

Cost Effective, High Power, η -Balance™ PWM Controller

FEATURES

- ◆ 800mA Drive Capability, up to 100W Application with Low System Cost
- ◆ Proprietary η -Balance™ Control to Boost Light Load Efficiency
- ◆ Proprietary “Audio Noise Free OCP Compensation”
- ◆ Proprietary “Zero OCP/OPP Recovery Gap” Control
- ◆ Latch Plug-off Protection with External Triggering
- ◆ Fixed 65KHz Switching Frequency
- ◆ Built-in Soft Start Function
- ◆ Pins Floating Protection
- ◆ Current Mode Control
- ◆ Built-in Frequency Shuffling
- ◆ Built-in Synchronous Slope Compensation
- ◆ Cycle-by-Cycle Current Limiting
- ◆ Built-in Leading Edge Blanking (LEB)
- ◆ Constant Power Limiting
- ◆ Audio Noise Free Operation
- ◆ VDD UVLO, OVP & Clamp

APPLICATIONS

Offline AC/DC Flyback Converter for

- ◆ AC/DC Adaptors
- ◆ Open-frame SMPS
- ◆ Print Power, Scanners, and Motor Drivers

GENERAL DESCRIPTION

SF1585 is a high performance, cost effective, highly integrated current mode PWM controller for medium to large offline flyback power converter applications. In SF1585, PWM switching frequency with shuffling is fixed to 65KHz and is trimmed to tight range. When the output power demands decrease, the IC decreases switching frequency based on the proprietary η -Balance™ control to boost power conversion efficiency at the light load. When the current set-point falls below a given value, e.g. the output power demand diminishes, the IC enters into burst mode and provides excellent efficiency without audio noise.

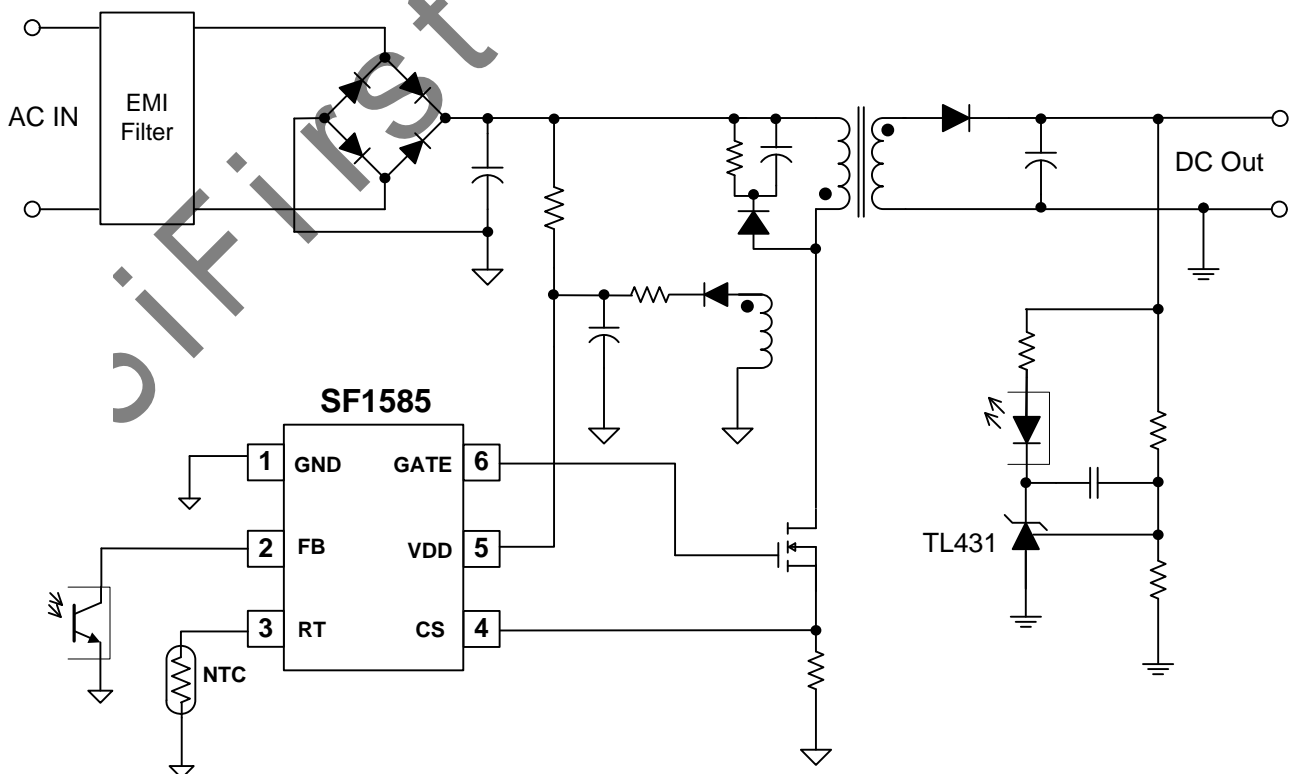
SF1585 can achieve “Zero OCP/OPP Recovery Gap” using SiFirst’s proprietary control algorithm. It also has built in proprietary “Audio Noise Free OCP Compensation”, which can achieve constant power limiting and can achieve audio noise operation at heavy loading when line input is around 90VAC.

