

## Highly Integrated Current Mode PWM Controller

**FEATURES**

- ◆ Built-in Soft Start Function
- ◆ Very Low Startup Current
- ◆ Frequency Reduction and Burst Mode Control for Energy Saving
- ◆ Built-in Frequency Shuffling
- ◆ Programmable Switching Frequency
- ◆ Built-in Synchronous Slope Compensation
- ◆ Cycle-by-Cycle Current Limiting
- ◆ Pins Floating Protection
- ◆ High Voltage CMOS Process with Excellent ESD Protection
- ◆ Current Mode Control
- ◆ Built-in Leading Edge Blanking (LEB)
- ◆ Constant Power Limiting
- ◆ Audio Noise Free Operation
- ◆ VDD OVP & Clamp
- ◆ VDD Under Voltage Lockout (UVLO)

**APPLICATIONS**

Offline AC/DC Flyback Converter for

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

**GENERAL DESCRIPTION**

SF1565 is a high performance, highly integrated current mode PWM controller for medium to large offline flyback converter applications.

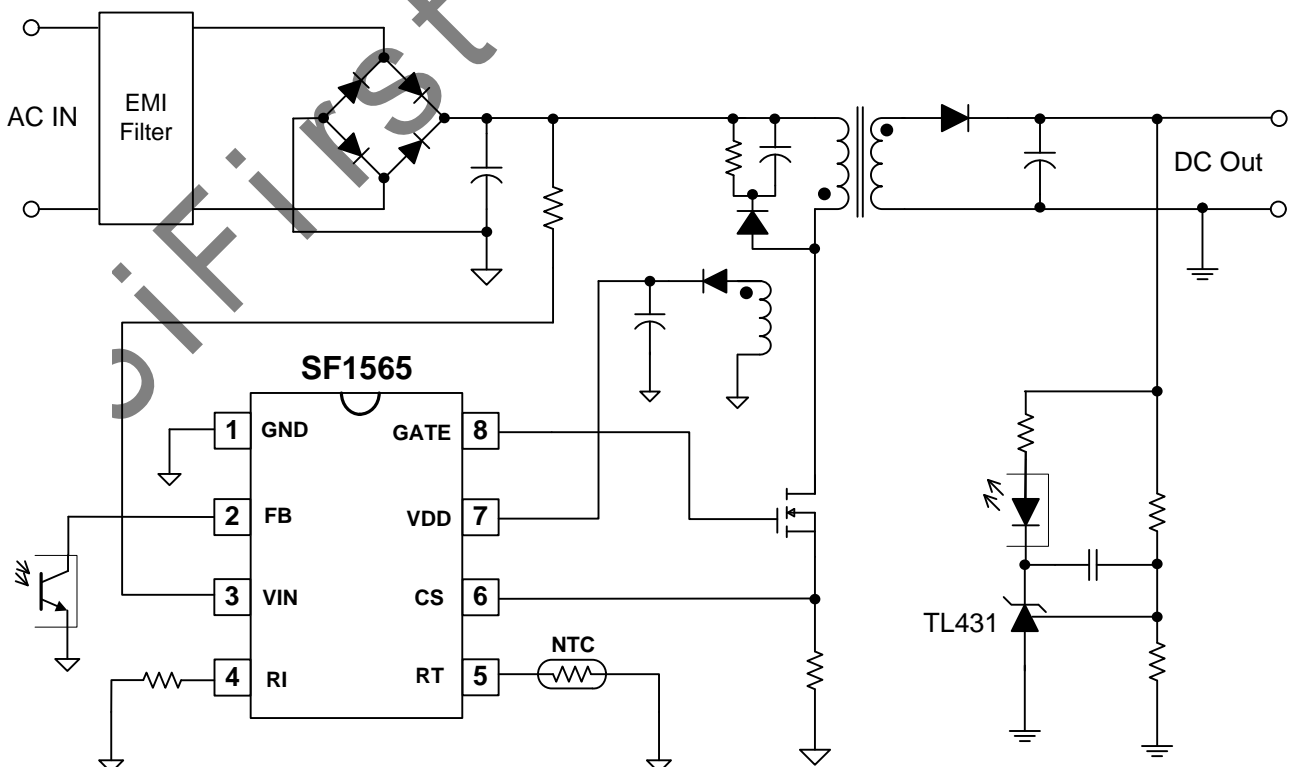
In SF1565, the PWM switching is internally trimmed to tight range. To improve EMI performance, the IC integrates frequency shuffling function to reduce conduction EMI emission of a power supply. The IC also integrates Constant Power Limiting block to achieve constant output power limit from 90VAC to 264VAC.

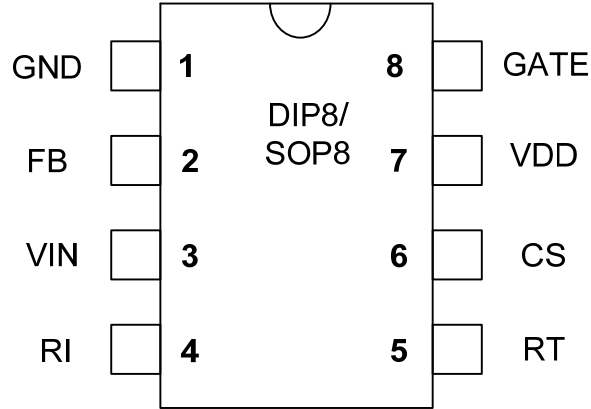
Under light load conditions, a green mode function can continuously decrease the switching frequency. Under zero-load conditions, the power supply enters into burst mode and provides excellent efficiency without audio noise generated. This green mode function enables power supplies to meet international power conservation requirements.

SF1565 integrates functions and protections of Under Voltage Lockout (UVLO), VDD Over Voltage Protection (OVP), Soft Start, External Programmable Over Temperature Protection (OTP), Cycle-by-cycle Current Limiting (OCP), Over Load Protection (OLP), Pins Floating Protection, RI Pin Short-to-GND Protection, GATE Clamping, VDD Clamping, Leading Edge Blanking (LEB).

In SF1565, the all protection functions are auto-recovery mode protection.

SF1565 is available in SOP-8 and DIP-8 packages.

**TYPICAL APPLICATION**


**Pin Configuration**

**Ordering Information**

Part Number	Top Mark	Package		Tape & Reel
SF1565SG	SF1565SG	SOP8	Green	
SF1565SGT	SF1565SG	SOP8	Green	Yes
SF1565DP	SF1565DP	DIP8	RoHS	

**Marking Information**
