GENERAL DESCRIPTION

The TCS9708C is a cost-effective, low voltage, single P-MOSFET load switch, optimized for self-powered and bus-powered Universal Serial Bus (USB) applications. This switch operates with inputs ranging from 2.4V to 5.5V, making it ideal for both 3V and 5V systems. The switch's low $R_{DS(ON)}$, 60mΩ, meets USB voltage drop requirements. A built-in P-channel MOSFET with true shutdown function to eliminate any reversed current flow across the switch when it is powered off. When the output voltage is higher than input voltage, the power switch is turned off by internal output reverse-voltage comparator.

nFLG is an open-drain output report over-current or over temperature event. In addition, nFLG also has typical 8ms deglitch timeout period and reports output reverse-voltage condition.

FEATURES

- Integrated Typical 60mΩ Power MOSFET
- Low Supply Current
- 30μA Typical at Switch On State
- 1μA Typical at Switch Off State
- Wide Input Voltage Range: 2.5V to 5.5V
- Fast Transient Response: 8μs
- 0.1ms Typical Rise Time
- Reverse Current Flow Blocking
- Deglitched Open-Drain Over-Current Flag Output
- Thermal Shutdown Protection
- Hot Plug-In Application (Soft-Start)
- CB Test Certification by IEC62368-1:2014
- UL 2367 Certification - E528420
- SOT-23-6/SOT-23-5 Package

APPLICATIONS

- USB Bus/Self Powered Hubs
- Battery-Charger Circuits
- Personal Communication Devices
- Notebook Computers

TYPICAL APPILCATION

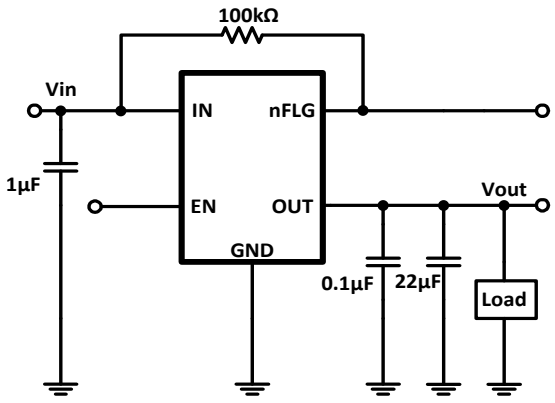

Figure 1. Application Circuit