication
Preferred Delivered Product	Packaged units, dice, probed wafers, pc assemblies	Packaged units in CDIP, PDIP, QFP (metric) PLCC (J-lead), LCC (J-lead), LCC (leadless) SOIC, PPGA, CPGA, Cerquad FP, SMT	Packaged dice; offer DIP, Flat, PGA, LCC in most popular sizes
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in, thermal cycle	AC and DC functional and parametric, voltage/frequency corners	Functional, DC, AC, 100% burn-in
Electrical Test Systems Available	In-house built, microcomputer-controlled test systems	Sentry Series, Sentinel, Trillium	Ando
Comments	Chips as large as 522x1068 mils have been successfully manufactured	Complete standard cell and gate array compatibility; applications support;Design Centers; in-house; manufacturing and assembly; full line of tools for industry standard workstations. Tools assist board-level as well as ASIC-level simulation.	Broad line of processes, products and packages. Offer one-stop shopping as an ASIC vendor.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Newbridge Microsystems	OnChip Systems	Qualcomm
Customized Standard Circuits	Linear, digital, memory, 8000 series peripherals, 8085 μP	Linear, linear/digital	Linear, Digital, Combined
Gate Array		Bipolar, Analog CMOS	
Chip Density Range (equiv. gates)	CMOS up to 25,000 gates, Bipolar up to 2,000 gates	Bipolar; to 800 components, Analog CMOS: to 1000 Gates.	10,000–40,000
Cell Library	Yes	Yes	
Design Kit Available	Yes	No	
Full Custom Circuits Digital	CMOS, Bipolar and standard cell	CMOS Si gate and Metal Gate GaAs.	CMOS, ECL, TTL
Linear	Bipolar	Analog CMOS, Bipolar, CMOS Si gate and Metal Gate High Speed Bipolar and GaAs	
Combined Digital Linear	Limited	Analog CMOC, CMOS Si gate and Metal Gate, GaAs	BiCMOS
Provide Design Assistance	Yes	Yes	
Acceptable Customer Input (in order of preference)	Functional specifications and test description, logic schematic, circuit schematic, netlist	Schematic w/functional specs;Block Diagram;Concept	
Design Aids	Software logic simulation, timing verification, design rule checks (DRC), test programs, real chip modelling, cell library, auto-routing layout software	Internal Design manual & design rules ISS system layout, DRC, LVS, digitizing Simulation (SPICE) Breadboard	
Production	QA & Test In-house	Procured, multiple sources for each process.	Wafer production procured from outside foundaries
Preferred Delivered Product	Packaged parts, dice, probed wafers	Packaged - DIP,SOIC,SMT; Die - Wafers, Waffle packs	Packaged devices, die
Test Program Generation	Yes	Part of development	Yes
Production Test	Functional and parametric. Can also do burn-in and thermal cycling mil screening available	Functional, parametric, mil screening available Temperature testing available	
Electrical Test Systems Available	Sentry series, and in-house testers	Pragmatic test heads. Custom built systems.	
Comments	CAD software runs on sun, apollo, DEC and PC/AT. Most Intel 8xxx functions available as macro cells, STD cell libraries.	Prefer turnkey designs with active involvement at the system level.	1w - house VLSI design capability for forward error correction and frequency synthesis ASICs.

Manufacturer FOR DETAILED DATA SEE:	Raytheon Semiconductor	S-MOS Systems	Seattle Silicon
Customized Standard Circuits	Linear, digital	Digital	
Gate Array	Bipolar digital, ECL, CMOS	Silicon-gate CMOS	
Chip Density Range (equiv. gates)	800 to 20,440	400 to 10,000	
Cell Library	TTL	Basic cells and MSI Macros	
Design Kit Available	Yes	Yes	
Full Custom Circuits Digital	Consult factory (bipolar)	Si-gate CMOS	Cell-based silicon-gate CMOS
Linear	Bipolar		Silicon-gate CMOS
Combined Digital Linear	Consult factory (bipolar)		Silicon-gate CMOS
Provide Design Assistance	Yes		Yes
Acceptable Customer Input (in order of preference)	TEGAS netlist, circuit schematics, physical database program	Netlist, P.G. tape, schematic	Workstation logic diagram
Design Aids	Evaluation devices, design source manual, factory tutorial, Schematic Entry, circuit simulation, design rule checks	Schematic entry, circuit simulation, logic simulation, design and electrical rule checks	Library of parts, place and route, back annotate simulation models for Mentor and Valid; logic synthesis and timing analysis
Production	Yes	In-house	Procured
Preferred Delivered Product	Packaged units, dice	Any	Packaged units
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in, thermal shock, environmental, MIL	Functional, parametric	Functional, parametric, burn-in
Electrical Test Systems Available	Sentry 7, Sentry Series 21	Takeda-Riken	Sentry
Comments	Radiation tolerance test data available		Automated design system for multiple processes using custom cell-generators, full CAD and simulation support

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	SGS-THOMSON	Siemens	Sierra Semiconductor
Customized Standard Circuits	Digital/linear		Analog telecomms/datacomms and EEPROM
Gate Array	Silicon-gate analog/digital, silicon-gate high voltage	Bipolar ECL/CML, CMOS sea-of-gates, CMOS cell-based custom	
Chip Density Range (equiv. gates)		1500 to 16,000 ECL/CML; Up to 130k gates available for CMOS	Over 100,000 gates
Cell Library	100 to 1,200 gates	Yes	CMOS with analog and EEPROM
Design Kit Available	Yes	Daisy, Mentor, Valid	Mentor, Daisy, Montage
Full Custom Circuits Digital	Silicon-gate CMOS/DMOS, 500V dielectric isolation		CMOS 1.0μ
Linear	Same as above		CMOS 1.0μ 1.5, 2.0, and 3.0μ
Combined Digital Linear	Same as above		CMOS 1.5, 2.0 and 3.0μ
Provide Design Assistance	Same as above	Yes	Design centers worldwide
Acceptable Customer Input (in order of preference)	Schematic I/O requirements, functional specs, breadboard, test vectors, customer-owned-tooling, known good device	Verified netlist, circuit diagram, specs, schematic capture,	CIF or GDS II database, simulated netlist, schematic and specification, block diagram and specification
Design Aids	Daisy/VAX, Spice 2G. transient analysis, Daisy Logician logic simulation, Daisy Gatemaster place and route	Design manual, DRC, timing analysis, Daisy, Mentor, Valid libraries, fault simulation	Complete design tools: Montage schematic capture and mixed signal simulation, layout, custom design
Production	In-house wafer fab	Fab—Germany, test and assembly—Santa Clara, Germany, or Far East	5-inch and 6-inch
Preferred Delivered Product	Wafer, dual-in-line packages, chip carriers	Packaged in ceramic PGAs, CMOS—DIPs, PGAs, chip carriers, PLCCs, QFP	Wafers, die or packaged units
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric burn-in, thermal shock, environmental	AC and DC functional and parametric	Functional, parametric, burn-in
Electrical Test Systems Available	Custom high voltage test system, LTX	Advantest, Sentry	Sentry Series 80, Megatest, Teradyne A500, STS
Comments	Dielectric isolation allows simultaneous integration of HV p- and n-channel transistors, IGTs, bipolar devices, and standard CMOS; design centers available	Santa Clara Design Center, test and assembly also done in Santa Clara	Specialize in converters PLL's Video DACs

Manufacturer FOR DETAILED DATA SEE:	Signetics	Silicon General	Silicon Systems Page 3646
Customized Standard Circuits	Digital		Analog/digital
Gate Array	Silicon-gate CMOS, ECL 100K and 10K compatibility (0.5ns), ISL- 48mA drive TTL compatible		
Chip Density Range (equiv. gates)	330 to 1,100 Si-gate-CMOS; 600 to 2,200-ECL; Up to 2500 used gates -Flexx Array		
Cell Library	Silicon-gate CMOS, TTL and LSTTL-Si-gate CMOS; Macrocell library-ECL; Full library of soft & hard macros-Flexx Array		Analog/digital standard cells and compiled macros
Design Kit Available	Yes		No
Full Custom Circuits Digital	No* Yes, using the Flexx Array as foundation	CMOS, BiCMOS	Silicon gate CMOS, bipolar, TTL, STL, SRTL, LSTTL, ECL, I^2L
Linear		Yes, Bipolar	Silicon gate CMOS, bipolar
Combined Digital Linear		Yes	Silicon gate CMOS, bipolar, TTL, SRTL, I^2L, STL
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Schematic input	Yes	Functional specification, logic diagram, circuit diagram, breadboard, test vectors
Design Aids	Schematic capture, complete simulation, auto place, auto route, auto test generation	On Site	Breadboards, logic and circuit simulation, design rule checks, test-program development
Production	In-house	In House	In-house
Preferred Delivered Product	Packaged units	Fully Packaged, Dice	Packaged units and tested dice
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric and ac	Yes	Automatic testers for analog and digital devices, functional and parametric
Electrical Test Systems Available	Sentry VII, VIII, and 21, Takeda Riken system	Yes	LTX, Teradyne Trillium
Comments	*Standard cells from 200 to 2,000 gates		

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Sipex-HSD	Solitron Devices	Standard Microsystems Corp.
Customized Standard Circuits	Digital, combined digital/linear	Bipolar linear, power linear, smart power	Digital, combined digital/linear, memory, μC
Gate Array	2–5μ silicon-gate CMOS, Bi-CMOS (bipolar and CMOS)		
Chip Density Range (equiv. gates)	100 to 10,000 2-input gates		50 to 10,000
Cell Library	CMOS, BiCMOS	Yes	Silicon-gate NMOS, CMOS
Design Kit Available	Yes	Yes	Yes
Full Custom Circuits Digital	Silicon-gate CMOS, HCMOS, HMOS, BiCMOS		Silicon-gate NMOS, CMOS
Linear	Silicon-gate CMOS, HCMOS, BiCMOS	Bipolar small signal and high power up to 80V and up to 20A	Silicon-gate NMOS, CMOS
Combined Digital Linear	Silicon-gate CMOS, HCMOS, BiCMOS		Silicon-gate CMOS
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Logic diagram, circuit diagram, breadboard, functional specification, test vectors, COT, known good device	Calma GDS II tape, schematics, layout and block diagram	Functional specification, logic diagram, Calma database tape, netlist
Design Aids	Circuit simulation, logic simulation, schematic entry, test program generation, design rule checks, breadboard assistance	CAD assistance, model parameters	Logic simulation, design rule checks, electrical rule checks, transient analysis, automatic breadboard wiring, logic simulation with extracted delays, training course, software
Production	In-house, procured	In-House	In-house
Preferred Delivered Product	Packaged devices, others available	Wafers, die or packaged units	Packaged devices preferred; all others available
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in, thermal shock, environmental, MIL	Functional, parametric, burn-in, all environmental, all military and classes testing	Full testing and screening including burn-in
Electrical Test Systems Available	Sentry, Teradyne	LTX	Fairchild Sentry 20, 21, Sentinel, Genrad GR–16
Comments	Complete custom capability including design, instruction, CAD and technology licensing. Standard cell library available.	Complete custom capability, including design, modeling and layout	Specialize in digital MOS/LSI and VLSI; will also customize by modifying MOS/LSI standard parts; second sources available; macrocells

Manufacturer FOR DETAILED DATA SEE:	STC Semiconductors	Sunshine Semiconductor	Tektronix
Customized Standard Circuits	Digital, combined digital/linear, linear, memory	Digital, combined linear/digital	Linear, mixed linear/digital, bipolar
Gate Array	Bipolar		
Chip Density Range (equiv. gates)	10 to 15,000		Up to 800 equivalent gates (digital)
Cell Library	CMOS, Bipolar, merged CMOS/ bipolar	Si-gate CMOS	Digital and Analog
Design Kit Available	Yes		Yes
Full Custom Circuits Digital	CMOS, Bipolar, merged CMOS/ Bipolar, TTL, ECL	Silicon-gate CMOS, metal-gate CMOS, nonvolatile CMOS	Yes
Linear	CMOS, merged CMOS/Bipolar, UHF Bipolar		Bipolar (junction isolation); bipolar (sidewall oxide isolation); amplifiers, mixers, filters to UHF
Combined Digital Linear	CMOS, merged CMOS/Bipoolar, UHF Bipolar	Metal Gate CMOS	Bipolar
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Functional spec and block diagram, customer-owned tooling, Calma database tape	Product description, block diagram with specifications, logic diagram	QuicKic Database, Calma GDS II, Outform 3
Design Aids	Alphanumeric netlist or schematic entry, circuit simulation, logic simulation, design and electrical rule checking	Breadboard, circuit and logic simulation, DRC, graphics, NCC	Training, QuicKic interactive schematic capture/layout editor, design consultation, manuals, full SPICE models, Electrical Rules Checking, Worst Case Analysis
Production	In-House	Procured	In-House
Preferred Delivered Product	Fully tested assembled packages, wafers and all others available	Packaged dice, bare dice, design and layout	Tested/untested wafers, die, plastic DIP, ceramic DIP, 28,44,68 pin plastic/ceramic J-leaded quad packages
Test Program Generation	Yes	Yes	Yes
Production Test	Full testing and screening; burn-in if required	Procured	Analog, parametric (DC), limited functional ATE-based, burn-in and thermal shock
Electrical Test Systems Available	Fairchild Sentry Series 10, 15 and 81; Xincom, H.P. and other dedicated systems		Sentry, Series 80, Tektronix, ESI
Comments	Total capability offered, including analog and digital bipolar circuits up to GHz range	Services include product and specification finalization, logic and circuit design, layout, test definition	Complete high-speed analog capability on two high-speed bipolar processes; SPICE library, proprietary DRC and worst-case analysis capability. In-house design center.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	Texas Instruments	Toshiba America Electronic Components	TriQuint Semiconductor
Customized Standard Circuits	Digital	Digital	Digital/Mixed Signal
Gate Array	1μ CMOS gate arrays	HC^2MOS Si-gate double layer metal	SCFL Standard Cells
Chip Density Range (equiv. gates)	Up to 25,000 (standard cells); 3200—25,868 (gate arrays)	37,932 to 129,042; 2-input NAND gates with a fanout of two	Up to 15K Gates
Cell Library	1μ and 2μ CMOS Standard Cells	CMOS	Yes
Design Kit Available	Yes	Yes	Yes
Full Custom Circuits Digital	Silicon-gate CMOS	1.5μ CMOS, Mega-cell library including Z80 family, 82CXX peripherals, others, 1.2μ	GaAs IC designs by customer or TriQuint
Linear	Yes	1.5μ CMOS, A/D, Op Amp, etc.	Including MMICs to 26 GHz
Combined Digital Linear	Yes	Yes	Yes
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Workstation netlist (captured schematic/simulated database), functional specification, logic diagram	1) Workstation interface (tape or floppy); 2) Logic diagram with netlist and test vectors; 3) circuit diagram/schematic	CALMA GDSII for customer designs, Schematics for TriQuint designs, Workstation Netlist For Semicustom
Design Aids	Simulation, testability analysis, test grading, design rule checking software, logic synthesis, workstation-compatible cell libraries, design workshops, and design kits	Circuit simulation, logic simulation, test program generation; turn-key implementation for Mega-cell based custom circuits	Detailed manuals, device models, logic models, Daisy, Mentor workstations
Production	In-house	In-house	In-house
Preferred Delivered Product	Choice of packages: DIPS, LCC, PGA, and Quad Flat Pack	Packaged units (DIP, PLCC, PFP, CFP, PGA)	Wafers, die, packaged parts
Test Program Generation	Yes	Yes	Yes
Production Test	Functional and parametric	Functional, parametric	Yes
Electrical Test Systems Available	Sentry 21, ACTV, Trillium	Sentry VII, Sentry 10/20, TACT–820	Tektronix 32XX Series, Tek LT 1001
Comments	Standard Cells/Gate Arrays available in commercial and military versions.Supported through TI Regional Design Centers (Atlanta, Dallas, Boston, Chicago,Santa Clara, Irvine, Ottawa	Toshiba offers gate array, standard cell and custom (super-integration); design centers in Boston, Dallas, and Sunnyvale CA.	Custom foundry, semicustom arrays, custom design. STD cell library includes ROM, DDS macros, Linear Functions

Manufacturer FOR DETAILED DATA SEE:	Unicorn Microelectronics Corp. (UMC)	United Technologies	Vitesse Semiconductor
Customized Standard Circuits	Digital, combined digital/analog	Digital	Digital, Memory, Combination
Gate Array	3μ and 2μ silicon-gate HCMOS	3μ silicon-gate CMOS; 1.5μ silicon-gate CMOS; 1.2μ silicon-gate CMOS	0.8μ metal-gate GaAs E/D MESFET;0.6μ metal-gate GaAs E/D MESFET ECL, TTL, CMOC, GaAs I/O
Chip Density Range (equiv. gates)	200 to 4,080 2-input NAND gates	3,400—50,000	1,500–350,000 2-Input NOR gates (gate arrays), 150–200,000 2-Input NOR gates (standard cell)
Cell Library	HCMOS	7400/4000 CMOS, 2900 series, 8X305, multipliers, adders, DSP cells, etc.	SSI, MSI, RAM, ROM, ALU, Megacells, Custom/Compiled cells; over 300 cells (standard cells), over 150 cells (gate arrays)
Design Kit Available	Yes	Yes, 1 week class	Yes, on-site design course
Full Custom Circuits Digital	5μ metal-gate ALCMOS, 3μ and 1.5μ silicon-gate HCMOS	3μ silicon-gate CMOS 1.5μ silicon-gate CMOS 1.2μ silicon-gate CMOS	0.8μ metal-gate GaAs E/D MESFET 0.6μ metal-gate GaAs E/D MESFET I/O: ECL, TTI, CMOS, GaAs. 4-level aluminum Interconnect
Linear	3μ silicon-gate HCMOS		Same as Digital
Combined Digital Linear	3μ silicon-gate HCMOS		Same as Digital
Provide Design Assistance	Yes	Yes	Yes, On-site Design Course
Acceptable Customer Input (in order of preference)	Logic diagram, circuit diagram, breadboard, functional specification, test vectors, customer-owned-tooling	Simulated netlist, logic diagram, customer owned tooling, PG tape, functional specs.	PG Tape (GDSII Format), circuit Schematics and timing requirements, functional and timing specifications.
Design Aids	Design rule checks, circuit simulation, logic simulation, schematic capture, test program generation, breadboard assistance	Schematic entry, design rule checks, logic simulation, testability analysis, layout, test program generation, state machine compiler; workstation tools for Daisy, Mentor, Valid.	Logic & timing simulation placement & routing, design rule checks, electrical rule checks, behavioral modeling & simulation, layout, design compiler,cell compiler, workststion tools for Daisy, Mentor, Valid, VLSI, Synopsys, and Verilog.
Production	In-house	In-house	Design Fabrication, Assembly, Test in-house (devices) design, Assembly, Test In-house(packages)
Preferred Delivered Product	Packaged units, others available	Packaged dice, dice, probed wafers	Packaged/tested parts, dice, probed wafers
Test Program Generation	Yes	Yes, automatic	Yes
Production Test	Functional, parametric, burn-in, thermal shock, environmental	MIL-STD–883 level B or S; MIL-M–38510/6XX (JAN); in-house total dose and transient upset testing	AC/DC functional and parametric, burn-in, thermal cycle, MIL-STD–883 screening, level B
Electrical Test Systems Available	Sentry VII, Sentry Series 20, Sentry Series 10, Teledyne, LTX	Trillium Micromaster, Genrad GR16	Teradyne J953 VLSI Tester, Teradyne J386 Memory Tester, Custom Systems.
Comments	Complete custom capability; from consumer to industrial application; low power, high speed/performance; silicon compiler; hierarchical structured CMOS customer ICs	Radiation hardened versions available; Silicon foundry also available	Complete gate array, standard cell, and custom capability;Commercial, industrial, or military applications; very high speed, low power performance, applications support; design centers; complete in-house fab, assembly, and test capability;solid second-source.

ASIC/CUSTOM (Cont'd)

Manufacturer FOR DETAILED DATA SEE:	VLSI Technology	VTC	Waferscale Integration
Customized Standard Circuits		Linear, digital, combined linear/digital	Digital
Gate Array		2.0μ silicon-gate CMOS	
Chip Density Range (equiv. gates)		Up to 6,000 gates	500 to 70,000 gates
Cell Library		Linear/digital, digital	CMOS
Design Kit Available		Yes	Yes
Full Custom Circuits Digital	NMOS, HMOS, CMOS	ECL, TTL, aimed standard cell, CMOS standard cell, VL2000 bipolar digital standard cell, VL5000 CMOS digital standard cell	1.2μ silicon-gate CMOS 1.0μ silicon-gate CMOS 0.8μ silicon-gate CMOS
Linear	NMOS, CMOS	Bipolar cell library and full custom	
Combined Digital Linear	NMOS, CMOS	VL1000 bipolar linear/digital cell library	
Provide Design Assistance	Yes	Yes	Yes
Acceptable Customer Input (in order of preference)	Functional specification, logic diagram, breadboard, customer-owned-tooling, data tape, PG tape, mask	Circuit diagram with test conditions and PG tape; circuit diagram with test conditions and simulated netlist; functional specification	Logic diagram with test vectors
Design Aids	PRISM VLSI design system, including high-level design language, circuit extraction, logic and circuit simulation, design rule checks, plotting, STIX	Logic and circuit simulation, predesigned linear and digital cells, schematic entry, regional design centers	Schematic entry, logic simulation, circuit simulation, test program generation, design rule checks
Production	In-house	Complete mask, wafer fab, packaging test facility	Procured
Preferred Delivered Product	Packaged dice preferred; any on request	Packaged devices or die	Packaged devices
Test Program Generation	Yes	Yes	Yes
Production Test	Functional, parametric, burn-in, thermal shock, environmental, MIL	Functional, parametric, burn-in, thermal shock, environmental, MIL	Functional, parametric, burn-in, thermal shock, environmental, hi-rel processing
Electrical Test Systems Available	Sentry 20/120, Accutest	LTX with ESILaser, Sentry 8, Sentry 80, MCT–2	Trillium, Teradyne
Comments	Multiple sourcing compatibility, foundry services, training services, training and CAD aids to support user designed VLSI	All libraries and gate arrays have full CAD support.	Macro-block modular-cell semicustom library available, high performance bit-slice, EPROM and logic on the same chip

Manufacturer FOR DETAILED DATA SEE:	Western Design Center	Western Digital	Xilinx
Customized Standard Circuits	Digital	Digital	
Gate Array		Silicon-gate NMOS	CMOS DLM 1.2μ
Chip Density Range (equiv. gates)	Over 1,000	Up to 1,000 gates	1,000 to 10,000
Cell Library	Yes, CMOS	Yes	Yes: SSI, MSI, Macros
Design Kit Available	Yes		Yes
Full Custom Circuits Digital	1.0 to 3U CMOS		
Linear	Limited CMOS		
Combined Digital Linear	Limited CMOS		
Provide Design Assistance	Yes	Yes	
Acceptable Customer Input (in order of preference)	'Idea' or market requirement, functional specification, logic diagram, logic capture file	Functional specification, logic system	
Design Aids	1. Tool box design system emulation, 2. logic simulation, 3. circuit simulation, 4. test program generation, 5. design rules checks, logic capture, full custom graphics support	Logic simulation, design rule checks, test program development	Simulation, timing analysis, in-circuit debugger, PC or workstation based
Production	Procured	In-house	No masking—user programmable
Preferred Delivered Product	Packaged devices, dice, wafer	Packaged units and test dice	Packaged Units
Test Program Generation	Yes	Yes	Not required—standard product
Production Test	Functional, paramtic burn-in, device qual, package qual and for licensing purposes, ful mil and life support.	Functional, burn-in	100% tested by Xilinx, burn-in available
Electrical Test Systems Available	Sentry		Sentry
Comments	Full custom, microprocessor-core-based technology, technology licensing, W65C02, W65C816 core microprocessor with support cores available	Uncommitted logic arrays, 20 pin DIP, 130 prefabricated logic elements or 28/40 pin DIP, 400 prefabricated logic elements	User programmable gate array, 68, 160, I/O Reconfigurable in-system.

ASIC/CUSTOM (Cont'd)

Manufacturer **FOR DETAILED DATA SEE:**	**ZyMOS**		
Customized Standard Circuits	Digital		
Gate Array	2.0, 1.5 and 1.2μ CMOS standard cells		
Chip Density Range (equiv. gates)	Up to 25,000 gates		
Cell Library	300 + cells; supercells such as 82C37, 54, 59		
Design Kit Available	Yes		
Full Custom Circuits Digital	2.0, 1.5 and 1.2μ CMOS		
Linear			
Combined Digital Linear			
Provide Design Assistance	Yes		
Acceptable Customer Input (in order of preference)	Logic input through ZyP-AT CAD system, logic diagram, functional spec.		
Design Aids	Standard cell and supercell libraries, schematic capture, logic simulation, test program generation, DRCs, place and route, layout verification		
Production	Procured		
Preferred Delivered Product	Packaged die: PLCC, PDIP, SOIC, LCC, QFP. Die or wafers.		
Test Program Generation	Yes		
Production Test	Functional, parametric		
Electrical Test Systems Available	Sentry 20		
Comments	ZyP-AT CAD system available at customer site.		

ASIC/CUSTOM—Gate Arrays

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Actel																		
1200		70	CMOS	2	2				57	x				x	Field Programmable	ACT1010	Actel	
2000		70	CMOS	2	2				69	x				x	Field Programmable	**ACT1020**	**Actel**	**(3202)**
2500	5.5	120	CMOS	1.2	2				82	x				x	Field Programmable Gate Array	**A1225**	**Actel**	**(3200)**
4000	5.5	120	CMOS	1.2	2				104	x				x	Field Programmable Gate Array	**A1240**	**Actel**	**(3200)**
8000	5.5	120	CMOS	1.2	2				140	x				x	Field Programmable Gate Array	**A1280**	**Actel**	**(3200)**
Applied Micro Circuits																		
3.5	0.1	1500	1	2	3	2			110	x	x	x	x	x	Contains imbedded Phase-lock loop	Q208025	◊°† AMCC	
800	0.5	300	BiCMOS	1	3	1			44	x	x	x	x	x		Q24008	◊°† AMCC	
	0.6	240	BiCMOS	1.5	3	1			44	x	x	x	x	x		Q800B	◊°† AMCC	
1000	0.1	1200	Bipolar	1	3	2			66		x	x	x	x		Q20010	◊°† AMCC	
1300	0.21	600	Bipolar	2	2	0			76		x	x	x	x		Q1300T	◊°† AMCC	
1600	0.21	600	Bipolar	2	2	0			106		x	x	x	x	1280 bits of RAM	QM1600T	◊°† AMCC	
2160	0.4	300	BiCMOS	1	2	1			80	x	x	x	x	x		Q24021	◊°† AMCC	
	0.61	240	BiCMOS	1.5	2	1			80	x	x	x	x	x	48 mA Drive	Q2100B	◊°† AMCC	
3500	0.1	1500	BIP	1	3	2			110	x	x	x	x	x		Q20025	◊°† AMCC	
	0.21	600	Bipolar	2	2	0			120		x	x	x	x		Q3500T	◊°† AMCC	
5000	0.21	600	Bipolar	2	2	0			160		x	x	x	x		Q5000T	◊°† AMCC	
5760	0.4	300	BiCMOS	1	3	1			132	x	x	x	x	x		Q24060	◊°† AMCC	
	0.61	240	BiCMOS	1.5	3	1			132	x	x	x	x	x	48 mA Drive	Q6000B	◊°† AMCC	
5800	0.25 *	1.2 GHz	ECL/TTL	1.5	2	1			120		x	x	x	x		Q20045	◊°† AMCC	
6300	0.1	1500	BIP	1	3	2			120	x	x	x	x	x		A20045	◊°† AMCC	
8000	0.1	1200	Bipolar	1	3	2			162		x	x	x	x		Q20080	◊°† AMCC	
9072	0.4	300	BiCMOS	1	2	1			160	x	x	x	x	x		Q24091	◊°† AMCC	
	0.61	240	BiCMOS	1.5	2	1			160	x	x	x	x	x	48 mA Drive	Q9100B	◊°† AMCC	
13440	0.4	300	BiCMOS	1	3	1			226	x	x	x	x	x		Q24140	◊°† AMCC	
	0.61	240	BiCMOS	1.5	3	1			226	x	x	x	x	x	48 mA Drive	Q14000B	◊°† AMCC	
18000	0.1	1500	BIP	1	3	2			212	x	x	x	x	x		Q20120	◊°† AMCC	
27520	0.53 *	280	BiCMOS	1.5	2	1			256	x	x	x	x	x		Q24280	◊°† AMCC	
28000	0.85	180	BiCMOS	1.5	3	1			256	x	x	x	x	x		Q28000B	◊°† AMCC	
AT&T																		
1000	0.9	200	ECL/EFL	4	2				96			x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	TE1000	◊‡ AT&T	
		800	ECL	1.5	3				36		x	x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	ATE1000	◊ AT&T	
1048	0.4	3000	ECL	1.5	3	2					x	x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	BE1000	◊ AT&T	
2000			CMOS	0.9	2				64	x	x	x		x		**ATT3020**	**AT&T**	**(3327)**
	0.9	200	ECL/EFL	4	2				84			x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	TE2000	◊‡ AT&T	
		800	ECL	1.5	3				72		x	x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	ATE2000	◊ AT&T	
3000			CMOS	0.9	2				80	x	x	x		x		**ATT3030**	**AT&T**	**(3327)**
	0.9	200	ECL/EFL	4	2				168			x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	TE3000	◊‡ AT&T	
4196		2200	ECL	1.5	2				108				x			BE4000	AT&T	
4200			CMOS	0.9	2				96	x	x	x		x		**ATT3042**	**AT&T**	**(3327)**
6000	0.9	800	ECL	1.5	3				120		x	x	x	x	ECL 10K, 10KH, Schottky TTL Compatible I/O	ATE6000	◊ AT&T	
6400			CMOS	0.9	2				120	x	x	x		x		**ATT3064**	**AT&T**	**(3327)**
9000			CMOS	0.9	2				144	x	x	x		x		**ATT3090**	**AT&T**	**(3327)**
9432		2200	ECL	1.5	2				164				x			BE9000	AT&T	
Exar																		
140	8	8	CMOS	8	1				29	x	x	x		x	32 dedicated flip-flops	XR-CMA	† Exar	
156	3	35	CMOS	3	2	1			22	x	x	x		x	Silicon gate	30015	Exar	
192	50	1	I^2L		1				24	x	x	x		x	Programmable speed/power	XR200	† Exar	
200	8	8	CMOS	8	1				34	x	x	x		x	32 dedicated flip-flops	XR-CMB	Exar	
270	8	8	CMOS	8	1				40	x	x	x		x	32 dedicated flip-flops	XR-CMC	† Exar	
288	3	35	CMOS	3	2	1			30	x	x	x		x	Silicon gate	30030	Exar	
	50	1	I^2L		1				28	x	x	x		x	Programmable speed/power	XR300	† Exar	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Exar																	(Cont'd)	
440	8.0	8	CMOS	8	1				46	x	x	x		x	32 dedicated flip-flops	XR-CMD	† Exar	
460	3	35	CMOS	3	2	1			38	x	x	x		x	Silicon gate	30045	Exar	
520	50	1	I^2L		1				40	x	x	x		x	Programmable speed/power	XR500	† Exar	
793	3	35	CMOS	3	2	1			50	x	x	x		x	Silicon gate	30080	Exar	
1548	3	35	CMOS	3	2	1			70	x	x	x		x	Silicon gate	30155	Exar	5
3025	3	35	CMOS	3	2	1			98	x	x	x		x	Silicon gate	30300	Exar	
EXEL Microelectronics																		
800	25	50	CMOS	1.5	2	2	22	10	10	x	x	x		x	E^2 Programmable	**XL78C800**	**† EXEL**	**(3395)**
Fujitsu																		
32	0.16	1000	BP	1	2		12	10	13			x	x		Ultra-Low Output Jitter	**E32**	**◊° Fujitsu**	**(3402)**
			ECL						14				x		ECL 10KH, 100K Optional	MB1700	◊ Fujitsu	
		1500	ECL	0.5	1	1		16					x			MB1700	◊ Fujitsu	10
128	0.075	3000	BP	0.5	2		15	8	16				x		Ultra-Low Output Jitter	**E128H**	**◊° Fujitsu**	**(3400)**
	0.075	2500	ECL						16				x		ECL 10KH, 100K Optional	MB1800	◊ Fujitsu	
		3000	ECL	0.5	1	1		8					x			MB1800	◊ Fujitsu	
	0.16	1000	BP	1	2		22	20	23			x	x		Ultra-Low Output Jitter	**E128**	**◊° Fujitsu**	**(3400)**
			ECL						22				x		ECL 10KH, 100K Optional	MB1600	◊ Fujitsu	15
		1500	ECL	0.5	1	1		8					x			MB1600	◊ Fujitsu	
336	1.5	125	CMOS	1.5	2	1			60	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C330UHB	Fujitsu	
360	1.25	120	BIP	2	2	0			40		x	x		x	24 mA outputs optional.	B240	Fujitsu	
528	3.6	85	BIP	2	2				44		x	x		x	48 mA outputs.	B350B	Fujitsu	
530	1.5	125	CMOS	1.5	2	1			68	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C530UHB	Fujitsu	20
540	1.25	120	BIP	2	2	0			48		x	x		x	360 equiv. 3-input gates	B350	Fujitsu	
645	0.8	180	BiCMOS	1.5	2	1			52		x	x		x	24 mA output option, 3-input merged logic	BC400	Fujitsu	
830	1.5	125	CMOS	1.5	2	1			76	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C830UHB	Fujitsu	
924	1.25	120	BIP	2	2	0			64		x	x		x	24 mA outputs optional.	B600	Fujitsu	
1056	0.55	800	BIP	1	3						x	x	x		ECL 10kH, 100k Optional	ET750	Fujitsu	25
1080	2.4	85	BIP	2	2				64		x	x		x	48 mA outputs.	B700B	Fujitsu	
1218	0.8	180	BiCMOS	1.5	2	1			72		x	x		x	24 mA output option, 3-Input merged logic.	BC800	Fujitsu	
1233	1.5	120	CMOS	1.5	2	1			95	x	x	x		x	Twin Tub Isolated CMOS, High Drive–10mA Outputs	C1200UHB	Fujitsu	
1680	1.25	150	TTL-LS						88		x	x		x	1120 equiv. 3-input gates	B1100	Fujitsu	
1724	1.5	125	CMOS	1.5	2	1			112	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C1700UHB	Fujitsu	30
1872	0.8	180	BiCMOS	1.5	2	1			96		x	x		x	24 mA output option, 3-input merged logic	BC1200	Fujitsu	
1920	0.55	800	BIP	1	2			72	120		x	x	x	x	4.6K RAM	ET2004M	Fujitsu	
2112	0.55	800	BIP	1	3						x	x			ECL 10kH, 100k Optional	ET1500	Fujitsu	
2220	1.5	125	CMOS	1.5	2	1			127	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C2200UHB	Fujitsu	
2640	0.22	800	BIP	1	3				120			x	x			ET2009M	Fujitsu	35
2700	0.8	200	CMOS	0.8	2	1			108	x	x	x		x		**CG10272**	**◊° Fujitsu**	**(3401)**
3066	1.5	120	CMOS	1.5	2	1			130	x	x	x		x		C3000UHB	Fujitsu	
3240	0.8	180	BiCMOS	1.5	2	1			112		x	x		x	Clock Distribution Network, 24 mA Outputs	BC2000	Fujitsu	
3400	0.8	200	CMOS	0.8	2	1			123	x	x	x		x		**CG10342**	**◊° Fujitsu**	**(3401)**
3584	0.12	1000	GaAs	0.8	3				92			x	x			**MB53030**	**◊ Fujitsu**	**(3404)** 40
3960	0.55	800	BIP	1	3				120			x	x			ET3004M	Fujitsu	
4174	1.5	125	CMOS	1.5	2	1			160	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C4100UHB	Fujitsu	
4296	0.55	800	BIP	1	3			72	120		x	x	x	x	ECL 10K or 100K optional.	ET3000	Fujitsu	
4312	0.55	250	BiCMOS	1	3	1			96		x	x	x	x	ECL 10KH, 100K Optional	BC4000H	Fujitsu	
4900	0.8	200	CMOS	0.8	2	1	x	x	148	x	x	x		x		**CG10492**	**◊° Fujitsu**	**(3401)** 45
5000	0.35	1000	BIP	0.5	3	0			200		x	x	x	x	5.1K RAM	ET5005HM	◊ Fujitsu	
5700	0.8	200	CMOS	0.8	2	1			163	x	x	x		x		**CG10572**	**◊° Fujitsu**	**(3401)**
6000	1.5	120	CMOS	1.5	2	1			170	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C6000UHB	Fujitsu	
6160	0.55	800	BIP	1	3			84	136		x	x	x	x	ECL 10K or 100K optional.	ET4500	Fujitsu	
6400	0.12	1000	GaAs	0.8	3				120			x	x			**MB53050**	**◊ Fujitsu**	**(3404)** 50
6900	0.8	200	CMOS	0.8	2	1			163	x	x	x		x		**CG10692**	**◊° Fujitsu**	**(3401)**
7920	0.55	250	BiCMOS	1	3	1			200		x	x	x	x	ECL 10KH, 100K Optional, 40K-bit Dual-Port Embedded RAM	BC8040HM	◊ Fujitsu	
8160	0.55	250	BiCMOS	1	3	1			128		x	x	x	x	ECL 10KH, 100K Optional	BC8000H	Fujitsu	
8768	1.5	125	CMOS	1.5	2	1			188	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C8700UHB	Fujitsu	

