

Product Overview

FAN251040: 40A Synchronous Buck Regulator with PMBUS

For complete documentation, see the data sheet.

The FAN251040 is a highly efficient synchronous buck regulator with digital interface, capable of operating with an input range from 4.5 V to 18 V and supporting up to 40 A load currents. The FAN2510xx utilizes a fixed-frequency voltage-mode control architecture to provide a synchronized constant switching frequency while ensuring fast transient response. Switching frequency and over-current protection can be programmed to provide a flexible solution for various applications. Output over-voltage, under-voltage, over-current, and thermal shutdown protections help prevent damage to the device during fault conditions.

Features

- PMBUS 1.3.1 Compatible
- VIN Range: 4.5 V to 18 V
- Accurate Voltage, Current and Thermal Telemetry Reporting
- High Efficiency: Over 96% Peak
- Continuous Output Current: 40 A
- Internal Linear Bias Regulator
- Precision Reference: $\pm 0.7\%$ Over Temperature
- Output Voltage Range: 0.5 V to 5.5 V
- Adjustable Frequency: 200 kHz to 1.4 MHz
- Programmable Soft-Start

For more features, see the data sheet

Benefits

- Telemetry reporting, custom configuration, fault recording/reading with NVM

Applications

- Point of Load
- ASIC, CPU Core and I/O Supplies

End Products

- Server and Desktop Computers, Notebooks, Gaming
- Telecommunications
- High Density Power Solutions

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	V _O Typ (V)	I _O Typ (A)	Efficiency (%)	f _{sw} Typ (kHz)	Package Type
FAN251040MNTXG	2.5333	Pb-free Halide free non AEC-Q and PPAP	NEW	Step-Down	Voltage Mode	4.5	18	0.5V to 5.5V	Up to 40A	96% Peak	200kHz to 1.4Mhz	WQFN-34

For more information please contact your local sales support at www.onsemi.com.

Created on: 8/5/2021