

High Efficiency 8A Synchronous Buck Converter

Features

- Ultra-High Efficiency
- Low Quiescent Current of 40 μ A
- Integrated 15m Ω at VCC=5V N-Channel MOSFET for Low Side
- Integrated 30m Ω at VCC=5V N-Channel MOSFET for High Side
- No Current-Sense Resistor (Lossless I_{LIMIT})
- Quasi-PWM with 100ns Load-Step Response
- 1% VOUT Accuracy Over Line and Load
- Programmable Switching Frequency
- 0.75V to 3.6V Adjustable Output Range
- 3V to 28V Adapter or Battery Input Range
- Integrated Boost Switch
- OVP & UVP
- Over Temperature Protection (non-latch)
- 2ms Soft-Start
- Power-Good Indicator

General Description

G5382 is a 6A, synchronous DC/DC buck converter with integrated 30m Ω N-channel high-side MOSFET and 15m Ω N-channel low-side MOSFET. It uses constant on-time control scheme to handle wide input/output voltage ratios with ease and provides 100ns "instant-on" response to load transients while maintaining a relatively constant switching frequency. The G5382 achieves high efficiency at a reduced cost by eliminating the current-sense resistor found in traditional current-mode PWMs. Single-stage buck conversion allows these devices to directly step down high-voltage batteries for the highest possible efficiency. The G5382 is intended for the power supply of Notebook Computer, or other low-voltage supplies as low as 0.75V. The G5382 is available in QFN3X3-24 package.

Applications

- Notebook Computers
- I/O Supply
- Chipset/RAM Supply as Low as 0.75V
- Networking Power Supply

Ordering Information

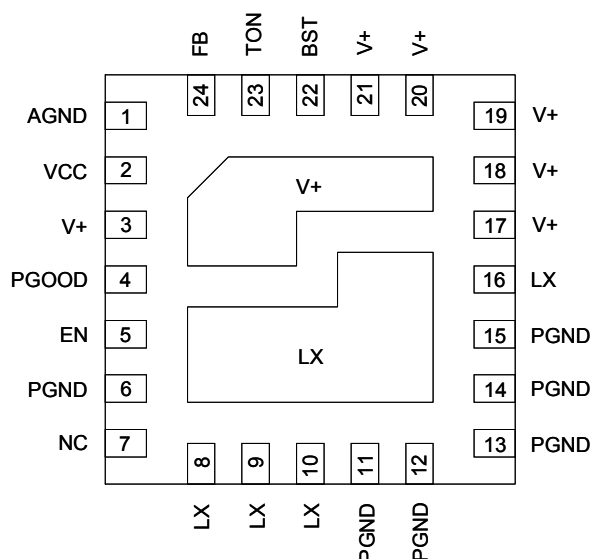
ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5382QU1U	5382	-40°C to +85°C	QFN3X3-24

Note:QU: QFN3X3-24

1: Bonding Code

U : Tape & Reel

Pin Configuration



G5382 QFN3X3-24

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