

Current Limited Load Switch

Features

- Input Voltage Range: 2.7V to 5.5V
- Programmable Over-Current Threshold
- 70mΩ Typical $R_{DS(ON)}$ at $V_{IN}=5V$
- Only 2.5V Needed for ON/OFF Control
- Under-Voltage Lockout
- Thermal Shutdown
- No Reverse Leakage Current
- Open-drain Fault Flag Pin
- Available with or without output shutdown pull-low resistor
- Output Reverse-Voltage Protection
- SOT-23-6, TSOT-23-6, MSOP-8 and MSOP-8 (FD) Packages
- UL Certification #E232223
- CB Test Certification by IEC 60950-1:2005 (2nd Edition); Am 1:2009

Applications

- Hot Swap Supplies
- Notebook Computers
- Peripheral Ports
- Personal Communication Devices

General Description

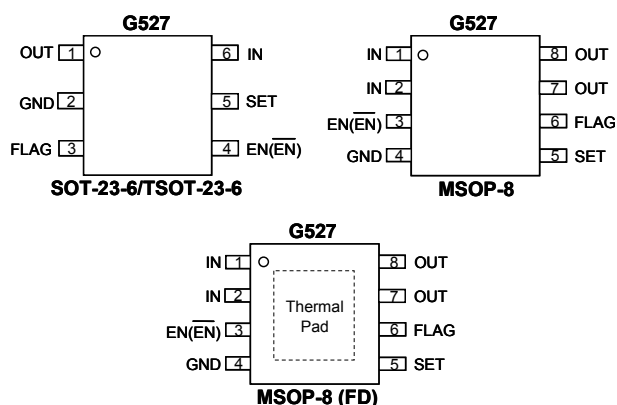
The G527 is a current limited N-channel MOSFET power switch designed for highside load switching applications. The low $R_{DS(ON)}$ N-channel power MOSFET is driven by a built-in charge pump which generates a voltage higher than the supply voltage to fully enhance the switch.

This switch operates with inputs ranging from 2.7V to 5.5V, making it ideal for both 3.3V and 5V systems. An integrated current-limiting circuit protects the input supply against large current which may cause the supply to fall out of regulation. The G527 is also protected from thermal overload which limits power dissipation and junction temperatures. Current limit threshold is programmed with a resistor from SET to ground. When the output voltage is higher than input voltage, the power switch is turned off by internal output reverse-voltage comparator.

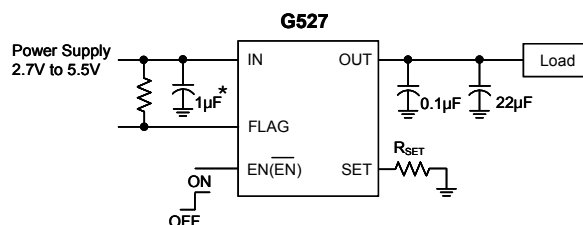
An open-drain flag output is also available to indicate fault condition, including overcurrent, thermal shutdown, and output reverse-voltage condition. In shutdown mode, the supply current decreases to less than 1μA. The reverse leakage current is also less than 1μA.

The G527 is available in SOT-23-6, TSOT-23-6, MSOP-8 and MSOP-8 (FD) packages.

Pin Configuration



Typical Application Circuit



*: 1μF of input capacitor is enough in most application cases.
If the PCB trace of power rail to IN is long, larger input capacitor is necessary.