Power Distribution Switch

Features

- **70mΩ High-Side MOSFET**
- **Operating Range:2.7V to 5.5V**
- **1mS Typical Rise Time**
- **Fast Overcurrent Response 1.5µs (TYP.)**
- **Under voltage Lockout**
- **130µA Quiescent Supply Current**
- **1µA Maximum Shutdown Supply Current**
- **No Reverse Current when Power Off**
- **Deglitched Open-Drain Over-Current Flag Output ($\overline{OC}$)**
- **Output Reverse-Voltage Protection**
- **SOP-8 Packages**

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**

General Description

The G548S is an integrated power switch for self-powered and bus-powered Universal Serial Bus (USB) applications.

Several Protection features include current limiting 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. When the output voltage is higher than input voltage, the power switch is turned off by internal output reverse-voltage comparator.

$\overline{OC}$ is open-drain output report over-current or over-temperature event and has typical 9ms deglitch timeout period. In addition, $\overline{OC}$ also reports output reverse-voltage condition with typical 5ms deglitch timeout period.
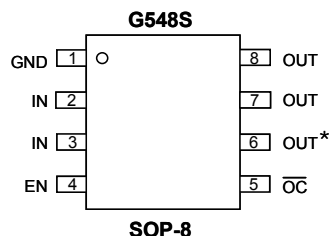
Ordering Information

ORDER NUMBER	MARKING	ENABLE	Current Limit	Output MOS $R_{DS(ON)}$	TEMP. RANGE	PACKAGE (Green)
G548S1P11U	G548S1	Active High	1.5A	70mΩ	-40°C to +85°C	SOP-8

Note:P1: SOP-8
1: Bonding Code
U: Tape & Reel

Pin Configuration

G548S

GND	1	8	OUT
IN	2	7	OUT
IN	3	6	OUT*
EN	4	5	$\overline{OC}$

SOP-8
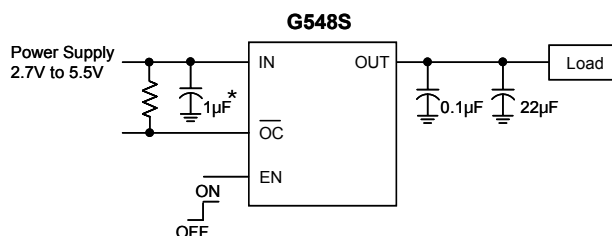
*Pin#6 should be considered as OUT when circuit design and PCB layout, but it is NC pin actually.

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.