Green-Mode PWM Controller with High-Voltage Start-Up Circuit

REV: 04b

General Description

The LD7575 is a current-mode PWM controller with excellent power-saving operation. It features a high-voltage current source to directly supply the startup current from bulk capacitor and further to provide a lossless startup circuit. The integrated functions such as the leading-edge blanking of the current sensing, internal slope compensation, and the small package provide the users a high efficiency, minimum external component counts, and low cost solution for AC/DC power applications.

Furthermore, the embedded over voltage protection, over load protection and the special green-mode control provide the solution for users to design a high performance power circuit easily. The LD7575 is offered in both SOP-8 and DIP-8 package.

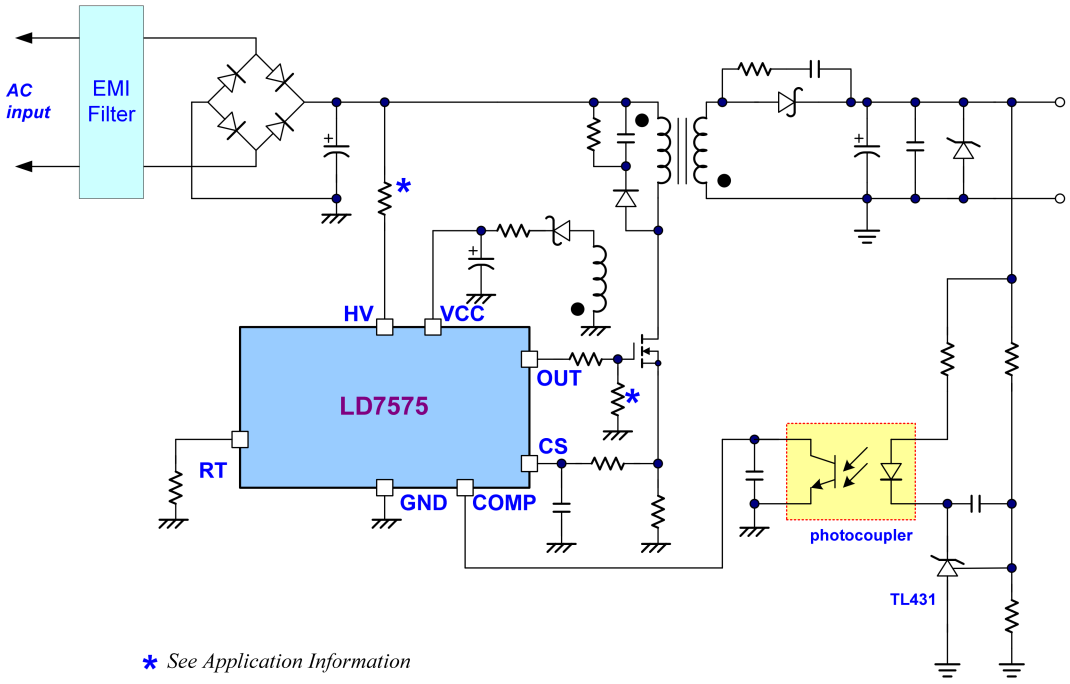
Features

- High-Voltage (500V) Startup Circuit
- Current Mode Control
- Non-Audible-Noise Green Mode Control
- UVLO (Under Voltage Lockout)
- LEB (Leading-Edge Blanking) on CS Pin
- Programmable Switching Frequency
- Internal Slope Compensation
- OVP (Over Voltage Protection) on Vcc
- OLP (Over Load Protection)
- 500mA Driving Capability

Applications

- Switching AC/DC Adapter and Battery Charger
- Open Frame Switching Power Supply
- LCD Monitor/TV Power

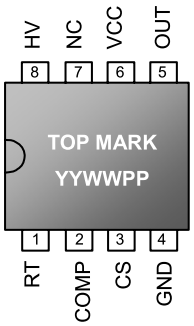
Typical Application



* *See Application Information*

Pin Configuration

SOP-8 & DIP-8 (TOP VIEW)



YY: Year code
WW: Week code
PP: Production code

Ordering Information

Part number	Package		Top Mark	Shipping
LD7575 PS	SOP-8	PB Free	LD7575PS	2500 /tape & reel
LD7575 GS	SOP-8	Green Package	LD7575GS	2500 /tape & reel
LD7575 PN	DIP-8	PB Free	LD7575PN	3600 /tube /Carton

The LD7575 is ROHS compliant/ Green Package.

Pin Descriptions

PIN	NAME	FUNCTION
1	RT	This pin will program the switching frequency, to connect a resistor with ground to set the switching frequency.
2	COMP	Voltage feedback pin (same as the COMP pin in UC384X), By connecting a photo-coupler to close the control loop and achieve the regulation.
3	CS	Current sense pin, connect to sense the MOSFET current
4	GND	Ground
5	OUT	Gate drive output to drive the external MOSFET
6	VCC	Supply voltage pin
7	NC	Unconnected Pin
8	HV	Connect this pin to positive terminal of bulk capacitor to provide the startup current for the controller. When Vcc voltage trips the UVLO(on), this HV loop will be off to save the power loss on the startup circuit.

Block Diagram