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Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Unconmitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Fujitsu																	(Cont'd)	
9856	0.35	1000	BIP	0.5	3	0			300		x	x	x	x		E10000H ◊	Fujitsu	
		1100	BIP	0.5	3			120	200		x	x	x	x	ECL 10KH, 100K Optional	ET10000H	Fujitsu	
10000	0.65	200	CMOS	0.8	2	1			108	x	x	x		x		**CG21103 ◊°**	**Fujitsu (3402)**	
	0.8	200	CMOS	0.8	2	1			188	x	x	x		x		**CG10103 ◊°**	**Fujitsu (3401)**	
10224	0.8		CMOS	1.2	3				108	x		x		x		C10KAU	Fujitsu	5
11968	0.55	250	BiCMOS	1	3	1			160		x	x	x	x	ECL 10KH, 100K Optional	BC12000H ◊	Fujitsu	
12000	1.5	120	CMOS	1.5	2	1			229	x	x	x		x	Clock Distribution Network, 24 mA Outputs	C12000UHB	Fujitsu	
13000	0.8	200	CMOS	0.8	2	1			220	x	x	x		x		**CG10133 ◊°**	**Fujitsu (3401)**	
13376	0.12	1000	GaAs	0.8	3				196			x	x			**MB53100 ◊**	**Fujitsu (3404)**	
13440	0.08		ECL	1	4				288				x		10KH I/O Options	E10040VHM	Fujitsu	10
			ECL	1	4				294				x		10KH, 100K I/O Options	E10160VHR	Fujitsu	
15000	0.65	200	CMOS	0.8	2	1			142	x	x	x		x		**CG21153 ◊°**	**Fujitsu (3402)**	
15486	0.8		CMOS	1.2	3				138	x		x		x		C15KAU	Fujitsu	
16720	0.55	250	BiCMOS	1	3	1			200		x	x	x	x	ECL 10KH, 100K Optional	BC16000H ◊	Fujitsu	
16896	0.12	1000	GaAs	0.8	3				196			x	x			**MB53150 ◊**	**Fujitsu (3404)**	15
20000	0.65	200	CMOS	0.8	2	1			155	x	x	x		x		**CG21203 ◊°**	**Fujitsu (3402)**	
20376	0.08		GaAs	0.8	3				156	x		x		x		MB53208	Fujitsu	
20876	0.8		CMOS	1.2	3				155	x		x		x		C20KAU	Fujitsu	
22896	0.12	1000	GaAs	0.8	3				256			x	x		10K bits RAM Embedded	**MB53200 ◊**	**Fujitsu (3404)**	
30528	0.12	1000	GaAS	0.8	3				256			x	x			**MB53300 ◊**	**Fujitsu (3404)**	20
31000	0.65	200	CMOS	0.8	3	1			178	x	x	x		x		**CG21303**	**Fujitsu (3402)**	
31500	1.0	130	CMOS	1.2	3	1			178	x	x	x		x	50% TO 75% Gates Usable	C30KAU	Fujitsu	
38948	0.08		ECL	1	4				300				x		10KH, 100K I/O OptionsE	**E3000VH ◊**	**Fujitsu (3399)**	
39000	0.08		BP	0.4	4		300	224	300				x			**E30000VH ◊°**	**Fujitsu (3399)**	
41000	0.65	200	CMOS	0.8	3	1			220	x	x	x		x		**CG21403 ◊°**	**Fujitsu (3402)**	25
41184	1	130	CMOS	1.2	3	1			220	x	x	x		x	50% to 75% Gates Usable	C40KAU	Fujitsu	
52000	0.65	200	CMOS	0.8	3	1			257	x	x	x		x		**CG21503 ◊°**	**Fujitsu (3402)**	
52164	1	130	CMOS	1.2	3	1			257	x	x	x		x	50% to 75% Gates Usable	C50KAU	Fujitsu	
75000	0.65	200	CMOS	0.8	3	1			284	x	x	x		x		**CG21753 ◊°**	**Fujitsu (3402)**	
75140	1	130	CMOS	1.2	3	1			300	x	x	x		x	50% to 75% Gates Usable	C75KAU	Fujitsu	30
102000	0.65	200	CMOS	0.8	3	1			332	x	x	x		x		**CG21104 ◊°**	**Fujitsu (3402)**	
102144	1	130	CMOS	1.2	3	1			332	x	x	x		x	50% to 75% Gates Usable	C100KAU	Fujitsu	
129540	0.37		CMOS	0.8	3				300	x		x		x		**CG31134**	**Fujitsu (3403)**	
160930	0.37		CMOS	0.8	3				332	x		x		x		**CG31164**	**Fujitsu (3403)**	
210188	0.37		CMOS	0.8	3				332	x		x		x		**CG31204**	**Fujitsu (3403)**	35
GoldStar Technology																		
272	5	25	CMOS	3.5	1	1			36	x	x	x		x		GCL3020	GoldStar	
342	5	25	CMOS	3.5	1	1			40	x	x	x		x		GCL3030	GoldStar	
420	5	25	CMOS	3.5	1	1			44	x	x	x		x		GCL3040	GoldStar	
472	0.9	35	CMOS	2	2	1			46	x	x	x	x	x		**GCL6009S**	**GoldStar (3440)**	
600	5	25	CMOS	3.5	1	1			52	x	x	x		x		GCL3060	GoldStar	40
812	5	25	CMOS	3.5	1	1			60	x	x	x		x		GCL3080	GoldStar	
880	2.5	66	CMOS	3	2	1			74	x	x	x		x		**GCL5080**	**GoldStar (3440)**	
902	0.9	35	CMOS	2.0	2	1			62	x	x	x		x		GCL6017S	GoldStar	
1056	5	25	CMOS	3.5	1	1			68	x	x	x		x		GCL3110	GoldStar	
1332	5	25	CMOS	3.5	1	1			76	x	x	x		x		GCL3130	GoldStar	45
1404	2.5	66	CMOS	3	2	1			92	x	x	x		x		**GCL5140**	**GoldStar (3440)**	
1470	0.9	35	CMOS	2	2	1			78	x	x	x		x		**GCL6028S**	**GoldStar (3440)**	
1722	5.0	25	CMOS	3.5	1	1			86	x	x	x		x		GCL3170	GoldStar	
2162	5.0	25	CMOS	3.5	1	1			96	x	x	x		x		GCL3210	GoldStar	
2224	2.5	66	CMOS	3	2	1			114	x	x	x		x		**GCL5220**	**GoldStar (3440)**	50
2448	0.9	35	CMOS	2	2	1			100	x	x	x		x		**GCL6047S**	**GoldStar (3440)**	
2550	5	25	CMOS	3.5	1	1			104	x	x	x		x		GCL3250	GoldStar	
3192	2.5	66	CMOS	3	2	1			138	x	x	x		x		**GCL5320**	**GoldStar (3440)**	
3520	0.9	35	CMOS	2	2	1			118	x	x	x		x		**GCL6068S**	**GoldStar (3440)**	
4202	2.5	66	CMOS	3	2	1			156	x	x	x		x		**GCL5420**	**GoldStar (3440)**	55
4440	0.9	35	CMOS	2	2	1			134	x	x	x	x	x		**GCL6087S**	**GoldStar (3440)**	
6000	2.5	66	CMOS	3	2	1			180	x	x	x		x		**GCL5600**	**GoldStar (3440)**	
6076	0.9	35	CMOS	2	2	1			158	x	x	x		x		**GCL6119S**	**GoldStar (3440)**	
8448	0.9	35	CMOS	2	2	1			184	x	x	x		x		**GCL6166S**	**GoldStar (3440)**	
10619	0.9	35	CMOS	2	2	1			206	x	x	x		x		**GCL6209S**	**GoldStar (3440)**	60
13524	0.9	35	CMOS	2	2	1			232	x	x	x		x		**GCL6267S**	**GoldStar (3440)**	
Gould AMI																		
1600	.38	160	CMOS	1.0	2/3	1			140	x		x		x		GD16K	◊°† Gould AMI	
3000	.38	160	CMOS	1.0	2/3	1			56	x		x		x		GD3K	◊°† Gould AMI	
	.50	120	CMOS	1.25	2	1			72	x		x		x		GC3K	◊°† Gould AMI	
5000	.38	160	CMOS	1.0	2/3	1			76	x		x		x		GD5K	◊°† Gould AMI	65
	.50	120	CMOS	1.25	2	1			98	x		x		x		GC5K	◊°† Gould AMI	
7000	.38	160	CMOS	1.0	2/3	1			92	x		x		x		GD7K	◊°† Gould AMI	
	.50	120	CMOS	1.25	2	1			116	x		x		x		GC7K	◊°† Gould AMI	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Gould AMI																(Cont'd)		
9000	.38	160	CMOS	1.0	2/3	1			100	x		x		x		GD9K	◊°† Gould AMI	
10000	.50	120	CMOS	1.25	2	1			136	x		x		x		GC10K	◊°† Gould AMI	
12000	.38	160	CMOS	1.0	2/3	1			120	x		x		x		GD12K	◊°† Gould AMI	
15000	.50	120	CMOS	1.25	2	1			168	x		x		x		GC15K	◊°† Gould AMI	
20000	.38	160	CMOS	1.0	2/3	1			156	x		x		x		GD20K	◊°† Gould AMI	5
	.50	120	CMOS	1.25	2	1			196	x		x		x		GC20K	◊°† Gould AMI	
25000	.38	160	CMOS	1.0	2/3	1			180	x		x		x		GD25K	◊°† Gould AMI	
	.50	120	CMOS	1.25	2	1			220	x		x		x		GC25K	◊°† Gould AMI	
30000	.50	120	CMOS	1.25	2	1			246	x		x		x		GC30K	◊°† Gould AMI	
35000	.38	160	CMOS	1.0	2/3	1			208	x		x		x		GD35K	◊°† Gould AMI	10
50000	.38	160	CMOS	1.0	2/3	1			256	x		x		x		GD50K	◊°† Gould AMI	
70000	.38	160	CMOS	1.0	2/3	1			288	x		x		x		GD70K	◊°† Gould AMI	
100000	.38	160	CMOS	1.0	2/3	1			348	x		x		x		GD100K	◊°† Gould AMI	
200000	.38	160	CMOS	1.0	2/3	1			492	x		x		x		6D200K	◊°† Gould AMI	
Harris Semiconductor																		
1500	1.8	45	CMOS	4	1				84	x	x	x		x		IGD11500	† Harris	15
1700	0.68		CMOS	1.2	2				60	x	x	x		x		AGC40170	† Harris	
	0.82		CMOS	1.2	2				60	x	x	x		x		TAGC40170	† Harris	
6200	0.68		CMOS	1.2	2				104	x	x	x		x		AGC40620	† Harris	
	0.82		CMOS	1.2	2				104	x	x	x		x		TAGC40620	† Harris	
10000	0.67		CMOS/SOS															
				1.2	2				164	x	x	x		x		AVA10000	‡ Harris	20
13500	0.68		CMOS	1.2	2				172	x	x	x		x		AGC41350	† Harris	
	0.82		CMOS	1.2	2				172	x	x	x		x		TAGC41350	† Harris	
20000	0.67		CMOS/SOS															
				1.2	2				234	x	x	x		x		AVA20000	‡ Harris	
Hitachi																		
770	0.7	200	CMOS	1	2				68	x	x	x		x		HG62E08	Hitachi	
1162	0.7	200	CMOS	1	2				80	x	x	x		x		HG62E11	Hitachi	25
2178	0.7	200	CMOS	1	2				100	x	x	x		x		HG62E22	Hitachi	
			CMOS	1	2				132	x	x	x		x		HG62F22	Hitachi	
3210	0.45	160	BiCMOS	1.3	2				102	x	x	x		x		HG29A32	Hitachi	
3297	0.7	200	CMOS	1	2				120	x	x	x		x		HG62E33	Hitachi	
			CMOS	1	2				132	x	x	x		x		HG62F33	Hitachi	30
4309	0.7	200	CMOS	1	2				100	x	x	x		x		HG62E43	Hitachi	
			CMOS	1	2				160	x	x	x		x		HG62F43	Hitachi	
5821	0.7	200	CMOS	1	2				118	x	x	x		x		HG62E58	Hitachi	
			CMOS	1	2				160	x	x	x		x		HG62F58	Hitachi	
7488	0.7	200	CMOS	1	2				138	x	x	x		x		HG62E75	Hitachi	35
			CMOS	1	2				192	x	x	x		x		HG62F75	Hitachi	
10076	0.7	200	CMOS	1	2				162	x	x	x		x		HG62E101	Hitachi	
			CMOS	1	2				192	x	x	x		x		HG62F101	Hitachi	
13015	0.7	200	CMOS	1	2				190	x	x	x		x		HG62E130	Hitachi	
18176	0.7	200	CMOS	1	2				230	x	x	x		x		HG62E182	Hitachi	40
24020	0.7	200	CMOS	1	2				272	x	x	x		x		HG62E240	Hitachi	
Honeywell	0.8		Bipolar	4	2				24		x	x	x		Replicates Obsolete Analog SSI Functions.	HP BIPOLAR DEVICE ARRAY	◊† Honeywell	
150	0.8	500	Bipolar	4	2				16		x	x	x	x	Replicates Obsolete DTL and RTL SSI Functions.	BIPOLAR DEVICE ARRAY	◊°† Honeywell	
1500	0.8	500	Bipolar	4	2				24		x	x		x	Replicates Obsolete TTL, SSI Functions.	TTL GATE ARRAY	◊† Honeywell	
60000	1	180	RICMOS	1.2					218	x	x	x		x	Sea of Transistors	HR1060	‡ Honeywell	45
Hughes																		
1040	1.2	150	CMOS	2	2	1			40	x	x	x		x		HU1101	Hughes	
2016	1.2	150	CMOS	2	2	1			56	x	x	x		x		HU1102	Hughes	
2992	1.2	150	CMOS	2	2	1			68	x	x	x		x		HU1103	Hughes	
4704	1.2	150	CMOS	2	2	1			84	x	x	x		x		HU1105	Hughes	
6600	1.2	150	CMOS	2	2	1			100	x	x	x		x		HU1107	Hughes	50
8816	1.2	150	CMOS	2	2	1			116	x	x	x		x		HU1109	Hughes	
14504	1.2	150	CMOS	2	2	1			148	x	x	x		x		HU1115	Hughes	
19608	1.2	150	CMOS	2	2	1			172	x	x	x		x		HU1120	Hughes	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Uncommitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Integrated Circuit Systems																		
864	2	—	CMOS	2	2	1	23		38	x	x	x		x		VGC0900	IntCirSys	
1188	2	—	CMOS	2	2	1	27		46	x	x	x		x		VGC1200	IntCirSys	
1242	2.5	—	CMOS	2	2	1	27		46	x	x	x		x		VGC0500	IntCirSys	
1932	2.0	—	CMOS	2	2	1	35		58	x	x	x		x		VGC1900	IntCirSys	
2592	2.5	—	CMOS	2	2	1	39		70	x	x	x		x		VGC2400	IntCirSys	5
3240	2.0	—	CMOS	2	2	1	43		78	x	x	x		x		VGC3200	IntCirSys	
4020	2.5	—	CMOS	2	2	1	47		86	x	x	x		x		VGC4000	IntCirSys	
6000	2.5	—	CMOS	2	2	1	55		106	x	x	x		x		VGC6000	IntCirSys	
Integrated CMOS Systems																		
54700	0.45		CMOS	0.8	2				196	x					Channelless Architecture	ICS25055	ICSI	
68200	0.45		CMOS	0.8	2				220	x					Channelless Architecture	ICS25068	ICSI	10
89200	0.45		CMOS	0.8	2				252	X					Channelless Architecture	ICS25089	ICSI	
128800	0.45		CMOS	0.8	2				304	x					Channelless Architecture	ICS25129	ICSI	
172000	0.45		CMOS	0.8	2				352	x					Channelless Architecture	ICS25172	ICSI	
Integrated Logic Systems																		
1960	1.3	150	CMOS	1.5	2	1			48	x	x	x		x	RAM, ROM, PLA and Testability	CA1502	◊°† iLSi	
5376	1.3	150	CMOS	1.5	2	1			74	x	x	x		x	RAM, ROM, PLA and Testability	CA1505	◊°† iLSi	15
10608	1.3	150	CMOS	1.5	2	1			102	x	x	x		x	RAM, ROM, PLA and Testability	CA1511	◊°† iLSi	
20928	1.3	150	CMOS	1.5	2	1			140	x	x	x		x	RAM, ROM, PLA and Testability	CA1521	◊°† iLSi	
30400	1.3	150	CMOS	1.5	2	1			168	x	x	x		x	RAM, ROM, PLA, and Testability	CA1530	◊°† iLSi	
			CMOS	1.5	2	1			146	x	x	x		x	RAM, ROM, PLA and Testability	15GH-0304	◊°† iLSi	
41568	1.3	150	CMOS	1.5	2	1			194	x	x	x		x	RAM, ROM, PLA and Testability	CA1542	◊°† iLSi	20
			CMOS	1.5	2	1			170	x	x	x		x	RAM, ROM, PLA and Testability	15GH-0416	◊°† iLSi	
60368	1.3	150	CMOS	1.5	2	1			204	x	x	x		x	RAM, ROM, PLA and Testability	15GH-0604	◊°† iLSi	
82560	1.3	150	CMOS	1.5	2	1			236	x	x	x		x	RAM, ROM, PLA and Testability	15GH-0826	◊°† iLSi	
100512	1.3	150	CMOS	1.5	2	1			260	x	x	x		x	RAM, ROM, PLA and Testability	15GH-1005	◊°† iLSi	
Intel																		
2630	1.3	139	CMOS	1.5	2				64	x		x		x		D15A026	◊† Intel	25
5200	1.3	139	CMOS	1.5	2				90	x		x		x		D15A052	◊† Intel	
6320	1.3	139	CMOS	1.5	2				118	x		x		x		D15R063	◊† Intel	
8540	1.3	139	CMOS	1.5	2				118	x		x		x		D15A085	◊† Intel	
12750	1.3	139	CMOS	1.5	2				144	x		x		x		D15A127	◊† Intel	
			CMOS	1.5	2				174	x		x		x		D15A130	◊† Intel	30
International Microcircuits																		
75	30	2	CMOS	5	1				23	x	x	x	x	x	Metal Gate	IMIG4060	† IMI	
140	30	2	CMOS	5	1				29	x	x	x	x	x	Metal Gate	IMIG4112	† IMI	
200	30	2	CMOS	5	1				35	x	x	x	x	x	Metal Gate	IMIG4160	† IMI	
275	30	2	CMOS	5	1				38	x	x	x	x	x	Metal Gate	IMIG4220	† IMI	
330	30	2	CMOS	5	1				41	x	x	x	x	x	Metal Gate	IMIG4264	† IMI	35
390	30	2	CMOS	5	1				43	x	x	x		x	Metal Gate	IMIG4312	† IMI	
525	30	2	CMOS	5	1				49	x	x	x	x	x	Metal Gate	IMIG4420	† IMI	
600	30	2	CMOS	5	1				53	x	x	x	x	x	Metal Gate	IMIG4480	† IMI	
800	1.54	100	CMOS	1.5		1		38		x	x	x			1.5 micron CMOS, up to 800 usable gates, dual-level metallization, fully autoroutable.	IMI7080	◊† IMI	
825	0.75	100	CMOS	1.5	2				84	x				x		IMI708B	IMI	40
1500	0.75	100	CMOS	1.5	2				100	x				x		IMI715B	IMI	
1632	1.54	100	CMOS	1.5	2				78	x		x				IMI7160	IMI	
2232	1.54	100	CMOS	1.5	2				78	x		x				IMI7220	IMI	
2482	0.75	100	CMOS	1.5	2				122	x				x		IMI724B	IMI	
3432	1.54	100	CMOS	1.5	2				112	x		x				IMI7340	IMI	45

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-committed	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
International Microcircuits																	(Cont'd)	
3792	0.75	100	CMOS	1.5	2				148	x				x		IMI738B	IMI	
4900	1.54	100	CMOS	1.5	2				136	x		x				IMI7490	IMI	
6210	1.54	100	CMOS	1.5	2				158	x		x				IMI7620	IMI	
8000	1.54	100	CMOS	1.5	2				178	x		x				IMI7800	IMI	
12000	0.75	100	CMOS	1.5	2				190	x				x		IMI712K	IMI	5
16500	0.75	100	CMOS	1.5	2				222	x				x		IMI716K	IMI	
LSI Logic Up to 23496	0.45	150	HCMOS	0.7	3	1			444	x	x	x		x	Channel-Free Array with cell-based customer-defined embedded cores.	LEA100K	◊°† LSI Logic	
1443	1.1		HCMOS	1.5	2	1			86	x	x	x		x	Rad Hard Library, 200k RADs (Si), No Latch Up	**LRH9140**	**‡ LSI Logic (3530)**	
1968	0.57		HCMOS	0.9	2					x		x		x		**LMA9020**	**LSI Logic (3530)**	
2653	0.54	60	BiCMOS	1.5	2	1			84	x	x	x	x	x		**LDD10006**	**◊°† LSI Logic (3530)**	10
3192	1.1		HCMOS	1.5	2	1			128	x	x	x		x	Rad Hard Library, 200k RADs (Si), No Latch Up	**LRH9320**	**‡ LSI Logic (3530)**	
3286	0.57		HCMOS	0.9	2					x		x		x		**LMA9033**	**LSI Logic (3530)**	
4304	0.54	60	BiCMOS	1.5	2	1			110	x	x	x	x	x		**LDD10010**	**◊°† LSI Logic (3530)**	
4992	0.57		HCMOS	0.9	2					x		x		x		**LMA9050**	**LSI Logic (3530)**	
6072	1.1		HCMOS	1.5	2	1			186	x	x	x		x	Rad Hard Library, 200k RADs (Si), No Latch Up	**LRH9600**	**‡ LSI Logic (3530)**	15
6412	0.45	150	HCMOS	0.7	3	1			78	x	x	x		x	Channel-Free Array	**LCA100006**	**◊°† LSI Logic (3530)**	
7238	0.57		HCMOS	0.9	2					x		x		x		**LMA9072**	**LSI Logic (3530)**	
8070	0.54	60	BiCMOS	1.5	2	1			144	x	x	x	x	x		**LDD10019**	**◊°† LSI Logic (3530)**	
8374	0.45	150	HCMOS	0.7	3	1			90	x	x	x		x	Channel-Free Array	**LCA100008**	**◊°† LSI Logic (3530)**	
9504	0.57		HCMOS	0.9	2					x		x		x		**LMA9095**	**† LSI Logic (3530)**	20
12592	0.54	60	BiCMOS	1.5	2	1			178	x	x	x	x	x		**LDD10030**	**◊°† LSI Logic (3530)**	
14121	0.57		HCMOS	0.9	2					x		x		x		**LMA9141**	**LSI Logic (3530)**	
15286	0.45	150	HCMOS	0.7	3	1			116	x	x	x		x	Channel-Free Array	**LCA100015**	**◊°† LSI Logic (3530)**	
17028	0.54	60	BiCMOS	1.5	2	1			210	x	x	x	x	x		**LDD10041**	**◊°† LSI Logic (3530)**	
19000	0.57		HCMOS	1.5	2					x		x		x		**LMA9190**	**LSI Logic (3530)**	25
23020	0.45	150	HCMOS	0.7	3	1			158	x	x	x		x	Channel-Free Array	**LCA100023**	**◊°† LSI Logic (3530)**	
23408	0.57		HCMOS	0.9	2					x		x		x		**LMA9239**	**† LSI Logic (3530)**	
25440	0.54	60	BiCMOS	1.5	2	1			256	x	x	x	x	x		**LDD10062**	**◊°† LSI Logic (3530)**	
25740	0.57		CMOS	1.5	2	1			148	x	x	x		x	Channel-Free Array	**LCA10026**	**LSI Logic (3530)**	
27740	0.57		HCMOS	1.5	2	1			148	x	x	x		x	Rad Hard Library, Channel-Free Array 1000k RADs (Si), No Latch Up	**LRH10026**	**‡ LSI Logic (3530)**	30
28388	0.57		HCMOS	0.9	2					x		x		x		**LMA9284**	**† LSI Logic (3530)**	
33370	0.45		HCMOS	1	3	1			170	x	x	x		x		**LCA100033**	**◊°† LSI Logic (3530)**	
34792	0.54	60	BiCMOS	1.5	2	1			256	x	x	x	x	x		**LDD10085**	**◊°† LSI Logic (3530)**	
37932	0.57		CMOS	1.5	2	1			184	x	x	x		x	Channel-Free Array	**LCA10038**	**LSI Logic (3530)**	
			HCMOS	0.9	2					x		x		x		**LMA9350**	**† LSI Logic (3530)**	35
			HCMOS	1.5	2	1			184	x	x	x		x	Rad Hard Library, Channel-Free Array 1000k RADs (Si), No Latch Up	**LRH10038**	**‡ LSI Logic (3530)**	
44840	0.54	60	BiCMOS	1.5	2	1			256	x	x	x	x	x		**LDD10109**	**◊°† LSI Logic (3530)**	
45880	0.45	150	HCMOS	0.7	3	1			198	x	x	x		x	Channel-Free Array	**LCA100046**	**◊°† LSI Logic (3530)**	
50904	0.5		HCMOS	1.5	2	1			234	x	x	x		x	Channel Free Array	**LCA10051**	**◊°† LSI Logic (3530)**	
	0.59		HCMOS	1.5	2	1			214	x	x	x		x	1000 k Rad Hard Library - Channel Free Array	**LRH10051**	**◊°‡ LSI Logic (3530)**	40
66156	0.45	150	HCMOS	0.7	3	1			238	x	x	x		x	Channel-Free Array	**LCA100066**	**◊°† LSI Logic (3530)**	
74970	0.57		HCMOS	1.5	2	1			282	x	x	x		x	Channel Free Array	**LCA10075**	**◊°† LSI Logic (3530)**	
			HCMOS	1.5	2	1			262	x	x	x		x	1000 k Rad Hard Library - Channel Free Array	**LRH10075**	**◊°‡ LSI Logic (3530)**	
83951	0.45		HCMOS	1	3	1			278	x	x	x		x		**LCA100084**	**◊°† LSI Logic (3530)**	
100182	0.57		CMOS	1.5	2	1			326	x	x	x		x	Channel-Free Array	**LCA10100**	**LSI Logic (3530)**	45
			HCMOS	1.5	2	1			326	x	x	x		x	Rad Hard Library, Channel-Free Array 1000k RADs (Si), No Latch Up	**LRH10100**	**‡ LSI Logic (3530)**	
106218	0.45	150	HCMOS	0.7	3	1			298	x	x	x		x	Channel-Free Array	**LCA100106**	**◊°† LSI Logic (3530)**	
129042	0.57		HCMOS	1.5	2	1			x	x	x	x		x	Channel Free Array	**LCA10129**	**◊°† LSI Logic (3530)**	
			HCMOS	1.5	2	1			348	x	x	x		x	1000 k Rah Hard Library - Channel Free Array	**LRH10129**	**◊°‡ LSI Logic (3530)**	
135042	0.45		HCMOS	1	3	1			336	x	x	x		x		**LCA100135**	**◊°† LSI Logic (3530)**	50
181792	0.45		HCMOS	1	3	1			388	x	x	x		x		**LCA100182**	**◊°† LSI Logic (3530)**	
234916	0.45		HCMOS	1	3	1			438	x	x	x		x		**LCA100235**	**◊°† LSI Logic (3530)**	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Unpackaged	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Marconi Circuit Technology																		
392	3	35	CMOS	3	1	1			26	x	x	x		x		MA8304	† Marconi	
750	1.5	50	CMOS/SOS	2.5	2	2.5			46	x	x	x		x	Radiation Hardened	MAS9007	‡ Marconi	
1120	4 *	25	CMOS	4	2				48	x	x	x		x		MA2010	† Marconi	
1632	4 *	25	CMOS	4	2		16	16	32	x	x	x		x		MA2016	Marconi	
1920	0.9	100	CMOS	2.5	2	2			59	x		x		x		MA6000	◊°‡ Marconi	5
2436	4 *	25	CMOS	4	2		16	16	48	x	x	x		x		MA2024	† Marconi	
2464	2 *	40	CMOS/SOS	3	2				80	x	x	x		x	Radiation Hardened	MA9024	‡ Marconi	
3876	4	25	CMOS	4	2				96	x	x	x		x		MA2038	† Marconi	
3904	0.9 *	100	CMOS	2	2				96	x	x	x		x		MA4039	† Marconi	
4048	1.7	50	SOS	3	2	1			98	x		x		x		MAS9040	◊°‡ Marconi	10
5510	0.9 *	100	CMOS	2	2				112	x	x	x		x		MA4055	† Marconi	
7544	0.9 *	100	CMOS	2	2				136	x	x	x		x		MA4075	† Marconi	
10044	0.9 *	100	CMOS	2	2				160	x	x	x		x		MA4100	† Marconi	
25000	0.6	140	SOS	1.5	2	1				x		x		x		MAS25K	◊°‡ Marconi	
Mitsubishi Electronics																		
224	0.9	175	CMOS	1.3	2	1	0	0	22	x	x	x		x	Gate Isolation Process	**M60020**	◊ **Mitsubishi (3554)**	15
500	1.4	100	CMOS	2	2	1	0	0	64	x	x	x		x	Gate Isolation Process	**M60011**	◊ **Mitsubishi (3555)**	
507	0.9	175	CMOS	1.3	2	1	0	0	32	x	x	x		x	Gate Isolation Process	**M60021**	◊ **Mitsubishi (3554)**	
800	0.9	175	CMOS	1.3	2	1	0	0	42	x	x	x		x	Gate Isolation Process	**M60022**	◊ **Mitsubishi (3554)**	
810	1.4	100	CMOS	2	2	1	0	0	82	x	x	x		x	Gate Isolation Process	**M60012**	◊ **Mitsubishi (3555)**	
1100	1.4	100	CMOS	2	2	1	0	0	96	x	x	x		x	Gate Isolation Process	**M60013**	◊ **Mitsubishi (3555)**	20
1104	0.9	175	CMOS	1.3	2	1	0	0	45	x	x	x		x	Gate Isolation Process	**M60023**	◊ **Mitsubishi (3554)**	
1680	1.4	100	CMOS	2	2	1	0	0	116	x	x	x		x	Gate Isolation Process	**M60014**	◊ **Mitsubishi (3555)**	
1773	0.9	175	CMOS	1.3	2	1	0	0	62	x	x	x		x	Gate Isolation Process	**M60024**	◊ **Mitsubishi (3554)**	
2000	0.9	175	CMOS	1.3	2	1			112	x	x	x		x	Gate Isolation Process	**M60043**	◊° **Mitsubishi (3553)**	
2400	0.9	175	CMOS	1.3	2	1	0	0	72	x	x	x		x	Gate Isolation Process	**M60025**	◊ **Mitsubishi (3554)**	25
2666	1.4	100	CMOS	2	2	1	0	0	132	x	x	x		x	Gate Isolation Process	**M60015**	◊ **Mitsubishi (3555)**	
3000	0.37	329	CMOS		2	1			124	x	x	x		x	Gate Isolation	M60062	Mitsubishi	
3200	0.9	175	CMOS	1.3	2	1			138	x	x	x		x	Gate Isolation Process	**M60044**	◊° **Mitsubishi (3553)**	
			CMOS	1.3	2	2	1	0	88	x	x	x		x	Gate Isolation Process	**M60030**	◊ **Mitsubishi (3554)**	
3608	1.4	100	CMOS	2	2	1	0	0	148	x	x	x		x	Gate Isolation Process	**M60016**	◊ **Mitsubishi (3555)**	30
4000	0.37	320	CMOS		2	1			144	x	x	x		x	Gate Isolation	M60063	Mitsubishi	
4100	0.9	175	CMOS	1.3	2	1			164	x	x	x		x	Gate Isolation Process	**M60045**	◊° **Mitsubishi (3553)**	
			CMOS	1.3	2	2	1	0	110	x	x	x		x	Gate Isolation Process	**M60031**	◊ **Mitsubishi (3554)**	
4814	1.4	100	CMOS	2	2	1	0	0	176	x	x	x		x	Gate Isolation Process	**M60017**	◊ **Mitsubishi (3555)**	
5000	0.37	320	CMOS		2	1			112	x	x	x		x	Gate Isolation	**M60050**	◊° **Mitsubishi (3550, 3552)**	35
			CMOS		2	1			144	x	x	x		x	Gate Isolation	M60064	Mitsubishi	
6000	.370	320	CMOS	1.0	2	1			120	x	x	x		x		**M60051**	◊° **Mitsubishi (3550, 3552)**	
	0.37	320	CMOS		2	1			128	x	x	x		x	Gate Isolation	**M60052**	**Mitsubishi (3550, 3552)**	
			CMOS		2	1			144	x	x	x		x	Gate Isolation	M60065	Mitsubishi	
6233	1.4	100	CMOS	2	2	1	0	0	178	x	x	x		x	Gate Isolation Process	**M60018**	◊ **Mitsubishi (3555)**	40
6300	0.9	175	CMOS		2	1			180	x	x	x		x	Gate Isolation	**M60047**	◊° **Mitsubishi (3553)**	
			CMOS	1.3	2	2	1	0	132	x	x	x		x	Gate Isolation Process	**M60032**	◊ **Mitsubishi (3554)**	
8000	0.37	320	CMOS		2	1			144	x	x	x		x	Gate Isolation	M60066	Mitsubishi	
8096	1.4	100	CMOS	2	2	1	0	0	190	x	x	x		x	Gate Isolation Process	**M60019**	◊ **Mitsubishi (3555)**	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Out-put Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Mitsubishi Electronics																	(Cont'd)	
8400	0.9	175	CMOS		2	1			184	x	x	x		x	Gate Isolation	**M60049**	**Mitsubishi (3553)**	
			CMOS	1.3	2	2	1	0	180	x	x	x		x	Gate Isolation Process	**M60034**	◇ **Mitsubishi (3554)**	
10000	0.37	320	CMOS		2	1			150	x	x	x		x	Gate Isolation	**M60053**	◇° **Mitsubishi (3550, 3552)**	
			CMOS		2	1			192	x	x	x		x	Gate Isolation	M60067	Mitsubishi	
11000	0.9	175	CMOS	1.3	2	2	1	0	196	x	x	x		x	Gate Isolation Process	**M60035**	◇ **Mitsubishi (3554)**	
12000	0.37	320	CMOS	1.0	2	1			166	x	x	x		x		**M60054**	◇° **Mitsubishi (3550, 3552)**	5
15000	0.5	320	CMOS	1	2	1			154	x	x	x		x	Gate Isolation Process	**M60055**	◇° **Mitsubishi (3550, 3552)**	
20000	0.9	175	CMOS	1.3	2	2	1	0	256	x	x	x		x	Gate Isolation Process	**M60037**	◇ **Mitsubishi (3554)**	
25000	0.5	320	CMOS	1	2	1			212	X	X	X		X	Gate Isolation Process	**M60056**	◇° **Mitsubishi (3550, 3552)**	
35000	0.5	320	CMOS	1	2	1			256	x	x	x		x	Gate Isolation Process	**M60057**	◇° **Mitsubishi (3550, 3552)**	10
Motorola																		
533	4	80	TTL	1	2		26	15	12	x	x	x		x	Macrocell array	MCA500ALS	Motorola	
625	1.2	250	ECL	1	2		25		18				x		Macrocell array	MCA600ECL	Motorola	
648	1.1	85	CMOS	2	2					x	x	x				HCA62A06	Motorola	
848	0.15	1000	ECL	1.5	3				42		x	x	x	x	mixed ECL/TTL interface	MCA750ETL	◇° Motorola	
902	0.5	770	ECL	2	2		28		18				x			MCA800ECL	Motorola	15
957	1.1	85	CMOS	2	2					x	x	x				HCA62A10	Motorola	
1192	1.2	250	ECL	1	2		32		26				x		Macrocell array	MCA1200ECL	Motorola	
1280	4	80	ECL	1	2		36		40	x	x	x		x	Macrocell array	MCA1300ALS	Motorola	
1638	1.1	85	CMOS	2	2					x	x	x				HCA62A17	Motorola	
1708	0.5	770	ECL	3	3				120				x		Macrocell array	MCA1500M	Motorola	20
1800	1.1	125	ECL	2	2				120		x	x	x		RAM included	MCA2800RAM	Motorola	
2200	0.12 *	800	MOSAIC II	1	1								x			MCA2200ECL	Motorola	
2448	1.1	85	CMOS	2	2					x	x	x				HCA62A25	Motorola	
2760	0.3	600	ECL	2	3				68				x		Macrocell array	MCA2500ECL	Motorola	
2960	1.1	150	ECL	2	3			120	120	x	x	x		x	Macrocell array	MCA2800ALS	Motorola	25
3036	0.25 *	500	CMOS	1	3				88	x	x	x		x		HDC003	Motorola	
3570	.015	1000	ECL	1.5	3				120		x	x	x	x	Pseudo ECL option	MCA3200ETL °	Motorola	
3600	1.1	85	CMOS	2	2					x	x	x				HCA62A36	Motorola	
4968	1.1	85	CMOS	2	2					x	x	x				HCA62A50	Motorola	
5670	0.25	500	CMOS	1	3				120	x	x	x		x		HDC006	Motorola	30
6708	1.1	85	CMOS	2	2				146	x	x	x		x	Macrocell Array	HCA62A67	Motorola	
6915	0.15	1000	ECL	1.5	3				168		x	x	x	x	mixed ECL/TTL interface	MCA6200ETL °	Motorola	
8208	0.25 *		CMOS	1	3				108	x		x		x		HDC008	Motorola	
8568	2.8		HCMOS	2	2		168			x	x	x				HCA62A85	Motorola	
10332	0.175	1200	ECL	2	2		224	200					x		Macrocell Array	MCA10000ECL	Motorola	35
11208	0.25	250	CMOS	1.0	3				160	x	x	x		x	triple layer routing	HDC027	◇°† Motorola	
		500	CMOS	1	3				168	x	x	x		x		HDC011	Motorola	
16416	0.25 *		CMOS	1	3				136	x		x		x		HDC016	Motorola	
31290	0.25 *		CMOS	1	3				180	x		x		x		HDC031	Motorola	
49368	0.25	250	CMOS	1.0	3				208	x	x	x		x	triple layer routing	HDC049	◇°† Motorola	40
51744	0.1	1000	ECL	1.0	4				400				x		internal JTAG Boundary Scan	MCA50000ECL	◇° Motorola	
63900	0.25	500	CMOS	1	3				400	x	x	x		x		HDC064	Motorola	
104832	0.25	500	CMOS	1	3				512	x	x	x		x		HDC105	Motorola	
National Semiconductor																		
399	0.65	900	CMOS	1.5	1				28	x		x		x		SCX6B04	National	
540	1.1	50	CMOS	2	2	1	0		40	x	x	x		x	All CMOS 2-Micron Silicon Gate	FGC0500	◇ National	45
600	2.1	110	CMOS	2	2		8		40	x	x	x		x		SCX6206	◇ National	
864	1.1	50	CMOS	2	2		23		38	x	x	x		x		FGC0900	◇ National	
1020	0.65	900	CMOS	1.5	1				48	x		x		x		SCX6B10	National	
1188	1.1	50	CMOS	2	2	1	27		46	x	x	x		x	On-Chip Test Capability	FGC1200	◇ National	
1260	2.1	110	CMOS	2	2		17		42	x	x	x		x		SCX6212	◇ National	50
	3.5	66	CMOS	3	2	1	17		42	x	x	x		x		SCX6312	National	
1806	2.1	110	CMOS	2	2		3		70	x	x	x		x		SCX6218	◇ National	
1932	1.1	50	CMOS	2	2		32		57	x	x	x		x		FGC1900	◇ National	
2058	0.65	900	CMOS	1.5	1				68	x		x		x		SCX6B21	National	
2385	2.1	110	CMOS	2	2		55		56	x	x	x		x		SCX6224	National	55
	3.5	66	CMOS	3	2	1	55		56	x	x	x		x		SCX6324	National	

