Silicon Systems®

A Texas Instruments Company

SSI 34H3300

5 V Servo and Spindle Driver

Prototype

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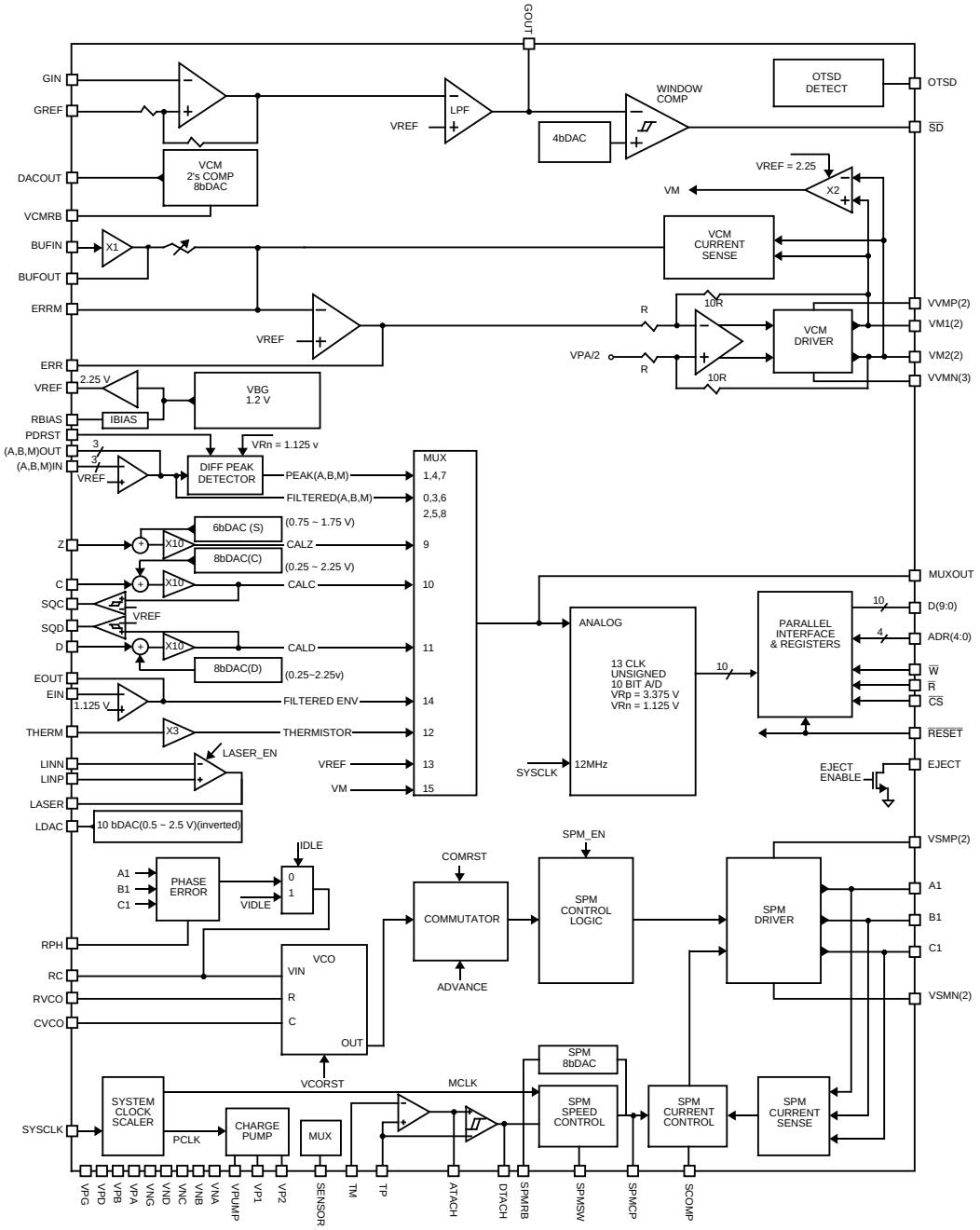
DESCRIPTION

The SSI 34H3300 VCM/SPM Integrated Driver and Analog Processing Combo, a CMOS monolithic integrated circuit housed in a 100-pin TQFP package, operates from a single 5 V supply. It provides a fully integrated VCM driver whose current is commanded by a 8-bit D/A converter; a SPM driver with a PLL commutator and an on-chip FLL/PLL speed regulator. It also includes a shock detector with a lowpass filter. The device is register-based with a microprocessor interface. A microprocessor (µP) can be used to configure and control the device. The device is designed for use in 5v disk drive applications.

FEATURES

- **100-pin TQFP package**
- **Internal 0.8A VCM driver (1.0 Ω RDS,TOTAL)**
- **No deadband, low distortion, class-AB output for VCM driver**
- **Precision VCM current control loop - no external sense resistors required**
- **Peak VCM current set by an external resistor at VCMRB**
- **Selectable gains for a wide dynamic range of position error signals**
- **Internal 0.6A SPM driver (2.0 Ω RDS,TOTAL)**
- **Precision SPM current control loop - no external sense resistors required**
- **Peak SPM current set by an external resistor at SPMRB**
- **On-chip programmable FLL speed control with 0.02% resolution**
- **Commutator driven by PLL for high jitter immunity**
- **Soft switching to reduce dv/dt on commutation - no snubber networks required**
- **Precision voltage reference output**
- **Thermal fault detection**
- **Internal shock detection with lowpass filtering**
- **10-bit parallel bus interface**
- **Low power CMOS design with multiple power save modes**

BLOCK DIAGRAM



Prototype: Indicates a product still in the design cycle, and any specifications are based on design goals only. Do not use for final design.

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