

Product Overview

CS51031: Hysteretic PFET Buck Controller

For complete documentation, see the data sheet.

The Hysteretic PFET Buck Controller is a switching controller for use in dc-dc converters. It can be used in the buck topology with a minimum number of external components. This Hysteretic PFET Buck Controller consists of a VCC monitor for controlling the state of the device, 1.0 A power driver for controlling the gate of a discrete P-channel transistor, fixed frequency oscillator, short circuit protection timer, programmable soft start, precision reference, fast output voltage monitoring comparator and output stage driver logic with latch. The high frequency oscillator allows the use of small inductors and output capacitors, minimizing PC board area and systems cost. The programmable soft start reduces current surges at start up. The short circuit protection timer significantly reduces the duty cycle to approximately 1/30 of its cycle during short circuit conditions. The CS51031 is available in 8 Lead SO plastic packages.

Features

- 1A Totem Pole Output Driver
- High Speed Oscillator (700 Hz max)
- No Stability Compensation Required
- Lossless Short Circuit Protection
- VCC Monitor
- 2% Precision Reference
- Programmable Soft Start
- Wide Ambient Temperature Range: Industrial Grade: -40°C to 85°C Commercial Grade: 0°C to 70°C
- Pb-Free Packages are Available

Applications

- FPGA, DSP, I/O and Core

End Products

- Graphics Card

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Phases	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	f _{sw} Typ (kHz)	Package Type
CS51031YDR8G	0.6667	Pb-free Halide free non AEC-Q and PPAP	Active	Step-Down	1	Hysteretic	4.5	16	200	SOIC-8

For more information please contact your local sales support at www.onsemi.com.

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