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† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◇ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Uncommitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
National Semiconductor																	(Cont'd)	
2430	2.1	110	CMOS	2	2		12		76	x	x	x		x		SCX6225	◊ National	
2500	0.75	600	ECL	1.5	2		60		60			x	x			FGE2000	◊ National	
2625	1.1	50	CMOS	2	2	1	39		70	x	x	x		x		FGC2400	◊† National	
3111	0.65	900	CMOS	1.5	1				84	x		x		x		SCX6B31	National	
3180	2.1	110	CMOS	2	2		3		101	x	x	x		x		SCX6232	◊ National	5
4380	2.1	110	CMOS	2	2		3		110	x	x	x		x		SCX6244	◊ National	
4788	0.65	900	CMOS	1.5	1				104	x		x		x		SCX6B48	National	
6260	2.1	110	CMOS	2	2		66		88	x	x	x		x		SCX6260	◊ National	
6336	0.65	900	CMOS	1.5	1				120	x		x		x		SCX6B64	National	
8586	0.65	900	CMOS	1.5	1				144	x		x		x		SCX6B86	National	10
11904	0.65	900	CMOS	1.5	1				176	x		x		x		SCX6B120	National	
21000	0.5	75	CMOS	0.8	2	1			84	x	x	x		x	FLEXCELL Gate Arrays	FLX1021	National	
38000	0.5	75	CMOS	0.8	2	1			124	x	x	x		x	FLEXCELL Gate Arrays	FLX1038	National	
56000	0.5	75	CMOS	0.8	2	1			152	x	x	x		x	FLEXCELL Gate Arrays	FLX1056	National	
80000	0.5	75	CMOS	0.8	2	1			188	x	x	x		x	FLEXCELL Gate Arrays	FLX1080	National	15
122000	0.5	75	CMOS	0.8	2	1			232	x	x	x		x	FLEXCELL Gate Arrays	FLX1120	National	
160000	0.5	75	CMOS	0.8	2	1			268	x	x	x		x	FLEXCELL Gate Arrays	FLX1160	National	
207000	0.5	75	CMOS	0.8	2	1			308	x	x	x		x	FLEXCELL Gate Arrays	FLX1200	National	
252000	0.5	75	CMOS	0.8	2	1			340	x	x	x		x	FLEXCELL Gate Arrays	FLX1250	National	
NCM Corporation																		
3003	10	5	CMOS	7.5	1M				35	x	x	x		x	40 pads	NCM300XZ	NCM	20
70015	3	12	CMOS	5	1M	1P			58	x	x	x		x	62 pads	NCM7001XZ	NCM	
NEC Electronics																		
320	0.9	70	CMOS	1.5	2				54	x		x		x	High Drive, High I/O count.	μPD65005	◊° NEC	
504	0.9	70	CMOS	1.5	2				62	x		x		x	High Drive, High I/O count.	μPD65006	◊° NEC	
600	0.14	1600	ECL	1.2	3		88	48	88				x			μPB6303	NEC	
624	0.67	200	BiCMOS	1.5	2				64	x	x			x		μPD67001	◊° NEC	25
858	10	12	CMOS	1.5	2				62	x				x	Battery Supply 1V to 3.6V	μPD65007	◊° NEC	
1088	0.9	70	CMOS	1.5	2				82	x		x		x	High Drive, High I/O count.	μPD65012	◊° NEC	
1124	0.67	200	BiCMOS	1.5	2				84	x	x			x		μPD67010	◊° NEC	
1200	0.14	1600	ECL	1.2	3		108	48	108				x			μPB6312	NEC	
1584	0.9	70	CMOS	1.5	2				100	x		x		x	High Drive, High I/O count.	μPD65013	◊° NEC	30
1656	10	12	CMOS	1.5	2				82	x				x	Battery Supply 1V to 3.6V	μPD65014	◊° NEC	
2016	0.56	100	CMOS	1.2	2				79	x		x		x		μPD65025	◊° NEC	
2128	0.9	70	CMOS	1.5	2				82	x		x		x		μPD65022	◊° NEC	
2208	0.45	200	BiCMOS 5															
				1.3	2				80	x	x	x	x	x		μPD67021	◊ NEC	
2240	0.9	70	CMOS	1.5	2				120	x		x		x	2304 RAM bits included.	μPD65023	◊° NEC	35
2242	0.9	70	CMOS	1.5	2				104	x		x		x	High Drive, High I/O count.	μPD65024	◊° NEC	
2248	0.67	200	BiCMOS	1.5	2				120	x	x			x		μPD67020	◊° NEC	
2340	0.56	100	CMOS	1.2	2				116	x	x	x		x	High I/O	μPD65027	◊° NEC	
2400	0.15	1400	ECL	1.2	3		102	62	102		x	x	x			μPB63020	NEC	
	0.5	450	ECL	1.4	3				108		x	x	x			μPB6323	NEC	40
2457	10	12	CMOS	1.5	2				100	x				x	Battery Supply 1V to 3.6V	μPD65026	◊° NEC	
3140	0.67	200	BiCMOS	1.5	2				140	x	x			x		μPD67030	◊° NEC	
3240	0.45	200	BiCMOS	1.3	2				96	x	x	x	x	x		μPD67031	◊ NEC	
3360	10	12	CMOS	1.5	2				106	x				x	Battery Supply 1V to 3.6V	μPD65033	◊° NEC	
3366	0.56	100	CMOS	1.2	2				128	x	x	x		x	High I/O	μPD65034	◊° NEC	45
	100	250	CMOS	1.2	2				96	x		x		x		μPD65032	◊° NEC	
3575	0.9	70	CMOS	1.5	2				106	x		x		x		μPD65031	◊° NEC	
4000	0.15	1400	ECL	1.2	3		140	84	152		x	x	x			μPB63040	NEC	
	0.5	450	ECL	1.4	3				156		x	x	x			μPB6341	NEC	
4320	10	12	CMOS	1.5	2				120	x				x	Battery Supply 1V to 3.6V −5	μPD65045	◊° NEC	50
4440	0.56	100	CMOS	1.2	2				108	x		x		x		μPD65044	◊° NEC	
			CMOS	1.2	2				142	x	x	x		x	High I/O	μPD65046	◊° NEC	
	0.9	70	CMOS	1.5	2				180	x		x		x	4608 RAM bits included.	μPD65043	◊° NEC	
4727	0.9	70	CMOS	1.5	2				120	x		x		x		μPD65042	◊° NEC	
5000	0.5	450	ECL	1.4	3				172		x	x	x			μPB6351	NEC	55
5292	0.56	100	CMOS	1.2	2				120	x		x		x		μPD65051	◊° NEC	
			CMOS	1.2	2				142	x	x	x		x	High I/O	μPD65053	◊° NEC	
5320	0.45	300	BiCMOS	1.3	2				124	x	x		x	x		μPD67050	◊ NEC	
5632	10	12	CMOS	1.5	2				138	x				x	Battery Supply 1V to 3.6V −6	μPD65052	◊° NEC	
5742	0.9	70	CMOS	1.5	2				138	x		x		x		μPD65050	◊° NEC	60
6000	0.15	1400	ECL	1.2	3		174	90	174		x	x	x			μPB63060	NEC	
6348	0.56	100	CMOS	1.2	2				124	x		x		x		μPD65061	◊° NEC	
			CMOS	1.2	2				142	x	x	x		x	High I/O	μPD65062	◊° NEC	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
NEC Electronics																	(Cont'd)	
6372	0.67	200	BiCMOS	1.5	2				180	x	x			x		μPD67060	◊° NEC	
7164	0.9	70	CMOS	1.5	2				144	x		x		x		μPD65070	◊° NEC	
7216	0.45	300	BiCMOS	1.3	2				148	x	x		x	x		μPD67070	◊ NEC	
7500	0.56	100	CMOS	1.2	2				140	x		x		x		μPD65071	◊° NEC	
			CMOS	1.2	2				142	x	x	x		x	High I/O	μPD65072	◊° NEC	5
8000	0.15	1400	ECL	1.2	3		200	103	204		x	x	x			μPB63080	NEC	
8510	0.9	70	CMOS	1.5	2				168	x		x		x		μPD65081	◊° NEC	
8748	0.56	100	CMOS	1.2	2				148	x		x		x		μPD65082	◊° NEC	
10152	0.45	300	BiCMOS	1.3	2				176	x	x		x	x		μPD67101	◊ NEC	
10348	0.67	200	BiCMOS	1.5	2				228	x	x			x		μPD67100	◊° NEC	10
10496	0.9	70	CMOS	1.5	2				186	x		x		x		μPD65101	◊° NEC	
10800	0.56	100	CMOS	1.2	2				160	x		x		x		μPD65103	◊° NEC	
14256	0.56	100	CMOS	1.2	2				188	x		x		x		μPD65140	◊° NEC	
14943	0.9	70	CMOS	1.5	2				214	x		x		x		μPD65150	◊° NEC	
18144	0.56	100	CMOS	1.2	2				214	x		x		x		μPD65180	◊° NEC	15
19551	0.9	70	CMOS	1.5	2				246	x		x		x		μPD65200	◊° NEC	
24000	0.56	100	CMOS	1.2	2				246	x		x		x		μPD65240	◊° NEC	
24528	0.45	300	BiCMOS	1.3	2				272	x	x		x	x		μPD67240	◊ NEC	
30600	0.56	100	CMOS	1.2	3				246	x		x		x		μPD65300	◊° NEC	
42240	0.45	200	CMOS–6															
				1	3				236	x	x	x		x	Sea-of-gate architecture	μPD65658	NEC	20
45012	0.56	100	CMOS	1.2	3				246	x		x		x		μPD65450	◊° NEC	
72576	0.45	200	CMOS–6															
				1	3				304	x	x	x		x	Sea-of-gate architecture	μPD65664	NEC	
119232	0.45	200	CMOS–6															
				1	3				384	x	x	x		x	Sea-of-gate architecture	μPD65672	NEC	
177408	0.45	200	CMOS–6															
				1	3				464	x	x	x		x	Sea-of-gate architecture	μPD67676	NEC	
OKI Semiconductor																		
301	2.2	65	CMOS	2	2	1			32	x	x	x		x	Hi Density/Low I/O Option	7H003	◊° OKI	25
522	2.2	65	CMOS	2	2	1			40	x	x	x		x	Hi Density/Low I/O Option	7H005	◊° OKI	
700	1.4	120	CMOS	1.5	2	1			74	x	x	x		x	Channelled Gate Array	70V000	◊° OKI	
	2.2	65	CMOS	2	2	1			70	x	x	x		x	16/48mA Outputs	70HB000	◊° OKI	
			CMOS	2	2	1			74	x	x	x		x	Channelled Gate Array	70H000	◊° OKI	
748	2.2	65	CMOS	2	2	1			48	x	x	x		x	Hi Density/Low I/O Option	7H007	◊° OKI	30
1000	1.4	120	CMOS	1.5	2	1			74	x	x	x		x	Channelled Gate Array	71V000	◊° OKI	
	2.2	65	CMOS	2	2	1			70	x	x	x		x	16/48mA Outputs	71HB000	◊° OKI	
			CMOS	2	2	1			x	x	x	x		x	Channelled Gate Array	71H000	◊° OKI	
1001	2.2	65	CMOS	2	2	1			56	x	x	x		x	Hi Density/Low I/O Option	7H010	◊° OKI	
1440				3	2											MSM73000	OKI	35
1568	1.4	120	CMOS	1.5	2	1			74	x	x	x		x	Channelled Gate Array	72V000	◊° OKI	
	2.2	65	CMOS	2	2	1			70	x	x	x		x	16/48mA Outputs	72HB000	◊° OKI	
			CMOS	2	2	1			x	x	x	x		x	Channelled Gate Array	72H000	◊° OKI	
1632	0.51	400	CMOS	1.2	2	1			60	x	x	x		x		7U016	◊° OKI	
2000				3	2											MSM74000	OKI	40
	1.4	120	CMOS	1.5	2	1			88	x	x	x		x	Channelled Gate Array	73V000	◊° OKI	
	2.2	65	CMOS	2	2	1			84	x	x	x		x	16/48mA Outputs	73HB000	◊° OKI	
			CMOS	2	2	1			x	x	x	x		x	Channelled Gate Array	73H000	◊° OKI	
2400	1.4	120	CMOS	1.5	2	1			88	x	x	x		x	Channelled Gate Array	74V000	◊° OKI	
	2.2	65	CMOS	2	2	1			84	x	x	x		x	16/48mA Outputs	74HB000	◊° OKI	45
			CMOS	2	2	1			88	x	x	x		x	Channelled Gate Array	74H000	◊° OKI	
2440	0.51	400	CMOS	1.2	2	1			72	x	x	x		x		7U024	◊° OKI	
3000				2	2											MSM79H000	OKI	
3289	1.4	120	CMOS	1.5	2	1			94	x	x	x		x	Channelled Gate Array	79V000	◊° OKI	
	2.2	65	CMOS	2	2	1			98	x	x	x		x	16/48mA Outputs	79HB000	◊° OKI	50
			CMOS	2	2	1			94	x	x	x		x	Channelled Gate Array	79H000	◊° OKI	
3312	0.51	400	CMOS	1.2	2	1			84	x	x	x		x		7U033	◊° OKI	
4000				2	2											MSM75H000	OKI	
				3	2											MSM7500	OKI	
4256	0.51	400	CMOS	1.2	2	1			96	x	x	x		x		7U042	◊° OKI	55
4290	1.4	120	CMOS	1.5	2	1			112	x	x	x		x	Channelled Gate Array	75V000	◊° OKI	
	2.2	65	CMOS	2	2	1			114	x	x	x		x	16/48mA Outputs	75HB000	◊° OKI	
			CMOS	2	2	1			112	x	x	x		x	Channelled Gate Array	75H000	◊° OKI	
5500	0.43	500	CMOS	1.2	2	1			68	x	x	x		x	Sea-of-Gate Gate Array	10U0055	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	68	x	x	x	-	x	Sea-of-Gate Gate Array	10V0055	◊° OKI	60
6000				2	2											MSM76H000	OKI	
	1.4	120	CMOS	1.5	2	1			138	x	x	x		x	Channelled Gate Array	76V000	◊° OKI	
	2.2	65	CMOS	2	2	1			138	x	x	x		x	Channelled Gate Array	76H000	◊° OKI	
	2.5	100	CMOS	2	2				x	x		x		x	5.5K GATES + 2 (32x8) RAMS	92H600	◊ OKI	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
OKI Semiconductor																	(Cont'd)	
6080	0.51	400	CMOS	1.2	2	1			114	x	x	x		x		7U060	◊° OKI	
8000				2	2											MSM77H000	OKI	
8118	1.4	120	CMOS	1.5	2	1			178	x	x	x		x	Channelled Gate Array	77V000	◊° OKI	
	2.2	65	CMOS	2	2	1			178	x	x	x		x	Channelled Gate Array	77H000	◊° OKI	
8132	0.51	400	CMOS	1.2	2	1			130	x	x	x		x		7U081	◊° OKI	5
10000				2	2											MSM78H000	OKI	
10008	1.4	120	CMOS	1.5	2	1			188	x	x	x		x	Channelled Gate Array	78V000	◊° OKI	
	2.2	65	CMOS	2	2	1			188	x	x	x		x	Channelled Gate Array	78H000	◊° OKI	
	2.5	100	CMOS	2	2				x	x		x		x	8.9K GATES + 5 (32x8) RAMS	92H800	◊ OKI	
10332	0.51	400	CMOS	1.2	2	1			148	x	x	x		x		7U100	◊° OKI	10
10600	0.43	500	CMOS	1.2	2	1			90	x	x	x		x	Sea-of-Gate Gate Array	10U0106	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	90	x	x	x	-	x	Sea-of-Gate Gate Array	10V0106	◊° OKI	
13200	0.43	500	CMOS	1.2	2	1			98	x	x	x		x	Sea-of-Gate Gate Array	10U0132	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	98	x	x	x	-	x	Sea-of-Gate Gate Array	10V0132	◊° OKI	
15402	0.51	400	CMOS	1.2	2	1			188	x	x	x		x		7U150	◊° OKI	15
17500	0.43	500	CMOS	1.2	2	1			112	x	x	x		x	Sea-of-Gate Gate Array	10U0175	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	112	x	x	x	-	x	Sea-of-Gate Gate Array	10V0175	◊° OKI	
20300	0.51	400	CMOS	1.2	2	1			206	x	x	x		x		7U200	◊° OKI	
20900	0.43	500	CMOS	1.2	2	1			122	x	x	x		x	Sea-of-Gate Gate Array	10U0209	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	122	x	x	x	-	x	Sea-of-Gate Gate Array	10V0209	◊° OKI	20
26200	0.43	500	CMOS	1.2	2	1			136	x	x	x		x	Sea-of-Gate Gate Array	10U0262	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	136	x	x	x	-	x	Sea-of-Gate Gate Array	10V0262	◊° OKI	
30384	0.51	400	CMOS	1.2	2	1			252	x	x	x		x		7U300	◊° OKI	
30400	0.43	500	CMOS	1.2	2	1			146	x	x	x		x	Sea-of-Gate Gate Array	10U0304	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	146	x	x	x	-	x	Sea-of-Gate Gate Array	10V0304	◊° OKI	25
41600	0.43	500	CMOS	1.2	2	1			170	x	x	x		x	Sea-of-Gate Gate Array	10U0416	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	170	x	x	x	-	x	Sea-of-Gate Gate Array	10V0416	◊° OKI	
60400	0.43	500	CMOS	1.2	2	1			204	x	x	x		x	Sea-of-Gate Gate Array	10U0604	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	204	x	x	x	-	x	Sea-of-Gate Gate Array	10V0604	◊° OKI	
82600	0.43	500	CMOS	1.2	2	1			236	x	x	x		x	Sea-of-Gate Gate Array	10U0826	◊° OKI	30
	0.64	265	CMOS	1.5	2	1	-	-	236	x	x	x	-	x	Sea-of-Gate Gate Array	10V0826	◊° OKI	
100500	0.43	500	CMOS	1.2	2	1			260	x	x	x		x	Sea-of-Gate Gate Array	10U1005	◊° OKI	
	0.64	265	CMOS	1.5	2	1	-	-	260	x	x	x	-	x	Sea-of-Gate Gate Array	10V1005	◊° OKI	
Performance Semiconductor Corp.																		
11000	0.5	250	CMOS	0.8	2	1	x	x	x	x		x		x	CMOS I/O Now TTL I/O Later	P9CG11000	Performance	
Plessey Semiconductors																		
70	6	40	Si-Gate	4	1	1			18	x	x	x	x	x	Supply voltage 3 to 15 V.	MHA	Plessey	35
130	2.5	80	CML	3	1				20	x	x	x	x	x	300 μW/gate, autoroutable	ULA1RA	Plessey	
	7.5	20	CML	3	1				20	x	x	x	x	x	100 μW/gate, channel-less	ULA1RB	Plessey	
	15	10	CML	3	1				20	x	x	x	x	x	30 μW/gate, channel-less	ULA1RC	Plessey	
	50	10	CML	3	1				20	x	x	x	x	x	5 μW/gate, channel-less	ULA1RD	Plessey	
140	6	40	Si-Gate	4	1	1			24	x	x	x	x	x	Supply voltage 3 to 15 V.	MHB	Plessey	40
	17	9	CMOS	7	1				29	x	x	x				MCA	† Plessey	
200	6	40	Si-Gate	4	1	1			30	x	x	x	x	x	Supply voltage 3 to 15 V.	MHC	Plessey	
	17	9	CMOS	7	1				34	x	x	x				MCB	† Plessey	
270	17	9	CMOS	7	1				40	x	x	x				MCC	† Plessey	
300	2.5	80	CML	3	1				30	x	x	x	x	x	300 μW/gate, Channel-less	ULA3RA	Plessey	45
	7.5	20	CML	3	1				30	x	x	x	x	x	100 μW/gate, channel-less	ULA3RB	Plessey	
	15	10	CML	3	1				30	x	x	x	x	x	30 μW/gate, channel-less	ULA3RC	Plessey	
	50	10	CML	3	1				30	x	x	x	x	x	5 μW/gate, channel-less	ULA3RD	Plessey	
330	6	40	Si-Gate	4	1	1			40	x	x	x	x	x	Supply voltage 3 to 15 V.	MHD	Plessey	
340	17	9	CMOS	7	1				40	x	x	x			28 dedicated flip-flops	MCE	† Plessey	50
440	17	9	CMOS	7	1				46	x	x	x			32 dedicated flip-flops	MCD	† Plessey	
500	2.5	80	CML	3	1				38	x	x	x	x	x	300 μW/gate, Channel-less	ULA5RA	Plessey	
	7.5	20	CML	3	1				38	x	x	x	x	x	100 μW/gate, channel-less	ULA5RB	Plessey	
	15	10	CML	3	1				38	x	x	x	x	x	30 μW/gate, channel-less	ULA5RC	Plessey	
	50	10	CML	3	1				38	x	x	x	x	x	5 μW/gate, channel-less	ULA5RD	Plessey	55
550	6	40	Si-Gate	4	1	1			48	x	x	x	x	x	Supply voltage 3 to 15 V.	MHE	Plessey	
630	1.0	250	BIP	1.5	2				32	x	x	x	x	x		ULA6DSA	Plessey	
	1.6	150	BIP	1.5	2				32	x	x	x	x	x		ULA6DSB	Plessey	
	4.0	75	BIP	1.5	2				32	x	x	x	x	x		ULA6DSC	Plessey	
	17	9	CMOS	7	1				50	x	x	x				MCF	† Plessey	60

