Smart Green-Mode PWM Controller with Multiple Protections

REV: 00

General Description

The LD7523 is a low startup current, current mode PWM controller with green-mode power-saving operation. The SOP-8/DIP-8 package integrated functions such as the leading- edge blanking of the current sensing, internal slope compensation, line compensation, and several protection features. The protection functions include cycle-by-cycle current limit, OVP, OLP, and brownout protection. It provides the users a high efficiency, low external component counts solution for AC/DC power applications.

Furthermore, to satisfy various protection requirements, both latch-mode protection and auto-recoverable protection can be easily achieved by configuring LD7523 on different operation modes.

The special green-mode control is not only to achieve the low power consumption but also to offer a non-audible-noise operation when the LD7523 is operating under light load or no load condition.

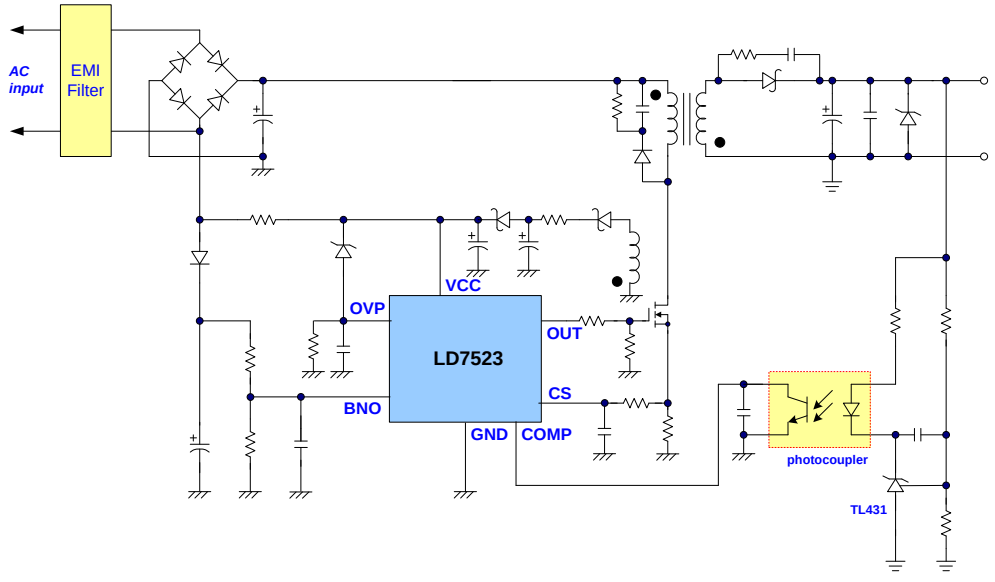
Features

- High-Voltage CMOS Process with Excellent ESD protection
- Very Low Startup Current (< 35μA)
- Current Mode Control
- Non-audible-noise Green Mode Control
- UVLO (Under Voltage Lockout)
- LEB (Leading-Edge Blanking) on CS Pin
- Internal Slope Compensation
- Programmable Line Compensation
- OVP (Over Voltage Protection)
- OLP (Over Load Protection)
- Brownout Protection
- Built in OLP De-Latch Timer
- 500mA Driving Capability

Applications

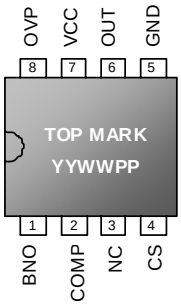
- Switching AC/DC Adaptor and Battery Charger
- Open Frame Switching Power Supply
- LCD Monitor/TV Power

Typical Application



Pin Configuration

SOP-8 & DIP-8(TOP VIEW)



YY : Year code (D: 2004, E: 2005…..)
WW : Week code
: Production code

Ordering Information

Part number	Package		TOP MARK	Shipping
LD7523 GS	SOP-8	Green Package	LD7523GS	2500 /tape & reel
LD7523 GN	DIP-8	Green Package	LD7523GN	3600/tube /carton

The LD7523 is ROHS Complaint/ Green Package.

Pin Descriptions

PIN	NAME	FUNCTION
1	BNO	Brownout Protection Pin. Connect a resistor divider between this pin and bulk capacitor voltage to set the brownout level and line compensation. When the voltage of this pin fall below threshold voltage, the PWM output will be shut off.
2	COMP	Voltage feedback pin (same as the COMP pin in UC384X). Connect it with a photo-coupler to close the control loop and achieve the regulation.
3	NC	NC
4	CS	Current sense pin, connect to sense the MOSFET current
5	GND	Ground
6	OUT	Gate drive output to drive the external MOSFET
7	VCC	Supply voltage pin
8	OVP	This pin is active-high to provide the OVP function. Connecting a zener or a resistor voltage divider to Vcc will set the OVP level. Once the voltage rise above 2.5V, the OVP will be tripped and the gate drive off. Short this pin to ground to disable the OVP function.

Block Diagram