

High Performance Current Mode PWM Controller

FEATURES

- ◆ Proprietary “Zero OCP/OPP Recovery Gap” Control
- ◆ Built-in Soft Start Function
- ◆ Pins Floating Protection
- ◆ Very Low Startup Current
- ◆ High Voltage CMOS Process with Excellent ESD Protection
- ◆ Frequency Reduction and Burst Mode Control for Energy Saving
- ◆ Current Mode Control
- ◆ Built-in Frequency Shuffling
- ◆ Programmable Switching Frequency
- ◆ Built-in Synchronous Slope Compensation
- ◆ Cycle-by-Cycle Current Limiting
- ◆ 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 Adaptors
- ◆ Open-frame SMPS
- ◆ Set-Top Box Power Supplies
- ◆ ATX Standby Power

GENERAL DESCRIPTION

SF1530 is a high performance, low cost, highly integrated current mode PWM controller for offline flyback converter applications.

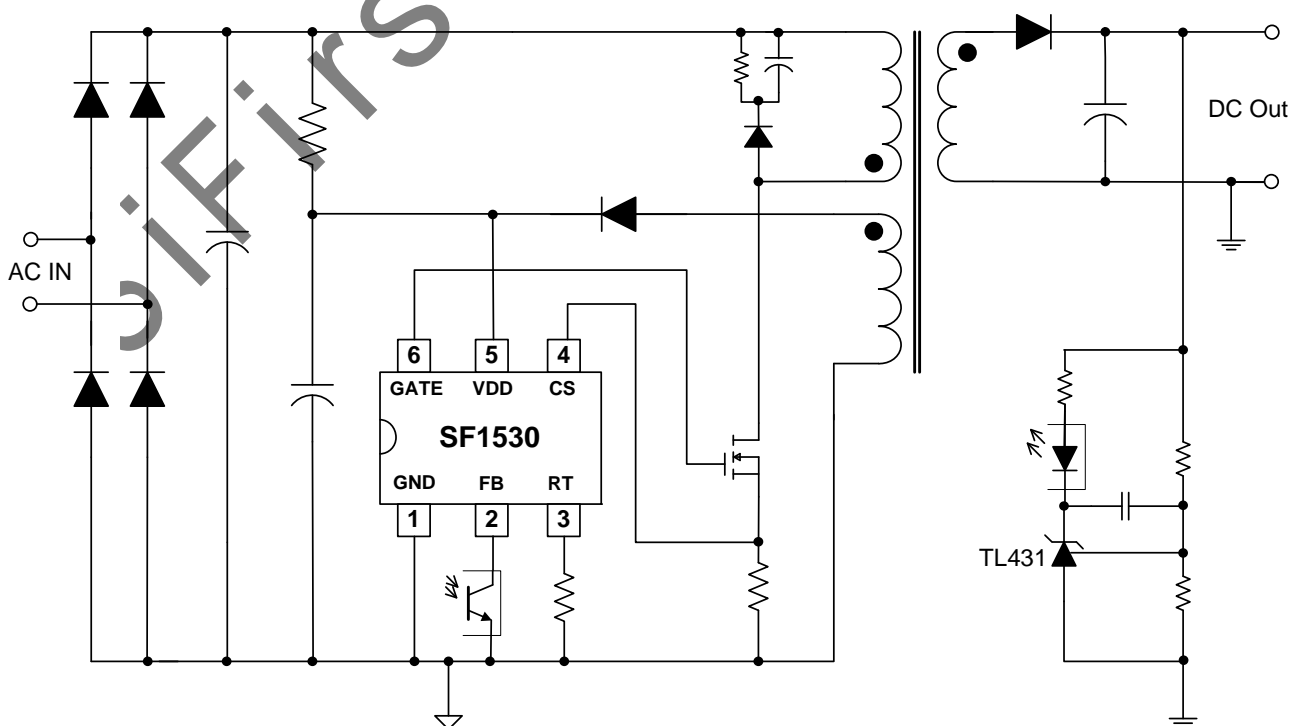
PWM switching frequency with shuffling is externally programmable, which can reduce conduction EMI emission of a power supply. When the output power demands decrease, the IC automatically decreases switching frequency for high power conversion efficiency. When the current set-point falls below a given value, e.g. the output power demand diminishes, the IC enters into burst mode and provides excellent efficiency without audio noise.

The IC can achieve “**Zero OCP/OPP Recovery Gap**” using SiFirst’s proprietary control algorithm. Meanwhile, the OCP/OPP variation versus universal line input is compensated.

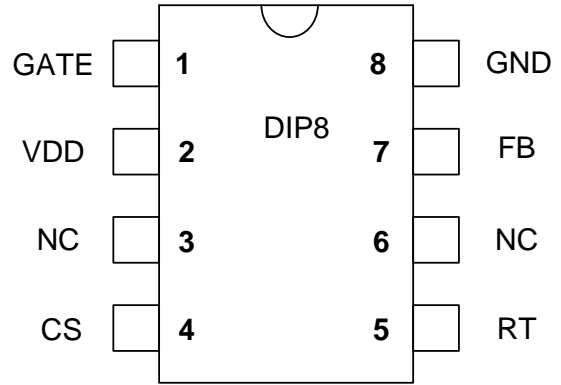
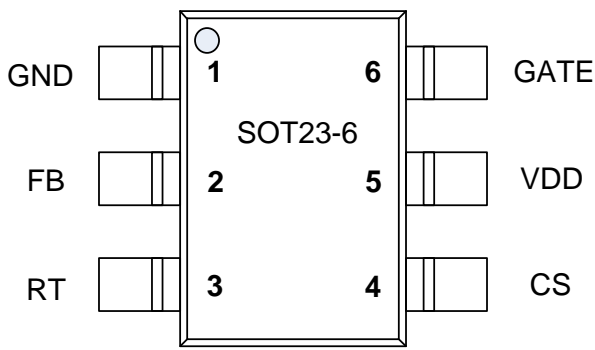
The IC has built-in synchronized slope compensation to prevent sub-harmonic oscillation at high PWM duty output. The IC also has built-in soft start function to soften the stress on the MOSFET during power on period.

SF1530 integrates functions and protections of Under Voltage Lockout (UVLO), VCC Over Voltage Protection (OVP), Cycle-by-cycle Current Limiting (OCP), Pins Floating Protection, Over Load Protection (OLP), RT Pin Short-to-GND Protection, Gate Clamping, VCC Clamping, Leading Edge Blanking (LEB).

SF1530 is available in SOT23-6, DIP-8 packages.

TYPICAL APPLICATION


Pin Configuration



Ordering Information

Part Number	Top Mark	Package		Tape & Reel
SF1530LGT	.30YWW	SOT26	Green	Yes
SF1530DP	SF1530DP	DIP8	RoHS	

Marking Information

