

Sync. Rectifier Step Up Converter

Features

- Up to 90% Efficiency at $I_{OUT}=2A$ $V_{OUT}=5V$ from 3.3V Input
- Low 70 μA Quiescent Current
- Guaranteed 3A Output Current at $V_{OUT}=5V$ from 3.3V Input
- 1MHz PWM Switching Frequency
- Synchronous and Embedded Power Mosfets; No Schottky Diode Required
- Internal Soft-Start to Limit Inrush Current
- Adjustable Output
- Output turn off true shutdown function
- Current Mode Operation with Internal Compensation for Excellent Line and Load Transient Response
- Overload/Short-Circuit Protection with hiccup control
- Shutdown Current <1 μA
- Thermal Shutdown
- Compact 8 pin, SOP8 (FD) package

General Description

The G5177B is a compact, high-efficiency, synchronous step-up converter with power Mosfets embedded and with output turn off true shutdown function and adjustable output current limiting with foldback for a single-cell Li-ion/polymer battery. The G5177B uses only 70 μA (typ) quiescent current and allows the converter to switch only when needed at no load and light loads, and when load is higher than 100mA, it uses fixed-frequency PWM technique at 1MHz. It features a current mode control for fast transient response with internal compensation. The G5177B includes cycle-by-cycle current limit to maximum inductor current and over-temperature protection circuit. The G5177B is suitable for iPad-like computers, smart phones and portable handheld devices.

The G5177B is available in a SOP8 (FD) package. The operating temperature range is from -45 $^{\circ}C$ to +85 $^{\circ}C$.

Application

- iPad-like computers, smart phones and portable handheld devices.

Ordering Information

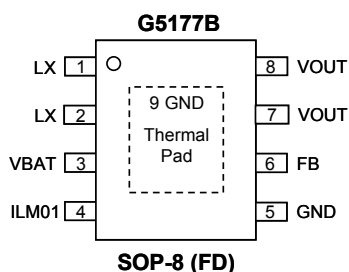
ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5177BF11U	G5177B	0 $^{\circ}C$ to +85 $^{\circ}C$	SOP-8 (FD)

Note: F1:SOP-8 (FD)

1: Bonding Code

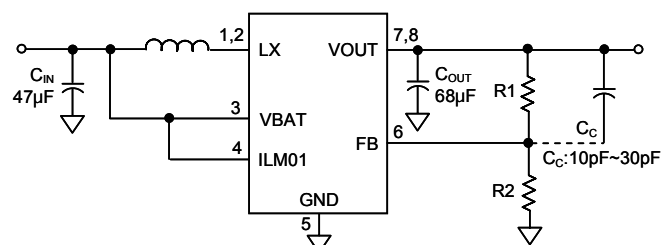
U: Tape & Reel

Pin Configuration



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

Typical Application Circuit



$V_{OUT}=V_{REF}*(1+R1/R2)$, where V_{REF} typical is 1.23V.