SF1585 integrates functions and protections of Under Voltage Lockout (UVLO), VCC Over Voltage Protection (OVP), Cycle-by-cycle Current Limiting (OCP), External Programmable Over Temperature Protection (OTP), All Pins Floating Protection, Over Load Protection (OLP), Gate Clamping, VCC Clamping, Leading Edge Blanking (LEB).

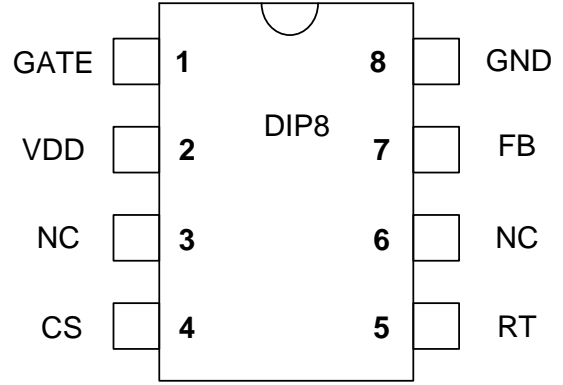
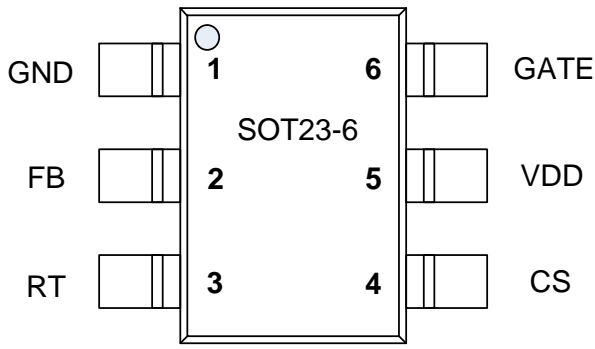
In SF1585, the OTP and VDD OVP is **Latch Plug-off** protection. The other protection functions are auto-recovery mode protection.

SF1585 is available in SOT23-6, DIP-8 packages.

TYPICAL APPLICATION



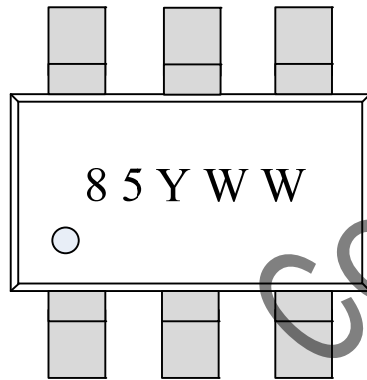
Pin Configuration



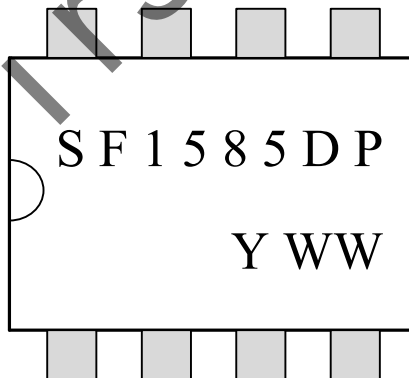
Ordering Information

Part Number	Top Mark	Package		Tape & Reel
SF1585LGT	.85YWW	SOT26	Green	Yes
SF1585DP	SF1585DP	DIP8	RoHS	

Marking Information



Dot: Pin1 Mark
45: Part number SF1585
YWW: Year&Week Code



YWW: Year&Week code