

## FAN602

# Offline Quasi-Resonant PWM Controller

## Product Overview

For complete documentation, see the data sheet.

The FAN602 is an advanced PWM controller aimed at achieving power density of  $\sim 10\text{W}/\text{in}^3$  in universal input range AC/DC flyback isolated power supplies. It incorporates Quasi-Resonant (QR) control with proprietary Valley Switching with a limited frequency variation. QR switching provides high efficiency by reducing switching losses while Valley Switching with a limited frequency variation bounds the frequency band to overcome the inherent limitation of QR switching.

FAN602 features mWSaver® burst mode operation with extremely low operating current (300 A) and significantly reduces standby power consumption to meet the most stringent efficiency regulations such as Energy Star's 5-Star Level and CoC Tier II specifications.

## Features

- High Efficiency Across Wide Input and Output Conditions in a Small Form Factor
- Quasi-Resonant Switching Operation with Programmable Maximum Blanking Frequency Range (60 kHz~ 140 kHz)
- User Configurable Burst Mode Entry and Exit to Maximize Light Load Efficiency and Minimize Audible Noise
- Adaptive Burst Mode Entry Level for Adaptive Charger Application
- mWSaver® Technology for Ultra Low Standby Power Consumption ( $< 20\text{ mW}$ )
- Forced and Inherent Frequency Modulation of Valley Switching for Low EMI Emissions and Common Mode Noise
- Built-In and User Configurable Over-Voltage Protection (OVP), Under-Voltage Protection (UVP) and Over-Temperature Protection (OTP)
- Fully Programmable Brown-In and Brownout Protection
- Precise Constant Output Current Regulation with Programmable Line Compensation
- Built-In High-Voltage Startup to Reduce External Components

For more features, see the data sheet

## Applications

- This product is general usage and suitable for many different applications.