

Product Overview

FAN5026: PWM Controller, Dual-Output/DDR

For complete documentation, see the data sheet.

The FAN5026 PWM controller provides high efficiency and regulation for two output voltages adjustable in the range from 0.9V to 5.5V that are required to power I/O, chip-sets, and memory banks in high-performance computers, set-top boxes, and VGA cards. Synchronous rectification contributes to high efficiency over a wide range of loads. Efficiency is even further enhanced by using MOSFET $R_{DS(ON)}$ as a current-sense component.

Feedforward ramp modulation, average-current mode control scheme, and internal feedback compensation provide fast response to load transients. Out-of-phase operation with 180° phase shift reduces input current ripple. The controller can be transformed into a complete DDR memory power supply solution by activating a designated pin. In DDR Mode, one of the channels tracks the output voltage of another channel and provides output current sink and source capability — essential for proper powering of DDR chips. The buffered reference voltage required by this type of memory is also provided. The FAN5026 monitors these outputs and generates separate PGx (power good) signals when the soft-start is completed and the output is within ±10% of its set point.

Over-voltage protection prevents the output voltage from exceeding 120% of the set point. Normal operation is automatically restored when the over-voltage conditions cease. Under-voltage protection latches the chip off when either output drops below 75% of its set value after the soft-start sequence for this output is completed. An adjustable over-current function monitors the output current by sensing the voltage drop across the lower MOSFET. If precision current-sensing is required, an external current-sense resistor may be used.

Features

- Highly Flexible, Dual Synchronous Switching PWM Controller that Includes Modes for:
- DDR Mode with In-phase Operation for Reduced Channel Interference
- 90° Phase-shifted, Two-stage DDR Mode for Reduced Input Ripple
- Dual Independent Regulators, 180° Phase Shifted
- Complete DDR Memory Power Solution
- V_{TT} Tracks $V_{DDQ/2}$
- $V_{DDQ/2}$ Buffered Reference Output
- Lossless Current Sensing on Low-Side MOSFET or Precision Over-Current Using Sense Resistor
- V_{CC} Under-Voltage Lockout
- Wide Input Range: 3V to 16V

For more features, see the data sheet

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
FAN5026MTCX	Pb-free	Active	Step-Down						TSSOP-28

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

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