

Product Overview

FAN5234: PWM/PFM Controller, Wide Input Voltage

For complete documentation, see the data sheet.

The FAN5234 PWM controller provides high efficiency and regulation with an adjustable output from 0.9V to 5.5V required to power I/O, chip-sets, memory banks, or peripherals in high-performance notebook computers, PDAs, and internet appliances. Synchronous rectification and hysteretic operation at light loads contribute to a high efficiency over a wide range of loads. The Hysteretic Mode of operation can be disabled if PWM Mode is desired for all load levels. Efficiency is further enhanced by using the MOSFET's $R_{DS(ON)}$ as a current-sense component.

Feed-forward ramp modulation, average current mode control, and internal feedback compensation provide fast response to load transients. The FAN5234 monitors these outputs and generates a PGOOD (power-good) signal when the soft-start is completed and the output is within $\pm 10\%$ of its set point. A built-in over-voltage protection prevents the output voltage from going above 120% of the set point. Normal operation is automatically restored when the over-voltage conditions cease. Under-voltage protection latches the chip off when the output drops below 75% of its set value after the softstart sequence is completed. An adjustable over-current function monitors the output current by sensing the voltage drop across the lower MOSFET.

Features

- Wide Input Voltage Range for Mobile Systems: 2 V to 24 V
- Excellent Dynamic Response with Voltage Feed-Forward and Average-Current-Mode Control
- Lossless Current Sensing on Low-Side MOSFET or Precision Over-Current via Sense Resistor
- V_{CC} Under-Voltage Lockout
- Power-Good Signal
- Light-Load Hysteretic Mode Maximizes Efficiency
- 300 KHz or 600 KHz Operation

Applications

- TBA

Part Electrical Specifications

Product	Compliance	Status	Topology	Phases	Control Mode	V_{CC} Min (V)	V_{CC} Max (V)	f_{sw} Typ (kHz)	Package Type
FAN5234MTCX	Pb-free	Active	Step-Down						TSSOP-16

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

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