

Step-Down DC/DC

Features

- 4A Output Current
- 75mΩ Internal Power MOSFET Switch
- Stable with Low ESR Output Ceramic Capacitors
- Up to 95% Efficiency
- Less Than 1μA Shutdown Current
- Wide Switching Frequency Range from 300kHz~1.4MHz
- Thermal Shutdown
- Cycle-by-Cycle Over Current Protection
- Output Adjustable from 0.8V to V_{IN}
- Available in SOP-8 (FD) Package

Applications

- TV
- Distributed Power Systems
- Pre-Regulator for Linear Regulators

General Description

The G5684 is a monolithic step-down switch mode regulator with a built in internal power MOSFET. It achieves 4A continuous output current over a wide switching frequency range with excellent load and line regulation.

Current mode operation provides fast transient response and eases of loop stabilization.

Fault condition protection includes cycle-by-cycle current limiting, output short circuit protection and thermal shutdown. In shutdown mode the regulator draws less than 1μA of supply current. Internal soft-start minimizes the inrush supply current at initial startup.

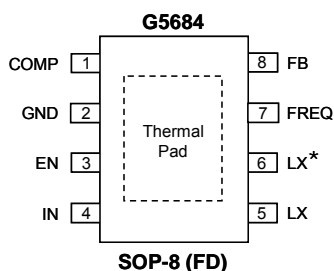
The G5684 requires a minimum number of readily available standard external components. It is available in SOP-8 (FD) package.

Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5684F11U	G5684	-40°C to +85°C	SOP-8 (FD)

Note: F1: SOP-8 (FD)
 1 : Bonding Code
 U : Tape & Reel

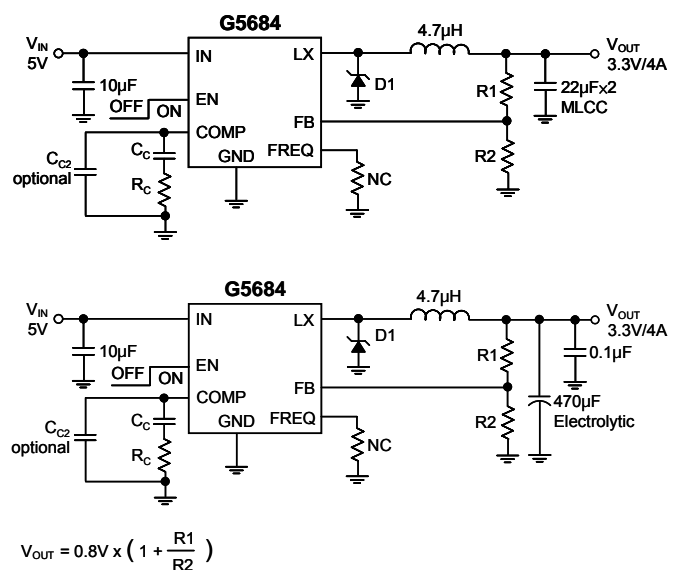
Pin Configuration



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

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

Typical Application Circuit



$$V_{OUT} = 0.8V \times \left(1 + \frac{R1}{R2} \right)$$