

DESCRIPTION

MT7933 is a single-stage, primary side control AC-DC LED driver with active power factor correction. MT7933 integrates on-chip PFC circuit operates in critical conduction mode (CRM) to achieve high power factor and reduce the power MOSFET switching loss. With MAXIC Proprietary control technique, precision LED current is achieved without secondary side sense and feedback circuit including opto-coupler.

MT7933 provides various protections, such as over current protection (OCP), over voltage protection (OVP), short circuit protection (SCP) and over temperature protection (OTP), etc, to improve system reliability.

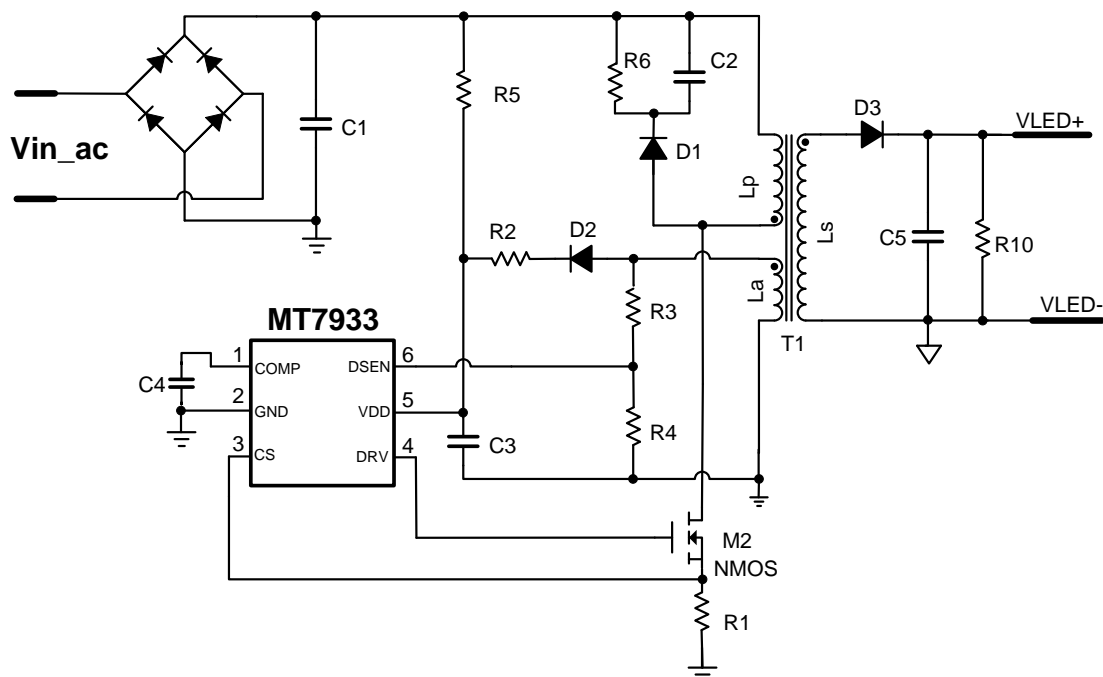
FEATURES

- Single-stage Active PFC for high power factor and low THD
- Primary side control eliminates opto-coupler
- High precision LED current ($\pm 3\%$)
- Critical Conduction Mode operation
- Up to 60W driving capability.
- Cycle-by-cycle current limiting
- Under-voltage lockout (UVLO) protection
- VDD and output over voltage protection
- Adjustable constant current and output power setting
- Power on soft-start
- Compact SOT23-6 package

APPLICATIONS

- AC/DC LED driver applications
- Signal and decorative LED lighting
- E27/PAR30/PAR38/GU10 etc.LED lamp
- T8/T10 LED String

Typical Application Circuit



ABSOLUTE MAXIMUM RATINGS

VDD Voltage	-0.3V to VDD Clamp
DRV Pin Voltage	-0.3V to 24V
COMP/CS/DSEN Pins Voltage	-0.3V to 5V
Power Dissipation (TA=25°C, SOT23-6)	0.6W
Lead Temperature (soldering, 10 sec.)	260°C
Storage Temperature	-55°C to 150°C

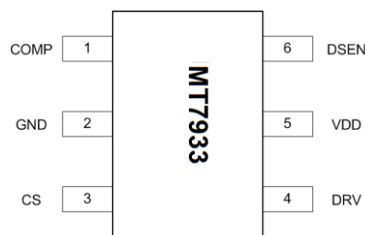
Recommended operating conditions

Supply voltage	7.2V to 23V
Operating Temperature	-40°C to 105°C

Thermal resistance^①

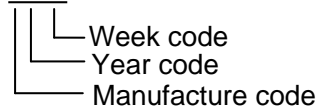
Junction to ambient (R _{θJA})	145°C/W
Junction to Case (R _{θJC})	80°C/W

PIN CONFIGURATIONS



Chip Mark

7933xYW



PIN DESCRIPTION

Name	Pin No.	Description
COMP	1	Internal EA's output. Connect a capacitor to ground for frequency compensation.
GND	2	Ground.
CS	3	Current Sense Pin.
DRV	4	Gate drive output for primary MOSFET.
VDD	5	Power Supply.
DSEN	6	The voltage feedback from auxiliary winding. Connected to a resistor divider from auxiliary winding to sense output voltage.