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ON Semiconductor®

Energy Efficient Innovations

Product Overview

FAN65004B: Synchronous PWM Buck Regulator, High Performance, Voltage Mode, 65 V, 6 A

For complete documentation, see the data sheet.

FAN65004B is a wide VIN highly efficient synchronous buck regulator, with integrated high side and low side power MOSFETs. The device incorporates a fixed frequency voltage mode PWM controller supporting a wide voltage range from 4.5 V to 65 V and can handle continuous currents up to 6 A. FAN65004B includes a 0.67% accurate reference voltage to achieve tight regulation. The switching frequency can be programmed from 100 kHz to 1 MHz.

This single phase buck regulator offers complete protection features including Over current protection, Thermal shutdown, Under-voltage lockout, Over voltage protection, Under voltage protection and Short-circuit protection. This device is available in a compact 6 x 6 mm PQFN package.

Features

- Wide Input Voltage Range: 4.5 V to 65 V
- Switching Frequency: 100 kHz to 1 MHz
- 0.6 V Reference Voltage with 0.67% Accuracy
- Selectable CCM PWM Mode or PFM Mode for Light Loads
- Over Current Protection, Thermal Shutdown, Over Voltage Protection, Under Voltage Protection and Short-circuit Protection
- Dual LDOs for Single Supply Operation and to Reduce Power Loss
- External Compensation for Wide Operation Range
- Adjustable Soft-Start & Pre-Bias Startup
- Enable Function with Adjustable Input Voltage Under-Voltage-Lock-Out (UVLO)
- Power Good Indicator

  For more features, see the data sheet

Benefits

- Supports wide range of applications
- Allows for optimization between size, efficiency, and maximum duty cycle
- Maintain voltage accuracy
- Best Efficiency at heavy loads and also at light loads
- Fully protected against voltage, current and temperature faults
- Improves efficiency by reducing power loss

Applications

- High Voltage POL Module
- Telecommunications
- Networking and Servers Systems, USB−PD
- Industrial Equipments

End Products

- Industrial Automation
- Computing
- Base Station Power Supplies
- Vending, ATM and Slot Machines
- Robotics

Part Electrical Specifications

Product	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
FAN65004B	Pb-free Halide free	Active	Step-Down	Voltage Mode	4.5	65	Adjustable	6	-	100 - 1000	PQFN-35

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

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