



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

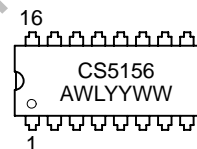
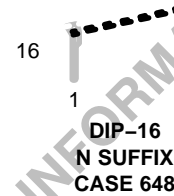
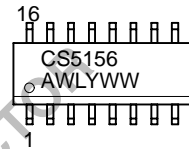
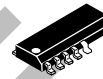
### Features

- N Channel Design
- Excess of 1.0 MHz Operation
- 100 ns Transient Response
- 5 Bit DAC
- Backward Compatible with 4 Bit CS5150/CS5151
- 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

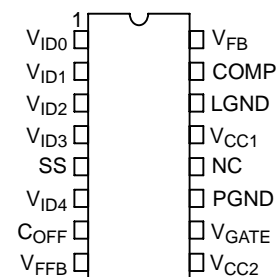
<http://onsemi.com>

### MARKING DIAGRAMS

116CS5156GN16DIP



### PIN CONNECTIONS



CS5156GDR16

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