Power Distribution Switch

Features

- 70mΩ High-Side MOSFET (G557A,G557B,G557C)
- Available with 3 Versions of Current Limits with Foldback
- Operating Range:2.7V to 5.5V
- 1.5mS Typical Rise Time
- Fast Overcurrent Response - 3µS (TYPICAL)
- Under voltage Lockout
- 100µA Quiescent Supply Current
- 1µA Maximum Shutdown Supply Current
- Logic Level Enable Pin, Available with Active-High or Active-Low Version
- No Reverse Current when Power Off
- Deglitched Open-Drain Over-Current Flag Output ($\overline{OC}$)
- With Output Shutdown Pull-low Resister
- SOP-8 ,MSOP-8,TDFN3X3-8 Packages

General Description

The G557 is an integrated power switch for self-powered and bus-powered Universal Serial Bus (USB) applications. G557A, G557B, G557C are 70mΩ $R_{DS(ON)}$.

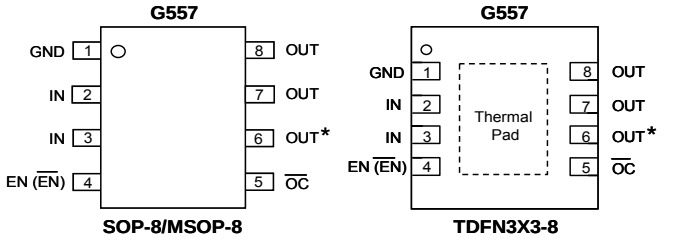
Several Protection features include current limiting with foldback, and thermal shutdown to prevent catastrophic switch failure caused by increasing power dissipation when continuous heavy loads or short circuit occurs. A built-in charge pump is used to drive the N-channel MOSFET that is free of parasitic body diode to eliminate any reversed current flow across the switch when it is powered off.

$\overline{OC}$ is open-drain output report over-current or over-temperature event and has typical 9ms deglitch timeout period.

Applications

- High-Side Power Protection Switch
- USB Power Management
- USB Host and Self-Powered Bubs
- USB Bus-Powered Hubs
- Hot Plug-In Power Supplies
- Battery-Charger Circuits

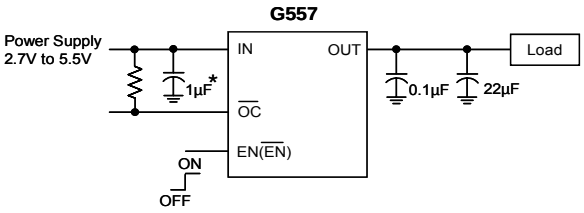
Pin Configuration



Note: Recommend connecting the Thermal Pad to the GND for excellent power dissipation.

*Pin#6 should be considered as OUT when circuit design and PCB layout, but it is NC pin actually.

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.