

Product Overview

FAN6604: Green-Mode PWM Controller for Flyback Converter, 65KHz, Brown In/Out Protection

For complete documentation, see the data sheet.

The highly integrated FAN6604 PWM controller provides several features to enhance the performance of flyback converters. To minimize standby power consumption, a proprietary Green-Mode function provides off-time modulation to continuously decrease the switching frequency under light-load conditions.

Under zero-load and very light-load conditions, FAN6604 saves PWM pulses by entering "deep" Burst Mode. Burst Mode enables the power supply to meet international power conservation requirements.

FAN6604 also integrates a frequency-hopping function that helps reduce EMI emission of a power supply with minimum line filters. The built-in synchronized slope compensation helps achieve stable peak-current control. Add in current limit to keep constant output power over universal AC input range. The gate output is clamped at 13 V to protect the external MOSFET from over-voltage damage.

Other protection functions include AC input brownout protection with hysteresis, sense pin short-circuit protection, and VDD over-voltage protection. For over-temperature protection, an external NTC thermistor can be applied to sense the external switcher's temperature. When V_{DD} OVP or OTP are activated, an internal latch circuit is used to latch-off the controller. The Latch Mode is reset when the V_{DD} supply is removed.

FAN6604 is available in an 8-pin SOP package.

Features

- High-Voltage Startup
- AC Input Brownout Protection with Hysteresis
- Line Compensation by Current Limit
- Low Operating Current: 1.5 mA
- Linearly Decreasing PWM Frequency to 22 kHz with Cycle Skipping
- Frequency Hopping to Reduce EMI Emission
- Fixed PWM Frequency: 65 kHz
- Peak-Current-Mode Control
- Cycle-by-Cycle Current Limiting
- Leading-Edge Blanking (LEB)

For more features, see the data sheet

Applications

- LCD Monitor
- LCD TV
- Motion Control - Industrial Motor

Part Electrical Specifications

Product	Compliance	Status	Topology	Phases	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	f _{SW} Typ (kHz)	Package Type
FAN6604MLMX	Pb-free	Active	Flyback	1	Current Mode	16	18	65	SOIC-8
	Halide free								
FAN6604MRMX	Pb-free	Active	Flyback	1	Current Mode	16	18	65	SOIC-8
	Halide free								

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