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Un-com-mitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Plessey Semiconductors																	(Cont'd)	
640	1.2	100	CMOS	2	2	1			36	x	x	x		x		CLA5100	Plessey	
660	6	40	Si-Gate	4	1	1			56	x	x	x	x	x	Supply voltage 3 to 15 V.	MHF	Plessey	
840	2.1	50	CMOS	3	2				40	x	x	x		x		CLA3100	Plessey	
880	17	9	CMOS	7	1				58	x	x	x				MCG	† Plessey	
900	2.5	80	CML	3	1				48	x	x	x	x	x	300 μW/gate, Channel-less	ULA9RA	Plessey	5
	7.5	20	CML	3	1				48	x	x	x	x	x	100 μW/gate, channel-less	ULA9RB	Plessey	
	15	10	CML	3	1				48	x	x	x	x	x	30 μW/gate, channel-less	ULA9RC	Plessey	
	50	10	CML	3	1				48	x	x	x	x	x	8 μW/gate, channel-less	ULA9RD	Plessey	
1000	6	40	Si-Gate	4	1	1			68	x	x	x	x	x	Supply voltage 3 to 15 V.	MHG	Plessey	
1200	2.5	80	CML	3	1				52	x	x	x	x	x	300 μW/gate, Channel-less	ULA12RA	Plessey	10
	7.5	20	CML	3	1				52	x	x	x	x	x	100 μW/gate, channel-less	ULA12RB	Plessey	
	15	10	CML	3	1				52	x	x	x	x	x	30 μW/gate, channel-less	ULA12RC	Plessey	
	50	10	CML	3	1				52	x	x	x	x	x	5 μW/gate, channel-less	ULA12RD	Plessey	
1210	1	250	BIP	1.5	2				44	x	x	x	x	x		ULA12DSA	Plessey	
	1.6	150	BIP	1.5	2				44	x	x	x	x	x		ULA12DSB	Plessey	15
	4	75	BIP	1.5	2				44	x	x	x	x	x		ULA12DSC	Plessey	
1232	1.2	100	CMOS	2	2	1			48	x	x	x		x		CLA5200	Plessey	
1440	2.1	50	CMOS	3	2				52	x	x	x		x		CLA3300	Plessey	
1600	2.5	80	CML	3	1				62	x	x	x	x	x	300 μW/gate, Channel-less	ULA16RA	Plessey	
	6	40	Si-Gate	4	1	1			84	x	x	x	x	x	Supply voltage 3 to 15 V.	MHH	Plessey	20
	7.5	20	CML	3	1				62	x	x	x	x	x	100 μW/gate, channel-less	ULA16RB	Plessey	
	15	10	CML	3	1				62	x	x	x	x	x	30 μW/gate, channel-less	ULA16RC	Plessey	
	50	5	CML	3	1				62	x	x	x	x	x	5 μW/gate, channel-less	ULA16RD	Plessey	
1870	1	250	BIP	1.5	2				64	x	x	x	x	x		ULA19DSA	Plessey	
	1.6	150	BIP	1.5	2				64	x	x	x	x	x		ULA19DSB	Plessey	25
	4	75	BIP	1.5	2				64	x	x	x	x	x		ULA19DSC	Plessey	
2000	2.5	80	CML	3	1				72	x	x	x	x	x	300 μW/gate, Channel-less	ULA20RA	Plessey	
	7.5	20	CML	3	1				72	x	x	x	x		100 μW/gate, channel-less	ULA20RB	Plessey	
	15	10	CML	3	1				72	x	x	x	x	x	30 μW/gate, channel-less	ULA20RC	Plessey	
	50	5	CML	3	1				72	x	x	x	x	x	5 μW/gate, channel-less	ULA20RD	Plessey	30
2016	1.2	100	CMOS	2	2	1			64	x	x	x		x		CLA5300	Plessey	
2400	2.1	50	CMOS	3	2				64	x	x	x		x		CLA3500	Plessey	
	2.9	40	CMOS	2	2				64	x	x	x		x		CLA4500	Plessey	
2550	1.0	250	BIP	1.5	2				74	x	x	x	x	x		ULA25DSA	Plessey	
3060	1.2	100	CMOS	2	2	1			80	x	x	x		x		CLA5400	Plessey	35
4200	2.1	50	CMOS	3	2				84	x	x	x		x		CLA3700	Plessey	
	2.9	40	CMOS	2	2				80	x	x	x		x		CLA4700	Plessey	
4404	1.2	100	CMOS	2	2	1			96	x	x	x		x		CLA5500	Plessey	
5984	1.2	100	CMOS	2	2	1			112	x	x	x		x		CLA5600	Plessey	
6000	2.1	50	CMOS	3	2	1			108	x	x	x		x		CLA3900	Plessey	40
	3.0	100	CMOS	2					120	x	x	x				CLA4000	Plessey	
7104	1.2	100	CMOS	2	2	1			128	x	x	x		x		CLA5700	Plessey	
7920	1.6	150	BIP	1.5	2				138	x	x	x	x	x		ULA80DSB	Plessey	
8856	1.2	100	CMOS	2	2	1			144	x	x	x		x		CLA5800	Plessey	
10440	1.2	100	CMOS	2	2	1			160	x	x	x		x		CLA5900	Plessey	45
Raytheon Semiconductor																		
7128	0.3 *	600	ECL						180			x	x	x		CGA70E18	‡ Raytheon	
8001	0.3	1200	BIP	2	2				120			x	x			CGA40E12	Raytheon	
Ricoh																		
560	1.5		Si-Gate CMOS 2	2					40	x	x	x		x		RP5GH05	Ricoh	
1000	1.5		Si-Gate CMOS 2	2					60	x	x	x		x		RP5GH10	Ricoh	
1600	1.5		Si-Gate CMOS 2	2					72	x	x	x		x		RP5GH16	Ricoh	50
2300	1.5		Si-Gate CMOS 2	2					88	x	x	x		x		RP5GH23	Ricoh	
2900	1.5		Si-Gate CMOS 2	2					98	x	x	x		x		RP5GH29	Ricoh	
3800	1.5		Si-Gate CMOS 2	2					108	x	x	x		x		RP5GH38	Ricoh	
5500	1.5		Si-Gate CMOS 2	2					120	x	x	x		x		RP5GH55	Ricoh	
S-MOS Systems																		
820	2	60	CMOS	3	2	1	6		54	x	x	x		x	Silicon gate	SLA6080	S-MOS	55
1394	2	60	CMOS	3	2	1	6		68	x	x	x		x	Silicon gate	SLA6140	S-MOS	
1746	2	60	CMOS	3	2	1	6		76	x	x	x		x	Silicon gate	SLA6170	S-MOS	
2667	2	60	CMOS	3	2	1	6		94	x	x	x		x	Silicon gate	SLA6270	S-MOS	
3312	2	60	CMOS	3	2	1	6		104	x	x	x		x	Silicon gate.	SLA6330	S-MOS	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Unpacked	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
S-MOS Systems																	(Cont'd)	
4342	2	60	CMOS	3	2	1	6		120	x	x	x		x	Silicon gate	SLA6430	S-MOS	
5304	0.5		CMOS	1.2	2				78	x		x		x		SLA827S	S-MOS	
6204	2	60	CMOS	2	2	1	6		148	x	x	x		x		SLA6620	S-MOS	
9416	0.5		CMOS	1.2	2				104	x		x		x		SLA847S	S-MOS	
14336	0.5		CMOS	1.2	2				132	x		x		x		SLA872S	S-MOS	5
22680	0.5		CMOS	1.2	2				164	x		x		x		SLA8B3S	S-MOS	
30000	0.5		CMOS	1.2	2				190	x		x		x		SLA8F0S	S-MOS	
38550	0.5		CMOS	1.2	2				218	x		x		x		SLA8J3S	S-MOS	
Samsung Semiconductor																		
210	4.2	40	CMOS	3	1					x	x	x			Silicon Gate	KG10200	Samsung	
400	1	70	CMOS	2	2				28	x	x	x		x		KG30400	Samsung	10
	4.2	40	CMOS	3	1					x	x	x			Silicon Gate	KG10400	Samsung	
600	1	70	CMOS	2	2				38	x	x	x		x		KG30600	Samsung	
	4.2	40	CMOS	3	1					x	x	x				KG10600	Samsung	
800	1	70	CMOS	2	2				42	x	x	x		x		KG30800	Samsung	
840	4.2	40	CMOS	3	1					x	x	x				KG10800	Samsung	15
1190	4.2	40	CMOS	3	1					x	x	x				KG11200	Samsung	
1200	1	70	CMOS	2	2				50	x	x	x		x		KG31200	Samsung	
1600	4.2	40	CMOS	3	1					x	x	x				KG11600	Samsung	
1980	4.2	40	CMOS	3	1					x	x	x				KG12000	Samsung	
2000	1	70	CMOS	2	2				76	x	x	x		x		KG32000	Samsung	20
3200	1	70	CMOS	2	2				88	x	x	x		x		KG33200	Samsung	
4000	1	70	CMOS	2	2				110	x	x	x		x		KG34000	Samsung	
6000	1	70	CMOS	2	2				132	x	x	x		x		KG36000	Samsung	
8000	1	70	CMOS	2	2				160	x	x	x		x		KG38000	Samsung	
SGS-THOMSON																		
306	1		HCMOS	1.5	2	1			28	x		x		x		ISB9003 ◊°†	SGS-Thomson	25
858	1		HCMOS	1.5	2	1			46	x		x		x		ISB9008 ◊°†	SGS-Thomson	
1120	1.0	65	HCMOS	1.2	2				56	x	x	x		x		TSGC01000	SGS-Thomson	
	1.5	40	HCMOS	2	2				56	x	x	x		x		TSGB01000	SGS-Thomson	
		125	CMOS	2	2				56	x	x	x		x		GB1000D	† SGS-Thomson	
	1.5 *	125	CMOS	2	2				56	x	x	x		x		MKGB1000D	† SGS-Thomson	30
1152	2.5 *	40	CMOS	2	2				64	x	x	x		x		MKGA1000D	SGS-Thomson	
1554	1		HCMOS	1.5	2	1			62	x		x		x		ISB9015 ◊°†	SGS-Thomson	
2016	2.5 *	40	CMOS	2	2				84	x	x	x		x		MKGA2000D	SGS-Thomson	
2128	1	65	HCMOS	1.2	2				76	x	x	x		x		TSGC02000	SGS-Thomson	
	1.5	40	HCMOS	2	2				76	x	x	x		x		TSGB02000	SGS-Thomson	35
		125	CMOS	2	2				76	x	x	x		x		GB2000D	† SGS-Thomson	
	1.5 *	125	CMOS	2	2				76	x	x	x		x		MKGB2000D	† SGS-Thomson	
2346	1		HCMOS	1.5	2	1			76	x		x		x		ISB9023 ◊°†	SGS-Thomson	
2880	0.4	100	HCMOS	1.2	2	1			48	x		x		x		ISB12003 ◊°†	SGS-Thomson	
3016	2.5 *	40	CMOS	2	2				104	x	x	x		x		MKGA3000D	SGS-Thomson	40
3264	1	65	HCMOS	1.2	2				96	x	x	x		x		TSGC03000	SGS-Thomson	
	1.5	40	HCMOS	2	2				96	x	x	x		x		TSGB03000	SGS-Thomson	
		125	CMOS	2	2				96	x	x	x		x		GB3000D	† SGS-Thomson	
	1.5 *	125	CMOS	2	2				96	x	x	x		x		MKGB3000D	† SGS-Thomson	
3795	1		HCMOS	1.5	2	1			96	x		x		x		ISB9038 ◊°†	SGS-Thomson	45
4080	2.5 *	40	CMOS	2	2				120	x	x	x		x		MKGA4000D	SGS-Thomson	
4256	1	65	HCMOS	1.2	2				108	x	x	x		x		TSGC04000	SGS-Thomson	
	1.5	40	HCMOS	2	2				108	x	x	x		x		TSGB04000	SGS-Thomson	
		125	CMOS	2	2				108	x	x	x		x		GB4000D	† SGS-Thomson	
	1.5 *	125	CMOS	2	2				108	x	x	x		x		MKGB4000D	† SGS-Thomson	50
5120	0.4	100	HCMOS	1.2	2	1			64	x		x		x		ISB12005 ◊°†	SGS-Thomson	
5544	1		HCMOS	1.5	2	1			116	x		x		x		ISB9055 ◊°†	SGS-Thomson	
5880	1	65	HCMOS	1.2	2				132	x	x	x		x		TSGC06000	SGS-Thomson	
	1.5	40	HCMOS	2	2				132	x	x	x		x		TSGB06000	SGS-Thomson	
		125	CMOS	2	2				132	x	x	x		x		GB6000D	† SGS-Thomson	55
	1.5 *	125	CMOS	2	2				132	x	x	x		x		MKGB6000D	† SGS-Thomson	
6277	1		HCMOS	1.5	2	1			130	x		x		x		ISB9069 ◊°†	SGS-Thomson	
6480	0.25	100	HCMOS	0.8	2	1			72	x		x		x		ISB18006 ◊°	SGS-Thomson	
7872	1	65	HCMOS	1.2	2				168	x	x	x		x		TSGC08000	SGS-Thomson	
	1.5	40	HCMOS	2	2				168	x	x	x		x		TSGB08000	SGS-Thomson	60
		125	CMOS	2	2				168	x	x	x		x		GB8000D	† SGS-Thomson	
	1.5 *	125	CMOS	2	2				168	x	x	x		x		MKGB8000D	† SGS-Thomson	
8000	0.3 *		HCMOS	1.2	2				76	x		x		x		ISB12008	SGS-Thomson	
8466			HCMOS	1.5	2	1			142	x		x		x		ISB9085	SGS-Thomson	
9680	0.25	100	HCMOS	0.8	2	1			88	x		x		x		ISB18010 ◊°	SGS-Thomson	65
9776	1.0	65	HCMOS	1.2	2				192	x	x	x		x		TSGC10000	SGS-Thomson	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Unpackaged	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
SGS-THOMSON																		
9776																(Cont'd)		
	1.5	40	HCMOS	2	2				192	x	x	x		x		TSGB10000	SGS-Thomson	
		125	CMOS	2	2				192	x	x	x		x		GB10000D	† SGS-Thomson	
	1.5 *	125	CMOS	2	2				192	x	x	x		x		MKGB10000D	† SGS-Thomson	
11520	0.3 *		HCMOS	1.2	2				92	x		x		x		ISB12011	SGS-Thomson	
11970	1		HCMOS	1.5	2	1			168	x		x		x		ISB9122	◊°† SGS-Thomson	5
13502	0.25	100	HCMOS	0.8	2	1			104	x		x		x		ISB18013	◊° SGS-Thomson	
15680	0.3 *		HCMOS	1.2	2				108	x		x		x		ISB12015	SGS-Thomson	
17772	1		HCMOS	1.5	2	1			196	x		x		x		ISB9165	◊°† SGS-Thomson	
18000	0.25	100	HCMOS	0.8	2	1			120	x		x		x		ISB18018	◊° SGS-Thomson	
19635	1		HCMOS	1.5	2	1			214	x		x		x		ISB9201	◊°† SGS-Thomson	10
20480	0.3 *		HCMOS	1.2	2				120	x		x		x		ISB12020	SGS-Thomson	
25920	0.25	100	HCMOS	0.8	2	1			144	x		x		x		ISB18026	◊° SGS-Thomson	
	0.3 *		HCMOS	1.2	2				136	x		x		x		ISB12025	SGS-Thomson	
32000	0.25	100	HCMOS	0.8	2	1			160	x		x		x		ISB18032	◊° SGS-Thomson	
	04	100	HCMOS	1.2	2	1			152	x		x		x		ISB12032	◊°† SGS-Thomson	15
38720	0.3 *		HCMOS	1.2	2				164	x		x		x		ISB12038	SGS-Thomson	
42320	0.25	100	HCMOS	0.8	2	1			184	x		x		x		ISB1804	◊° SGS-Thomson	
54080	0.25	100	HCMOS	0.8	2	1			208	x		x		x		ISB18054	◊° SGS-Thomson	
	0.3 *		HCMOS	1.2	2				200	x		x		x		ISB12054	SGS-Thomson	
62720	0.4	100	HCMOS	1.2	2	1			224	x		x		x		ISB12062	◊°† SGS-Thomson	20
76880	0.3 *		HCMOS	1.2	2				232	x		x		x		ISB12076	SGS-Thomson	
103680	0.3 *		HCMOS	1.2	2				256	x		x		x		ISB12103	SGS-Thomson	
128000	0.3 *		HCMOS	1.2	2				256	x		x		x		ISB12128	SGS-Thomson	
Sharp Electronics																		
300	1.7	90	CMOS	1.6	2	1			37	x	x			x		LZ93300	Sharp	
600	1.7	90	CMOS	1.6	2	1			51	x	x			x		LZ93600	Sharp	25
1010	1.7	90	CMOS	1.6	2	1			67	x	x			x		LZ931000	Sharp	
1596	1.7	90	CMOS	1.6	2	1			97	x	x			x		LZ931600	Sharp	
2000	1.2	100	CMOS	1.2	2	1			97	x	x			x		LZ952000	Sharp	
2240	1.7	90	CMOS	1.6	2	1			97	x	x			x		LZ932200	Sharp	
3145	1.7	90	CMOS	1.6	2	1			112	x	x			x		LZ933000	Sharp	30
4009	1.7	90	CMOS	1.6	2	1			128	x	x			x		LZ934000	Sharp	
4255	1.2	100	CMOS	1.2	2	1			128	x	x			x		LZ954000	Sharp	
5000	1.7	90	CMOS	1.6	2	1			140	x	x			x		LZ935000	Sharp	
6075	1.2	100	CMOS	1.2	2	1			148	x	x			x		LZ956000	Sharp	
8370	1.2	100	CMOS	1.2	2	1			176	x	x			x		LZ958000	Sharp	35
10032	1.2	100	CMOS	1.2	2	1			194	x	x			x		LZ9510000	Sharp	
Siemens																		
1500	0.12 *	1500	Bipolar	1.5	3	2			80			x	x	x		SH100E4	◊°† Siemens	
2300	0.4	180	CMOS	1	2	1			44	x	x	x	x	x		SC2D4	◊°† Siemens	
2500	0.12 *	1500	Bipolar	1.5	3	2			120			x	x	x		SH100E5	◊°† Siemens	
3498	0.7	150	CMOS	1.5	2	1			60	x	x	x	x	x		SC3C1	◊°† Siemens	40
4400	0.4	180	CMOS	1	2	1			60	x	x	x	x	x		SC4D4	◊°† Siemens	
5000	0.12 *	1500	Bipolar	1.5	3	2			160			x	x	x		SH100E6	°† Siemens	
5120	0.7	150	CMOS	1.5	2	1			72	x	x	x	x	x		SC5C1	◊°† Siemens	
5800	0.4	180	CMOS	1	2	1			68	x	x	x	x	x		SC6D4	◊°† Siemens	
8000	0.7	150	CMOS	1.5	2	1			92	x	x	x	x	x		SC8C1	◊°† Siemens	45
8900	0.4	180	CMOS	1	2	1			84	x	x	x	x	x		SC9D4	◊°† Siemens	
10000	0.12 *	1500	Bipolar	1.5	3	2			256				x	x		SH100E7	°† Siemens	
11092	0.7	150	CMOS	1.5	2	1			106	x	x	x	x	x		SC11C1	◊°† Siemens	
12000	0.4	180	CMOS	1	2	1			100	x	x	x	x	x		SC12D4	◊°† Siemens	
14204	0.7	150	CMOS	1.5	2	1			120	x	x	x	x	x		SC14C1	◊°† Siemens	50
17082	0.7	150	CMOS	1.5	2	1			132	x	x	x	x	x		SC17C1	◊°† Siemens	
18000	0.4	180	CMOS	1	2	1			120	x	x	x	x	x		SC18D4	◊°† Siemens	
21060	0.7	150	CMOS	1.5	2	1			146	x	x	x	x	x		SC21C1	◊°† Siemens	
25740	0.7	150	CMOS	1.5	2	1			160	x	x	x	x	x		SC26C1	◊°† Siemens	
27000	0.4	180	CMOS	1	2	1			144	x	x	x	x	x		SC27D4	◊°† Siemens	55
32000	0.7	150	CMOS	1.5	2	1			180	x	x	x	x	x		SC32C1	◊°† Siemens	
37000	0.4	180	CMOS	1	2	1			168	x	x	x	x	x		SC37D4	◊°† Siemens	
37932	0.7	150	CMOS	1.5	2	1			196	x	x	x	x	x		SC38C1	◊°† Siemens	
44000	0.4	180	CMOS	1	2	1			184	x	x	x	x	x		SC44D4	◊°† Siemens	
50904	0.7	150	CMOS	1.5	2	1			256	x	x	x	x	x		SC51C1	◊°† Siemens	60
54000	0.4	180	CMOS	1	2	1			204	x	x	x	x	x		SC54D4	◊°† Siemens	
68000	0.4	180	CMOS	1	2	1			228	x	x	x	x	x		SC68D4	◊°† Siemens	
74970	0.7	150	CMOS	1.5	2	1			256	x	x	x	x	x		SC75C1	◊°† Siemens	
89000	0.4	180	CMOS	1	2	1			256	x	x	x	x	x		SC89D4	◊°† Siemens	
100182	0.7	150	CMOS	1.5	2	1			256	x	x	x	x	x		SC100C1	◊°† Siemens	65
128000	0.4	180	CMOS	1	2	1			256	x	x	x	x	x		SC128D4	◊°† Siemens	
129042	0.7	150	CMOS	1.5	2	1			256	x	x	x	x	x		SC129C1	◊°† Siemens	
172000	0.4	180	CMOS	1	2	1			256	x	x	x	x	x		SC172D4	◊°† Siemens	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Uncommitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Sony Corporation of America																		
70	0.2	3000	ECL	1.2	2				32				x			E3G70	Sony	
200	0.15	2500	ECL 3	1	2				37				x		I/O ECL 100K Compatible	E3G200	◊° Sony	
Texas Instruments																		
1200	9.3	70	CMOS	1	2				57	x	x	x		x	Field Programmable Gate Array	TPC1010A	◊°† TI	
2000	9.3	70	CMOS	1	2				69	x	x	x		x	Field Programmable Gate Array	TPC1020A	◊°† TI	
3600	0.5	150	CMOS	1	2	1			100	x	x	x		x	CMOS Gate Array	TGC104	◊°† TI	5
4500	0.5	150	CMOS	1	2	1			100	x	x	x		x	CMOS Gate Array	TGC105A	TI	
5600	0.5	150	CMOS	1	2	1			130	x	x	x		x	CMOS Gate Array	TGC106	◊°† TI	
6000	9.3	70	CMOS	1	2				140	x	x	x		x	Field Programmable Gate Array	TPC1280	◊°† TI	
6720	0.5	150	CMOS	1	2	1			130	x	x	x		x	CMOS Gate Array	TGC107	◊°† TI	
8340	0.5	150	CMOS	1	2	1			158	x	x	x		x	CMOS Gate Array	TGC108A	TI	10
10008	0.5	150	CMOS	1	2	1			158	x	x	x		x	CMOS Gate Array	TGC110	◊°† TI	
12654	0.5	150	CMOS	1	2	1			196	x	x	x		x	CMOS Gate Array	TGC113	◊°† TI	
14706	0.5	150	CMOS	1	2	1			196	x	x	x		x	CMOS Gate Array	TGC115A	◊°† TI	
15580	0.5	150	CMOS	1	2	1			216	x	x	x		x	CMOS Gate Array	TGC116	◊°† TI	
18620	0.5	150	CMOS	1	2	1			216	x	x	x		x	CMOS Gate Array	TGC119	◊°† TI	15
21854	0.5	150	CMOS	1	2	1			256	x	x	x		x	CMOS Gate Array	TGC122	◊°† TI	
25868	0.5	150	CMOS	1	2	1			256	x	x	x		x	CMOS Gate Array	TGC126	◊°† TI	
Toshiba America Electronic Components																		
700	0.6	150 *	CMOS	1.5	2	1			44 *	x	x	x		x		**TC11L**	**Toshiba (3687)**	
2300	0.4	200	CMOS, Si-Gate	1	2				44	x		x		x		TC140G02	Toshiba	
			CMOS, Si-Gate	1	2				44	x		x		x		**TC150G02**	**Toshiba (3687)**	20
4400	0.4	200	CMOS, Si-Gate	1	2				60	x		x		x		TC140G04	Toshiba	
			CMOS, Si-Gate	1	2				60	x		x		x		**TC150G04**	**Toshiba (3687)**	
5000	0.4 *	200 *	CMOS	1	2	1			160 *	x	x	x		x		**TC14L**	**Toshiba (3687)**	
5800	0.4	200	CMOS, Si-Gate	1	2				68	x		x		x		TC140G06	Toshiba	
			CMOS, Si-Gate	1	2				64	x		x		x		**TC150G06**	**Toshiba (3687)**	25
8900	0.4	200	CMOS, Si-Gate	1	2				84	x		x		x		TC140G09	Toshiba	
			CMOS, Si-Gate	1	2				84	x		x		x		**TC150G09**	**Toshiba (3687)**	
12000	0.4	200	CMOS, Si-Gate	1	2				100	x		x		x		TC140G12	Toshiba	
			CMOS, Si-Gate	1	2				100	x		x		x		**TC150G12**	**Toshiba (3687)**	
18000	0.4	200	CMOS, Si-Gate	1	2				120	x		x		x		TC140G18	Toshiba	30
			CMOS, Si-Gate	1	2				120	x		x		x		**TC150G18**	**Toshiba (3687)**	
27000	0.4	200	CMOS, Si-Gate	1	2				144	x		x		x		TC140G27	Toshiba	
			CMOS, Si-Gate	1	2				144	x		x	x			**TC150G27**	**Toshiba (3687)**	
37000	0.4	200	CMOS, Si-Gate	1	2				168	x		x		x		TC140G37	Toshiba	
			CMOS, Si-Gate	1	2				168	x		x		x		**TC150G37**	**Toshiba (3687)**	35
44000	0.4	200	CMOS, Si-Gate	1	2				184	x		x		x		TC140G44	Toshiba	
			CMOS, Si-Gate	1	2				184	x		x		x		**TC150G44**	**Toshiba (3687)**	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Unconmitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Toshiba America Electronic Components																	(Cont'd)	
54000	0.4	200	CMOS, Si-Gate	1	2				204	x		x		x		TC140G54	Toshiba	
			CMOS, Si-Gate	1	2				204	x		x		x		**TC150G54**	**Toshiba (3687)**	
68000	0.4 *	200 *	CMOS	1	2	1			360 *	x	x	x		x		TC140G	Toshiba	
	0.4	200	CMOS, Si-Gate	1	2				228	x		x		x		TC140G68	Toshiba	
			CMOS, Si-Gate	1	2				228	x		x		x		**TC150G68**	**Toshiba (3687)**	5
89000	0.4	200	CMOS, Si-Gate	1	2				260	x		x		x		TC140G89	Toshiba	
			CMOS, Si-Gate	1	2				260	x		x		x		**TC150G89**	**Toshiba (3687)**	
100000	0.4 *	200 *	CMOS	1	3	1			360 *	x	x	x		x		**TC150G**	**Toshiba (3687)**	
128000	0.4	200	CMOS, Si-Gate	1	2				312	x		x		x		TC140GC8	Toshiba	
			CMOS, Si-Gate	1	2				312	x		x		x		**TC150GC8**	**Toshiba (3687)**	10
172000	0.4	200	CMOS, Si-Gate	1	2				360	x		x		x		TC140GH2	Toshiba	
			CMOS, Si-Gate	1	2				360	x		x	x			**TC150GH2**	**Toshiba (3687)**	
United Technologies																		
3400	1		CMOS	1.5	2				96	x	x	x		x		**UT116D**	**UTMC (3696)**	
			CMOS	1.5	2				96	x	x	x		x		**UT116DR**	**◇‡ UTMC (3696)**	
6000	1		CMOS	1.5	2				136	x	x	x		x		UT160D	UTMC	15
			CMOS	1.5	2				136	x	x	x		x		UT160DR	◇‡ UTMC	
7800	1		CMOS	1.5	2				156	x	x	x		x		**UT180D**	**UTMC (3696)**	
			CMOS	1.5	2				156	x	x	x		x	Radiation Hardened	**UT180DR**	**◇‡ UTMC (3696)**	
11000	1		CMOS	1.5	2				188	x	x	x		x		**UT212D**	**UTMC (3693)**	
			CMOS	1.5	2				188	x	x	x		x		**UT212DR**	**◇‡ UTMC (3693)**	20
Universal Semiconductor																		
99	0.9	50	CMOS	2	1	1			18	x	x	x		x	24 pads	**IS02J**	**Universal (3692)**	
	2.5	30	CMOS	3	1	1			18	x	x	x		x	24 pads	**IS03J**	**Universal (3692)**	
180	0.9	50	CMOS	2	1	1			30	x	x	x		x	40 pads	**IS02I**	**Universal (3692)**	
	2.5	30	CMOS	3	1	1			30	x	x	x		x	40 pads	**IS03I**	**Universal (3692)**	
360	0.9	50	CMOS	2	1	1			36	x	x	x		x	46 pads	**IS02A**	**Universal (3692)**	25
	2.4	30	CMOS	3	1	1			36	x	x	x		x	46 pads	**IS03A**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			36	x	x	x		x	46 pads	**IS05A**	**† Universal (3692)**	
540	0.9	50	CMOS	2	1	1			48	x	x	x		x	58 pads	**IS02B**	**Universal (3692)**	
	2.4	30	CMOS	3	1	1			48	x	x	x		x	58 pads	**IS03B**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			48	x	x	x		x	58 pads	**IS05B**	**† Universal (3692)**	30
720	0.9	50	CMOS	2	1	1			54	x	x	x		x	64 pads	**IS02C**	**Universal (3692)**	
	2.4	30	CMOS	3	1	1			54	x	x	x		x	64 pads	**IS03C**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			54	x	x	x		x	64 pads	**IS05C**	**† Universal (3692)**	
960	0.9	50	CMOS	2	1	1			62	x	x	x		x	72 pads	**IS02D**	**Universal (3692)**	
	2.4	30	CMOS	3	1	1			62	x	x	x		x	72 pads	**IS03D**	**† Universal (3692)**	35
	4.4	20	CMOS	5	1	1			62	x	x	x		x	72 pads	**IS05D**	**† Universal (3692)**	
1200	0.9	50	CMOS	2	1	1			68	x	x	x		x	78 pads	**IS02E**	**Universal (3692)**	
	2.4	30	CMOS	3	1	1			68	x	x	x		x	78 pads	**IS03E**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			68	x	x	x		x	78 pads	**IS05E**	**† Universal (3692)**	
1500	0.9	50	CMOS	2	1	1			76	x	x	x		x	86 pads	**IS02F**	**Universal (3692)**	40
	2.4	30	CMOS	3	1	1			70	x	x	x		x	86 pads	**IS03F**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			70	x	x	x		x	78 pads	**IS05F**	**† Universal (3692)**	
1800	0.9	50	CMOS	2	1	1			82	x	x	x		x	92 pads	**IS02G**	**Universal (3692)**	
	2.4	30	CMOS	3	1	1			82	x	x	x		x	92 pads	**IS03G**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			82	x	x	x		x	92 pads	**IS05G**	**† Universal (3692)**	45
2400	0.9	50	CMOS	2	1	1			90	x	x	x		x	100 pads	**IS02H**	**Universal (3692)**	
	2.4	30	CMOS	3	1	1			82	x	x	x		x	100 pads	**IS03H**	**† Universal (3692)**	
	4.4	20	CMOS	5	1	1			82	x	x	x		x	100 pads	**IS05H**	**† Universal (3692)**	

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ASIC/CUSTOM—Gate Arrays (Cont'd)

Mfr/ Equiv. 2-Input Gates	max Gate Delay (ns)	Toggle Freq (MHz)	Device Process Tech.	Geometry (μm)	Metal	Poly	Input/Output Cells: Input Only	Output Only	Uncommitted	Input/Output Compatibility: C-MOS	TTL-LS	TTL	ECL	Three State	Comments	Device	Source	Line
Vitesse Semiconductor																		
100K	0.05	1000	GaAs E/D MESFET	0.6	4	1			196		x	x	x	x	Channel-Free, Programmable ECL/TTL/or GaAs I/O	FX100K	◊‡ Vitesse	
200K	0.05	1000	GaAs E/D MESFET	0.6	4	1			256		x	x	x	x	Channel-Free,Programmable ECL/TTL/or GaAs I/O	FX200K	◊‡ Vitesse	
350K	0.05	1000	GaAs E/D MESFET	0.6	4	1			360		x	x	x		Channel-Free, Programmable ECL/TTL/or GaAs I/O	X350K	◊‡ Vitesse	
1500	0.12	3000	GaAs E/D MESFET	0.8	2		24	22					x		Two Logic Cell Types	VSC1520	◊‡ Vitesse	
	0.15	2300	GaAs E/D MESFET	0.8	2		25	22					x		Two Logic Cell Types	VSC1500	◊‡ Vitesse	5
1800	0.12 *	1000	GaAs E/D MESFET	0.8	2	1	13		28		x	x	x	x	Very Low Power	VSC2000	◊‡ Vitesse	
2400	0.07	1000	GaAs E/D MESFET	0.8	3	1	40		52	x	x	x		x	PLD Replacement	PLRZKT	◊‡ Vitesse	
3584	0.07 *	1000	GaAs E/D MESFET	0.8	3	1	44		52		x	x	x	x	GaAs I/O Available	VSC3K	◊‡ Vitesse	
4000	0.16	1000	GaAs E/D MESFET	0.8	2		52		68		x	x	x	x	Very Low Power	VSC4500	◊‡ Vitesse	
6400	0.07 *	1000	GaAs E/D MESFET	0.8	3	1	52		68		x	x	x	x	GaAs I/O Available	VSC5K	◊‡ Vitesse	10
13376	0.07 *	1200	GaAs E/D MESFET	0.8	3	1	100		90		x	x	x	x	GaAs I/O Available	VSC10K	◊‡ Vitesse	
16896	0.07 *	1000	GaAs E/D MESFET	0.8	3	1	96		100		x	x	x	x	GaAs I/O Available	VSC15K	◊‡ Vitesse	
20736	0.07	1000	GaAs E/D MESFET	0.8	3	1	104	19	132		x	x	x	x	8K Static RAM, Programmable ECL/TTL/or GaAs I/O	VSCZOK8R	◊‡ Vitesse	
30528	0.07 *	1000	GaAs E/D MESFET	0.8	3	1	100		156		x	x	x	x	GaAs I/O Available	VSC30K	◊‡ Vitesse	
VLSI Technology																		
0.56 *	0.56 *	250	CMOS	1.5	2				128	x	x	x		x		VGT200024	VLSI Tech	15
3200	0.56 *	250	CMOS	1.5	2				48	x	x	x		x		**VGT200003**	**VLSI Tech (3706)**	
6728	0.56 *	250	CMOS	1.5	2				68	x	x	x		x		**VGT200006**	**VLSI Tech (3706)**	
10952	0.56 *	250	CMOS	1.5	2				88	x	x	x		x		**VGT200010**	**VLSI Tech (3706)**	
17672	0.56 *	250	CMOS	1.5	2				112	x	x	x		x		VGT200017	VLSI Tech	
28800	0.56 *	250	CMOS	1.5	2				140	x	x	x		x		VGT200029	VLSI Tech	20
30300	0.35 *	250	CMOS	1	2	1			140	x	x	x		x	Channel-Free Array	**VGT300030**	**VLSI Tech (3706)**	
33800	0.56 *	250	CMOS	1.5	2				152	x	x	x		x		VGT200033	VLSI Tech	
42632	0.56 *	250	CMOS	1.5	2				172	x	x	x		x		**VGT200042**	**VLSI Tech (3706)**	
46200	0.35 *	250	CMOS	1	2	1			172	x	x	x		x	Channel-Free Array	**VGT300046**	**VLSI Tech (3706)**	
56448	0.56 *	250	CMOS	1.5	2				196	x	x	x		x		**VGT200056**	**VLSI Tech (3706)**	25
73728	0.56 *	250	CMOS	1.5	2				224	x	x	x		x		**VGT200073**	**VLSI Tech (3706)**	
77400	0.35 *	250	CMOS	1	2	1			220	x	x	x		x	Channel-Free Array	**VGT300077**	**VLSI Tech (3706)**	
109512	0.56 *	250	CMOS	1.5	2				272	x	x	x		x		**VGT200109**	**VLSI Tech (3706)**	
110300	0.35 *	250	CMOS	1	2	1			260	x	x	x		x	Channel-Free Array	**VGT300110**	**VLSI Tech (3706)**	
145800	0.56 *	250	CMOS	1.5	2				312	x	x	x		x		**VGT200145**	**VLSI Tech (3706)**	30
163800	0.35 *	250	CMOS	1	2	1			316	x	x	x		x	Channel-Free Array	**VGT300163**	**VLSI Tech (3706)**	
180000	0.56 *	250	CMOS	1.5	2				348	x	x	x		x		**VGT200180**	**VLSI Tech (3706)**	
198800	0.35 *	250	Si-Gate CMOS	1	2				348	x				x		**VGT300198**	**VLSI Tech (3706)**	
246500	0.35 *	250	CMOS	1	2	1			388	x	x	x		x	Channel-Free Array	VGT300246	VLSI Tech	
Xilinx																		
1200	3	70	CMOS	1.2	2	1			58	x		x		x	User Programmable	**XC2064**	**◊† Xilinx (3786)**	35
1800	3	70	CMOS	1.2	2	1			74	x		x		x	User Programmable	**XC2018**	**◊† Xilinx (3786)**	
2000	0.6		CMOS	0.8	2				64	x		x		x	Logic Cell Array	**XC4002**	**Xilinx (3782)**	
	3	70	CMOS	1.2	2	1			64	x		x		x	User Programmable	**XC3020**	**◊† Xilinx (3784)**	
3000	0.6		CMOS	0.8	2				80	x		x		x	Logic Cell Array	**XC4003**	**Xilinx (3782)**	
	3	70	CMOS	1.2	2	1			80	x		x		x	User Programmable	**XC3030**	**† Xilinx (3784)**	40
4000	0.6		CMOS	0.8	2				96	x		x		x	Logic Cell Array	**XC4004**	**Xilinx (3782)**	
4200	3	70	CMOS	1.2	2	1			96	x		x		x	User Programmable	**XC3042**	**† Xilinx (3784)**	
5000	0.6		cmos	0.8	2				112	x		x		x	Logic Cell Array	**XC4005**	**Xilinx (3782)**	
6000	0.6		CMOS	0.8	2				128	x		x		x	Logic Cell Array	XC4006	Xilinx	
6400	3	70	CMOS	1.2	2	1			120	x		x		x	User Programmable	**XC3064**	**† Xilinx (3784)**	45
8000	0.6		cmos	0.8	2				144	x		x		x	Logic Cell Array	**XC4008**	**Xilinx (3782)**	
9000	3	70	CMOS	1.2	2	1			144	x		x		x	User Programmable	**XC3090**	**† Xilinx (3784)**	
10000	0.8		CMOS	0.6	2				160	x		x		x	Logic Cell Array	**XC4010**	**Xilinx (3782)**	
13000	0.6		CMOS	0.8	2				192	x		x		x	Logic Cell Array	**XC4013**	**◊ Xilinx (3782)**	

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ASIC/CUSTOM—Linear & Linear/Digital Arrays

Manufacturer / Technology	Total Bonding Pads	Linear: Dedicated Op Amps, A/D, etc.	Linear: Total Other Lin. Components	Digital: Equiv. 2-Input Gates	Digital: Gate Delay ns @ V	Uncommited Transistors NPN	Uncommited Transistors PNP	Number Capacitors	Supply Voltage, V	Comments	Device	Source	Line
AT&T													
CBIC			80	30	2	10	12	3	12		ALA210	AT&T	
	30		109			13	15	3	90		ALA300	AT&T	
	32		436			52	60	12	90		ALA301	AT&T	
	36		480			68	43	21	12		ALA201	AT&T	
	38		434			61	61	7	33		ALA401	AT&T	5
	46		744			104	104	12	33		ALA402	AT&T	
	48		960			136	86	38	12		ALA202	AT&T	
BCDMOS	36		207						350		ALA501	AT&T	
Cherry Semiconductor													
BIP	16		333			60	25		20	Flip-chip	CS2800	Cherry Semi	
	18		325			60	18		20		CS2500G	Cherry Semi	10
	22		299			61	24		20	Photosensor on-chip	CS3500	Cherry Semi	
			479			88	36		20	Micropower	CS3100	Cherry Semi	
			479			88	36		20		CS3200L	Cherry Semi	
	23		522						50	Programmable Bandgap Reference	CS8000	Cherry Semi	
	24		437			96	36		20		CS3000F	Cherry Semi	15
	25		533			142	26		15	LSTTL	CS7600	Cherry Semi	
			695			123	52		20		CS3600	Cherry Semi	
Bipolar	18		232			42	31		5		GENESIS 2200E	◊ Cherry Semi	
	26	2	200	64	50	102	41		5		GENESIS 6000	◊ Cherry Semi	
	28		801			141	52		5		GENESIS 4000M	◊ Cherry Semi	20
	40		1178	70		199	103		5		GENESIS 5000	◊ Cherry Semi	
I^2L	26		490	64	50				12	143 NPN/PNP Transistors	CS1100	Cherry Semi	
	30										CS1500	Cherry Semi	
	40		400	256		200	69		5		GENESIS 1400	◊ Cherry Semi	
Custom Arrays													
BIP	14		96			27	14	1	20	Accepts Macro/Micro Cell Structures	MMA	◊°† CustomArrays	25
	18		175			46	20	1	20	Accepts Macro/Micro Cell Structures	MMB	◊°† CustomArrays	
	20		254			60	30	1	20	Accepts Macro/Micro Cell Structures	MMC	◊°† CustomArrays	
	25		366			78	36	2	20	Accepts Macro/Micro Cell Structures	MMD	◊°† CustomArrays	
	28		479			90	46	2	20	Accepts Macro/Micro Cell Structures	MME	◊°† CustomArrays	
	30		627			116	60	3	20	Accepts Macro/Micro Cell Structures	MMF	◊°† CustomArrays	30
	38		775			134	70	3	20	Accepts Macro/Micro Cell Structures	MMG	◊°† CustomArrays	
	42		925			256	84	3	20	Accepts Macro/Micro Cell Structures	MMH	◊°† CustomArrays	
	46		1073			178	98	3	20	High-Current NPN Transistors	MMJ	◊°† CustomArrays	
Bipolar	16					28	24	4	40	Accepts Macro/Micro Cell Structures	MVA	◊°† CustomArrays	
	20					48	33	4	40	Accepts Macro/Micro Cell Structures	MVC	◊°† CustomArrays	35
	24					66	47	6	40	Accepts Macro/Micro Cell Structures	MVE	◊°† CustomArrays	
	28					80	60	6	40	Accepts Macro/Micro Cell Structures	MVG	◊°† CustomArrays	
	36					120	93	8	40	Accepts Macro/Micro Cell Structures	MVJ	◊°† CustomArrays	
			1200			240	181	8	40	Can be used to >40 V	MV-Family	◊°† CustomArrays	
	49		1350			360	200	3	20	Can be used to >20 V	MM-Family	◊°† CustomArrays	40
ECI Semiconductor													
BIP	14		107			23	8		20		S20C	ECI Semi	
	18		140			38	12		20		S20J	ECI Semi	
			225			71	22		20		S20H	ECI Semi	
			227			59	18		20		S20G	ECI Semi	
	24		277			78	24		20		S20L	ECI Semi	45
			387			94	41		20		S20F	ECI Semi	
	28		562			150	52		20		S20M	ECI Semi	

(Continued)

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ASIC/CUSTOM—Linear & Linear/Digital Arrays (Cont'd)

Manufacturer / Technology	Total Bonding Pads	Linear: Dedicated Op Amps, A/D, etc.	Linear: Total Other Lin. Components	Digital: Equiv. 2-Input Gates	Digital: Gate Delay ns @ V	Uncommited Transistors NPN	Uncommited Transistors PNP	Number Capacitors	Supply Voltage, V	Comments	Device	Source	Line
ECI Semiconductor												(Cont'd)	
Bipolar	14		70			23	8		20		ECIS020C	◊† ECI Semi	
	18		90			38	12		20		ECIS020J	◊† ECI Semi	
			132			71	22		20		ECIS020H	◊† ECI Semi	
	20		150			59	18		20		ECIS020G	◊† ECI Semi	
	24		175			78	24		20		ECIS020L	◊† ECI Semi	5
			252			94	41		20		ECIS020F	◊† ECI Semi	
	28		360			150	52		20		ECIS020M	◊† ECI Semi	
CMOS	22			250	8/15V				18		ECIML50	◊† ECI Semi	
	32		180	140	8/15V				15		ECIMCA	◊† ECI Semi	
	38		360	200	15@5				15		ECIMCB	◊† ECI Semi	10
	44		600	270	8/15V				15		ECIMCC	◊† ECI Semi	
	52		900	440	8/15V				15		ECIMCD	◊† ECI Semi	
	60			630	8/15V				18		ECIFE600	◊† ECI Semi	
	80			800	8/15V				18		ECIFE500	◊† ECI Semi	
Exar													
BIP	14		110			23	8		20	6 Shottky diodes	XR-C100	◊ Exar	15
	16		209			50	16		36		XR-D100	◊ Exar	
			260			60	18		20	15 Shottky diodes	XR-A100	◊ Exar	
			300			69	12		20	16 Shottky diodes	XR-B100	◊ Exar	
	18		200			48	15		20		XR-E100	◊ Exar	
			230			34	16		75	High voltage array	XR-X100	◊ Exar	20
			260			38	12		20		XR-J100	◊ Exar	
			309			60	18		20		XR-G100	◊ Exar	
			401			72	22		20		XR-H100	◊ Exar	
	24					95	43		36	4 JFETs, ion implant resistors	XR-U100	Exar	
			251			80	26		20		XR-L100	◊ Exar	25
			472			97	36		20		XR-F100	◊ Exar	
	28					102	62		20	Ion implant resistors, low noise	XR-CA600	Exar	
			127			127	127	28	26	Transistors are programmable as NPN or PNP	BETA100	Exar	
			539			144	64	8	36	8 JFETs, ion implant resistors	XR-V100	◊ Exar	
			812			148	56		20		XR-M100	Exar	30
	38		218			218	218	38	26	Transistors are programmable as NPN or PNP	BETA180	Exar	
	40		901			224	70		36	8 JFETs, ion implant resistors	XR-W100	Exar	
	48		290			290	290	48	26	Transistors are programmable as NPN or PNP	BETA240	Exar	
I^2L	40		401	256	50/20 μA	45	12		7	18 I/O cells	XR400	Exar	
Gennum													
BIP	14		106			27	9	3	20	Component Array	**LA204**	**Gennum (3428)**	35
	18		177			48	14	3	20	Component Array	**LA202**	**Gennum (3428)**	
	24		224			70	20	4	20	Modula Series Library	**LA253**	**Gennum (3428)**	
			301			85	26	3	20	Component Array	**LA201**	**Gennum (3428)**	
	32		380			116	34	4	20	Modula Series Library	**LA252**	**Gennum (3428)**	
	40		483			152	49	4	20	Modula Series Library	**LA251**	**Gennum (3428)**	40
2 GHz BIP	14		140			116	24	1	15	Array may be doubled-up in one IC	**GA911**	**◊°† Gennum (3428)**	
Holt Integrated Circuits													
3μCMOS	64	48	200	340		4		10	0.3—18		HI5300	◊°† Holt	
Honeywell													
Bipolar	16		140			30		14	5	Replaces DTL, RTL	BDA	Honeywell	
	26		290			164	32	8	5		HABDA	Honeywell	
		Macros				240	82	8	33	JFETS, Thin Film Macrocells for Tiles.	HBA100	◊°† Honeywell	45
	48	Macros		132	20	453	156	18	33	JFETS, Thin Film Macrocells for Tiles.	HBA180	◊°† Honeywell	
TTL	24		280			60		100	5	Replaces TTL	TGA	Honeywell	
Hughes													
2μ	204			25480							HU1125	◊°† Hughes	
Marconi Circuit Technology													
CMOS 2.5 μ	68	2	8	1600	0.9@10				10		MA6005	◊° Marconi	
		8	8	1920	0.9@10				10		MA6003	◊° Marconi	50

(Continued)

[1] Delay conditions: 2-Input NAND driving 2 NANDs (FO = 2), 5V supply, 70°C, worst-case processing.

