LM5068
Negative Voltage Hot-Swap Controller

PRELIMINARY

General Description

The LM5068 hot-swap controller provides intelligent control of power supply connections during the insertion and removal of circuit cards powered by live system backplanes

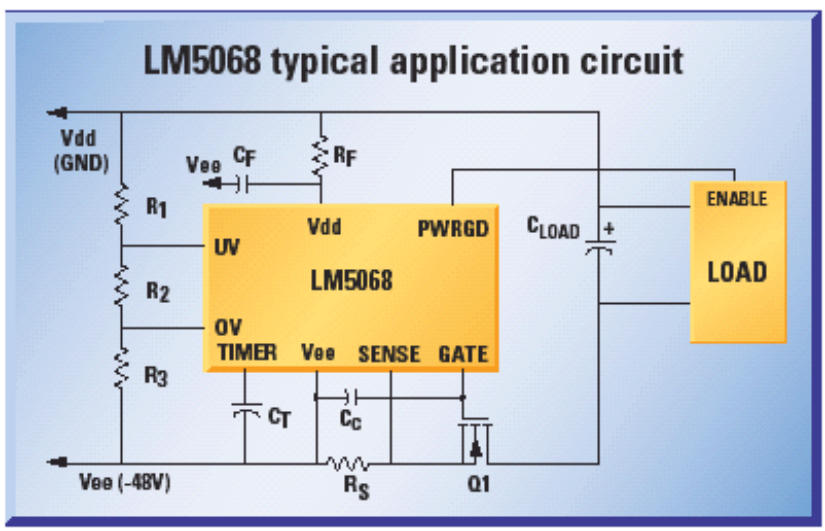
The LM5068 provides both in-rush current control and short-circuit protection functions, and limits power supply transients in the backplane caused by the insertion of additional circuit cards. The LM5068 controls the external N-Channel MOSFET to provide programmable load current limiting and circuit breaker functions using a single external current sense resistor. The LM5068 issues a power good (PWRGD) signal at the conclusion of a successful power-on sequence. Input over-voltage or under-voltage fault conditions will cancel the PWRGD indication.

The LM5068-1 and -2 indicate power good as an open-drain active high PWRGD state. The LM5068-3 and -4 indicate power-good as an open-drain active low PWRGD state. The LM5068-1 and -3 latch off after a fault condition is detected while the LM5068-2 and -4 continuously re-try at intervals set by a programmable timer.

The LM5068 is available in MSOP-8 package.

Features

- In-rush current limiting for safe board insertion into live backplanes
- Fast response to over-current fault conditions with active current limiting
- Wide -10V to -100V input voltage range
- Programmable Under-voltage and Over-voltage shutdown protection with adjustable hysteresis
- Programmable Multi-Function Timer for board insertion de-bounce delay
- Fault timer avoids nuisance trips caused by short duration load transients
- Active gate clamping during initial power application
- Available in both latched fault and automatic retry versions
- Available with either active HIGH or active LOW power good flag



Samples are available now; volume production is expected in late January 2004.

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