DESCRIPTION

MT7952 is a primary-side controller for AC-DC LED lighting. It operates in constant current control mode and works in discontinuous conduction mode, suitable for flyback converter under universal input, the output power of the system should less than 5W.

MT7952 adopts primary side sensing and regulation technology, no secondary side feedback circuit is needed. Further, the loop compensation components are also eliminated while maintaining system stability. With building in 600V power MOSFET, low component counts and low BOM cost are achieved.

By using Maxic proprietary current regulation method, the MT7952 achieves ±3% accuracy of LED current along with excellent line regulation and load regulation.

MT7952 provides plenty of protections, such as LED short circuit protection, LED open circuit protection, over-temperature protection, VDD over voltage protection, VDD under voltage lock-out, etc.

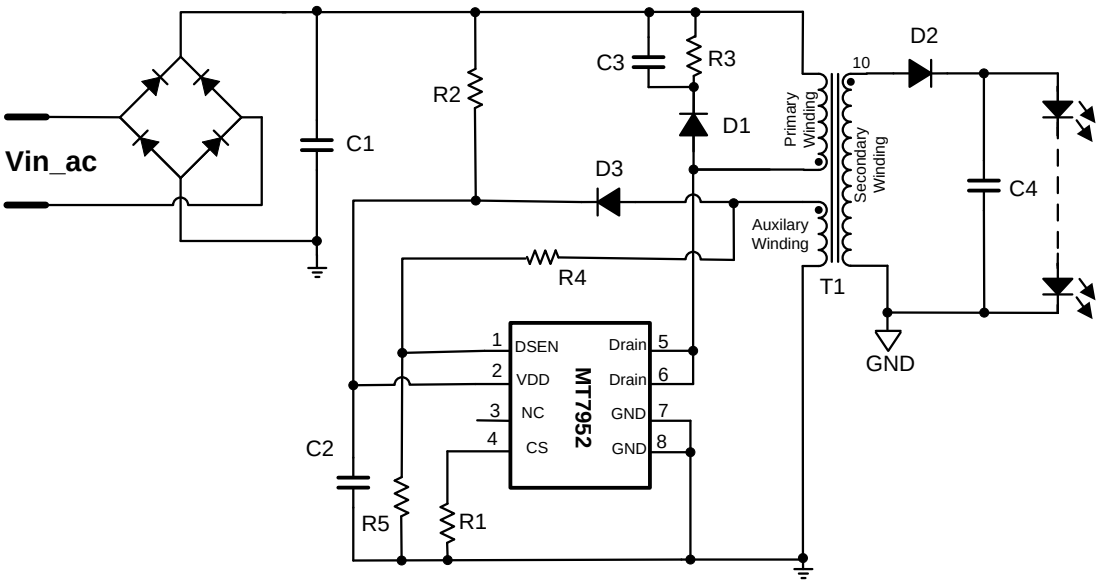
FEATURES

- Build in 600V power MOSFET
- 85V to 265V AC line voltage range
- Primary side sensing and regulation, no need of secondary side feedback
- High precision constant LED current (±3%)
- Cycle-by-cycle peak current control
- LED short-circuit/open circuit protection
- VDD under voltage lock-out protection
- VDD over voltage protection
- Over temperature protection
- Suitable for less than 5W applications
- Built-in leading edge blanking (LEB)
- Extremely minimum external components
- Available in SOP8 package

APPLICATION

- GU10/E27 LED lamp, spot light
- 1-5W LED lighting application

Typical Application Circuit



ABSOLUTE MAXIMUM RATINGS

VDD	-0.3V to 20V
DSEN	-0.3V to 6V
DRAIN	-0.3V to 600V
CS	-0.3V to 6V
PDMAX（Maximum Power）	0.45W
Storage Temperature	-55°C to 150°C
Junction Temperature (Tj)	150°C

Recommended operating conditions

Supply voltage	7.5V to 16V
Operating Temperature	-40°C to 105°C

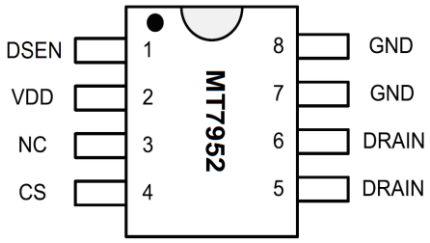
Thermal resistance①

Junction to ambient ($R_{\theta JA}$)	128°C/W

Note:

① *$R_{\theta JA}$ is measured in the natural convection at TA = 25°C on a low effective single layer thermal conductivity test board of JEDEC 51-3 thermal measurement standard. Test condition: Device mounted on 2" X 2" FR-4 substrate PCB, 2oz copper, with minimum recommended pad on top layer and thermal vias to bottom layer ground p*lane.

PIN CONFIGURATIONS



Chip Mark

MT7952
XX Y WW XX
Manufacture code
Week code
Year code
Manufacture code

PIN DESCRIPTION

Name	Pin No.	Description
DSEN	1	The voltage feedback from auxilary winding. Connected to a resistor divider from auxilary winding reflecting output voltage.
VDD	2	Power Supply.
NC	3	No Connection
CS	4	Current sense pin. A sense resistor connected between CS and GND pin.
DRAIN	5,6	Drain of internal 600V NMOSFET
GND	7,8	Ground