ASIC/CUSTOM—Linear & Linear/Digital Arrays (Cont'd)

Manufacturer / Technology	Total Bonding Pads	Linear: Dedicated Op Amps, A/D, etc.	Linear: Total Other Lin. Components	Digital: Equiv. 2-Input Gates	Digital: Gate Delay ns @ V	Uncommited Transistors NPN	Uncommited Transistors PNP	Number Capacitors	Supply Voltage, V	Comments	Device	Source	Line
Marconi Circuit Technology CMOS 2.5 μ													
	68											(Cont'd)	
		8	10	1920	0.9@10				10		MA6004 ◊°	Marconi	
		16	10	1920	0.9@10				10		MA6002 ◊°	Marconi	
		20		1920	0.9@10				10		MA6001 ◊°	Marconi	
MCE BIP	14					16	18	2	20	Power array	MCEP20A	MCE	
			109			22	8		20		MCEA20C	MCE	5
			109			62	8		20		MCEA20CS	MCE	
	16		194			50	16		40		MCEA40DS	MCE	
			194			100	16		40		MCEA40D	MCE	
			245			60	28		40		MCEA40AS	MCE	
			259			59	18		20		MCEA20A	MCE	10
			259			59	18		20		MCEA20AS	MCE	
	18		170			38	12		20		MCEA20J	MCE	
			170			38	12		20		MCEA20JS	MCE	
			187			48	15		20		MCEA20E	MCE	
			187			48	15		20		MCEA20ES	MCE	15
			308			60	18		20		MCEA20G	MCE	
			308			60	18		20		MCEA20GS	MCE	
			382			72	22		20		MCEA20H	MCE	
			382			74	22		20		MCEA20HS	MCE	
	20		—			27	12		40	5 op amps, power array	MCEP40A	MCE	20
			218			62	10		40		MCEA40BS	MCE	
	24		301			69	12		20		MCEA20B	MCE	
			301			69	12		20		MCEA20BS	MCE	
			416			80	26		20		MCEA20L	MCE	
			416			80	26		20		MCEA20LS	MCE	25
			437			96	36		20		MCEA20F	MCE	
			437			96	36		20		MCEA20FS	MCE	
			464			96	36		20		MCEA20WS	MCE	
	28					149	56		20		MCEA20M	MCE	
			812			149	56		20		MCEA20MS	MCE	30
Micrel CMOS/DMOS	78	4	180	200		200		2	20–100	CMOS/DMOS High Voltage Array.	MPD8020	Micrel	
Micro Linear BIP	24		926			178	78	8	12	f_t ± 1GHz	FB3610 ◊°†	MicroLinear	
		2	993			173	79	7	12	ft = 1 GHz	FB308	MicroLinear	
	28		1643	50	2	330	82	14	12	f_t ± 1GHz	FB324 ◊°†	MicroLinear	
		2	1426			238	138	10	12	ft = 1 GHz	FB312	MicroLinear	35
	32		564			116	36	4	40	f_t ± 1GHz	FB3410 ◊°†	MicroLinear	
			1348			268	124	12	12	f_t ± 1GHz	FB3620 ◊°†	MicroLinear	
	42	2	1168	142	4	188	108	8	12	ft = 1 GHz	FB330	MicroLinear	
	44	2	1847			307	181	13	12	ft = 1 GHz	FB315	MicroLinear	
	46		2392			424	232	24	12	f_t ± 1GHz	FB3630 ◊°†	MicroLinear	40
NCM Corporation Planar	24					100	39		25		NCM5001Z	NCM	
	28					149	52		25		NCM5002Z	NCM	
NEC Electronics CMOS	54–266	0	18	300 - 20000	0.9	0	0	0	5.5	1.5 μm	CMOS4 ◊°	NEC	
	88–334	0	18	2000 - 45000	0.6	0	0	0	5.5	1.2 μm	CMOS5 ◊°	NEC	
OnChip Systems Analog CMOS													
	24	18	30	108	2.5@10						Linear Array 1	OnChip Sys	45
	30	18	60	128	2.5@10						Linear Array 2	OnChip Sys	
	44	16	88	540	2.5@10						Linear Array 3	OnChip Sys	
	46	46	9	240	2.5@10						Linear Array 4A	OnChip Sys	
	56	92	151	300	2.5@10						Linear Array 5	OnChip Sys	
	64	52	103	930	2.5@10						Linear Array 6	OnChip Sys	50

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ASIC/CUSTOM—Linear & Linear/Digital Arrays (Cont'd)

Manufacturer / Technology	Total Bonding Pads	Linear: Dedicated Op Amps, A/D, etc.	Linear: Total Other Lin. Components	Digital: Equiv. 2-Input Gates	Gate Delay ns @ V	Uncommited Transistors NPN	Uncommited Transistors PNP	Number Capacitors	Supply Voltage, V	Comments	Device	Source	Line
Plessey Semiconductors													
BIP	14		110			22	8		20		MOC	Plessey	
	15		162			27	14	1	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMA	Plessey	
	16		194			50	16		36		MOD	Plessey	
			260			59	18		20		MOA	Plessey	
	18		170			38	12		20		MOJ	Plessey	5
			187			48	15		20		MOE	Plessey	
			314			56	22		20		MOQ	Plessey	
			382			72	22		20		MOH	Plessey	
	19		264			48	20	1	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMB	Plessey	
	20		310			60	18		20		MOG	Plessey	10
	21		378			60	30	1	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMC	Plessey	
	24								20		MOR	Plessey	
			278			81	28		24		BAA1000	Plessey	
			300			69	12		20		MOB	Plessey	
			416			80	26		20		MOL	Plessey	15
			437			96	36		20		MOF	Plessey	
			571			72	57		20		MOP	Plessey	
			572			159	58		24		BAA2000	Plessey	
	26		285	128	40 to 500	150		2	16.5	All arrays have dedicated bandgap reference	ULA 1P	Plessey	
	27		522			80	36	2	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMD	Plessey	20
	28		812			141	56		20		MOM	Plessey	
	30		663			87	46	2	20	Repeat cell structure to facilitate macros and design transfer between arrays	MME	Plessey	
	33		867			116	60	3	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMF	Plessey	
	34		405	338	40 to 500	214		2	16.5	All arrays have dedicated bandgap reference	ULA 3P	Plessey	
	40		1072			182	70		20		MON	Plessey	25
	41		1058			134	70	3	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMG	Plessey	
	42		525	578	40 to 500	278		2	16.5	All arrays have dedicated bandgap reference	ULA 6P	Plessey	
	45		1264			164	84	3	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMH	Plessey	
	49		1455			178	98	3	20	Repeat cell structure to facilitate macros and design transfer between arrays	MMJ	Plessey	
	50		645	882	40 to 500	342		2	16.5	All arrays have dedicated bandgap reference	ULA 9P	Plessey	30
	54		705	1152	40 to 500	374		2	16.5	All arrays have dedicated bandgap reference	ULA 11P	Plessey	
CML	18		530	30	230	199		2	1–5.5	Gate Current 2.4μA	ULA03G	Plessey	
	24		1012	98	230	441		2	1–5.5	Gate Current 2.4μA	ULA1G	Plessey	
	28		1408	162	230	649		2	1–5.5	Gate Current 2.4μA	ULA2G	Plessey	
	32		1868	242	230	897		2	1–5.5	Gate Current 2.4μA	ULA3G	Plessey	35
	36		2392	338	230	1185		2	1–5.5	Gate Current 2.4μA	ULA4G	Plessey	
	40		2980	450	230	1329		2	1–5.5	Gate Current 2.4μA	ULA5G	Plessey	
	44		3632	578	230	1977		2	1–5.5	Gate Current 2.4μA	ULA6G	Plessey	
CMOS	30		602			155	148	84	15		MLB	Plessey	
	42		930	199		414	398	84	15	16 dedicated flip-flops, switched capacitor array	MLA	Plessey	40

[1] Delay conditions: 2-Input NAND driving 2 NANDs (FO = 2), 5V supply, 70°C, worst-case processing.

ASIC/CUSTOM—Linear & Linear/Digital Arrays (Cont'd)

Manufacturer / Technology	Total Bonding Pads	Linear: Dedicated Op Amps, A/D, etc.	Linear: Total Other Lin. Components	Digital: Equiv. 2-Input Gates	Gate Delay ns @ V	Uncommited Transistors NPN	Uncommited Transistors PNP	Number Capacitors	Supply Voltage, V	Comments	Device	Source	Line
Raytheon Semiconductor													
BIP	24		170			49	19		2–32		RLA80	◊† Raytheon	
		12				39	16		±18	Four 100 mA NPN transistors, 148 aluminum feedthroughs, 176 thin-film resistors, dual-layer metal.	RLA120	Raytheon	
	44		312			46	10		2–32		RLA160	Raytheon	
Bipolar	32	10	370			71	29		5	Linear FET Macrocell Array	RFA120	Raytheon	
S-MOS Systems													
CMOS	48			513	2.0				7.0		SLA6050	S-MOS	5
	80			2232	1.0				7.0		SLA7220	S-MOS	
	112			3432	1.0				7.0		SLA7340	S-MOS	
	136			4900	1.0				7.0		SLA7490	S-MOS	
	158			6210	1.0				7.0		SLA7620	S-MOS	
	178			8000	1.0				7.0		SLA7800	S-MOS	10
	196			9250	1.0				7.0		SLA7930	S-MOS	
Sanyo 2μm CMOS													
	32			340	2				3—5.5	Max 16 mA Sink	LC9103B	Sanyo	
	44			588	2				3—5.5	Max 16 mA Sink	LC9105B	Sanyo	
	52			858	2				3—5.5	Max. 16 mA Sink	LC9108B	Sanyo	
	70			1190	2				3—5.5	Max. 8 mA Sink	LC9111A	Sanyo	15
	84			1692	2				3—5.5	Max. 8 mA Sink	LC9116A	Sanyo	
	96			2394	2				3—5.5	Max. 8 mA Sink	LC9123A	Sanyo	
	112			3013	2				3—5.5	Max. 8 mA Sink	LC9130A	Sanyo	
	128			4082	2				3—5.5	Max. 8 mA Sink	LC9140A	Sanyo	
	152			5365	2				3—5.5	Max. 8 mA Sink	LC9153A	Sanyo	20
SGS-THOMSON													
BiP	16		600	54	3	74	60	6	15	Tile Structure	TSFJ04	◊† SGS-Thomson	
	20		919	135	3	107	88	10	15	Tile Structure	TSFJ06	◊† SGS-Thomson	
	24		1554	162	3	235	103	1	15	Tile Structure	TSFJ09	◊† SGS-Thomson	
	28		906			188	28	4	15	Tile Structure	TSK09	◊† SGS-Thomson	
			1964	324	3	267	131	12	15	Tile Structure	TSFJ13	◊† SGS-Thomson	25
	40		906			188	28	4	15		TSK09 Series	SGS-Thomson	
			3067	486	3	403	224	19	15	Tile Structure	TSFJ23	◊† SGS-Thomson	
Sipex-HSD													
Bipolar	24	16	1240			220	220	14	35/20		SP1104	◊°‡ Sipex-HSD	
	40	32	800			244	244	26	35/20		SP1204	◊°‡ Sipex-HSD	
Solitron Devices													
Bipolar									40	Smart-Power Analog Circuit Array	W40M	Solitron	30
STC Semiconductors													
BIP	32		400	125	0.5	368	28		10	Modular Array with user defined resistors and capacitors	VAM400	STC	
	42		384	120	0.3	384			10	Partially Cellular Array with user defined resistors and capacitors	VAS380	STC	
	44		1476	260	0.148 - 0.92	1476			12	Modular array family with user defined resistors, capacitors and gate speed/power	VAE110	◊°† STC	
	62		416	140	0.2	416			10	Partially Cellular Array with user defined resistors and capacitors	VAH500	STC	
	68		2430	600	0.3	2430			10	Cellular Array with user defined resistors and capacitors	VAS2400	STC	35
	74		3456	619	0.148 - 0.92	3456			12		VAE120	◊°† STC	
	104		8136	1555	0.148 - 0.92	8136			12		VAE220	◊°† STC	
	134		13536	2491	0.148 - 0.92	13536			12		VAE230	◊°† STC	
	164		18576	3427	0.148 - 0.92	18576			12		VAE240	◊°† STC	
			21636	4003	0.148 - 0.92	21636			12		VAE330	◊°† STC	40
	194		29736	5515	0.148 - 0.92	29736			12		VAE340	◊°† STC	

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Linear & Linear/Digital Arrays (Cont'd)

Manufacturer Technology	Total Bonding Pads	Linear Dedicated Op Amps, A/D, etc.	Linear Total Other Lin. Components	Digital Equiv. 2-Input Gates	Digital Gate Delay ns @ V	Uncommited Transistors NPN	Uncommited Transistors PNP	Number Capacitors	Supply Voltage, V	Comments	Device	Source	Line
Tektronix													
BIP	16					74	25	4	34	44 Schottky Diodes, $f_t = 8.5$ GHz	QuickChip 6-10	°† Tektronix	
	22		324			78	38	10	32	QuickChip 2 with Schottkys	QuickChip 2K-30	◊† Tektronix	
	24		626			150	82	24	32	Array, ft = 6.5 GHz	QuickChip 2S	◊† Tektronix	
	32					224	100	16	34	104 Schottky Diodes, $f_t = 8.5$ GHz	QuickChip 6-40	°† Tektronix	
	36		966			214	110	20	32	Array, ft = 6.5 GHz	QuickChip 2	◊† Tektronix	5
	44		174			280	146	26	32	QuickChip 2 with Schottkys	QuickChip 2K-130	◊† Tektronix	
	54					600	300	48	34	240 Schottky Diodes, $f_t = 8.5$ GHz	QuickChip 6-120	◊† Tektronix	
	66		1356	300	0.4	294	174	16	32		QuickChip 4	◊† Tektronix	
	70		2136			480	240	72	32	Array, ft = 6.5 GHz	QuickChip 2L	◊† Tektronix	
Bipolar	16		44			74	25	4	34		QUICKCHIP6-10	◊† Tektronix	10
	22		56			78	38	10	32		QUICKCHIP2K-30	◊† Tektronix	
	24					150	82	24	32		QUICKCHIP2S	◊† Tektronix	
	32		104			224	100	16	34		QUICKCHIP6-40	◊† Tektronix	
	44		174			280	146	26	32		QUICKCHIP2K-130	◊† Tektronix	
	54		240			4600	300	48	34		QUICKCHIP6-120	◊† Tektronix	15
	70					480	240	72	32		QUICKCHIP2L	◊† Tektronix	
Universal Semiconductor													
CMOS	62	228	40	660	1.6	x	x	528	18	Silicon Gate	USI6000	◊‡ Universal	

[1] Delay conditions: 2-Input NAND driving 2 NANDs (FO = 2), 5V supply, 70°C, worst-case processing.

ASIC/CUSTOM—Standard Cells

Manufacturer Device Process Technology	Geometry (μm)	Interconnections Metal	Interconnections Poly	Delay 2-Input NAND Gate[1] (ns)	A/D	D/A	Cell Library Includes Op Amp	Core μP	RAM	ROM	PLA	Supply Voltage, V	Comments	Library or Process Name	Source	Line
Advanced Linear Devices																
Si-Gate CMOS	5	1	1		x	x	x					±1 to 6	Standard Cell Analog, other members of cell library available.	CMOS	◊°† AdvLinear	
SiGate CMOS	3	x	x	3			x					2–15	13 Analog STD cells, 38 digital SSI cells	FSK11	◊°† AdvLinear	
		x	x	3			x					2–15	13 Analog STD cells, 38 digital SSI cells	FSK12	◊°† AdvLinear	
SiGateCMOS	5	X	X		X	X	X					±1 to ±6 V	STD Cell Analog, other members of cell library available	SiGateCMOS	◊°† AdvLinear	
Analog Devices LC[2]MOS	3	1	1	3	x	x	x		x	x	x	±5	Mixed analog and digital for 12-bit systems.	**LC2MOS**	**◊°† AD (3265)**	5
AT&T ECL	1.5	3		0.2									ECL 10K, ECL 10 KH, Schottky TTL compatible I/O.	SFOXIL	◊ AT&T	
		3	2	0.08	x	x	x		x				ECL 10K, ECL 10 KH, Schottky TTL compatible I/O.	BEST	◊ AT&T	
Avasem Corp. CMOS	1.25	2	1	0.8		x			x	x	x	5		CELL8	◊°† Avasem	
	1.5	2	1	1		x			x	x	x	5		CELL3	◊°† Avasem	
	2	2	1	1.5	x	x	x	x	x	x	x	5		CELL2	◊°† Avasem	10
		2	2	1.5	x	x	x	x	x	x	x	5		CELL5	◊°† Avasem	
	3	1	1		x	x	x		x	x	x	10		CELL6	◊°† Avasem	
		1	1	2.5	x	x	x		x	x	x	5		CELL1	◊°† Avasem	
		1	2		x	x	x		x	x	x	10		CELL7	◊°† Avasem	
		1	2	2.5	x	x	x		x	x	x	5		CELL4	◊°† Avasem	15
CMOS, Si-gate	1.25	2	1	0.8	x	x	x		x	x		3–5	Multiple Sourcing	MULTI-CELL8	◊°† Avasem	
	1.5	2	1	1	x	x	x	x	x	x		3–5	Multiple Sourcing	MULTI-CELL3	◊°† Avasem	
	2	1	2	1.5	x	x	x		x	x		3–5	Multiple Sourcing	MULTI-CELL9	◊°† Avasem	
		2	1	1.5	x	x	x	x	x	x		3–5	Multiple Sourcing	MULTI-CELL2	◊°† Avasem	
		2	2	1.5	x	x	x		x	x		3–5	Multiple Sourcing	MULTI-CELL6	◊°† Avasem	20
	3	1	2	2.5	x	x	x		x	x		2–10	Multiple Sourcing	MULTI-CELL7	◊°† Avasem	
	5	1	2	7	x	x	x		x	x		3–15	Multiple Sourcing	MULTI-CELL5	Avasem	
Exar CMOS	2	2	2	1	x	x	x					3 to 15	Includes Oscillators, Switched Capacitor Filters and Phase Locked Loops	N2000	Exar	
	3	2		1			x					5	49 Digital Cells, 6 Analog Cells	P3000	Exar	
Fujitsu CMOS, Si-Gate	1.3	2/3	1	0.7				x	x	x	x	5	Cell logic is compatible with the UHB library	STD CELL	Fujitsu	25
GigaBit Logic GaAs	1	2		0.09								–5.2	Custom Foundry Services Available	SC5000	◊°‡ GigaBit	
		3		0.07					x	x		–5.2	ECL, TTL and CMOS Compatible	SC10000	◊°‡ GigaBit	
Gould AMI CMOS	1.0	2	1	.37				x	x	x	x	2.5–5.5	Dual Port Ram, Slew rate Buffers	CYB	◊°† Gould AMI	
	1.25	2	1	.5				x	x	x	x	2.5–5.5	MSI, 7400 Functions, various megacells	CAB	◊°† Gould AMI	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Standard Cells (Cont'd)

Manufacturer Device Process Technology	Geometry (μm)	Interconnections Metal	Interconnections Poly	Delay 2-Input NAND Gate[1] (ns)	Cell Library Includes A/D	D/A	Op Amp	Core μP	RAM	ROM	PLA	Supply Voltage, V	Comments	Library or Process Name	Source	Line
Gould AMI																
CMOS															(Cont'd)	
	1.5 Digital, 3.5 Analog	2	2	.5	x	x	x	x	x	x	x	0–12 OR −6- + 6	Same digital library as 1.25μ process. Parameterized analog building block generator.	ABX	◊°† Gould AMI	
	3	2	2		x	x	x	x	x	x		10 to 30	Mixed Mode (analog and digital process)	**CCI**	**Gould AMI (3444)**	
CMOS, Si-Gate	3	1	1	5			x		x			2.5 to 10		SLM CMOS	† Gould AMI	
Harris Semiconductor																
CMOS	1.5	2	1	0.8	x	x	x	x	x	x	x	5		HSC4000	◊°† Harris	
	2	2	1	0.8				x	x	x		5		HSC1000RH	◊°‡ Harris	5
	3	2	1	2.5	x	x	x		x			16		BiMOS E	◊°† Harris	
CMOS, Si-Gate	3	2	1	<2								2 to 10		CMOS Library	Harris	
CMOS, SOS	3	1	1	4			x					3 to 12		SOS-2 Library	‡ Harris	
	5	1	1	8			x					3 to 12		SOS-1 Library	‡ Harris	
Holt Integrated Circuits																
CMOS	3	1	2	3			x	x	x	x		1.5–15	35 Analog Cells	CB-ASIC	°† Holt	10
		1	2	3	x	x	x		x	x		1.5 to 15	Digital 9 V Maximum, Analog 15 V Maximum	CMOS	◊°† Holt	
Honeywell																
RICMOS	1.2			0.9		x	x	x	x	x		5		RSCL	‡ Honeywell	
Hughes																
CMOS, Si-Gate	2.5											4 to 10		HCMOS Library	† Hughes	
Integrated Circuit Systems																
CMOS, Metal Gate	12	1		30			x			x	x	5–35		CMOS Library	IntCirSys	
		1		30			x			x	x	5–35		CMOS Library	IntCirSys	15
CMOS, Si-Gate	1.2	2	1	0.8–1.2	x	x	x		x	x	x	3–5		CMOS Library2	IntCirSys	
	1.5	2	1	1.2–1.8	x	x	x	x	x	x	x	3–5		CMOS Library2	IntCirSys	
	2μm	2	1	1.5–4	x	x	x	x	x	x	x	4.5–5.5	ICS Custom Libary	CMOS Library	IntCirSys	
	3	2	1	4	x	x	x	x	x	x	x	5	ICS Custom Library	CMOS Library	IntCirSys	
	3.0	1	1	2–3	x	x	x		x	x	x	3–10		CMOS Library2	IntCirSys	20
	5	1	1	10	x	x	x		x			5 to 10	ICS Custom Library	CMOS Library	IntCirSys	
CMOS, SiGate	5.0	1	1	4.6	x	x	x		x	x	x	5–18		CMOS Library2	IntCirSys	
NMOS, Metal-Gate	4.5	1		20				x	x	x	x	5 to 10		NMOS Library	† IntCirSys	
		1		20	x	x	x	x	x	x	x	5 to 10		CMOS Library	IntCirSys	
	5	1	1	20					x	x	x	5 to 10		NMOS Library	† IntCirSys	25
		1	1	20	x	x	x	x	x	x	x	5 to 10		CMOS Library	IntCirSys	
NMOS, Si-Gate	3	1	1	4	x	x	x	x	x	x	x	5	ICS Custom Library	CMOS Library	IntCirSys	
Intel																
CMOS, Si-Gate	2	1	1	1.0				x	x	x	x	5	Currently in Beta sites	CHMOS-1 Library	Intel	
SiGate CMOS	1.5			0.7	x	x	x	x	x	x	x	5		CHMOS III	◊°† Intel	
International Microcircuits																
CMOS, Si-Gate	3	2	1	2	x	x	x		x	x	x	3.5 to 8		CMOS Library	IMI	30

[1] Delay conditions: 2-Input NAND driving 2 NANDs (FO = 2), 5V supply, 70°C, worst-case processing.

ASIC/CUSTOM—Standard Cells (Cont'd)

Manufacturer Device Process Technology	Geometry (μm)	Interconnections Metal	Interconnections Poly	Delay 2-Input NAND Gate[1] (ns)	A/D	D/A	Op Amp	Core μP	RAM	ROM	PLA	Supply Voltage, V	Comments	Library or Process Name	Source	Line
International Microelectronic Products																
CMOS	1.2	2	2						x	x		3,5	TTL Compatible	DCL 1.2	◊ IMP	
		2	2		x	x	x					3,5	Comparators, V. Ref	ACL 1.2	◊ IMP	
		2	2		x	x	x		x	x		3,5		MxCMOS 1.2	◊ IMP	
	2	2	2						x	x		3,5	TTL Compatible	DCL 2	◊ IMP	
		2	2		x	x	x					3,5	Comparators, V. Ref	ACL 2	◊ IMP	5
		2	2		x	x	x		x	x		3,5		MxCMOS 2	◊ IMP	
	3	2	2						x	x		3,5,10	TTL Compatible	DCL 3	◊ IMP	
		2	2		x	x	x					3,5,10	Comparators, V. Ref	ACL 3	◊ IMP	
		2	2		x	x	x		x	x		3,5,10		MxCMOS 3	◊ IMP	
	5	1	2		x	x	x					5,10,18	Comparators, V. Ref	ACL 5	◊ IMP	10
		1	2		x	x	x		x	x		5,10,18		MxCMOS 5	◊ IMP	
LSI Logic																
HCMOS	1.5	2M	1P	0.7				x	x	x		3/6	High Density, High Performance ASIC; RAM and ROM capabilities; up to 100,000 usable gates.	**LCB15**	**LSI Logic (3530)**	
LSI Logic HCMOS	0.7	2	1	0.45				x	x	x		3/6	High DensityDd, high performance ASIC; RAM & ROM capabilities; up to 200K usable gates.	**LCB007**	**◊°† LSI Logic (3530)**	
Marconi Circuit Technology																
CMOS	3	2	2	1.4	x	x	x		x	x		10		MACROMOS I	◊°† Marconi	
CMOS, Si-Gate	3	1	1	3			x		x	x		3 to 8	200°C operation	CELLMOS	† Marconi	15
	5	1	1	8			x		x	x		3 to 10	200°C operation	CELLMOS	† Marconi	
CMOS, SOS	3	1	1	2			x		x	x		3 to 8		CELLSOS	‡ Marconi	
	5	1	1	5			x		x	x		3 to 11		CELLSOS	‡ Marconi	
SOS	2.5	2	1	1.2					x	x		5	Radiation Hardened	MACROSOS I	◊°‡ Marconi	
Micro-Rel																
BIP, J.I., D.I.	8	1										100		High Voltage	‡ Micro-Rel	20
BIP, J.I, D.I	8	1										40	MOS capacitor available, dielectric isolation, 1.3 Kohms/square CrSi resistors	High Voltage	Micro-Rel	
BIP, J.I, D.I.	8	1										20	100Kohms/square CrSi resistors available	Low Voltage	‡ Micro-Rel	
CMOS	3	2	1	2.5	x	x	x					2–10	MOS capacitor available, 1.3 Kohms/square CrSi resistors 200ppm/C° for linear applications.	D3 Library	† Micro-Rel	
	5	1	1	5	x	x	x					2–18	Same as 3μ CMOS	D5 Library	† Micro-Rel	
National Semiconductor																
ASPECT	2	1		0.17					x	x		5		FSA Series	National	25
ASPECT III	0.8	1		0.05					x	x		5		NSA Series	National	
NCM Corporation																
CMOS Metal-Gate	5	1	0	12			x		x	x	x	15		9000	◊°‡ NCM	
CMOS, Si-Gate	3	1	1	3			x		x	x	x	3.5 to 12		4000 Series	NCM	
		1	1	7			x		x	x	x	15		8000/3	◊°‡ NCM	
	5	1	1	12			x		x	x	x	15		8000/5	◊°‡ NCM	30
NCR Microelectronics																
CMOS Si-Gate	1.5	2	1	1.3			x	x	x	x		4.5 to 5.5	DPRAM, ALU, Counter, and Mux Generators	NCRVS1500	NCR	
	2	1 or 2	1	1.5 to 4	x	x	x	x	x	x	x	4.5 to 5.5		NCRVS2000-D	† NCR	

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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ASIC/CUSTOM—Standard Cells (Cont'd)

Manufacturer Device Process Technology	Geometry (μm)	Interconnections Metal	Interconnections Poly	Delay 2-Input NAND Gate[1] (ns)	Cell Library Includes A/D	D/A	Op Amp	Core μP	RAM	ROM	PLA	Supply Voltage, V	Comments	Library or Process Name	Source	Line
NEC Electronics																
CMOS	1.2	3	0	0.56	x	x			x	x		5.5	Up to 60000 Gates	μPD92XXX	◊° NEC	
		3	0	0.56	x	x			x	x		5.5	Up to 60000 Gates	μPD92XXX(SC5)	◊° NEC	
	1.5	2		0.9	x	x			x	x		5		μPD92000	◊° NEC	
		2	0	0.55	x	x			x	x		5	Up to 17,000 Usable Gates	CMOS-4A	◊° NEC	
		2	0	0.9	x	x			x	x		5.5	Up to 20000 Gates	μPD91XXX	◊° NEC	5
		2	0	0.9	x	x			x			5		μPD91000	◊° NEC	
CMOS, SiGate																
	1.5	2	1									4–5		KG30K	°† NEC	
		2	1						x	x		4–5		KG40K	°† NEC	
		2	1		x	x	x		x	x	x	4–5		STD15	◊°† NEC	
	2.0	2	1		x	x	x	x	x	x	x	4–5		STD20	◊°† NEC	10
Newbridge Microsystems																
CMOS	1.2	2	1	0.5				x	x	x	x	5	Rad Hard, VHSIC Compatible	Standard Cell	Newbridge	
	2	1	1	1.5				x	x	x	x	5		CMOS	Newbridge	
	3	1	1	2				x	x	x	x	5		CMOS Library	Newbridge	
CMOS P-Well																
	1.6	4	3.2	0.8				x	x	x	x	5	Dual Metal	DMC1.6	Newbridge	
	2	5	4	1				x	x	x	x	5	Dual Metal	DMC2	Newbridge	15
	2.4	6.4	4.8	1.2				x	x	x		5	Single Metal	SMC2.4	Newbridge	
	3	8	6	1.5				x	x	x		5	Single Metal	SMC3	Newbridge	
OKI Semiconductor																
CMOS	1.2	2	1	0.77				x	x	x	x	5		MSM91U000	◊° OKI	
	1.5	2	1	1.2					x	x	x	5		91V000	◊° OKI	
		2	1	1.32				x	x	x	x	5		MSM91V000	◊° OKI	20
	2	2						x	x	x				MSM91000	OKI	
		2	1	1.7					x	x	x	5		91H000	◊° OKI	
		2	1	1.85				x	x	x	x	5		MSM91H000	◊° OKI	
	3	2						x	x	x				MSM90000	OKI	
Plessey Semiconductors																
CMOS	2	2	1	1.7	x	x			x	x	x	5	RAM, ROM, PLA are software generated	Megacell	Plessey	25
CMOS, Si-Gate																
	2.5	2		1.4	x	x	x	x	x	x	x	3 to 7		CMOS	Plessey	
	5	1	1	6	x	x	x					3 to 7		CMOS	Plessey	
NMOS	5	1		20								5		NMOS	Plessey	
Ricoh																
CMOS, Si-Gate	2	2		2					x	x	x	–0.3 to 7	Full CAD Support System	RSC20	Ricoh	
S-MOS Systems																
CMOS	1.2	2	1	0.6				x	x	x		5		SSC3000	◊° S-MOS	30
	1.8	2	1	0.9					x	x		5		SSC1000	◊° S-MOS	
Sanyo																
Bipolar	2	2	1	2	x	x			x	x	x	3—5.5	48 mA Sink	LC9600	◊ Sanyo	
SGS-THOMSON																
BiCMOS	2	2	2	2	xx	x	x		x	x	x	10	2.5 GHz PNP, 6 GHz NPN E(sup2)PROM	STKMZ000	◊°† SGS-Thomson	
Bipolar, MTL[3]V																
	6	2		25		x	x		x	x		2 to 10		Zodiac	SGS-Thomson	
CMOS	3.5	1	2	6	x	x	x					10		TSGSM	◊°† SGS-Thomson	35
CMOS, Si-Gate																
	2	2	0	1 *				x	x	x	x	3–6	Military 883C processing available.	TSSB Series	SGS-Thomson	
		2	1	7.4	x	x	x					5,10	Analog and Digital	TSGSM Series	SGS-Thomson	
	3	2	0	1.5				x	x	x	x	3–6	Military 883C processing available.	TSSC Series	SGS-Thomson	
HCMOS	1.2	2	1	0.7					x	x	x	5		CB12000	◊°† SGS-Thomson	
Siemens																
CMOS	1	2		0.7					x	x		5		SCOD Advancell	◊° Siemens	40
	1.5	2		1					x	x		5		SCOC Advancell	◊° Siemens	

[1] Delay conditions: 2-Input NAND driving 2 NANDs (FO = 2), 5V supply, 70°C, worst-case processing.

ASIC/CUSTOM—Standard Cells (Cont'd)

Manufacturer Device Process Technology	Geometry (μm)	Interconnections Metal	Interconnections Poly	Delay 2-Input NAND Gate[1] (ns)	A/D	D/A	Cell Library Includes Op Amp	Cell Library Includes Core μP	RAM	ROM	PLA	Supply Voltage, V	Comments	Library or Process Name	Source	Line
Sierra Semiconductor CMOS	1.5	2	2	0.9	x	x	x	x	x	x	x	5	Includes EEPROM	SC80000	◊° Sierra	
	3	2	2	2	x	x	x					10	EEPROM Available	CMOS 3	◊ Sierra	
Silicon Systems Bipolar	3	2	1	0.5			x					12	Mixed signal array; analog and digital	MSA6500	SiliconSys	
CMOS, Si-Gate	3	2	1	3	x	x	x			x		12	Mixed signal array; analog and digital	MSA6700	SiliconSys	
Sipex-HSD Dielectric Isolated	4	2				x	x					35/20		SP1100	◊°† Sipex-HSD	5
Standard Microsystems Corp. CMOS Si-Gate	1.6	2	1	0.9	x	x	x		x	x		4 to 6		Customation 3.1	◊°† SMC	
	2	1	1.5	x	x	x		x	x	x		4 to 6		Customation 3	◊°† SMC	
		2	1	1.5				x	x	x	x	4 to 6		Customation III	SMC	
	3	1	1	2	x	x	x	x	x	x	x	3.5 to 10		Customation II	◊ SMC	
		1	1	2	x	x	x	x	x	x		3 to 11	Library includes digital and analog cells	Customation 2	◊°† SMC	10
STC Semiconductors Bipolar	2	2	1	0.3								5	Ultra High-Speed Bipolar II	Bipolar II	† STC	
CMOS	1.25	2	1	3.5								5		Bipolar II	† STC	
CMOS/Bipolar	2	2	1	3.5								5	Merged Bipolar/CMOS	Bipolar/CMOS	† STC	
Tektronix Bipolar	1.25	4										±15		5H-PL	◊† Tektronix	
	2	7		4			x					±15		5H-3	◊† Tektronix	15
Texas Instruments CMOS	1	2		0.5*			x		x	x	x	5		TSC500 Series	◊°† TI	
Toshiba America Electronic Components CMOS	0.8	2	1	0.33				x	x	x		5	Up to 100K Gates	**TC25SC**	**◊° Toshiba (3687)**	
CMOS, Si-Gate	1	2		0.65					x	x		5	Up to 70K Usable Gates	TC24SC	Toshiba	
TriQuint Semiconductor GaAs	1	2		0.08								−5		QLSI STD-CELL	◊° TriQuint	
Vitesse Semiconductor GaAs E/D MESFET	0.6	3	1	0.12				x	x	x		−2/−5.2	500 to 200,000 Gates; CMOS, TTL, ECL or GaAs I/O	VCB50K	◊°‡ Vitesse	20
	0.6(eff)	4	1	0.05(NOR)				x	x	x		−2		H-GaAs III	◊°‡ Vitesse	
VLSI Technology CMOS	1	2	1	0.35					x	x	x	5	Compilers	VGT300	◊°† VLSI Tech	
		2	1	0.35				x	x	x	x	5	Compilers	VSC300	◊°† VLSI Tech	
	1.0	2	1	0.28				x	x	x	x	5		**VSC350**	**VLSI Tech (3705)**	
		2	1	0.28				x	x	x	x	5		**VSC370**	**VLSI Tech (3705)**	25
	1.5	2	1	0.56				x	x	x	x	5	Compilers	VGT200	◊°† VLSI Tech	
		2	1	0.56				x	x	x	x	5	Compilers	**VSC120**	**◊°† VLSI Tech (3705)**	
	2	2	1	0.93				x	x	x	x	5	Compilers	VGT10	◊° VLSI Tech	
		2	1	0.93				x	x	x	x	5	Compilers	VSC10	◊° VLSI Tech	
	3	2										5	Single Layer Metal Optional	CUSTOM/FOUNDRY	VLSI Tech (Continued)	30

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

ASIC/CUSTOM—Standard Cells (Cont'd)

Manufacturer Device Process Technology	Geometry (μm)	Interconnections Metal	Interconnections Poly	Delay 2-Input NAND Gate[1] (ns)	Cell Library Includes A/D	D/A	Op Amp	Core μP	RAM	ROM	PLA	Supply Voltage, V	Comments	Library or Process Name	Source	Line
VLSI Technology (Cont'd)																
CMOS, Si-Gate																
	3	2	1	5				x	x	x	x	5	Configurable cells	CMOS Library	VLSI Tech	
HCMOS	1.5	2	1						x	x	x	5		CMOS Library	VLSI Tech	
HMOS	2	2										5	Single Layer Metal Optional	CUSTOM/FOUNDRY	VLSI Tech	
	3	1										5		CUSTOM/FOUNDRY	VLSI Tech	
Si-Gate CMOS	1	2		0.45 *								5		VSC320	VLSI Tech	5
Waferscale Integration CMOS	1.2	1	2	0.60				x	x	x	x	3 to 6	Library includes SSI/MSI elements plus CMOS EPROM macro cells.	Modular-Cell	Waferscale	
		2	2	0.85				x	x	x	x	3 to 6	Specializes in large block cells. Also contains EPROM cells.	Modular-Cell	Waferscale	
Western Design Center CMOS	1.5	2	1	1				x				1.8 to 6	W65C02 8-bit static and pseudostatic	W65C02	◊ WDC	
		2	1	1				x				1.8 to 6	W65C816 16-bit static and pseudostatic	W65C816	◊ WDC	
Yamaha Systems CMOS	1.2	2			x	x			x	x		5		F7	Yamaha	10
	1.5	2			x	x			x	x		5		F5	Yamaha	
ZyMOS CMOS, Si-gate	1.2	2	1	0.7								2–5.5		Zy70000	ZyMOS	
	1.5	2	1	0.9								2–5.5		Zy67000	ZyMOS	
	2	2	1	1.4								2–5.5		Zy60000	ZyMOS	

[1] Delay conditions: 2-Input NAND driving 2 NANDs (FO = 2), 5V supply, 70°C, worst-case processing.

