

CS5151

CPU 4-Bit Nonsynchronous Buck Controller

The CS5151 is a 4-bit nonsynchronous N-Channel buck controller. It is designed to provide unprecedented transient response for today's demanding high density, high speed logic. The regulator operates using a proprietary control method, which allows a 100 ns response time to load transients. The CS5151 is designed to operate over a 4.25–16 V range (V_{CC}) using 12 V to power the IC and 5.0 V as the main supply for conversion.

The CS5151 is specifically designed to power Pentium® processors with MMX™ Technology and other high performance core logic. It includes the following features: on board, 4-bit DAC, short circuit protection, 1.0% output tolerance, V_{CC} monitor, and programmable Soft Start capability. The CS5151 is upward compatible with the 5-bit CS5156, allowing the mother board designer the capability of using either the CS5151 or the CS5156 with no change in layout. The CS5151 is available in 16-pin surface mount and DIP packages.

- N-Channel Design
- Excess of 1.0 MHz Operation
- 100 ns Transient Response
- 4-Bit DAC
- Upward Compatible with 5-Bit CS5155/CS5156
- 30 ns Gate Rise/Fall Times
- 1.0% DAC Accuracy
- 5.0 V & 12 V Operation
- Remote Sense
- Programmable Soft Start
- Lossless Short Circuit Protection
- V_{CC} Monitor
- Adaptive Voltage Positioning
- V^2 ™ Control Topology
- Current Sharing
- Overvoltage Protection

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