

High Efficiency 8A Synchronous Buck Converter

Features

- Ultra-High Efficiency
- Low Quiescent Current of 30 μ A
- Integrated 15m Ω at V5V=5V N-Channel MOSFET for Low Side
- Integrated 30m Ω at V5V=5V N-Channel MOSFET for High Side
- No Current-Sense Resistor (Lossless I_{LIMIT})
- Quasi-PWM with 100ns Load-Step Response
- 1% V_{OUT} Accuracy Over Line and Load
- Programmable Switching Frequency
- Adjustable Output Range from 0.9V
- 4.5V to 28V Adapter or Battery Input Range
- Integrated Boost Switch
- OVP & UVP
- Over Temperature Protection (non-latch)
- 3.3ms Soft-Start
- Power-Good Indicator
- Fixed 5V, 10mA Linear Regulator

General Description

G5383 is a 8A, 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 G5383 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 built-in 5V LDO supports 10mA for internal circuits. The G5383 is intended for the power supply as low as 0.9V. The G5383 is available in QFN3X3-24 package.

Applications

- Networking Power Supply
- I/O Supply

Ordering Information

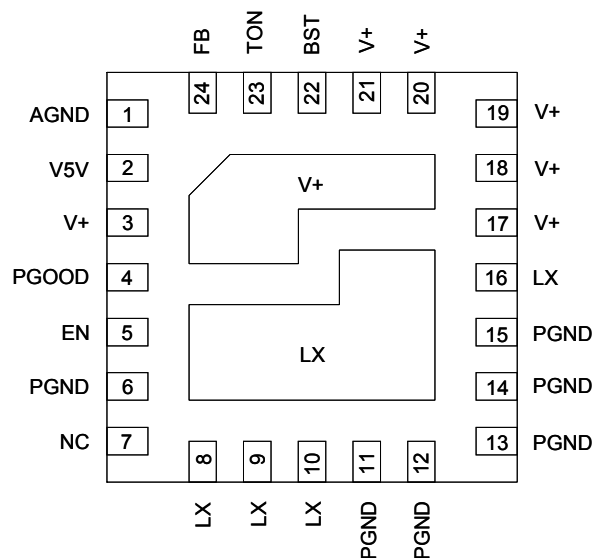
ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5383QU1U	5383	-40°C to +85°C	QFN3X3-24

Note: QU: QFN3X3-24

1: Bonding Code

U : Tape & Reel

Pin Configuration



G5383 QFN3X3-24

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