

η -Balance™ Current Mode PWM Controller

FEATURES

- ◆ Less than 100mW Standby Power
- ◆ Proprietary η -Balance™ Control to Boost Light Load Efficiency
- ◆ Proprietary “Zero OCP/OPP Recovery Gap” Control
- ◆ Proprietary “Audio Noise Free OCP Compensation”
- ◆ Latch Plug-off Protection with External Triggering
- ◆ Fixed 65KHz Switching Frequency
- ◆ Built-in Frequency Shuffling
- ◆ Built-in Soft Start Function
- ◆ Frequency Reduction and Burst Mode Control for Energy Saving
- ◆ Built-in Synchronous Slope Compensation
- ◆ Cycle-by-Cycle Current Limiting
- ◆ Built-in Leading Edge Blanking (LEB)
- ◆ Current Mode Control
- ◆ Pin Floating Protection
- ◆ Very Low Startup Current
- ◆ Audio Noise Free Operation
- ◆ VDD UVLO, OVP & Clamp

APPLICATIONS

- Offline AC/DC Flyback Converter for
- ◆ AC/DC Adaptors
 - ◆ Open-frame SMPS

GENERAL DESCRIPTION

SF5545 is a high performance, high efficiency, highly integrated current mode PWM controller for offline flyback converter applications.

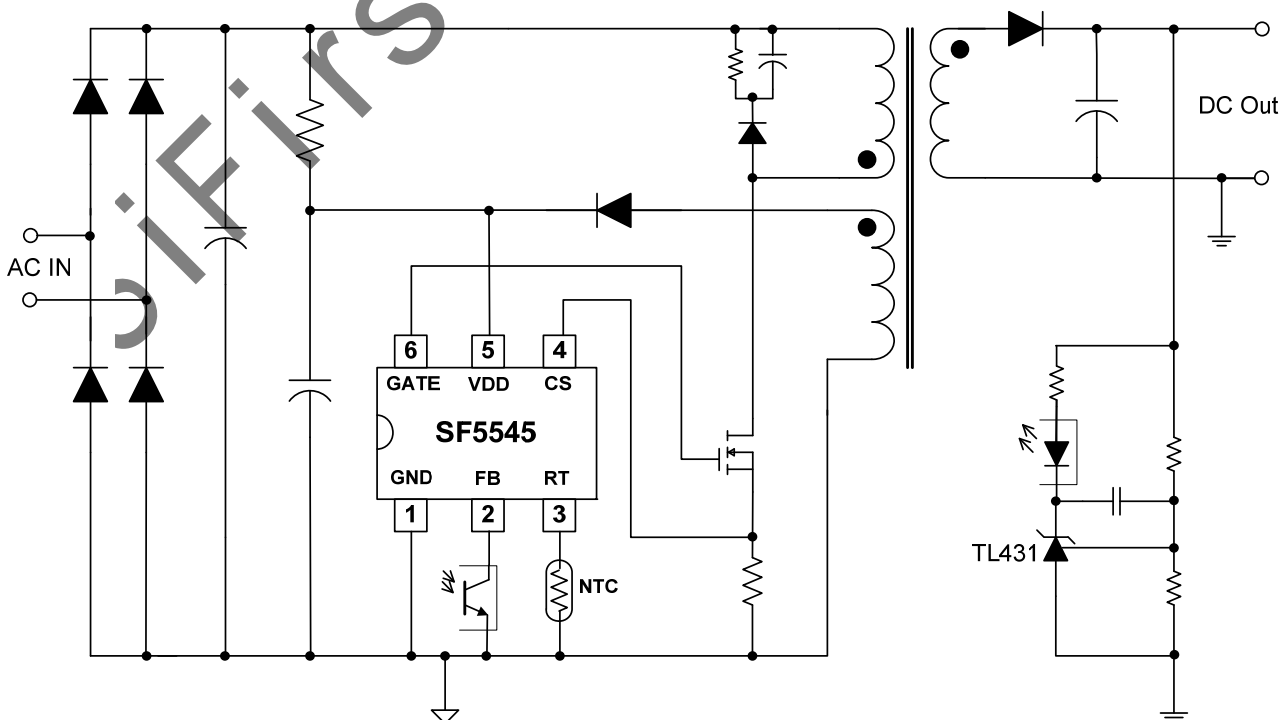
In SF5545, PWM switching frequency with shuffling is fixed to 65KHz and is trimmed to tight range. When the output power demands decrease, the IC decreases switching frequency based on the proprietary η -Balance™ control to boost power conversion efficiency at the light load. When output power falls below a given value, the IC enters into burst mode and can achieve less than 100mW no load power.

