



# CS51311

**S** **B** **C** **12 V**  
**d** **5.0 V A** **CPU**



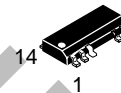
<http://onsemi.com>

The CS51311 is a synchronous dual NFET Buck Regulator Controller. It is designed to power the core logic of the latest high performance CPUs. It uses the  $V^2$  control method to achieve the fastest possible transient response and best overall regulation. It incorporates many additional features required to ensure the proper operation and protection of the CPU and Power system. The CS51311 provides the industry's most highly integrated solution, minimizing external component count, total solution size, and cost.

The CS51311 is specifically designed to power Intel's Pentium II processor and includes the following features: 5 bit DAC with 1.2% tolerance, Power Good output, overcurrent hiccup mode protection,  $V_{CC}$  monitor, soft start, adaptive voltage positioning, adaptive FET non overlap time, and remote sense. The CS51311 will operate over an 8.4 V to 14 V range and is available in 14 lead narrow body surface mount package.

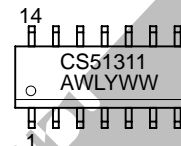
## Features

- Synchronous Switching Regulator Controller for CPU  $V_{CORE}$
- Dual N Channel MOSFET Synchronous Buck Design
- $V^2$  Control Topology
- 200 ns Transient Loop Response
- 5 Bit DAC with 1.2% Tolerance
- Hiccup Mode Overcurrent Protection
- 40 ns Gate Rise and Fall Times (3.3 nF Load)
- 65 ns Adaptive FET Non Overlap Time
- Adaptive Voltage Positioning
- Power Good Output Monitors Regulator Output
- $V_{CC}$  Monitor Provides Undervoltage Lockout Enable Through Use of the COMP Pin



SO-14  
D SUFFIX  
CASE 751A

## MARKING DIAGRAM



- A = Assembly Location
- WL, L = Wafer Lot
- YY, Y = Year
- WW, W = Work Week

## PIN CONNECTIONS

V<sub>C5</sub> 29m2704.92 300 559.6 0 0 6.5 489 298

## ORDERING INFORMATION

Device	Package	Shipping
CS51311GD14	SO 14	55 Units/Rail
CS51311GDR14	SO 14	2500 Tape & Reel

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