IC MASTER

ASIC/CUSTOM—Gate Array Design Automation Tools

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Advanced Micro Devices							
M2018	x	x	x		XACT	AMD	
M2064	x	x	x		XACT	AMD	
Applied Micro Circuits							
ALL			x		AMCC	AMCC	
	x	x		x	CAE-2000	Tek/CAE	
		x			GAWS	Tektronix	5
	x	x		x	IDEASTATION	Mentor	
	x	x		x	LOGICIAN	DAZIX	
	x	x	x	x	MERLYN-G	Tek/CAE	
	x	x		x	SCALD	Valid	
	x	x		x	TEGAS	Calma	10
Q14000 Series	x	x	x	x	ERC-VRC	AMCC	
Q5000 Series	x	x	x	x	ERC-VRC	AMCC	
Exar							
XR-CM SERIES	x	x	x	x	GATEMASTER	DAZIX	
XR-30000 SERIES	x	x	x	x	GATEMASTER	DAZIX	
Fujitsu							
All BiCMOS		x	x	x	LCAD	Fujitsu	15
All CMOS		x	x	x	LCAD	Fujitsu	
All ECL		x	x	x	LCAD	Fujitsu	
All LSTTL		x	x	x	LCAD	Fujitsu	
AU(1.2μ)	x	x			HP	HP	
	x	x			IDEASTATION	Mentor	20
	x	x			LASAR	Teradyne	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid/Sun-SCALD		
						Valid	
	x	x		x	ViewCAD	Fujitsu	
AV(1.8μ)	x	x			HP	HP	25
	x	x			IDEASTATION	Mentor	
	x	x			LASAR	Teradyne	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid/Sun-SCALD		
						Valid	
	x	x		x	ViewCAD	Fujitsu	30
AVM(1.8μ)	x	x			IDEASTATION	Mentor	
	x	x			LASAR	Teradyne	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid/Sun-SCALD		
						Valid	
BiCMOS	x	x			HP	HP	35
	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid/Sun-SCALD		
						Valid	
	x	x		x	ViewCAD	Fujitsu	
B1100	x	x			DASH	Fujitsu	40
	x	x			GATEMASTER	DAZIX	
	x	x			GATESTATION	Mentor	
	x	x	x	x	LCAD	Fujitsu	
	x	x			SCALD	Valid	
ECL	x	x			HP	HP	45
	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid/Sun-SCALD		
						Valid	
	x	x	x	x	ViewCAD	Fujitsu	
LSTTL	x	x			HP	HP	50
	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid	Valid	
UHB(1.5μ)	x	x			HP	HP	
	x	x			IDEASTATION	Mentor	55
	x	x			LASAR	Teradyne	
	x	x			LOGICIAN	DAZIX	
	x	x			Valid/Sun-SCALD		
						Valid	
	x	x		x	ViewCAD	Fujitsu	
Harris Semiconductor							
IGC10000		x	x	x	CADEXEC	Harris	60
IGC20000		x	x	x	CADEXEC	Harris	

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Hitachi							
HD61	x	x	x	x	HITACHI	Hitachi	
	x	x			LOGICIAN	DAZIX	
International Microcircuits							
G4000	x	x	x	x	IMI	IMI	
IMI7000	x	x	x	x	LOGICIAN	DAZIX	65
4000 Series (8 μ)	x	x	x	x	EASYGATE	IMI	
7000 Series (1.5 μ)	x	x	x	x	EASYGATE	IMI	
LSI Logic							
LCA10000	x	x	x	x	MDE	LSI Logic	
LCBI5	x	x	x	x	MDE	LSI Logic	
LRH10000	x	x	x	x	MDE	LSI Logic	70
LRH9000	x				DASH	FutureNet	
	x				DESIGN		
					VERIFIER	LSI Logic	
	x	x	x	x	MDE	LSI Logic	
Marconi Circuit Technology							
MA2000A			x		ARRAY 2	Marconi	
	x				CASS	SilvarLisco	75
		x		x	HILO	GenRad	
	x	x	x	x	IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
MA4000			x		ARRAY 2	Marconi	
	x				CASS	SilvarLisco	80
		x		x	HILO	GenRad	
	x	x	x	x	IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
MA8304			x		ARRAY 1	Marconi	
	x				CASS	SilvarLisco	85
		x		x	HILO	GenRad	
	x	x	x	x	IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
MA9000			x		ARRAY 2	Marconi	
	x				CASS	SilvarLisco	90
		x		x	HILO	GenRad	
	x	x	x	x	IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
MS200A	x	x			SCALD	Valid	
Micro-Rel							
3μ CMOS			x		-	Calma	95
	x	x			-	DAZIX	
5μ CMOS	x			x	-	Cadence	
Mitsubishi Electronics							
ALL	x				DASH	FutureNet	
	x	x		x	IDEASTATION	Mentor	
		x			IKOS	Ikos	100
	x	x			INTERGRAPH	Intergraph	
	x				ORCAD	OrCAD	
		x	x	x	PROPRIETARY	Mitsubishi	
	x	x			SERIES 9000	HP	
	x	x		x	SUN 3-SUN 4	Valid	105
Motorola							
HD6000	x	x	x	x	MIDAS	ControlData	
MCA1200ECL	x	x			CAE-1	PCAD	
	x	x			CAE-2	PCAD	
	x				GATE		
					DESIGNER	Valid	
	x	x	x	x	GATEMASTER	DAZIX	110
	x	x	x	x	WACC	Motorola	
MCA1300ALS	x				CAE-1	PCAD	
	x	x			GATEMASTER	DAZIX	
	x	x	x	x	WACC	Motorola	
MCA2500ECL	x	x			GATEMASTER	DAZIX	115
	x	x			GATESTATION	Mentor	
	x	x	x	x	WACC	Motorola	
MCA2800ALS	x	x			GATEMASTER	DAZIX	
	x	x			GATESTATION	Mentor	
	x	x	x	x	WACC	Motorola	120
MCA500ALS	x				CAE-1	PCAD	
	x				CAE-2	PCAD	

(Continued)

FOR ADDITIONAL INFORMATION ON DESIGN TOOLS SEE DESIGN AUTOMATION SECTION

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ASIC/CUSTOM—Gate Array Design Automation Tools (Cont'd)

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Motorola							
MCA500ALS						(Cont'd)	
	x	x			GATEMASTER	DAZIX	
	x	x	x	x	WACC	Motorola	
MCA600ECL	x	x			CAE-1	PCAD	
	x	x			CAE-2	PCAD	
	x				GATE DESIGNER	Valid	5
	x	x	x	x	GATEMASTER	DAZIX	
	x	x	x	x	WACC	Motorola	
MCA800ECL	x	x			GATEMASTER	DAZIX	
	x	x	x	x	WACC	Motorola	
MC1300ALS	x				CAE-2	PCAD	10
National Semiconductor							
SCX2-WS-D-X	x	x	x	x	GATEMASTER	DAZIX	
SCX2-WS-F-X	x	x			DASH	FutureNet	
SCX2-WS-H-X	x	x		x	HILO	GenRad	
SCX2-WS-M-X	x	x	x	x	GATESTATION	Mentor	
SCX2-WS-S-X			x		MERLYN-G	Tek/CAE	15
SCX2-WS-V-X	x	x	x	x	GATE DESIGNER	Valid	
NCM Corporation							
NCM 300XZ	x	x	x	x	ARIES	Applicon	
NCM 7001XZ	x	x	x	x	ARIES	Applicon	
NEC Electronics							
μPB63xx ECL		x			HILO-VAX/SUN	GenRad	
	x	x		x	IDEASTATION	Mentor	20
	x	x		x	LOGICIAN	DAZIX	
		x			MACH1000	ZyCAD	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	
μPD65xxx CMOS	x	x			DASH/CADAT-PLUS	FutureNet	25
		x			HILO-VAX/SUN	GenRad	
	x	x	x	x	IDEASTATION	Mentor	
	x	x		x	LOGICIAN	DAZIX	
		x			MACH1000	ZyCAD	
		x	x	x	NEC-ACOS	NEC	30
	x	x		x	SCALD	Valid	
	x	x		x	WORKVIEW	ViewLogic	
μPD67xxx BiCMOS		x			HILO-VAX/SUN	GenRad	
	x	x		x	IDEASTATION	Mentor	
	x	x		x	LOGICIAN	DAZIX	35
		x			MACH1000	ZyCAD	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	
	x	x		x	WORKVIEW	ViewLogic	
μPD67XXX BiCMOS		x			HILO-VAX/SUN	GenRad	40
	x	x		x	IDEASTATION	Mentor	
	x	x		x	LOGICIAN	DAZIX	
		x			MACH 1000	ZyCAD	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	45
63XX	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			SCALD	Valid	
65XXX	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	50
	x	x			SCALD	Valid	
Performance Semiconductor Corp.							
CMOS	x	x	x	x	GATEMASTER	DAZIX	
Plessey Semiconductors							
CLA3000	x	x	x	x	CLASSIC	Plessey	
CLA5000	x	x	x	x	CLASSIC	Plessey	
S-MOS Systems							
SLA XXXX		x		x	BRAVO	Applicon	55
	x	x		x	DASH	FutureNet	
	x	x			GATESTATION	Mentor	
	x		x		GDS-II	Calma	
	x	x			LOGICIAN	DAZIX	

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
SGS-THOMSON							
GA-XXXX	x	x			CAE-2000	Tek/CAE	60
	x	x			CT1000/SILOS	CaseTech	
	x	x			GATE DESIGNER	Valid	
	x	x	x	x	GATESTATION	Mentor	
	x	x	x	x	HIGHLAND 2	SGS-Thomson	
	x	x		x	LOGICIAN	DAZIX	65
	x	x			TEGASTATION	Calma	
GB-XXXX	x	x			TEGASTATION	Calma	
GB-XXXXX	x	x			CAE-2000	Tek/CAE	
	x	x			CT1000/SILOS	CaseTech	
	x	x			GATE DESIGNER	Valid	70
	x	x	x	x	GATESTATION	Mentor	
	x	x	x	x	HIGHLAND 2	SGS-Thomson	
	x	x		x	LOGICIAN	DAZIX	
ISB12000	x	x		x	LOGIC WORKBENCH	Valid	
ISB18000	x	x		x	CADAT	Cadam	75
	x	x		x	FRAMEWORK	Mentor	
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	SUN 4	Mentor	
	x	x		x	386i	DAZIX	
ISB9000	x	x		x	FRAMEWORK/CONCERT	Cadence	80
Sony Corporation of America							
SPECL	x	x	x	x	IDEASTATION/GATESTATION	Mentor	
Texas Instruments							
TGC100 Series	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			MEGALOGICIAN	DAZIX	
	x	x			PERSONAL LOGICIAN	DAZIX	85
	x	x			SCALD SYSTEM	Valid	
	x	x			SUN 3/4	Valid	
	x	x			SUN 386i	DAZIX	
TriQuint Semiconductor							
GaAs	x	x		x	CAE-2000	Tek/CAE	
	x	x		x	GATESTATION	DAZIX	90
United Technologies							
UTD		x	x	x	HIGHLAND	UTMC	
	x				IDEASTATION	Mentor	
	x				LOGICIAN	DAZIX	
	x				SCALD	Valid	
Universal Semiconductor							
ISORAD				x	Applicon Graphics	Applicon	95
		x			Berkeley SPICE	UC Berkeley	
	x				FutureNet (Unicad)	Data I/O	
				x	IDEEL	AutoImages	
		x			SILOS	Simulog	
Vitesse Semiconductor							
HS SERIES VSC1500 VSC1520	x	x			DAISY	DAZIX	100
	x	x			IDEA SYSTEM	Mentor	

FOR ADDITIONAL INFORMATION ON DESIGN TOOLS SEE DESIGN AUTOMATION SECTION

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IC MASTER

ASIC/CUSTOM—Linear & Linear/Digital Design Automation Tools

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Custom Arrays							
MM(20V)	x	x	x	x	PC-AT(W/287 + EGA)	CustomArrays	
MM-Family	x	x	x	x	OrCAD	CustomArrays	
MV(40V)	x	x	x	x	PC-AT(W/287 + EGA)	CustomArrays	
MV-Family	x	x	x	x	OrCAD	CustomArrays	
ECI Semiconductor							
BiCMOS	x				DASH	FutureNet	5
				x	MAGIC	FutureNet	
BIPOLAR		x			SPICE	FutureNet	
CMOS		x			CRYSTAL	FutureNet	
			x		MAGIC	FutureNet	
Exar							
LINEAR BIPOLAR							
CUSTOM	x	x	x	x	CHIPMASTER	DAZIX	10
	x	x	x	x	PROPRIETARY	Exar	
LINEAR CMOS							
CUSTOM	x	x	x	x	CHIPMASTER	DAZIX	
	x	x	x	x	PROPRIETARY	Exar	
XR-100	x	x	x	x	GATEMASTER	DAZIX	
	x	x	x	x	PROPRIETARY	Exar	15
XR-400	x	x	x	x	GATEMASTER	DAZIX	
	x	x	x	x	PROPRIETARY	Exar	
Gennum							
LA200	x	x			CADDS-2	Gennum	
	x	x	x	x	CHIPMASTER	DAZIX	
	x	x	x	x	CV	CompVision	20
			x	x	GDS-II	Calma	
	x	x			SCALD	Valid	
LA250	x	x	x	x	APLE860	Applicon	
	x	x	x	x	CHIPMASTER	DAZIX	
	x	x	x	x	CV	CompVision	25
			x	x	GDS-II	Calma	
	x	x			SCALD	Valid	
Harris Semiconductor							
Bipolar Analog							
Semicμstom	x		x		EDGE	Cadence	
		x			SLICE	Harris	
BiMOS E Cμstom	x	x	x	x	FASTRACK	Harris	30
Honeywell							
Bipolar Arrays	x	x	x		IDEA STATION	Mentor	
International Microelectronic Products							
ACL	x	x	x	x	SUN/SCS	SiCompilers	
DCL	x	x	x	x	SUN/SCS	SiCompilers	
MxCMOS	x	x	x	x	SUN/SCS	SiCompilers	
LSI Logic							
CMOS	x	x			CT2000	CaseTech	35
MOS	x	x			CT2000	CaseTech	
Micro Linear							
BIPOLAR/ANALOG	x	x			CT2000	CaseTech	
FB300	x	x			ANALOG WORKBENCH	AnalDesTools	
			x		APLE860	Applicon	
	x	x	x		CHIPMASTER	DAZIX	40
			x		GDS-II	Calma	
	x	x			LINEAR CAD II	MicroLinear	
	x	x			LOGICIAN	DAZIX	
	x	x			PC WORKBENCH	AnalDesTools	
	x	x			PERSONAL LOGICIAN	DAZIX	45
FB3600	x	x			ANALOG WORKBENCH	AnalDesTools	
			x		APLE860	Applicon	
			x		GDS-II	Calma	
	x	x			LINEAR CAD II	MicroLinear	
	x	x			LOGICIAN	DAZIX	50

(Continued)

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Micro Linear							
FB3600						(Cont'd)	
	x	x			PC WORKBENCH	AnalDesTools	
	x	x			PERSONAL LOGICIAN	DAZIX	
FB900	x	x			LINEAR CAD II	MicroLinear	
NEC Electronics							
μPD41xxx	x	x		x	LOGICIAN	DAZIX	
μPD65xxx	x	x	x	x	IDEASTATION	Mentor	55
μPD65XXX	x	x	x	x	IDEASTATION	Mentor	
μPD91XXX	x	x		x	LOGICIAN	DAZIX	
μPD92xxx	x	x		x	CADNETIX	Cadnetix	
	x	x			DASH/CADAT-PLUS	FutureNet	
		x		x	HILO-VAX/SUN	GenRad	60
		x		x	MACH1000	ZyCAD	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	
	x	x		x	WORKVIEW	ViewLogic	
μPD92XXX	x	x			DASH/CADAT-PLUS	FutureNet	65
		x		x	HILO-VAX/SUN	GenRad	
		x		x	MACH 1000	ZyCAD	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	
	x	x		x	WORKVIEW	ViewLogic	70
SGS-THOMSON							
MOS	x	x			CT2000	CaseTech	
Sierra Semiconductor							
CMOS 2μ SC70000	x	x			IDEA	Mentor	
		x			MIXsim	Sierra	
	x	x	x	x	Sierra Custom Design System	Sierra	
1.5μ		x		x	MIXSIM	Sierra	75
2μ		x		x	MIXSIM	Sierra	
United Silicon Structures							
ALL	x	x	x	x	SOLO 1200	United	
Universal Semiconductor							
USI6000				x	DRACULA	ECAD	
	x				FutureNet (Unicad)	Data I/O	
				x	IDEEL	AutoImages	80
		x			PSPICE	Microsim	
		x			SILOS	Simulog	

FOR ADDITIONAL INFORMATION ON DESIGN TOOLS SEE DESIGN AUTOMATION SECTION

Bold face indicates data is provided on the page noted.

ASIC/CUSTOM—Standard Cell Design Automation Tools

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Exar							
A3000 SERIES			x		CAL-MP	SilvarLisco	
				x	DRACULA	ECAD	
		x			HILO	GenRad	
	x				SDS	SilvarLisco	
Fujitsu							
Std Cell(1.2μ)	x	x			GATEMASTER	DAZIX	5
	x	x			IDEASTATION	Mentor	
	x	x			Valid/Sun-SCALD	Valid	
Harris Semiconductor							
HSC	x	x	x	x	Harris Architect	Harris	
	x	x			IDEA Series	Mentor	
	x	x			SCALD	Valid	10
ISC 20000		x	x	x	CADEXEC	Harris	
	x				CAE-1	PCAD	
	x				CAE-2	PCAD	
	x	x	x	x	CELLMASTER	DAZIX	
	x	x	x	x	CELLSTATION	Mentor	15
	x				DASH	FutureNet	
		x			TEGAS	Calma	
	x	x			TEGASTATION	Calma	
Honeywell							
RAD HARD STD CELLS	x	x	x	x	PROPRIETARY	Cadence	
	x	x	x	x	PROPRIETARY	Mentor	20
IC DESIGNS							
2μ CMOS	x				DESEDIT	IC DESIGNS	
			x		MAPCHIP/GENCHIP	IC DESIGNS	
		x			QSIM	IC DESIGNS	
2μCMOS		x			QTIM		
					INTERACTIVE TIMING VERIFIER	IC DESIGNS	
				x	XTR TRANSISTOR NETLIST		
					EXTARCTOR	IC DESIGNS	25
International Microcircuits							
PROPRIETARY	x	x	x	x	3.5u 1 METAL	IMI	
LSI Logic							
ALL	x				CAE-1	PCAD	
	x				CAE-2	PCAD	
	x				DASH	FutureNet	
	x	x			IDEAL	Tek/CAE	30
	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x	x	x	MDE	LSI Logic	
	x	x			SCALD	Valid	
Marconi Circuit Technology							
3μCELLMOS	x		x		CASS/CAL-MP	SilvarLisco	35
		x		x	HILO	GenRad	
	x	x			IDEASTATION	Mentor	
3μCELLSOS	x		x		CASS/CAL-MP	SilvarLisco	
		x		x	HILO	GenRad	
	x	x			IDEASTATION	Mentor	40
	x	x			LOGICIAN	DAZIX	
5μCELLMOS	x		x		CASS/CAL-MP	SilvarLisco	
		x		x	HILO	GenRad	
	x	x			IDEASTATION	Mentor	
5μCELLSOS	x		x		CASS/CAL-MP	SilvarLisco	45
		x		x	HILO	GenRad	
	x	x			IDEASTATION	Mentor	
Micro-Rel							
Bipolar SLM			x			Calma	
		x			HSPICE	MetaSoft	
BiMOS 3μ SLM		x			SILOS	Simucad	50
BiMOS 5μ SLM		x			SILOS	Simucad	
CMOS 3μ DLM	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	

(Continued)

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Micro-Rel						(Cont'd)	
CMOS 5μ DLM	x		x	x	EDGE	Cadence	
Motorola							
2μ 2 METAL	x	x	x	x	CELLSTATION	Mentor	55
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	SCALD	Valid	
3μ 1 METAL	x	x		x	IDEASTATION	Mentor	
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	SCALD	Valid	60
National Semiconductor							
SCX-WS-D-X	x	x	x	x	GATEMASTER	DAZIX	
SCX-WS-F-X	x	x			DASH	FutureNet	
SCX-WS-H-X	x	x		x	HILO	GenRad	
SCX-WS-M-X	x	x	x	x	GATESTATION	Mentor	
SCX-WS-S-X			x		VR SYSTEM	Tek/CAE	65
SCX-WS-V-X	x	x	x	x	GATE DESIGNER	Valid	
NCM Corporation							
300XZ	x	x	x		ARIES	Applicon	
7001ZX	x	x	x		ARIES	Applicon	
NCR Microelectronics							
NCR	x	x		x	NCR	NCR	
2μ 2 METAL	x	x	x	x	CELLSTATION	Mentor	70
	x	x		x	SCALD	Valid	
NEC Electronics							
μPD91xxx 1.5u CMOS	x	x	x	x	IDEASTATION	Mentor	
μPD91XXX 1.5u CMOS	x	x	x	x	IDEASTATION	Mentor	
μPD92xxx 1.2u CMOS	x	x		x	CADNETIX	Cadnetix	
	x	x			DASH/CADAT-PLUS	FutureNet	75
		x			HILO-MACH1000	GenRad	
		x			HILO-VAX	GenRad	
	x	x		x	LOGICIAN	DAZIX	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	80
	x	x		x	WORKVIEW	ViewLogic	
μPD92XXX 1.2u CMOS	x	x		x	CADNETIX	Cadnetix	
	x	x			DASH/CADAT-PLUS	FutureNet	
		x			HILO-MACH 1000	GenRad	
		x			HILO-VAX	GenRad	85
	x	x		x	LOGICIAN	DAZIX	
		x	x	x	NEC-ACOS	NEC	
	x	x		x	SCALD	Valid	
	x	x		x	WORKVIEW	ViewLogic	
SGS-THOMSON							
SA SERIES	x	x			CAE-2000	Tek/CAE	90
	x	x			CT1000/SILOS	CaseTech	
	x	x			GATE DESIGNER	Valid	
	x	x			GATESTATION	Mentor	
	x	x	x	x	HIGHLAND 2	SGS-Thomson	
	x	x			LOGICIAN	DAZIX	95
	x	x			TEGASTATION	Calma	
SB SERIES	x	x			CAE-2000	Tek/CAE	
	x	x			CT1000/SILOS	CaseTech	
	x	x			GATE DESIGNER	Valid	
	x	x			GATESTATION	Mentor	100
	x	x	x	x	HIGHLAND 2	SGS-Thomson	
	x	x			LOGICIAN	DAZIX	
	x	x			TEGASTATION	Calma	
Sierra Semiconductor							
CMOS 2μ SC70000	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	105
		x			MIXsim	Sierra	
	x	x	x	x	Sierra Custom Design System	Sierra	

(Continued)

FOR ADDITIONAL INFORMATION ON DESIGN TOOLS SEE DESIGN AUTOMATION SECTION

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ASIC/CUSTOM—Standard Cell Design Automation Tools (Cont'd)

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Sierra Semiconductor						(Cont'd)	
SC70000	x	x	x	x	IDEASTATION	Mentor	
	x	x	x	x	LOGICIAN	DAZIX	
	x	x	x	x	PROPRIETARY	Sierra	
1.5μ 2 METAL		x		x	MIXSIM	Sierra	
2μ 2 METAL		x		x	MIXSIM	Sierra	5
	x	x			PROPRIETARY	Sierra	
Standard Microsystems Corp.							
CMOS Si-GATE		x			CADAT	HHB-Sys	
			x		CAL-MP	SilvarLisco	
				x	GDS-II	Calma	
	x	x		x	IDEASTATION	Mentor	10
		x		x	LOGICIAN	DAZIX	
		x		x	MEGALOGICIAN	DAZIX	
	x	x		x	SCALD	Valid	
	x	x		x	WORKVIEW	ViewLogic	
CUSTOMATION		x			CADAT	HHB-Sys	15
			x		CAL-MP	SilvarLisco	
	x	x			DASH	FutureNet	
	x	x		x	DRACULA	ECAD	
				x	GDS-II	Calma	
	x	x		x	IDEASTATION	Mentor	20
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	MEGALOGICIAN	DAZIX	
	x	x		x	SCALD	Valid	
			x		TANCELL	Tangent	
				x	TANSURE	Tangent	25
	x	x		x	WORKVIEW	ViewLogic	
1.6μ DLM CMOS	x	x		x	CELL		
					STATION	Mentor	
	x	x			DASH	FutureNet	
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	SCALD		
					SYSTEM	Valid	30
	x	x			WORKVIEW	ViewLogic	
2μ DLM CMOS	x	x		x	CELL		
					STATION	Mentor	
	x	x			DASH	FutureNet	
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	SCALD		
					SYSTEM	Valid	35
	x	x			WORKVIEW	ViewLogic	
3μ SLM CMOS	x	x		x	CELL		
					STATION	Mentor	
	x	x			DASH	FutureNet	
	x	x		x	LOGICIAN	DAZIX	
	x	x		x	SCALD		
					SYSTEM	Valid	40
	x	x			WORKVIEW	ViewLogic	
Texas Instruments							
TSC500 Series	x	x			IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			MEGALOGICIAN	DAZIX	
	x	x			PERSONAL		
					LOGICIAN	DAZIX	45
	x	x			SCALD		
					SYSTEM	Valid	
	x	x			SUN 3/4	Valid	
	x	x			SUN 386i	DAZIX	
	x	x			ValidSIM	Valid	
Vitesse Semiconductor							
VC850K	x	x			DAISY	DAZIX	50
	x	x			IDEA SYSTEM	Mentor	
	x	x			VALIDATION		
					DESIGNER	Valid	
	x	x	x	x	VLSI		
					TECHNOLOGY		
					TOOLS	VLSI Tech	
Waferscale Integration							
ALL	x	x			CAE-1	PCAD	
	x	x	x	x	CASS/CAL-MP	SilvarLisco	55
	x	x	x	x	CELLSTATION	Mentor	
				x	DRACULA	ECAD	
						(Continued)	

Array Source / Device Family	Schematic Entry	Simulation & Timing	Place & Route	Layout Extraction & Re-simulation	Design Tool	Source	Line
Waferscale Integration							
ALL						(Cont'd)	
	x				IDEASTATION	Mentor	
	x	x			LOGICIAN	DAZIX	
	x	x			MEGALOGICIAN	DAZIX	60
	x	x			SCALD	Valid	
			x		TANCELL	Tangent	

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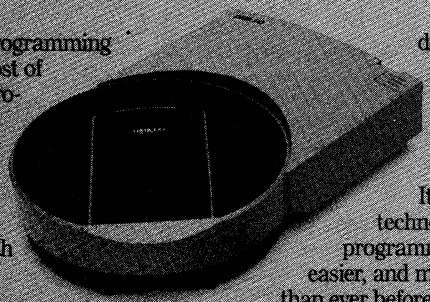

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2116/1390

INTRODUCTION TO PROGRAMMABLE LOGIC DEVICES

Programmable logic devices are listed by major technology families: Bipolar, CMOS, ECL, or GaAs and within them by functional groups in the following order according to output configuration:

COMBINATORIAL OUTPUTS
- One-Time Programmable – Combinatorial Outputs
- Erasable Programmable – Combinatorial Outputs
- Electrically Erasable Programmable – Combinatorial Outputs

REGISTERED OUTPUTS
- One-Time Programmable – Registered Outputs
- Erasable Programmable – Registered Outputs
- Electrically Erasable Programmable – Registered Outputs

REGISTERED/COMBINATORIAL OUTPUTS
- One-Time Programmable– Registered/Combinatorial Outputs
- Erasable Programmable– Registered/Combinatorial Outputs
- Electrically Erasable Programmable – Registered/ Combinatorial Outputs

SUPERSET
- One-Time Programmable – Superset
- Erasable Programmable – Superset
- Electrically Erasable Programmable – Superset

The Superset devices typically have programmable I/O Macrocells that allow one Superset device to replace many different convential programmable logic devices.

Within each of the above categories devices are listed in order of performance.

At the end of this directory, the Programmable Logic Design Automation Tools section provides a listing of PLD development systems.

PROGRAMMABLE LOGIC DEVICES—Bipolar

Max Propagation Delay (ns)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Combinatorial Outputs												
5	16	—	10	2	6	—	180	24	Field Programmable High Speed decoder, 16 inputs, 8 outputs	**PHD16N8-5 ◊†**	**Signetics (3611)**	
	64		10	2	6	180		20		TIBPAL16L8-5 ◊	TI	
				8		180	180	24		PAL16L8-5 ◊	AMD	
			14	2	6	210		24		TIBPAL20L8-5 ◊	TI	
6	8		10		8	180		20		TIBPAD18N8-6 ◊	TI	5
7	16		10		8	180		20		TIBPAD16N8-7 ◊	TI	
7.5	56	—	10	2	6	—	180	20		PAL16L8-7	AMD	
	64	—	10	2	6	—	180	20	Field Programmable Array Logic, 16 inputs, 8 outputs	**PLUS16L8-7 ◊†**	**Signetics (3633)**	
			14	2	6	—	210	24	Field Programmable Array Logic, 20 inputs, 8 outputs	**PLUS20L8-7 ◊†**	**Signetics (3634)**	
				8		210	210	24		PAL20L8-7 ◊	AMD	10
7.7	73	0	36	10	12	420	—	68	Programmable High Speed Decoder	**PHD48N22-7**	**Signetics (3612)**	
10	56	—	10	2	6	—	180	20		PAL16L8D	AMD	
			14	2	6	—	210	24		PAL20L8-10	AMD	
	64	—	9	2	6	—	180	20		PAL16L8D ◊†	National	
			10	2	6	—	180	20	Field Programmable Array Logic, 16 inputs, 8 outputs	**PLUS16L8D ◊†**	**Signetics (3633)**	15
			14	2	6	—	210	24	Field Programmable Array Logic, 20 inputs, 8 outputs	**PLUS20L8D ◊†**	**Signetics (3634)**	
12	42	—	8	—	10	—	200	20	Field Programmable Logic Array, 18 inputs, 10 32-input OR gates, 10 I/O with Polarity Control	PLUS153D ◊†	Signetics	
			12	—	10	—	200	24	Field Programmable Logic Array, 20 inputs, 10 32-input OR gates, 10 I/O with Polarity Control	PLUS173D ◊†	Signetics	
15	40		10	10		105	105	24		AMPAL20L10B ◊	AMD	
	42	—	8	—	10	—	200	20	Field Programmable Logic Array, 18 inputs, 10 32-input OR gates, 10 I/O with Polarity Control	PLUS153B ◊†	Signetics	20
			12	—	10	—	200	24	Field Programmable Logic Array, 20 inputs, 10 32-input OR gates, 10 I/O with Polarity Control	PLUS173B ◊†	Signetics	
	56	—	10	2	6	—	180	20		PAL16L8B	AMD	
			14	2	6	—	210	24		PAL20L8B	AMD	
	64	—	9	2	6	—	180	20		PAL16L8B ◊†	National	
			10	—	8	—	155	20	Field Programmable Logic Array, 18 inputs, 8 8-input OR gates, 8 I/O with Polarity Control	PLHS18P8B ◊†	Signetics	25
				2	6	—	155	20	Field Programmable Array Logic, 16 inputs, 8 outputs	PLHS16L8B ◊†	Signetics	
			14	2	4	—	210	24		PAL20L8B ◊†	National	
										PAL20P8B ◊†	National	
20	64	—	10	—	8	—	155	20	Field Programmable Logic Array, 18 inputs, 8 8-input OR gates, 8 I/O with Polarity Control	PLHS18P8A ◊†	Signetics	
				2	6	—	155	20	Field Programmable Array Logic, 16 inputs, 8 outputs	PLHS16L8A ◊†	Signetics	30
22	24	—	11	2	9	—	155	24	Field Programmable Logic Array, 20 inputs, 22 24-input OR gates, 11 outputs with Polarity Control	PLHS473 ◊†	Signetics	
25	7	—	14	2	6	—	210	24		PAL20L8A	AMD	
	16	—	10	8	—	—	90	20		PAL10H8A ◊†	National	
										PAL10L8A ◊†	National	
			12	6	—	—	90	20		PAL12H6A ◊†	National	35
										PAL12L6A ◊†	National	
			14	4	—	—	90	20		PAL14H4A ◊†	National	
										PAL14L4A ◊†	National	
			16	2	—	—	90	20		PAL16H2A ◊†	National	
										PAL16L2A ◊†	National	40
			20	2	—	—	100	24		PAL20C1A ◊†	National	
										PAL20L2A ◊†	National	

(Continued)

† Military Temperature Range (−55° to 125°C) ‡ High Radiation Resistance *Typical Value •Macrocell ◊ Available in Surface Mount Package

Bold face indicates additional data is provided on the page noted.

PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Propagation Delay (ns)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Combinatorial Outputs (Cont'd)												
25										(Cont'd)		
	20	—	12	10	—	—	100	24		PAL12L10A	◊† National	
			14	8	—	—	100	24		PAL14L8A	◊† National	
			16	6	—	—	100	24		PAL16L6A	◊† National	
			18	4	—	—	100	24		PAL18L4A	◊† National	
	40		10	10		105	105	24		AMPAL20L10AL	◊ AMD	5
	56	—	10	2	6	—	90	20		PAL16L8B-2	AMD	
							180	20		PAL16L8A	AMD	
			14	2	6	—	105	20		PAL20L8B-2	AMD	
	64	—	9	2	6	—	90	20		PAL16L8B2	◊† National	
							180	20		PAL16L8A	◊† National	10
			14	2	4	—	210	24		PAL20L8A	◊† National	
30	16	—	16	1	—	—	90	20		PAL16C1A	◊† National	
	32	0	8	0	10	155	—	20		PLS153A	Signetics	
	40	—	10	—	10	—	165	24	Functionally enhanced. XOR gates. 10 outputs.	PAL20L10A	AMD	
			12	2	8	—	165	24		PAL20L10A	◊† National	15
	42	—	12	—	10	—	170	24	Field Programmable Logic Array, 20 inputs, 10 32-input OR gates, 10 I/O with Polarity Control	PLS173	◊† Signetics	
35	16	—	10	8	—	—	45	20		PAL10H8A2	◊† National	
										PAL10L8A2	◊† National	
							90	20		PAL10H8	◊† National	
										PAL10L8	◊† National	20
			12	6	—	—	45	20		PAL12H6A2	◊† National	
										PAL12L6A2	◊† National	
							90	20		PAL12H6	◊† National	
										PAL12L6	◊† National	
			14	4	—	—	45	20		PAL14H4A2	◊† National	25
										PAL14L4A2	◊† National	
							90	20		PAL14H4	◊† National	
										PAL14L4	◊† National	
			16	1	—	—	90	20		PAL16C1	◊† National	
				2	—	—	45	20		PAL16H2A2	◊† National	30
										PAL16L2A2	◊† National	
							90	20		PAL16H2	◊† National	
										PAL16L2	◊† National	
	24	0	11	2	9	155	—	24		PLHS473S	Signetics	
	56	—	10	2	6	—	55	20		PAL16L8B-4	AMD	35
							90	20		PAL16L8A-2	AMD	
			14	2	6	—	105	24		PAL20L8A-2	AMD	
	64	—	9	2	6	—	90	20		PAL16L8A2	◊† National	
							180	20		PAL16L8	◊† National	
40	16	—	16	1	—	—	45	20		PAL16C1A2	◊† National	40
			20	2	—	—	100	24		PAL20C1	◊† National	
										PAL20L2	◊† National	
	20	—	12	10	—	—	100	24		PAL12L10	◊† National	
			14	8	—	—	100	24		PAL14L8	◊† National	
			16	6	—	—	100	24		PAL16L6	◊† National	45
			18	4	—	—	100	24		PAL18L4	◊† National	
	42	—	8	—	10	—	155	20	Field Programmable Logic Array, 18 inputs, 10 32-input OR gates, 10 I/O with Polarity Control	PLS153	◊† Signetics	
50	40	—	12	2	8	—	165	24		PAL20L10	◊† National	
	48	—	16	8	—	—	170	28	Field Programmable Logic Array, 16 inputs, 8 48-input OR gates, 8 outputs with Polarity Control	PLS100	◊† Signetics	
Erasable Programmable—Combinatorial Outputs												
6.5	64	16	20	16	8			20		**PLHS502**	**Signetics (3636)**	50
12	64	10	29	24	24			20		**PML2552**	**Signetics (3637)**	

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Clock Frequency (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered Outputs Only												
100						190		24	TTL Registered	PAL22V10C	Cypress	
	32 x 18	—	3	12	—	—	425	24	Memory/instruction-based sequencers. Frequency-multiplying phase-locked loop.	AM2971A	AMD	
80						190		24	TTL Registered	PAL22VP10C	Cypress	
74	64	—	8	8	—	—	180	20		PAL16R8-7	AMD	
		8	8	8	—	—	180	20	Field Programmable Array Logic, 16 inputs, 8 registered outputs	**PLUS16R8-7 ◊† (3633)**	**Signetics**	5
							210	24	Field Programmable Array Logic, 20 inputs, 8 registered outputs	**PLUS20R8-7 ◊† (3634)**	**Signetics**	
71	64	8	8	8	—	—	—	20		PAL16R8D ◊	National	
70	32 x 18	—	3	12	—	—	310	24	Memory/instruction-based sequencer. Frequency-multiplying phase-locked loop.	AM2971	AMD	
60.6	64	8	8	8	—	—	180	20	Field Programmable Array Logic, 16 inputs, 8 registered outputs	**PLUS16R8D ◊† (3633)**	**Signetics**	
							210	24	Field Programmable Array Logic, 20 inputs, 8 registered outputs	**PLUS20R8D ◊† (3634)**	**Signetics**	10
58.8	64	—	8	8	—	—	180	20		PAL16R8D	AMD	
56	64	8	8	8	0	220		20	Programmable Logic Array	TIBPAL16R8-12M ◊†	TI	
55.5	56	—	12	8	—	—	210	24		PAL20R8-10	AMD	
55	48	14	16	8	—	—	200	28	Field Programmable Logic Sequencer (Mealy type), 16 inputs, 48 transition terms, 8 registered outputs	PLUS105-55 ◊†	Signetics	
	64	16	15	8	—	—	225	28	Field Programmable Logic Sequencer (Mealy type), 16 inputs, 64 transition terms, 2 clocks, 8 registered outputs	PLUS405-55 ◊†	Signetics	15
50	64	8	8	8	—	—	—	20		PAL16R8B ◊†	National	
					0	220		20	Programmable Logic Array	TIBPAL16R8-15M ◊†	TI	
45	64	16	15	8	—	—	225	28	Field Programmable Logic Sequencer (Mealy type), 16 inputs, 64 transition terms, 2 clocks, 8 registered outputs	**PLUS405-45 ◊† (3638)**	**Signetics**	
41.6	64	8	8	8	0	180		24	Programmable Logic Array	TIBPAL16R8-20M ◊†	TI	
			12	8	0	180		24		TIBPAL20R8-20M ◊†	TI	20
40	48	—	16	8	—	—	200	28	Programmable logic sequencer. PLA structure, complement array.	PLS105-40	AMD	
		14	16	8	—	—	200	28	Field Programmable Logic Sequencer (Mealy type), 16 inputs, 48 transition terms, 8 registered outputs	PLUS105-40 ◊†	Signetics	
	64	8	8	8	—	—	—	20		PAL16R8B2 ◊†	National	
37	64	—	8	8	—	—	180	20		PAL16R8B	AMD	
			12	8	—	—	210	24		PAL20R8B	AMD	25
	74	16	15	8	—	—	225	28	Field Programmable Logic Sequencer (Mealy type), 16 inputs, 64 transition terms, 2 clocks, 8 registered outputs	**PLUS405-37 ◊† (3638)**	**Signetics**	
33.3	64	8	8	8	—	—	—	20		PAL16R8A ◊†	National	
33	48	—	12	4	—	—	160	24	Programmable logic sequencer. PLA structure, complement array.	PLS168-33	AMD	
			16	8	—	—	160	24	Programmable logic sequencer. PLA structure, complement array.	PLS167-33	AMD	
25	64	—	8	8	—	—	90	20		PAL16R8B-2	AMD	30
							180	20		PAL16R8A	AMD	
			12	8	—	—	105	24		PAL20R8B-2	AMD	
							210	24		PAL20R8A	AMD	
		8	8	—	8	—	170	20		PAL16RA8 ◊°†	National	
				8	0	105		20	Programmable Logic Array	TIBPAL16R8-30M ◊†	TI	35
						180		20	Programmable Logic Array	PAL16R8AM ◊†	TI	

