

High Efficiency 4A Synchronous Buck Converter

General Description

QFN3X3-24 package.

-40°C to +85°C

G5383A is a 4A, synchronous DC/DC buck converter

with integrated $30m\Omega$ N-channel high-side MOSFET

and $30m\Omega$ N-channel low-side MOSFET. It uses con-

stant on-time control scheme to handle wide in-

put/output voltage ratios with ease and provides 100ns

"instant-on" response to load transients while main-

taining a relatively constant switching frequency. The

G5383A achieves high efficiency at a reduced cost by

eliminating the current-sense resistor found in tradi-

tional current-mode PWMs. Single-stage buck conver-

sion allows these devices to directly step down

high-voltage batteries for the highest possible effi-

ciency. The built-in 5V LDO supports 10mA for internal

circuits. The G5383A is intended for the power supply

as low as 0.9V. The G5383A is available in

QFN3X3-24

Features

- Ultra-High Efficiency
- Low Quiescent Current of 30µA
- Integrated 30mΩ at V5V=5V N-Channel MOSFET for Low Side
- Integrated 30mΩ at V5V=5V N-Channel **MOSFET for High Side**
- No Current-Sense Resistor (Lossless ILIMIT)
- Quasi-PWM with 100ns Load-Step Response
- 1% VOUT 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

Applications

- **Networking Power Supply**
- I/O Supply

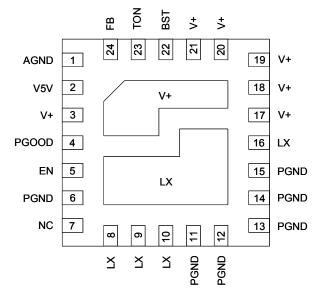
G5383AQU1U

ORDER MARKING TEMP. NUMBER RANGE	PACKAGE (Green)

5383A

Note: QU: QFN3X3-24 1: Bonding Code U: Tape & Reel

Pin Configuration



G5383A QFN3X3-24

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

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