

February 1998

## DESCRIPTION

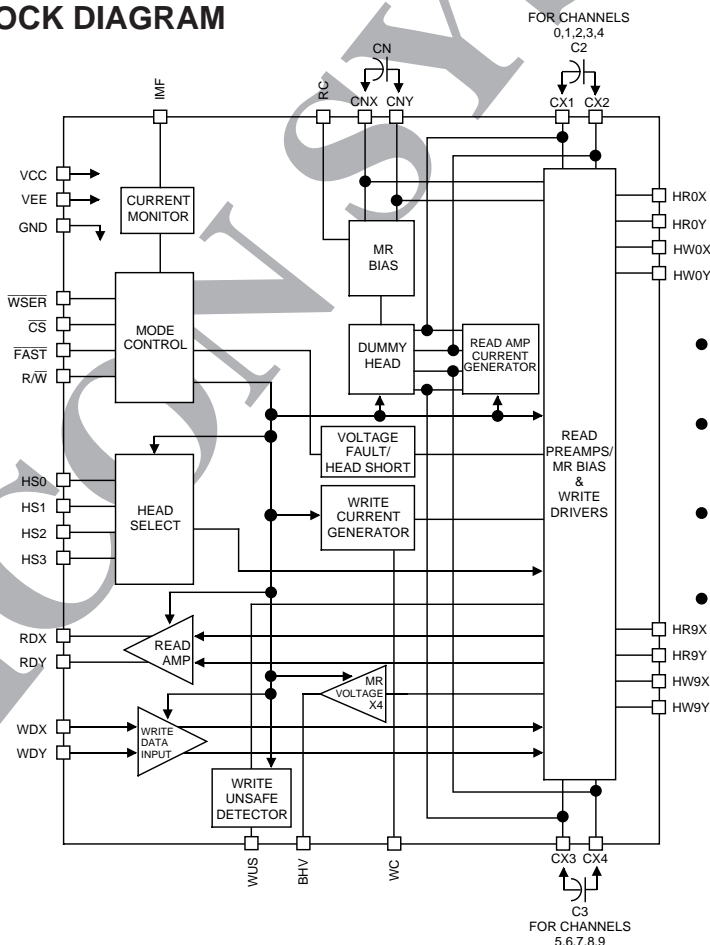
The SSI 32R1574R is a BiCMOS monolithic integrated circuit designed for use with four-terminal Magneto-Resistive recording heads. The device provides a write driver, MR current bias/voltage sense read architecture, low noise read amplifier, fault detection circuitry for up to 10 channels, and open collector read output. In write servo mode, one to five write heads each can be simultaneously selected. The device requires +5 V and -5 V  $\pm 10\%$  and comes in a 64-Lead and 80-Lead TQFP package.

## FEATURES

- **+5 V, -5 V  $\pm 10\%$  supplies**
- **Designed for four-terminal MR heads with minimum external components**
- **Truly differential current bias/voltage sense MR read amplifier**
- **MR head bias current range = 4-12 mA; MR head resistance range = 22 to 85  $\Omega$**
- **MR head gain = 150 V/V**
- **MR read input current noise = 10 pA/ $\sqrt{\text{Hz}}$  (nom, RMR = 45  $\Omega$ )**
- **MR read input voltage noise = 0.55 nV/ $\sqrt{\text{Hz}}$  (nom, RMR = 0  $\Omega$ )**

(continued)

## BLOCK DIAGRAM



# SSI 32R1574R

## +5, -5 V, 10 Channel

### MR Head Read/Write Device

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#### FEATURES (continued)

- MR read input resistance = 300  $\Omega$  (nom)
- Differential PECL write data input
- Head voltage swing = 10 Vp-p (nom, open head)
- Write current range = 10-45 mA
- Open collector read output
- Write unsafe detection
- Current monitor function
- Head short to ground detection and protection
- Enhanced system write to read and read to write recovery time
- Power supply fault protection
- Servo write feature
- Fast mode recovery from thermal asperity