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PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Clock Frequency (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered Outputs Only (Cont'd)												
25											(Cont'd)	
	80	10	10	—	10	—	200	24		PAL20RA10	◊°† National	
	120		12	0	10	225		24	Programmable Logic Array	TIBPAL22VP10-25M	◊°† TI	
22.2	40	—	10	10	—	—	180	28	Functionally enhanced. XOR gates. 10 outputs.	PAL20X10A	AMD	
22	120		12	0	10	180		24	Programmable Logic Array	TIBPAL220V10AM	◊°† TI	
20	48	12	14	6	—	—	180	24	Field Programmable Logic Sequencer (Mealy type), 14 inputs, 48 transition terms, 6 registered outputs	PLS167A	◊† Signetics	5
		14	12	8	—	—	180	24	Field Programmable Logic Sequencer (Mealy type), 12 inputs, 48 transition terms, 8 registered outputs	PLS168A	◊† Signetics	
			16	8	—	—	180	28	field Programmable Logic Sequencer (Mealy type), 16 inputs, 48 transition terms, 8 registered outputs	PLS105A	◊† Signetics	
	64	8	8	8	—	—	—	20		PAL16R8 PAL16R8A2	◊† National ◊† National	
16	64	—	8	8	—	—	55 90	20 20		PAL16R8B-4 PAL16R8A-2	AMD AMD	10
			12	8	—	—	105	24		PAL20R8A-2	AMD	
		8	8	8	0	90		20	Programmable Logic Array	PAL16R8A-2M	◊† TI	
13.9	48	12	414	6	—	—	180	24	Field Programmable Logic Sequencer (Mealy Type), 14 inputs, 48 transition terms, 6 registered outputs	PLS167	◊† Signetics	
		14	12	8	—	—	180	24	Field Programmable Logic Sequencer (Mealy type), 14 inputs, 48 transition terms, 6 registered outputs	PLS168	◊† Signetics	15
			16	8	—	—	180	28	Field Programmable Logic Sequencer (Mealy Type), 16 inputs, 48 transition terms, 8 registered outputs	PLS105	◊† Signetics	
Erasable Programmable—Registered Outputs Only												
125			18	8	8	65	45	20	8-Macrocell EPLD	EP330-12	◊ Altera	
100			18	8	8	65	45	20	8-Macrocell EPLD	EP330-15	◊ Altera	
83			20	16	8	90	45	24	16-Macrocell EPLD	EP630-15	◊ Altera	
62.5			20	16	8	90	45	24	16-Macrocell EPLD	EP630-20	◊ Altera	20

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PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs													
5	111	64	4	8			180	180	20		PAL16R4-5	◊ AMD	
			6	8			180	180	20		PAL16R6-5	◊ AMD	
			8	8			180	180	20		PAL16R8-5	◊ AMD	
7	100	64	—	14	2	6	—	210	24		TIBPAL20L8-7C	◊ TI	
			4	12	4	4	—	210	24		TIBPAL20R4-7C	◊ TI	5
			6	12	6	2	—	210	24		TIBPAL20R6-7C	◊ TI	
			8	12	8	—	—	210	24		TIBPAL20R8-7C	◊ TI	
7.5	—	64	—	10	2	6	—	200	20		TIBPAL16L8-7	◊† TI	
				14	2	6	—	210	24		TIBPAL20L8-7	◊† TI	
	45	64	4	12	4	4	—	210	24		TIBPAL20R4-7	◊† TI	10
			6	12	6	2	—	210	24		TIBPAL20R6-7	◊† TI	
			8	12	8	—	—	210	24		TIBPAL20R8-7	◊† TI	
	74	64	—	8	4	4	—	180	20		PAL16R4-7	AMD	
					6	2	—	180	20		PAL16R6-7	AMD	
			4	8	4	4	—	180	20	Field Programmable Array Logic	**PLUS16R4-7**	**◊† Signetics (3633)**	15
				12			210	210	24		PAL20R4-7	◊ AMD	
					4	4	—	210	24	Field Programmable Array Logic	**PLUS20R4-7**	**◊† Signetics (3634)**	
			6	8	6	2	—	180	20	Field Programmable Array Logic	**PLUS16R6-7**	**◊† Signetics (3633)**	
				12			210	210	24		PAL20R6-7	◊ AMD	
			8	12			210	210	24		PAL20R8-7	◊ AMD	20
	100	64	—	10	2	6	—	220	20		TIBPAL16L8-7C	◊ TI	
			4	8	4	4	—	200	20		TIBPAL16R4-7	◊† TI	
								220	20		TIBPAL16R4-7C	◊ TI	
			6	8	6	2	—	200	20		TIBPAL16R6-7	◊† TI	
								220	20		TIBPAL16R6-7C	◊ TI	25
			8	8	8	—	—	200	20		TIBPAL16R8-7	◊† TI	
								220	20		TIBPAL16R8-7C	◊ TI	
10	—	64	—	10	2	6	—	200	20		TIBPAL16L8-10	◊† TI	
	50	97	24	12	8	—	—	210	24	16 internal S/R registers	TIBPLS506	◊°† TI	
											TIBPLS506C	◊ TI	30
	55.5	64	—	12	4	4	—	210	24		PAL20R4-10	AMD	
					6	2	—	210	24		PAL20R6-10	AMD	
	58	80	16	12	8	—	—	210	24	6-bit on-chip counter	TIBPSG507C	◊ TI	
											TIBPSG507M	◊† TI	
	58.8	64	—	8	4	4	—	180	20		PAL16R4D	AMD	35
					6	2	—	180	20		PAL16R6D	AMD	
	60.6	64	4	8	4	4	—	180	20	Field Programmable Array Logic	**PLUS16R4D**	**◊† Signetics (3633)**	
				12	4	4	—	210	24	Field Programmable Array Logic	**PLUS20R4D**	**◊† Signetics (3634)**	
			6	8	6	2	—	180	20	Field Programmable Array Logic	**PLUS16R6D**	**◊† Signetics (3633)**	
				12	6	2	—	210	24	Field Programmable Array Logic	**PLUS20R6D**	**◊† Signetics (3634)**	40
	71	64	4	8	4	4	—	180	20		PAL16R4D	◊† National	
			6	8	6	2	—	180	20		PAL16R6D	◊† National	
		132	10	12		10	180	180	24		PAL22V10-10	◊°† AMD	

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PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

One-Time Programmable—Registered/Combinatorial Outputs (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source
10											(Cont'd)	
	71.4	64	—	10	2	6	—	220	20		TIBPAL16L8-10M	◊† TI
				14	2	6	—	210	24		TIBPAL20L8-10C	◊ TI
											TIBPAL20L8-10M	◊† TI
			4	8	4	4	—	220	20		TIBPAL16R4-10M	◊† TI
				12	4	4	—	210	24		TIBPAL20R4-10C	◊ TI
											TIBPAL20R4-10M	◊† TI
			6	8	6	2	—	220	20		TIBPAL16R6-10M	◊† TI
				12	6	2	—	210	24		TIBPAL20R6-10C	◊ TI
											TIBPAL20R6-10M	◊† TI
			8	8	8	—	—	220	20		TIBPAL16R8-10M	◊† TI
				12	8	—	—	210	24		TIBPAL20R8-10C	◊ TI
	85	64	4	8	4	4	—	200	20		TIBPAL16R4-10	◊† TI
			6	8	6	2	—	200	20		TIBPAL16R6-10	◊† TI
			8	8	8	—	—	200	20		TIBPAL16R8-10	◊† TI
12	—	64	—	10	2	6	—	200	20		TIBPAL16L8-12	◊† TI
	52.6	64	—	14	2	6	—	210	24		TIBPAL20L8-12M	◊† TI
			4	12	4	4	—	210	24		TIBPAL20R4-12M	◊† TI
			6	12	6	2	—	210	24		TIBPAL20R6-12M	◊† TI
	56	64	0	10	2	6		220	20	Programmable Logic Array	TIBPAL16L8-12M	◊† TI
			4	8	4	4		220	20	Programmable Logic Array	TIBPAL16R4-12M	◊† TI
			6	8	6	2		220	20	Programmable Logic Array	TIBPAL16R6-12M	◊† TI
	85	64	4	8	4	4	—	200	20		TIBPAL16R4-12	◊† TI
			6	8	6	2	—	200	20		TIBPAL16R6-12	◊† TI
			8	8	8	—	—	200	20		TIBPAL16R8-12	◊† TI
15	—	64	—	14	2	6	—	180	24		TIBPAL20L8-15	◊† TI
	37	64	—	8	4	4	—	180	20		PAL16R4B	AMD
					6	2	—	180	20		PAL16R6B	AMD
				12	4	4	—	210	24		PAL20R4B	AMD
					6	2	—	210	24		PAL20R6B	AMD
	50	48	12	414	6	—	—	160	24		TIB82S167B	† TI
			414	16	8	—	—	180	28		TIB82S105B	◊† TI
		64	—	10	2	6	—	180	20		TIBPAL16L8-15	◊† TI
			0	10	2	6		220	20	Programmable Logic Array	TIBPAL16L8-15M	◊† TI
			4	8	4	4	—	180	20		PAL16R4B	◊† National
											TIBPAL16R4-15	◊† TI
								220	20	Programmable Logic Array	TIBPAL16R4-15M	◊† TI
				12	4	4	—	180	24		TIBPAL20R4-15	◊† TI
								210	24		PAL20RP4B	◊ National
											PAL20R4B	◊ National

(Continued)

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PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs (Cont'd)													
15	50	64										(Cont'd)	
			6	8	6	2	—	180	20		PAL16R6B	◊† National	
											TIBPAL16R6-15	◊† TI	
								220	20	Programmable Logic Array	TIBPAL16R6-15M	◊† TI	
				12	6	2	—	180	24		TIBPAL20R6-15	◊† TI	
								210	24		PAL20R6B	◊ National	5
			8	8	8	—	—	180	20		TIBPAL16R8-15	◊† TI	
				12	8	—	—	180	24	s+	TIBPAL20R8-15	TI	
								210	24		PAL20RP6B	◊ National	
											PAL20RP8B	◊ National	
											PAL20R8B	◊ National	10
20	30	40	—	10	—	10 macrocells	—	210	24	Asynchronous PAL. Programmable clock.	PAL20RA10-20	AMD	
	33.3	48–96	—	9	4	4 macrocells	—	210	20	Sequencer PAL. 6 buried flip-flops.	AMPAL23S8-20	AMD	
	35	65	10	10	10	—	—	180	24		TIBPAL20X10-20	◊† TI	
		76	—	12	2	8	—	165	24		TIBPAL20L10-20	◊† TI	
			4	10	4	6	—	180	24		TIBPAL20X4-20	◊† TI	15
			8	10	8	2	—	180	24		TIBPAL20X8-20	◊† TI	
	41.5	64	6	12	6	2	—	210	24		TIBPAL20R6-20M	◊† TI	
	41.6	64	0	10	2	6		190	20	Programmable Logic Array	TIBPAL16L8-20M	◊† TI	
				14	2	6		180	24	Programmable Logic Array	TIBPAL20L8-20M	◊† TI	
			4	8	4	4		190	20	Programmable Logic Array	TIBPAL16R4-20M	◊† TI	20
				12	4	4		180	24	Programmable Logic Array	TIBPAL20R4-20M	◊† TI	
			6	8	6	2		190	20	Programmable Logic Array	TIBPAL16R6-20M	◊† TI	
25	—	54	—	16	—	6 macrocells	—	210	24	Asynchronous PAL. Edge activated flip-flops. 48–64 mA IOL.	PAL22IP6-25	AMD	
		64	—	14	2	6	—	105	24		TIBPAL20L8-25	◊† TI	
	25	48–96	—	9	4	4 macrocells	—	210	20	Sequencer PAL. 6 buried flip-flops.	AMPAL23S8-25	AMD	25
		64	—	8	4	4	—	90	20		PAL16R4B-2	AMD	
								180	20		PAL16R4A	AMD	
					6	2	—	90	20		PAL16R6B-2	AMD	
								180	20		PAL16R6A	AMD	
				12	4	4	—	105	24		PAL20R4B-2	AMD	30
								210	24		PAL20R4A	AMD	
					6	2	—	105	24		PAL20R6B-2	AMD	
								210	24		PAL20R6A	AMD	
		80–160	—	12	—	10 macrocells	—	180	24	Sequencer PAL. Buried flip-flops. J-K flip-flops.	PAL32VX10A	AMD	
	33	64	4	12	4	4	—	105	24		TIBPAL20R4-25	◊† TI	35
			6	12	6	2	—	105	24		TIBPAL20R6-25	◊† TI	
			8	12	8	—	—	105	24		TIBPAL20R8-25	◊† TI	
	33.3	64	4	8	4	4	—	180	20		PAL16R4A	◊† National	
				12	4	4	—	210	24		PAL20R4A	◊† National	
			6	8	6	2	—	180	20		PAL16R6A	◊† National	40
				12	6	2	—	210	24		PAL20R6A	◊† National	
			8	12	8	—	—	210	24		PAL20R8A	◊† National	

(Continued)

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PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs (Cont'd)													
25											(Cont'd)		
	40	64	4	8	4	4	—	100	20		PAL16R4B2	◊† National	
			6	8	6	2	—	100	20		PAL16R6B2	◊† National	
	50	64	—	10	2	6	—	100	20		TIBPAL16L8-25	◊† TI	
			4	8	4	4	—	100	20		TIBPAL16R4-25	◊† TI	
			6	8	6	2	—	100	20		TIBPAL16R6-25	◊† TI	5
			8	8	8	—	—	100	20		TIBPAL16R8-25	◊† TI	
30	20	40	—	10	—	10 macrocells	—	210	24	Asynchronous PAL. Programmable clock.	PAL20RA10	AMD	
	22	76	—	12	2	8	—	165	24		TIBPAL20L10-30	◊† TI	
			4	10	4	6	—	180	24		TIBPAL20X4-30	◊† TI	
			8	10	8	2	—	180	24		TIBPAL20X8-30	◊† TI	10
			10	10	10	—	—	180	24		TIBPAL20X10-30	◊† TI	
	22.2	40	—	10	4	6	—	180	28	Functionally enhanced. XOR gates 10 outputs.	PAL20X4A	AMD	
					8	2	—	180	28	Functionally enhanced. XOR gates 10 outputs.	PAL20X8A	AMD	
		80–160	—	12	—	10 macrocells	—	180	24	Sequencer PAL. Buried flip-flops. J-K flip-flops.	PAL32VX10	AMD	
	25	40	4	10	4	6	—	180	24		PAL20X4A	◊† National	15
			8	10	8	2	—	180	24		PAL20X8A	◊† National	
			10	10	10	—	—	180	24		PAL20X10A	◊† National	
		64	0	10	2	6		105	20	Programmable Logic Array	TIBPAL16L8-30M	◊† TI	
								180	20	Programmable Logic Array	PAL16L8AM	◊† TI	
			4	8	4	4		105	20	Programmable Logic Array	TIBPAL16R4-30M	◊† TI	
								180	20	Programmable Logic Array	PAL16R4AM	◊† TI	20
			6	8	6	2		105	20	Programmable Logic Array	TIBPAL16R6-30M	◊† TI	
								180	20	Programmable Logic Array	PAL16R6AM	◊† TI	
	35	32	—	8	—	8 macrocells	—	170	20	Asynchronous PAL. Programmable clock.	PAL16RA8	AMD	
35	16	64	—	8	4	4	—	55	20		PAL16R4B-4	AMD	25
								90	20		PAL16R4A-2	AMD	
					6	2	—	55	20		PAL16R6B-4	AMD	
								90	20		PAL16R6A-2	AMD	
				12	4	4	—	105	24		PAL20R4A-2	AMD	
					6	2	—	105	24		PAL20R6A-2	AMD	30
	18	43	48	4	—	12	—	190	20	Field Programmable Logic Sequencer, 16 inputs, 33 transition terms, 8 registered I/O, 4 I/O with Polarity	PLS159A	◊ Signetics	
	20	64	4	8	4	4	—	180	20		PAL16R4	◊† National	
				48	4	4	—	90	20		PAL16R4A2	◊† National	
			6	8	6	2	—	90	20		PAL16R6A2	◊† National	
								180	20		PAL16R6	◊† National	35
40	16	64	0	10	2	6		90	20	Programmable Logic Array	PAL16L8A-2M	◊† TI	
			4	8	4	4		90	20	Programmable Logic Array	PAL16R4A-2M	◊† TI	
			6	8	6	2		90	20	Programmable Logic Array	PAL16R6A-2M	◊† TI	
	22.2	64	12	12–17		8–12	225	225	28		PLS30S16-40	◊° AMD	

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—Bipolar (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source
One-Time Programmable—Registered/Combinatorial Outputs (Cont'd)												
50	14	43	4	4	—	12	—	190	20	Field Programmable Logic Sequencer, 16 inputs, 33 transition terms, 4 registered I/O, 8 I/O with Polarity	PLS155	◊ Signetics
			6	4	—	12	—	190	20	Field Programmable Logic Sequencer, 16 inputs, 33 transition terms, 6 registered I/O, 6 I/O with Polarity	PLS157	◊ Signetics
	16.7	40	4	10	4	6	—	180	24		PAL20X4	◊† National
			8	10	8	2	—	180	24		PAL20X8	◊† National
			10	10	10	—	—	180	24		PAL20X10	◊† National
One-Time Programmable—Superset												
15	—	64	—	10	—	8	—	180	20	Polarity	AMPAL18P8B	AMD
		80	—	12	—	8	—	180	24	Polarity	AMPAL22P10B	AMD
	50	96–192	—	12	—	8–16	—	180	24	Varied term distribution	PAL22V10-15	AMD
		120	10	12	10	10	—	180	24	Macrocell	TIBPAL22V10-15C	◊ TI
20	35	120	10	12	10	10	—	180	24	Macrocell	TIBPAL22V10-20M	◊† TI
	37	120	10	12	10	10	—	210	24	Enhanced macrocell	TIBPAL22VP10-20	◊°† TI
25	—	64	—	10	—	8	—	90	20	Polarity	AMPAL18P8AL	AMD
								180	20	Polarity	AMPAL18P8A	AMD
		80	—	12	—	10	—	90	24	Polarity	AMPAL22P10AL	AMD
								180	24	Polarity	AMPAL22P10A	AMD
	28	120	10	12	10	10	—	180	24	Macrocell	TIBPAL22V10A	◊°† TI
	28.5	96–192	—	12	—	10	—	180	24	Varied term distribution	AMPAL22V10A	AMD
35	—	64	—	10	—	8	—	90	20	Polarity	AMPAL18P8L	AMD
	18	96–192	—	12	—	10	—	180	24	Varied term distribution	AMPAL22V10	AMD
		120	10	12	10	10	—	180	24	Macrocell	TIBPAL22V10	◊°† TI
											TIBPAL22V10C	◊ TI

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PROGRAMMABLE LOGIC DEVICES—CMOS

Max Propagation Delay (ns)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Deecription	Device	Source	Line
One-Time Programmable—Combinatorial Outputs												
14	40	—	12	2	8	—	70	24		CPL20L10-15NLC	◊ Samsung	
15	40	—	12	2	8	—	45	24		CPL20L10L-15NC	Samsung	
										CPL20L10L-15NLC	◊ Samsung	
							70	24		CPL20L10-15NC	Samsung	
	64	—	10	2	6	—	45	20		CPL16L8L-15NC	Samsung	5
										CPL16L8L-15NLC	◊ Samsung	
							70	20		CPL16L8-15NC	Samsung	
								20		CPL16L8-15NLC	◊ Samsung	
			14	2	6	—	45	24		CPL20L8L-15NC	Samsung	
										CPL20L8L-15NLC	◊ Samsung	10
							70	24		CPL20L8-15NC	Samsung	
				42	6	—	70	24		CPL20L8-15NLC	◊ Samsung	
20	40	—	12	2	8	—	35	24		CPL20L10L-20NC	Samsung	
										CPL20L10L-20NLC	◊ Samsung	
							70	24		CPL20L10-20NC	Samsung	15
										CPL20L10-20NLC	◊ Samsung	
	64	—	10	2	6	—	35	20		CPL16L8L-20NC	Samsung	
										CPL16L8L-20NLC	◊ Samsung	
							70	20		CPL16L8-20NC	Samsung	
										CPL16L8-20NLC	◊ Samsung	20
			14	2	6	—	35	24		CPL20L8L-20NC	Samsung	
										CPL20L8L-20NLC	◊ Samsung	
							70	24		CPL20L8-20NC	Samsung	
										CPL20L8-20NLC	◊ Samsung	
25	40	—	12	2	8	—	35	24		CPL20L10L-25NC	Samsung	25
										CPL20L10L-25NLC	◊ Samsung	
									Meets industrial temperature	CPL20L10L-25NI	Samsung	
							70	24		CPL20L10-25NC	Samsung	
										CPL20L10-25NLC	◊ Samsung	
	64	—	10	2	6	—	35	20		CPL16L8L-25NC	Samsung	30
										CPL16L8L-25NLC	◊ Samsung	
							70	20		CPL16L8-25NC	Samsung	
										CPL16L8-25NLC	◊ Samsung	
				42	6	—	35	20	Meets industrial temperature.	CPL16L8L-25NI	Samsung	
25	64	—	14	2	6	—	35	24		CPL20L8L-25NLC	◊ Samsung	35
25	64	—	14	2	6	—	35	24	Meets industrial temperature.	CPL20L8L-25NI	Samsung	
								35	24	CPL20L8L-25NC	Samsung	
							70	24		CPL20L8-25NLC	◊ Samsung	
								70	24	CPL20L8-25NC	Samsung	
30	40	—	12	2	8	—	35	35		CPL20L10L-30NLC	◊ Samsung	40
							70	24		CPL20L10-30NC	Samsung	
										CPL20L10-30NLC	◊ Samsung	
			412	2	8	—	35	24		CPL20L10L-30NC	Samsung	

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Deecription	Device	Source	Line
One-Time Programmable—Combinatorial Outputs (Cont'd)												
35	64	—	10	2	6	—	35	20		CPL16L8L-35NC CPL16L8L-35NLC	Samsung ◊ Samsung	
							70	20		CPL16L8-35NC CPL16L8-35NLC	Samsung ◊ Samsung	
			14	2	6	—	35	24		CPL20L8L-35NC CPL20L8L-35NLC	Samsung ◊ Samsung	5
							70	24		CPL20L8-35NC CPL20L8-35NLC	Samsung ◊ Samsung	
	74	10	18	8	8			20		PLC18V8Z35	Signetics	
40	74	10	18	8	8			20		PLC18V8ZI	Signetics	10
Erasable Programmable—Combinatorial Outputs												
8			8	10			200	28	Ultra High-Speed State Machine EPLD	CY7C361-125C	◊° Cypress	
10			8	10			150	28	Ultra High-Speed State Machine EPLD	CY7C361-100C	◊° Cypress	
							200	28	Ultra High-Speed State Machine EPLD	CY7C361-100M	Cypress	
12			8	10			150	28	Ultra High-Speed State Machine EPLD	CY7C361-83C CY7C361-83M	◊° Cypress ◊°† Cypress	15
15			8	10			150	28	Ultra High-Speed State Machine EPLD	CY7C361-66C CY7C361-66M	◊° Cypress ◊°† Cypress	
	40	—	12	2	8	—	45	24		CPL20L10L-15WC	Samsung	
	64	—	10	2	6	—	45	20		CPL16L8L-15WC	Samsung	
			14	2	6	—	45	24		CPL20L8L-15WC	Samsung	20
20	40	—	10	2	6	—	70	20		PALC16L8-20	Cypress	
			12	2	8	—	35	24		CPL20L10L-20WC	Samsung	
	64		8		16	200	150	28	32-Macrocell Max EPLD	CY7C344-20C	◊° Cypress	
		—	10	2	6	—	35	20		CPL16L8L-20WC	Samsung	
			14	2	6	—	35	24		CPL20L8L-20WC	Samsung	25
25	40	—	12	2	8	—	35	24		CPL20L10L-25WC	Samsung	
	64		8		16	200	150	28	32-Macrocell Max EPLD	CY7C344-25C	◊° Cypress	
						220	170	28	32-Macrocell Max EPLD	CY7C344-25M	◊°† Cypress	
		—	10	2	6	—	35	20		CPL16L8L-25WC	Samsung	
							70	20		PALC16L8-25	Cypress	30
			14	2	6	—	35	24		CPL20L8L-25WC	Samsung	
30	64	—	10	2	6	—	70	20		PALC16L8-30	Cypress	
	128		8		28	155	100	44	64-Macrocell Max EPLD	CY7C343-30C	◊° Cypress	
	256		8		52	200	310	68	128-Macrocell Max EPLD	CY7C342-30C	◊° Cypress	
35	64		8		16	220	170	28	32-Macrocell Max EPLD	CY7C344-35M	◊°† Cypress	35
		—	10	2	6	—	70	20		PALC16L8-35	Cypress	
	128		8		28	155	100	44	64-Macrocell Max EPLD	CY7C343-35C	◊° Cypress	
						160	120	44	64-Macrocell Max EPLD	CY7C343-35M	◊°† Cypress	
	256		8		52	200	310	68	128-Macrocell Max EPLD	CY7C342-35C	◊° Cypress	
						240	320	68	128-Macrocell Max EPLD	CY7C342-35M	◊°† Cypress	40
40	64	—	10	2	6	—	70	20		PALC16L8-40	Cypress	
	128		8		28	160	120	44	64-Macrocell Max EPLD	CY7C343-40M	◊°† Cypress	

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
Erasable Programmable—Combinatorial Outputs											**(Cont'd)**	
40											(Cont'd)	
	256		8		52	200	310	68	128-Macrocell Max EPLD	CY7C342-40C	◊° Cypress	
						240	320	68	128-Macrocell Max EPLD	CY7C342-40M	◊°† Cypress	
Electrically Erasable Programmable—Combinatorial Outputs												
15	42	—	12	—	10	60	60mA + 0.5mA/MHz	24	FPLA prog AND/ prog OR. Prog polarity	**PEEL173-15**	**ICT (3507)**	
										PEEL273-15	**ICT (3507)**	
						65	98	24	10 Sum Terms PLS 173 Replacement	**PEEL173-15**	◊ **Gould AMI (3442)**	5
									20 Sum Terms PLS173 Superset	**PEEL273-15**	◊ **Gould AMI (3442)**	
30	42	—	8	—	10	65	82	20	10 sum terms. PLS153 replacement.	**PEEL153**	**Gould AMI (3442)**	
									20 sum terms. PLS153 superset.	**PEEL253**	**Gould AMI (3442)**	
			12	—	10	35	35mA + 1mA/MHz	24	FPLA prog AND/ prog OR. Prog polarity	PEEL173-30	ICT	
										PEEL273-30	ICT	10
						65	82	24	10 sum terms. PLS173 replacement.	**PEEL173**	**Gould AMI (3442)**	
									20 sum terms. PLS173 superset.	**PEEL273**	**Gould AMI (3442)**	

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Clock Frequency (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered Outputs Only												
41.6	64	8	8	8	—	—	45	20		CPL16R8L-15NC CPL16R8L-15NLC	Samsung ◊ Samsung	
							70	20		CPL16R8-15NC CPL16R8-15NLC	Samsung ◊ Samsung	
			12	8	—	—	45	24		CPL20R8L-15NC CPL20R8L-15NLC	Samsung ◊ Samsung	5
							70	24		CPL20R8-15NC CPL20R8-15NLC	Samsung ◊ Samsung	
33.3	64	8	8	8	—	—	35	20		CPL16R8L-20NC CPL16R8L-20NLC	Samsung ◊ Samsung	10
							70	20		CPL16R8-20NC CPL16R8-20NLC	Samsung ◊ Samsung	
			12	8	—	—	35	24		CPL20R8L-20NC CPL20R8L-20NLC	Samsung ◊ Samsung	
							70	24		CPL20R8-20NC CPL20R8-20NLC	Samsung ◊ Samsung	15
28.5	64	8	8	8	—	—	35	20		CPL16R8L-25NC CPL16R8L-25NLC	Samsung ◊ Samsung	
									Meets industrial temperature.	CPL16R8L-25NI	Samsung	
							70	20		CPL16R8-25NC CPL16R8-25NLC	Samsung ◊ Samsung	20
			12	8	—	—	35	24		CPL20R8L-25NC CPL20R8L-25NLC	Samsung ◊ Samsung	
									Meets industrial temperature.	CPL20R8L-25NI	Samsung	
							70	24		CPL20R8-25NC CPL20R8-25NLC	Samsung ◊ Samsung	25
18	64	8	8	8	—	—	35	20		CPL16R8L-35NC CPL16R8L-35NLC	Samsung ◊ Samsung	
							70	20		CPL16R8-35NC CPL16R8-35NLC	Samsung ◊ Samsung	30
			12	8	—	—	35	24		CPL20R8L-35NC CPL20R8L-35NLC	Samsung ◊ Samsung	
							70	24		CPL20R8-35NC CPL20R8-35NLC	Samsung ◊ Samsung	
Erasable Programmable—Registered Outputs Only												
50	256	—	—	—	12	30	120	28	Synchronous state machine with 12 I/O macrocells	CY7C330	Cypress	35
41.6	64	8	8	8	—	—	45	20		CPL16R8L-15WC	Samsung	
			12	8	—	—	45	24		CPL20R8L-15WC	Samsung	
33.3	64	8	8	8	—	—	35	20		CPL16R8L-20WC	Samsung	
			12	8	—	—	35	24		CPL20R8L-20WC	Samsung	
30	64 x 32	—	8	16	—	—	115	28	Memory/instruction-based sequencer. Instruction-based with counter and stack.	AM29CPL151H-30	AMD	40
	768	144	8	16	—	60	130	28	Stand-alone microsequencer. Available in OTP version.	EPS448 ◊†	Altera	
28.6	64	8	8	8	—	—	70	20		PALC16R8-25	Cypress	
28.5	64	8	8	8	—	—	35	20		CPL16R8L-25WC	Samsung	
							70	20		PALC16R8-20	Cypress	

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Clock Frequency (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
Erasable Programmable—Registered Outputs Only											**(Cont'd)**	
28.5	64	8	12	8	—	—	35	24		(Cont'd) CPL20R8L-25WC	Samsung	
25	64 x 32	—	8	16	—	—	115	28	Memory/instruction-based sequencer. Instruction-based with counter and stack.	AM29CPL151H-25	AMD	
	512 x 32	—	7	16	—	—	125	28	Memory/instruction-based sequencers. Instruction-based with counter and stack.	AM29CPL154H-25	AMD	
22	64	8	8	8	—	—	70	20		PALC16R8-30	Cypress	
20	192	12	13	—	6	90	180	28	Asynchronous registered EPLD, 20ns, 12 I/O macrocells.	CY7C331	Cypress	5
18	64	8	8	8	—	—	70	20		PALC16R8-35	Cypress	
16.7	68	16	15	8	—	0.1	80	28	CMOS Logic Sequencer (Mealy type), 17 inputs, 64 transition terms, zero power mode, 2 clocks, 8 registered outputs	**PLC415-16** ◊†	**Signetics (3639)**	
16.5	64	8	8	8	—	—	70	20		PALC16R8-40	Cypress	
Electrically Erasable Programmable—Registered Outputs Only												
27	75	22	10	—	10	—	150	24		GAL6001-30L	◊°‡ National	

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs													
5	125	64		10	2	6		180	20		TIBPAL16L8-5 ◊	TI	
				14	2	6		210	24		TIBPAL20L8-5 ◊	TI	
			4	8	4	4		180	20		TIBPAL16R4-5 ◊	TI	
				10	4	4		210	24		TIBPAL20R4-5 ◊	TI	
			6	8	6	2		180	20		TIBPAL16R6-5 ◊	TI	5
				10	6	2		210	24		TIBPAL20R6-5 ◊	TI	
			8	8	8			180	20		TIBPAL16R8-5 ◊	TI	
				10	8			210	24		TIBPAL20R8-5 ◊	TI	
15	41.6	64	4	8	4	4	—	45	20		CPL16R4L-15NC	Samsung	
											CPL16R4L-15NLC ◊	Samsung	10
								70	20		CPL16R4-15NC	Samsung	
											CPL16R4-15NLC ◊	Samsung	
				12	4	4	—	45	24		CPL20R4L-15NC	Samsung	
											CPL20R4L-15NLC ◊	Samsung	
								70	24		CPL20R4-15NC	Samsung	15
				412	4	4	—	70	24		CPL20R4-15NLC ◊	Samsung	
			6	8	6	2	—	45	20		CPL16R6L-15NC	Samsung	
											CPL16R6L-15NLC ◊	Samsung	
								70	20		CPL16R6-15NC	Samsung	
											CPL16R6-15NLC ◊	Samsung	20
				12	6	2	—	45	24		CPL20R6L-15NC	Samsung	
											CPL20R6L-15NLC ◊	Samsung	
								70	24		CPL20R6-15NC	Samsung	
				412	6	2	—	70	24		CPL20R6-15NLC ◊	Samsung	
20	33.3	64	4	8	4	4	—	35	20		CPL16R4L-20NC	Samsung	25
											CPL16R4L-20NLC ◊	Samsung	
								70	20		CPL16R4-20NC	Samsung	
											CPL16R4-20NLC ◊	Samsung	
				12	4	4	—	35	24		CPL20R4L-20NC	Samsung	
											CPL20R4L-20NLC ◊	Samsung	30
								70	24		CPL20R4-20NC	Samsung	
											CPL20R4-20NLC ◊	Samsung	
			6	8	6	2	—	35	20		CPL16R6L-20NLC ◊	Samsung	
								70	20		CPL16R6-20NC	Samsung	
											CPL16R6-20NLC ◊	Samsung	35
					46	2	—	35	20		CPL16R6L-20NC	Samsung	
				12	6	2	—	35	24		CPL20R6L-20NC	Samsung	
											CPL20R6L-20NLC ◊	Samsung	
								70	24		CPL20R6-20NC	Samsung	
											CPL20R6-20NLC ◊	Samsung	40
25	28.5	64	4	8	4	4	—	35	20		CPL16R4L-25NC	Samsung	
											CPL16R4L-25NLC ◊	Samsung	
										Meets industrial temperature.	CPL16R4L-25NI	Samsung	
								70	20		CPL16R4-25NC	Samsung	
											CPL16R4-25NLC ◊	Samsung	45
				12	4	4	—	35	24		CPL20R4L-25NC	Samsung	
											CPL20R4L-25NLC ◊	Samsung	

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs (Cont'd)													
25	28.5	64	4	12	4	4	—	35	24		(Cont'd)		
										Meets industrial temperature.	CPL20R4L-25NI	Samsung	
								70	24		CPL20R4-25NC	Samsung	
											CPL20R4-25NLC ◊	Samsung	
			6	8	6	2	—	35	20		CPL16R6L-25NC	Samsung	
											CPL16R6L-25NLC ◊	Samsung	5
										Meets industrial temperature.	CPL16R6L-25NI	Samsung	
								70	20		CPL16R6-25NC	Samsung	
											CPL16R6-25NLC ◊	Samsung	
				12	6	2	—	35	24		CPL20R6L-25NC	Samsung	
										Meets industrial temperature.	CPL20R6L-25NI	Samsung	10
								70	24		CPL20R6-25NC	Samsung	
											CPL20R6-25NLC ◊	Samsung	
				412	6	2	—	35	24		CPL20R6L-25NLC ◊	Samsung	
35	18	64	4	8	4	4	—	35	20		CPL16R4L-35NC	Samsung	
											CPL16R4L-35NLC ◊	Samsung	15
								70	20		CPL16R4-35NC	Samsung	
											CPL16R4-35NLC ◊	Samsung	
				12	4	4	—	35	24		CPL20R4L-35NC	Samsung	
											CPL20R4L-35NLC ◊	Samsung	
								70	24		CPL20R4-35NC	Samsung	20
			6	8	6	2	—	35	20		CPL16R6L-35NC	Samsung	
											CPL16R6L-35NLC ◊	Samsung	
								70	20		CPL16R6-35NC	Samsung	
											CPL16R6-35NLC ◊	Samsung	
				12	6	2	—	35	24		CPL20R6L-35NC	Samsung	
											CPL20R6L-35NLC ◊	Samsung	25
								70	24		CPL20R6-35NC	Samsung	
			44	12	4	4	—	70	24		CPL20R4-35NLC ◊	Samsung	
Erasable Programmable—Registered/Combinatorial Outputs													
15	41.6	64	4	8	4	4	—	45	20		CPL16R4L-15WC	Samsung	
				12	4	4	—	45	24		CPL20R4L-15WC	Samsung	30
			6	8	6	2	—	45	20		CPL16R6L-15WC	Samsung	
				12	6	2	—	45	24		CPL20R6L-15WC	Samsung	
	43.4	192	—	13	—	12	120	180	28	Registered combinational PLD, 12 I/O macrocells.	CY7C332	Cypress	
	66.6	72	8	10		8		45	20	8 Macrocells, Available in OTP Package	EP330 ◊°	TI	
	85	160	16	8	—	16	120	125	20	MAX EPLD. Available in OTP version.	EPM5016 ◊°†	Altera	35
20	25	192	20	10	—	12	0.15	100	24	Available in OTP version.	EP512 ◊°†	Altera	
	28.5	64	4	8	4	4	—	70	20		PALC16R4-20	Cypress	
			6	8	6	2	—	70	20		PALC16R6-20	Cypress	
	33.3	64	4	8	4	4	—	35	20		CPL16R4L-20WC	Samsung	
				12	4	4	—	35	24		CPL20R4L-20WC	Samsung	40
			6	8	6	2	—	35	20		CPL16R6L-20WC	Samsung	
				12	6	2	—	35	24		CPL20R6L-20WC	Samsung	
	55	160	16	4		16	0.15	100	24	16 Macrocells, Available in OTP Package	EP630 ◊°	TI	
	83	240	24	8		12		100	24	24 Macrocells, Available in OTP Package	EPM6024 ◊°	TI	

