

FAN501

Offline DCM / CCM Flyback PWM Controller for Charger Applications

Product Overview

For complete documentation, see the data sheet.

The advanced PWM controller, FAN501, simplifies isolated power supply design that requires CC regulation of the output. The output current is precisely estimated with only the information in the primary side of the transformer and controlled with an internal compensation circuit, removing the output current-sensing loss and eliminating external CC control circuitry. With an extremely low operating current (250 μ A), Burst Mode maximizes light-load efficiency, allowing conformance to worldwide Standby Mode efficiency guidelines.

Compared with a conventional approach using external control circuit in the secondary side for CC regulation, the FAN501 can reduce total cost, component count, size, and weight; while increasing efficiency, productivity, and system reliability.

Features

- WSaver® Technology Provides Ultra-Low Standby Power Consumption for Energy Star's 5-Star Level (<30 mW)
- Constant-Current (CC) Control without Secondary-Side Feedback Circuitry for Discontinuous Conduction Mode (DCM) and Continuous Conduction Mode (CCM)
- Dual-Frequency Function Changes Switching Frequency (140 kHz / 85 kHz) According to Input Voltage to Maximize Transformer Utilization and Improve Efficiency
- High Power Density and High Conversion Efficiency with CCM Operation in Typical 10 W to 15 W Compact Charger Applications
- Frequency Hopping to Reduce EMI Noise
- High-Voltage Startup
- Precise Maximum Output Power Limit by CC Regulation through External Resistor Adjustment
- Peak-Current-Mode Control with Slope Compensation to Avoid Sub-Harmonic Oscillation
- Programmable Over-Temperature Protection with Latch Mode through External NTC Resistor
- VS Over-Voltage Protection with Latch Mode

For more features, see the data sheet