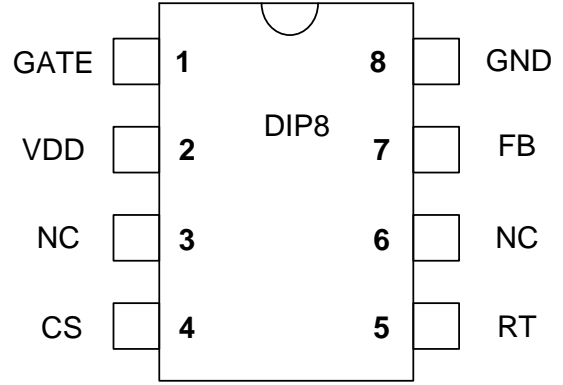
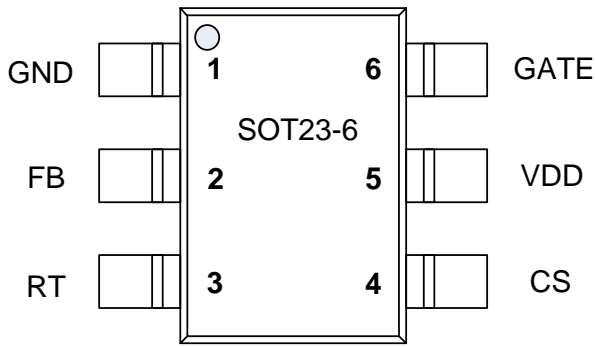
The IC can achieve “Zero OCP/OPP Recovery Gap” using SiFirst’s proprietary control algorithm. SF5545 also has built in proprietary “Audio Noise Free OCP Compensation”, which can achieve constant power limiting and can achieve audio noise operation at heavy loading when line input is around 90VAC.

SF5545 integrates functions and protections of Under Voltage Lockout (UVLO), VDD Over Voltage Protection (OVP), Cycle-by-cycle Current Limiting (OCP), External Programmable Over Temperature Protection (OTP) and Over Voltage Protection (OVP), Pins Floating Protection, Over Load Protection (OLP), Gate Clamping, VDD Clamping, Leading Edge Blanking (LEB), Soft Start, etc.

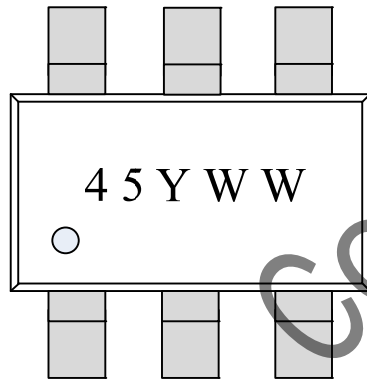
In SF5545, the external triggered OTP/OVP and VDD OVP are latch plug-off protections. The other protection functions are auto-recovery mode.

SF5545 is available in SOT23-6 and DIP-8 packages.

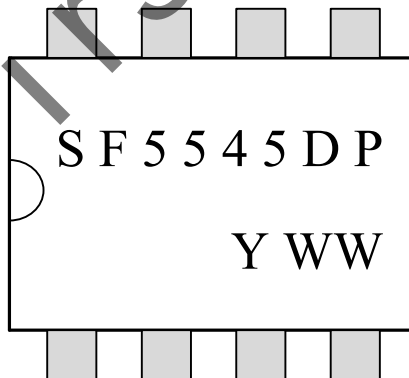
TYPICAL APPLICATION


Pin Configuration

Ordering Information

Part Number	Top Mark	Package		Tape & Reel
SF5545LGT	.45YWW	SOT26	Green	Yes
SF5545DP	SF5545DP	DIP8	RoHS	

Marking Information


Dot: Pin1 Mark
45: Part number SF5545
YWW: Year&Week Code



YWW: Year&Week code