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source
Erasable Programmable—Registered/Combinatorial Outputs (Cont'd)												
20	83											(Cont'd)
		320	32	8		16		125	28	32 Macrocells, Available in OTP Package	EPM6032 ◊°	TI
					—	16	120	125	28	MAX EPLD. Available in OTP version.	EPM5032 ◊°†	Altera
25	28	88	8	10	—	8	80	80	24	48ma output drivers	PLX448 ◊°†	PLX Tech
									28	64mA output drivers	PLX464 ◊°†	PLX Tech
	28.5	64	4	8	4	4	—	35	20		CPL16R4L-25WC	Samsung
								70	20		PALC16R4-25	Cypress
				12	4	4	—	35	24		CPL20R4L-25WC	Samsung
			6	8	6	2	—	35	20		CPL16R6L-25WC	Samsung
								70	20		PALC16R6-25	Cypress
				12	6	2	—	35	24		CPL20R6L-25WC	Samsung
	47	160	16	4	—	16	0.1	0–70	24		EP610 ◊†	TI
	48	160	16	4	—	16	0.1	60	24	Available in OTP version.	EP610 ◊°†	Altera
	50	640	64	8	—	28	150	155	40	MAX EPLD. Available in OTP version.	EPM5064 ◊°†	Altera
29	46	72	8	10	—	8	0.15	30	20	Available in OTP version.	EP320 ◊°†	Altera
30	22	64	4	8	4	4	—	70	20		PALC16R4-30	Cypress
			6	8	6	2	—	70	20		PALC16R6-30	Cypress
	41	42	24	12	—	24	0.1	0–70	40		EP910 ◊†	TI
	42	240	24	12	—	24	0.1	80	40	Available in OTP version.	EP910 ◊°†	Altera
	50	1280	128	8	—	28	150	155	40	MAX EPLD. Available in OTP version.	EPM5127 ◊°†	Altera
						52	150	155	68	MAX EPLD. Available in OTP version.	EPM5128 ◊°†	Altera
35	18	64	4	8	4	4	—	70	20		PALC16R4-35	Cypress
			6	8	6	2	—	70	20		PALC16R6-35	Cypress
	30	220	52	8	—	20	100	100	40	BUSTER EPLD. Available in OTP version.	EPB1400 ◊°†	Altera
	36	74	8	10	—	8	30	40	20	Available in OTP version.	EP310 ◊°†	Altera
	40	48	48	16	—	48	0.15	0–70	68		EP1810 ◊†	TI
		480	48	16	—	48	0.15	120	68	Available in OTP version.	EP1810 ◊°†	Altera
40	16.5	64	4	8	4	4	—	70	20		PALC16R4-40	Cypress
			6	8	6	2	—	70	20		PALC16R6-40	Cypress
43	26	160	16	4	—	16	0.15	50	24	Available in OTP version.	EP600 ◊°†	Altera
45	26	240	24	12	—	24	0.1	80	40	Available in OTP version.	EP900 ◊°†	Altera
55	25	64	—	10	2	6	—	70	20		TICPAL16L8-55C	TI
			4	8	4	4	—	79	20		TICPAL16R4-55C	TI
			6	8	6	2	—	70	20		TICPAL16R6-55C	TI
			8	8	8	—	—	70	20		TICPAL16R8-55C	TI
65	21	480	48	16	—	48	0.15	120	68	Available in OTP version.	EP1800 ◊°†	Altera
Electrically Erasable Programmable—Registered/Combinatorial Outputs												
7	100	64	8	8	8	8		115	20		**GAL16V8B-7L ◊°**	**Lattice (3524)**
9	71		24	36	24	24			40	Reprogrammable Flex-Cell Array	**XL78C8240**	**EXEL (3395)**
10	62.5	64	8	12	8	8		115	24		**GAL20V8A-10L ◊°**	**Lattice (3524)**
		74	8	10		8	120	151	20		**PEEL18CV8-10 ◊°**	**Gould AMI (3442)**
15	45.4			22	10		130	130	24	Generic Array Logic	GAL22V10-15LC	National
							150	150	24	Generic Array Logic	GAL22V10-15LI	National
											GAL22V10-15LM †	National
	45.5	64	8	8		8	55	55	20	GAL-Type Device	PALCE16V8Q-15 ◊°	AMD
				12		8	55	55	24	GAL-Type Device	PALCE20V8Q-15 ◊°	AMD
							110	110	24	GAL-Type Device	PALCE20V8H-15 ◊	AMD
	50	64	8	8		8		130	20		**GAL16V8A-15L/883C °†**	**Lattice (3524)**
					8	8		130	20		**GAL16V8A-15L1 ◊°**	**Lattice (3524)**
				12	8	8		130	24		**GAL20V8A-15L1 ◊°**	**Lattice (3524)**
			12	8		8		130	24		**GAL20V8A-15L/883C °†**	**Lattice (3524)**

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
Electrically Erasable Programmable—Registered/Combinatorial Outputs (Cont'd)													
15	50										(Cont'd)		
		80	10	10	10	10		100	24		**GAL20RA10-15L** ◊°	**Lattice (3524)**	
		92	10	12		10	105	130	24		**PEEL20CG10-15** ◊°	**Gould AMI (3442)**	
		132	10	12		10	105	130	24		**PEEL22CV10-15** ◊°	**Gould AMI (3442)**	
										200mA Zero Power 22V10	**PEEL22CV10Z-15** ◊°	**Gould AMI (3442)**	
	62.5	84	10	8		10		115	20		**GAL18V10-15L** ◊°	**Lattice (3524)**	5
		108	12	14		12		130	28		**GAL26CV12-15L** ◊°	**Lattice (3524)**	
20	33.3			22	10		130	130	24	Generic Array Logic	GAL22V10-20LC	National	
							150	150	24	Generic Array Logic	GAL22V10-20LI	National	
											GAL22V10-20LM †	National	
		132	10	12		10		150	24		**GAL22V10-20L/883C** °†	**Lattice (3524)**	10
	40	148	12	14		12	105	105	28	28-pin 22V10	PALCE26V12H-20 ◊°	AMD	
	41.6	64	8	8		8		90	24		**iSPGAL16Z8-20L** ◊°	**Lattice (3524)**	
								130	20		**GAL16V8A-20L/883C** °†	**Lattice (3524)**	
			12	8		8		130	24		**GAL20V8A-20L/883C** °†	**Lattice (3524)**	
	41.7	64	8	8	8	8		65	20		**GAL16V8A-20Q/883C** ◊°†	**Lattice (3524)**	15
											GAL16V8A-20QM ◊°†	**Lattice (3524)**	
											GAL16V8A-20Q1 ◊°	**Lattice (3524)**	
								130	20		**GAL16V8A-20L1** ◊°	**Lattice (3524)**	
				12	8	8		65	24		**GAL20V8A-20Q/883C** ◊°†	**Lattice (3524)**	
											GAL20V8A-20QM ◊°†	**Lattice (3524)**	20
											GAL20V8A-20Q1 ◊°	**Lattice (3524)**	
								130	24		**GAL20V8A-20L1** ◊°	**Lattice (3524)**	
		80	10	10	10	10		100	24		**GAL20RA10-20L** ◊°	**Lattice (3524)**	
								120	24		**GAL20RA10-20L/883C** ◊°†	**Lattice (3524)**	
											GAL20RA10-20LI ◊°	**Lattice (3524)**	25
											GAL20RA10-20LM ◊°†	**Lattice (3524)**	
	50	122	10	12	10	10		150	24		**GAL22V10-20LI** ◊°	**Lattice (3524)**	
		132	10	12		10		150	24		**GAL22V10-20L** ◊°	**Lattice (3524)**	
	62.5	84	10	8		10		115	20		**GAL18V10-20L** ◊°	**Lattice (3524)**	
					10	10		125	20		**GAL18V10-20LI** ◊°	**Lattice (3524)**	30
		108	12	14		12		130	28		**GAL26CV12-20L** ◊°	**Lattice (3524)**	
					12	12		150	28		**GAL26CV12-20LI** ◊°	**Lattice (3524)**	
23	50	84	40	2	—	20	100	100mA + 0.5mA/MHz	24	High density logic array. Approx. 1200-equiv gates.	**PA7024** ◊°	**ICT (3508)**	
		124	48	14	—	24	150	150mA + 0.5mA/MHz	24	High density logic array. Approx. 1700-equiv. gates	**PA7040** ◊°	**ICT (3508)**	
25	28.5			22	10		130	130	24	Generic Array Logic	GAL22V10-25LC	National	35
							150	150	24	Generic Array Logic	GAL22V10-25LI	National	
											GAL22V10-25LM †	National	
	33.3	64	8	8		8		90	24		**iSPGAL16Z8-25L** ◊°	**Lattice (3524)**	
					8	8		130	20		**GAL16V8A-25L1** ◊°	**Lattice (3524)**	
				12	8	8		130	24		**GAL20V8A-25L1** ◊°	**Lattice (3524)**	40

(Continued)

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source
Electrically Erasable Programmable—Registered/Combinatorial Outputs (Cont'd)												
25	33.3											(Cont'd)
		64–192	—	5	—	16 macrocells						
							—	100	24	Asynchronous PAL. Programmable clock. Advanced I/O macrocell.	PALCE29MA16H-25	AMD
		148	12	14		12	105	105	28	28-pin 22V10	PALCE26V12H-25 ◊°	AMD
	37	64	8	12		8	55	55	24	GAL-Type Device	PALCE20V8Q-25 ◊°	AMD
							110	110	24	GAL-Type Device	PALCE20V8H-25 ◊	AMD
	45.5		44	8	16		115	115	28	Instruction-based Microcontroller	AM29CPL151H-25 ◊	AMD
			54	7	16		125	125	28	Instruction-based Microcontroller	AM29CPL154H-25 ◊	AMD
		64	8	8		8	55	55	20	GAL-Type Device	PALCE16V8Q-25 ◊°	AMD
30	22.2			22	10		130	130	24	Generic Array Logic	GAL22V10-30LC	National
							150	150	24	Generic Array Logic	GAL22V10-30LI	National
											GAL22V10-30LM †	National
	25	132	10	12		10		150	24		**GAL22V10-30L/883C °† Lattice (3524)**	
	33.3		54	7	16		125	125	28	Instruction-based Microcontroller	AM29CPL154H-30 ◊	AMD
		64	8	8		8		130	20		**GAL16V8A-30L/883C °† Lattice (3524)**	
			12	8		8		130	24		**GAL20V8A-30L/883C °† Lattice (3524)**	
33	30		444	8	16		115	115	28	Instruction-based Microcontroller	AM29CPL151H-33 ◊	AMD
35	25	64–192	—	5	—	16 macrocells						
							—	100	24	Asynchronous PAL. Programmable clock. Advanced I/O macrocell.	PALCE29MA16H-35	AMD
	27	75	18	10		10		150	24		**GAL6001-35 ◊° Lattice (3524)**	
60	12	41	8	9	0	9	0.04	25	20		TC9800 ◊°	Toshiba
											TC9801 ◊°	Toshiba
One-Time Programmable—Superset												
12	100	64	8	10	0	8	65	65	20	8 Macrocell EPLD	EP330 ◊°‡	Altera
15	66	96–192	—	12	—	10	—	90	24	Varied term distribution	PALC22V10-15	Cypress
	83	160	16	4	0	16	0.15	90	24	16 Macrocell Zero-power EPLD	EP630 ◊°‡	Altera
	83.3	132	10	12	0	10	90	90	24	Varied Term Distribution	AT22V10-15 ◊°	ATMEL
20	50	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22VIOL-20 †	ATMEL
		480	48	16	0	48	0.15	180	68	48 Macrocell Zero-power EPLD	EP1830 ◊°‡	Altera
	50.0	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22V10L-20 ◊°†	ATMEL
							55	55	24	Varied Term Distribution	AT22V10-20 ◊°†	ATMEL
	55	171	20	12	0	10	12	120	24	750 gate EPLD	ATV750L-20 ◊°	ATMEL
							120	120	24	750 gate EPLD	ATV750-20 ◊°†	ATMEL
25	33.3	132	10	12	—	10	—	55	24		CPL22V10L-25NC	Samsung
											CPL22V10L-25NLC ◊	Samsung
								90	24		CPL22V10-25NC	Samsung
											CPL22V10-25NLC ◊	Samsung
	40	416	48	14	0	24	120	120	40	2500 gate EPLD	ATV2500H-25 ◊°†	ATMEL
	41.6	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22V10L-25 ◊°†	ATMEL
							55	55	24	Varied Term Distribution	AT22V10-25 ◊°†	ATMEL
											AT22V10-25 ◊°†	ATMEL

(Continued)

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Superset (Cont'd)													
25												(Cont'd)	
	45	171	20	12	0	10	12	120	24	750 gate EPLD	ATV750L-25	◊°† ATMEL	
							120	120	24	750 gate EPLD	ATV750-25	◊°† ATMEL	
	50	120	10	12	10	10	0.1	2ma/MHz	24	CMOS Macrocell	TICPAL22V10Z-25C	◊ TI	
		1152	128	20	0	64	225	250	100	128 Macrocell Max EPLD	EPM5130	◊°‡ Altera	
		1216	128	8	0	52	40	40	68	5000 gate EPLD	ATV5000-25	◊° ATMEL	5
		1728	192	8	0	64	275	300	84	192 Macrocell Max EPLD	EPM5192	◊°‡ Altera	
30	33	416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-30	◊° ATMEL	
							120	120	40	2500 gate EPLD	ATV2500H-30	◊°† ATMEL	
	33.3	132	10	12	0	10	15	55	24	Varied Term Distribution	AT22V10L-30	◊°† ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-30	◊°† ATMEL	10
	40	171	20	12	0	10	12	120	24	750 gate EPLD	ATV750L-30	◊°† ATMEL	
						12	120	120	24	750 gate EPLD	ATV750-30	◊°† ATMEL	
		1216	128	8	0	52	40	40	68	5000 gate EPLD	ATV5000-30	◊°† ATMEL	
35	18	132	10	12	—	10	—	55	24		CPL22V10L-35NC	Samsung	
											CPL22V10L-35NLC	◊ Samsung	15
								90	24		CPL22V10	Samsung	
											CPL22V10-35NLC	◊ Samsung	
	28	416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-35	◊°† ATMEL	
							120	120	40	2500 gate EPLD	ATV2500H-35	◊°† ATMEL	
	33	120	10	12	10	10	0.1	2ma/MHz	24	CMOS Macrocell	TICPAL22V10Z-35C	◊ TI	20
	33.3	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22V10L-35	◊° ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-35	◊° ATMEL	
	35	1216	128	8	0	52	40	40	68	5000 gate EPLD	ATV5000-35	◊°† ATMEL	
40	22	132	10	12	0	10	15	55	24	Varied Term Distribution	AT22V10L-40	◊°† ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-40	◊°† ATMEL	25
	25	416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-40	◊°† ATMEL	
	28	171	20	12	0	10	120	120	24	750 gate EPLD	ATV750-40	◊°† ATMEL	
45	22	416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-45	◊°† ATMEL	
Erasable Programmable—Superset													
									430		ATV2500-30	ATMEL	
12	45.5	8	—	—	—	—	—	80	20	Replaces: 10H8, 12H6, 14H4, 16H2, 10L8, 12L6, 14L4, 16L2, 10P8, 12P6, 14P4, 16P2, 16H8, 16L8, 16P8, 16R8, 16R6, 16R4, 16RP8, 16RP6, 16RP4, 18P8, 16V8	PLDC18G8-12	Cypress	30
	100	64	8	10	0	8	65	65	20	8 Macrocell EPLD	EP330	◊°‡ Altera	
15	41.6	8	—	—	—	—	—	80	20	Replaces: 10H8, 12H6, 14H4, 16H2, 10L8, 12L6, 14L4, 16L2, 10P8, 12P6, 14P4, 16P2, 16H8, 16L8, 16P8, 16R8, 16R6, 16R4, 16RP8, 16RP6, 16RP4, 18P8, 16V8	PLDC18G8-15	† Cypress	
	45.4	—	—	—	—	—	—	70	24	Replaces: 20L10, 20L8, 20R8, 20R6, 20R4, 12L10, 14L8, 16L6, 18L4, 20L2, 20V8	PLDC20G10-15	Cypress	
	50	96–192	—	12	—	10	—	90	24	Varied term distribution	PALC22V10-15	Cypress	

(Continued)

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Erasable Programmable—Superset (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
15												(Cont'd)	
	83	160	16	4	0	16	0.15	90	24	16 Macrocell Zero-power EPLD	EP630 ◊°‡	Altera	
	83.3	132	10	12	0	10	90	90	24	Varied Term Distribution	AT22V10-15 ◊°	ATMEL	
20	28.6	8	—	—	—	—	—	110	20	Replaces: 10H8, 12H6, 14H4, 16H2, 10L8, 12L6, 14L4, 16L2, 10P8, 12P6, 14P4, 16P2, 16H8, 16L8, 16P8, 16R8, 16R6, 16R4, 16RP8, 16RP6, 16RP4, 18P8, 16V8	PLDC18G8-20 †	Cypress	
	33.3	—	—	20	—	10	—	80	24	Macrocell architecture	PLDC20RA10-20	Cypress	
	41.6	—	—	—	—	—	—	70	24	Replaces: 20L10, 20L8, 20R8, 20R6, 20R4, 12L10, 14L8, 16L6, 18L4, 20L2, 20V8	PLDC20G10-20 †	Cypress	5
		96–192	—	12	—	10	—	120	24	Varied term distribution	PALC22V10-20 †	Cypress	
	50	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22V10L-20 ◊°†	ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-20 ◊°†	ATMEL	
		480	48	16	0	48	0.15	180	68	48 Macrocell Zero-power EPLD	EP1830 ◊°‡	Altera	
	55	171	20	12	0	10	12	120	24	750 gate EPLD	ATV750L-20 ◊°	ATMEL	10
							120	120	24	750 gate EPLD	ATV750-20 ◊°†	ATMEL	
25	25	—	—	20	—	10	—	100	24	Macrocell architecture	PLDC20RA10-25 †	Cypress	
	28	—	—	—	—	—	—	—	—		TICPAL22V10Z-25	TI	
	33.3	—	—	—	—	—	—	100	24	Replaces: 20L10, 20L8, 20R8, 20R6, 20R4, 12L10, 14L8, 16L6, 18L4, 20L2, 20V8	PLDC20G10-25 †	Cypress	
		96–192	—	12	—	10	—	55	24	Varied term distribution	PALC22V10-25 †	Cypress	15
		132	10	12	—	10	—	55	24		CPL22V10L-25WC	Samsung	
	40	416	48	14	0	24	120	120	40	2500 gate EPLD	ATV2500H-25 ◊°†	ATMEL	
	41.6	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22V10L-25 ◊°†	ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-25 ◊°†	ATMEL	
	45	171	20	12	0	10	12	120	24	750 gate EPLD	ATV750L-25 ◊°†	ATMEL	20
							120	120	24	750 gate EPLD	ATV750-25 ◊°†	ATMEL	
	47	160	16	4	—	16	0.1	70	24		EP610 ◊°†	TI	
	50	126	128	8	0	52	40	40	68	5000 gate EPLD	ATV5000-25 ◊°	ATMEL	
		1152	128	20	0	64	225	250	100	128 Macrocell Max EPLD	EPM5130 ◊°‡	Altera	
		1728	192	8	0	64	275	300	84	192 Macrocell Max EPLD	EPM5192 ◊°‡	Altera	25
30	22.2	—	—	20	—	10	—	80	24	Macrocell architecture	PLDC20RA10-30	Cypress	
	25	—	—	—	—	—	—	80	24	Replaces: 20L10, 20L8, 20R8, 20R6, 20R4, 12L10, 14L8, 16L6, 18L4, 20L2, 20V8	PLDC20G10-30 †	Cypress	
		96–192	—	12	—	10	—	120	24	Varied term distribution	PALC22V10-30 †	Cypress	
	33										ATV2500-30	ATMEL	
		64	8	18	8	8	55	55	20	Universal Programmable Array	PALC18U8Q-30 ◊	AMD	30
		416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-30	ATMEL	
											ATV2500-30 ◊°	ATMEL	
							120	120	40	2500 gate EPLD	ATV2500H-30 ◊°†	ATMEL	
	33.3	132	10	12	0	10	15	55	24	Varied Term Distribution	AT22V10L-30 ◊°†	ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-30 ◊°†	ATMEL	35
					10	10	0.01	15	24		AT22V10L-30	ATMEL	
		171	20	22	22	22	0.01	120	24		ATV750-30	ATMEL	
		416	48	14		100	0.01	10	40		ATV2500H-30	ATMEL	
	40	171	20	12	0	10	12	120	24	750 gate EPLD	ATV750L-30 ◊°†	ATMEL	
							120	120	24	750 gate EPLD	ATV750-30 ◊°†	ATMEL	40

(Continued)

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
Erasable Programmable—Superset												**(Cont'd)**	
30	40											(Cont'd)	
		1216	128	8	0	52	40	40	68	5000 gate EPLD	ATV5000-30	◊°† ATMEL	
	41	42	24	412	—	24	0.1	70	40		EP910	◊°† TI	
35	18.1	—	—	—	—	—	—	55	24	Replaces: 20L10, 20L8, 20R8, 20R6, 20R4, 12L10, 14L8, 16L6, 18L4, 20L2, 20V8	PLDC20G10-35	Cypress	
				20	—	10	—	100	24	Macrocell architecture	PLDC20RA10-35	† Cypress	
		96–192	—	12	—	10	—	55	24	Varied term distribution	PALC22V10-35	Cypress	5
	21	74	8	8	—	8	0.1	22.5	20	CMOS Zero Power Programmable Array Logic, 18 inputs, 74 product terms, 8 output macrocells	**PLC18V8Z**	**◊† Signetics (3635)**	
	25	105	10	8	—	12	60	90	24	CMOS Programmable Logic Sequencer, 22 inputs, 32 64-input OR gates, synch and asynch clocks, 10 output macrocells	**PLC42VA12**	**◊ Signetics (3640)**	
	28	416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-35	◊°† ATMEL	
							120	120	40	2500 gate EPLD	ATV2500H-35	◊°† ATMEL	
	28.6	132	10	12	10	10	0.01	15	24		AT22V10L-35	ATMEL	10
							0.012	100	24		AT22V10-35	ATMEL	
		171	20	22	22	22	0.01	120	24		ATV750-35	ATMEL	
		416	48	14		100	0.01	10	40		ATV2500-35	ATMEL	
											ATV2500H-35	ATMEL	
	33	171	20	0	0	10	120	120	24	750 gate EPLD	ATV750-35	◊°† ATMEL	15
	33.3	132	10	12	0	10	12	55	24	Varied Term Distribution	AT22V10L-35	◊° ATMEL	
							55	55	24	Varied Term Distribution	AT22V10-35	◊° ATMEL	
	35	1216	128	8	0	52	40	40	68	5000 gate EPLD	ATV5000-35	◊°† ATMEL	
	40	48	48	16	—	48	0.15	70	68		EP1810	◊°† TI	
40	18.1	96–192	—	12	—	10	—	100	24	Varied term distribution	PALC22V10-40	† Cypress	20
	25	64	8	18	8	48	55	55	20	Logic	PALC18U8Q-40	◊ AMD	
		132	10	12	10	10	0.01	15	24		AT22V10L-40	ATMEL	
							0.012	100	24		AT22V10-40	ATMEL	
		171	20	22	22	22	0.01	120	24		ATV750-40	ATMEL	
		416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-40	◊°† ATMEL	25
	28	171	20	12	0	10	120	120	24	750 gate EPLD	ATV750-40	◊°† ATMEL	
	16.6	—	—	—	—	—	—	80	24	Replaces: 20L10, 20L8, 20R8, 20R6, 20R4, 12L10, 14L8, 16L6, 18L4, 20L2, 20V8	PLDC20G10-40	† Cypress	
45	22	416	48	14	0	24	5	120	40	2500 gate EPLD	ATV2500-45	◊°† ATMEL	
Electrically Erasable Programmable—Superset													
10	62.5	64	8	8	—	8	—	115	20	Generic PLD	**GAL16V8A-10L**	**◊° Lattice (3524)**	
				12	—	8	—	115	24	Generic PLD	**GAL20V8A-10L**	**◊° Lattice (3524)**	30
		74	8	10	—	8	80	80 + 0.5ma/MHz	20	PAL superset, 12-configurable I/O macrocells	**PEEL18CV8-10**	**◊ ICT (3507)**	
							120	151	20		**PEEL18CV8-10**	**◊° Gould AMI (3442)**	
12	57	132	10	12	—	10	105	105mA + 0.5mA/MHz	24	PAL superset. 4/12- configurable I/O macrocells	**PEEL22CV10-12**	**◊ ICT (3507)**	
15	41.6	64	—	8	—	8	—	90	20	Prog enable	PALCE16V8H-15	AMD	
	50	64	8	8	—	8	—	55	20	Generic PLD	**GAL16V8A-15Q**	**◊° Lattice (3524)**	35
								130	20	Generic PLD	**GAL16V8A-15LM**	**◊† Lattice (3524)**	
				10	—	8	—	90	20	Generic Programmable Array Logic	GAL16V8-15H	◊ SGS-Thomson	
				12	—	8	—	45	24	Generic Programmable Array Logic	GAL20V8-15H	◊ SGS-Thomson	
								55	24	Generic PLD	**GAL20V8A-15Q**	**◊° Lattice (3524)**	

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
Electrically Erasable Programmable—Superset												**(Cont'd)**	
15	50	64	8	12	—	8	—					(Cont'd)	
								115	24	Generic PLD	**GAL20V8A-15L ◊°**	**Lattice (3524)**	
								130	24	Generic PLD	**GAL20V8A-15LM ◊°†**	**Lattice (3524)**	
		74	8	10	—	8	80	80mA + 0.5mA/MHz	20	PAL superset. 8 I/O macrocells with 12 configurations.	**PEEL18CV8-15 ◊°**	**ICT (3507)**	
							90	125	20		**PEEL18CV8-15 °**	**Gould AMI (3442)**	
		92	10	12		10	105	130	24		**PEEL20CG10-15 ◊°**	**Gould AMI (3442)**	5
		96–192	—	12	—	10	—	90	24	Varied term distribution	PALCE22V10H-15	AMD	
		132	10	12		10	105	130	24		**PEEL22CV10-15 ◊°**	**Gould AMI (3442)**	
										200mA Zero Power 22V10	PEEL22CV102-15 ◊°	Gould AMI	
	59	64	8	8	—	8	—	115	20	Generic PLD	**GAL16V8A-15L ◊°**	**Lattice (3524)**	
	62.5	132	10	12	—	10	—	130	24	Generic PLD	**GAL22V10-15L ◊°**	**Lattice (3524)**	10
20	33.3	8–16	—	14	—	12	—	90	28	Varied term distribution	PALCE26V12H-20	AMD	
		132	10	12	—	10	—	150	24	Generic PLD	**GAL22V10-20LM ◊°†**	**Lattice (3524)**	
	40	92	10	12	—	10	65	65mA + 0.5mA/MHz	24	PAL superset. 10 I/O macrocells with 12 configurations.	**PEEL20CG10-20 ◊°**	**ICT (3507)**	
		132	10	12	—	10	65	65mA + 0.5mA/MHz	24	PAL superset. 10 I/O macrocells with 12 configurations.	**PEEL22CV10-20 ◊°**	**ICT (3507)**	
	41.6	64	8	8	—	8	—	130	20	Generic PLD	**GAL16V8A-20LM ◊°†**	**Lattice (3524)**	15
				10	8	90	—	90	20	Generic Programmable Array Logic	GAL16V8-20H ◊	SGS-Thomson	
				12	—	8	—	90	24	Generic Programmable Array Logic	GALV20V8-20 ◊	SGS-Thomson	
								130	24	Generic PLD	**GAL20V8A-20LM ◊°†**	**Lattice (3524)**	
		74	8	10	—	8	80	80mA + 0.5mA/MHz	20	PAL superset. 8 I/O macrocells with 12 configurations.	**PEEL18CV8-20 ◊°**	**ICT (3507)**	
25	28.5	64	—	8	—	8	—	90	20	Prog enable	PALCE16V8H-25	AMD	20
		96–192	—	12	—	10	—	90	24	Varied term distribution	PALCE22V10H-25	AMD	
	28.8	96–192	—	12	—	10	—	45	24	Varied term distribution	PALCE22V10Q-25	AMD	
	33.3	64	8	8	—	8	—	55	20	Generic PLD	**GAL16V8A-25Q ◊°**	**Lattice (3524)**	
								115	20	Generic PLD	**GAL16V8A-25L ◊°**	**Lattice (3524)**	
				10	—	8	—	45	20	Generic Programmable Array Logic	GAL16V8-25Q ◊	SGS-Thomson	25
								90	20	Generic Programmable Array Logic	GAL16V8-25H ◊	SGS-Thomson	
				12	—	8	—	45	28	Generic Programmable Array Logic	GAL20V8-25Q ◊	SGS-Thomson	
								55	24	Generic PLD	**GAL20V8A-25Q ◊°**	**Lattice (3524)**	
								90	24	Generic Programmable Array Logic	GAL20V8-25H ◊	SGS-Thomson	
								115	24	Generic PLD	**GAL20V8A-25L ◊°**	**Lattice (3524)**	30
		74	8	10	—	8	20	20mA + 0.7mA/MHz	20	PAL superset. 8 I/O macrocells with 12 configurations.	**PEEL18CV8-25 ◊°**	**ICT (3507)**	
		128–256	—	5	—	16	—	100	24	Advanced I/O macrocell	PALCE29M16H-25	AMD	
		132	10	12	—	10	—	130	24	Generic PLD	**GAL22V10-25L ◊°**	**Lattice (3524)**	
							55	72	24	200mA zero power	**PEEL22CV10Z °**	**Gould AMI (3442)**	
										22V10 replacement	**PEEL22CV10 °**	**Gould AMI (3442)**	35
	35.3	74	8	10	—	8	25	50	20		**PEEL18CV8 ◊°†**	**Gould AMI (3442)**	
	37	92	10	12	—	10	55	55mA + 0.5mA/MHz	24	PAL superset. 10 I/O macrocells with 12 configurations.	**PEEL20CG10-25 ◊°**	**ICT (3507)**	

(Continued)

† Military Temperature Range (–55° to 125°C) ‡ High Radiation Resistance *Typical Value °Macrocell ◊ Available in Surface Mount Package

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PROGRAMMABLE LOGIC DEVICES—CMOS (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
Electrically Erasable Programmable—Superset												**(Cont'd)**	
25	37											(Cont'd)	
		132	10	12	—	10	0.2	55mA + 0.5mA/MHz	24	PAL superset with zero power feature	**PEEL22CV10Z-25** ◊°	**ICT (3507)**	
							55	55mA + 0.5mA/MHz	24	PAL superset. 10 I/O macrocells with 12 configurations.	**PEEL22CV10-25** ◊°	**ICT (3507)**	
	40	92	10	12	—	10	55	75	24		**PEEL20CG10** °	**Gould AMI (3442)**	
		96–192	—	14	—	12	—	90	28	Varied term distribution	PALCE26V12H-25	AMD	
30	22.9	179	108	11	—	10	—	90	24	Generic Programmable Array Logic	GAL39V18-30H ◊	SGS-Thomson	5
	25	132	10	12	—	10	—	150	24	Generic PLD	**GAL22V10-30LM** ◊°†	**Lattice (3524)**	
	27	75	18	10	—	10	—	150	24	FPLA	**GAL6001-30** ◊°	**Lattice (3524)**	
	33.3	64	8	8	—	8	—	130	20	Generic PLD	**GAL16V8A-30LM** ◊°†	**Lattice (3524)**	
				12	—	8	—	130	24	Generic PLD	**GAL20V8A-30LM** ◊°†	**Lattice (3524)**	
35	22.2	74	8	10	—	8	20	20mA + 0.7mA/MHz	20	PAL superset. 8 I/O macrocells with 12 configurations.	**PEEL18CV8-35** ◊°	**ICT (3507)**	10
		92	10	12	—	10	55	55mA + 0.5mA/MHz	24	PAL superset. 10 I/O macrocells with 12 configurations.	**PEEL20CG10-35** ◊°	**ICT (3507)**	
		132	10	12	—	10	55	55mA + 0.5mA/MHz	24	PAL superset. 10 I/O macrocells with 12 configurations.	**PEEL22CV10-35** ◊°	**ICT (3507)**	
	22.5	132	10	12	—	10	0.2	55mA + 0.5mA/MHz	24	PAL superset with zero power feature	**PEEL22CV10Z-35** ◊°	**ICT (3507)**	
	25	128–256	—	14	—	16	—	100	24	Advanced I/O macrocell	PALCE29M16H-35	AMD	
	28.6	64	8	10	—	8	—	45	20	Generic Programmable Array Logic	GAL16V8-35Q ◊	SGS-Thomson	15
				12	—	8	—	45	24	Generic Programmable Array Logic	GAL20V8-35Q ◊	SGS-Thomson	

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PROGRAMMABLE LOGIC

PROGRAMMABLE LOGIC DEVICES—ECL

Max Propagation Delay (ns)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Combinatorial Outputs												
3						220		24	10K ECL Compatible	CY10E302	Cypress	
			16	4	4	220	0.5	24	10KH Compatible	CY10E302-3C ◊	Aspen	
									100K Compatible	CY100E302-3C ◊	Aspen	
3.5						240		24	10K ECL Compatible	CY10E301	Cypress	
			16	8	8	240	0.5	24	10KH Compatible	CY10E301-3.5C ◊	Aspen	5
									100K Compatible	CY100E301-3.5C ◊	Aspen	
4						220		24	100K ECL Compatible	CY100E302	Cypress	
						240		24	100K ECL Compatible	CY100E301	Cypress	
			16	4	4	170	0.5	24	10KH Compatible	CY10E302L-4C ◊	Aspen	
									100K Compatible	CY100E302L-4C ◊	Aspen	10
						220	0.5	24	10KH Compatible	CY10E302-4C ◊	Aspen	
										CY10E302-4M ◊†	Aspen	
									100K Compatible	CY100E302-4C ◊	Aspen	
				8	8	240	0.5	24	10KH Compatible	CY10E301-4C ◊	Aspen	
									100K Compatible	CY100E301-4C ◊	Aspen	15
	32	—	16	4	—	—	220	24		PAL10016P4A	National	
										PAL1016P4A	National	
5			16	8	8	240	0.5	24	10KH Compatible	CY10E301-5M ◊†	Aspen	
6			16	8	8	170	0.5	24	10KH Compatible	CY10E301L-6C ◊	Aspen	
	32	—	12	4	4	—	240	24		PAL10016P8	National	20
										PAL1016P8	National	

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PROGRAMMABLE LOGIC DEVICES—ECL (Cont'd)

Max Clock Frequency (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered Outputs Only												
200	32	4	12	—	4	—	240	24		PAL10016RM4A	National	
										PAL1016RM4A	National	
117	64	8	8	8	—	—	280	24		PAL10016RD8	National	
										PAL1016RD8	National	

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PROGRAMMABLE LOGIC DEVICES—ECL (Cont'd)

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs													
6	—	64	—	12	4	4	—	240	24		TIEPAL10H16P8-6	TI	
One-Time Programmable—Superset													
4.5	200	90	8	11	—	8	—	230	24	ECL 10KH Field Programmable Array Logic, 20 inputs, 90 product terms, 8 output macro cells	10H20EV8	◊† Signetics	
										ECL 100K Field Programmable Array Logic, 20 inputs, 90 product terms, 8 output macro cells	10020EV8	◊† Signetics	

PROGRAMMABLE LOGIC

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PROGRAMMABLE LOGIC DEVICES—Gallium Arsenide

Max Propagation Delay (ns)	Max Clock Freq (MHz)	Product Terms	Flip Flops	Dedicated Inputs	Dedicated Outputs	Bidirectional I/Os	Max Standby Current (mA)	Max Active Current (mA)	Pins	Description	Device	Source	Line
One-Time Programmable—Registered/Combinatorial Outputs													
7.5	166	135	14	9	—	8	—	220	20	20 pin PLD sequencer	GA23S8-7SC	◊ Gazelle	
One-Time Programmable—Superset													
7.5	166	135	14	9	—	8	—	220	20	20-pin PLD Superset	GA23SV8-7SC	◊ Gazelle	
10	153	135	14	9	—	8	—	220	20	20-pin PLD Superset	GA23SV8-10SC	◊ Gazelle	
12	105	135	14	9	—	8	—	220	20	20 pin PLD Superset	GA23SV8-12M	◊† Gazelle	

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PROGRAMMABLE LOGIC DEVICES—Programmable Logic Design Automation Tools

Array Source / Device Family	Logic Schematic	Net List	Boolean Equations	State Diagram	Development System	Source	Line
Altera							
EPLDs	x	x	x	x	PLCAD-SUPREME	Altera	
		x	x	x	PLCAD 4	Altera	
	x	x	x	x	PLDS-ENCORE	Altera	
	x	x	x	x	PLDS-MAX	Altera	
EXEL Microelectronics							
ERASIC	x	x	x	x	XL26XXX	Data I/O	5
	x	x	x	x	XL26XXX	EXEL	
	x	x	x	x	XL26XXX	FutureNet	
Intel							
EPLDs	x	x	x	x	iPLDS	Intel	
5CXXX	x	x	x	x	iPLDS	Intel	
Signetics							
AMAZE	x		x		PROPRIETARY	Signetics	10
SNAP	x	x	x		PROPRIETARY	Signetics	
Xilinx							
PROGRAMMABLE GATE ARRAYS	x	x	x		XACT	Xilinx	
XC2018	x	x	x	x	**XACT**	**Xilinx (3786)**	
XC2064	x	x	x	x	**XACT**	**Xilinx (3786)**	

FOR ADDITIONAL INFORMATION ON DESIGN TOOLS SEE DESIGN AUTOMATION SECTION

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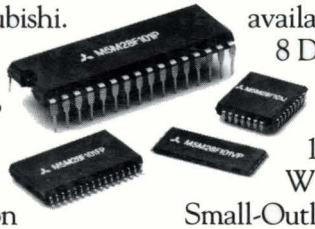

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