

DESCRIPTION

The MT7830A is a high-PF, non-isolate LED Driver IC. The floating-ground, high-side BUCK topology makes full wave detection possible. The MT7830A works in QRM mode, which improves both of efficiency and EMI performance. Selectable maximum period control is integrated, such that flick can be eliminated while enough demagnetization time is guaranteed.

Various protections such as OVP, OCP, OTP, etc, are embedded to improve reliability.

The driving capability of the MT7830A is designed to be insensitive to VDD voltage and soft, with MAXIC proprietary technique. It can help to improve EMI performance greatly.

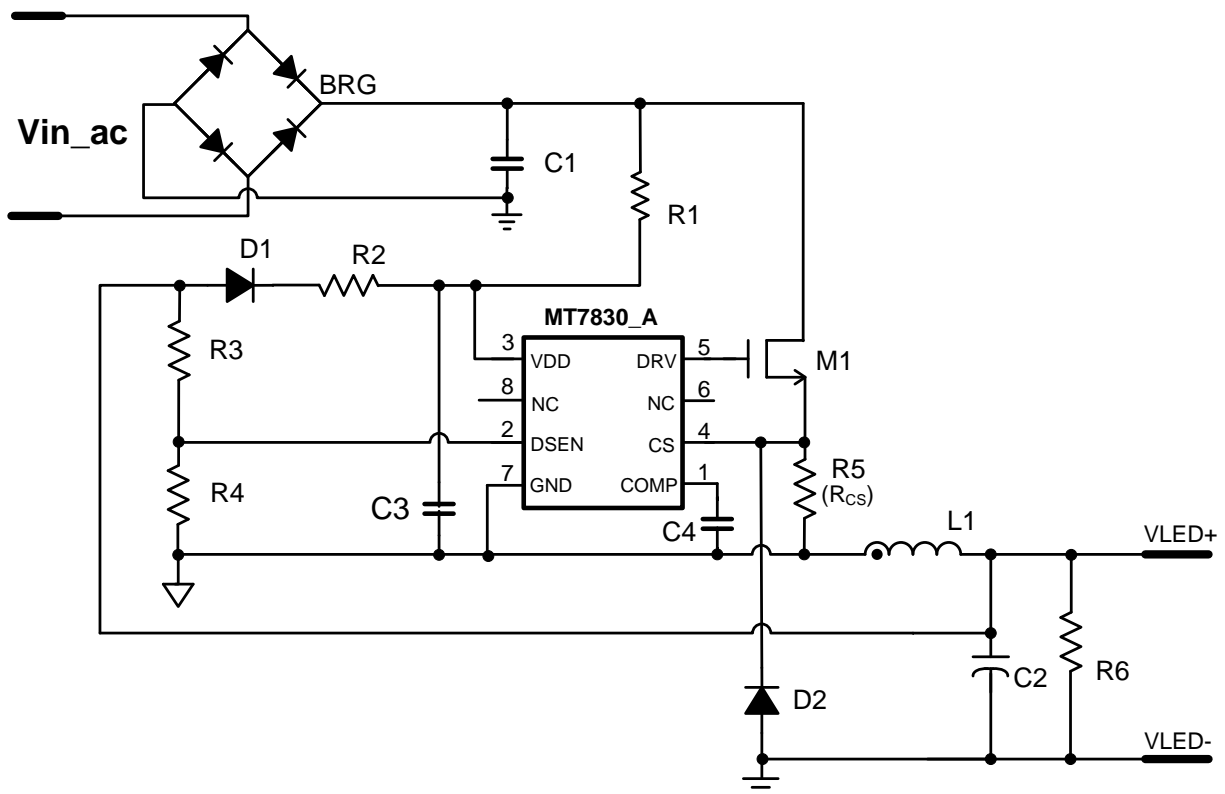
FEATURES

- Single-stage active power factor correction (PFC > 0.90)
- High accurate LED current ($\pm 3\%$)
- Good Line and Load Regulation ($\pm 2\%$)
- Quasi-Resonant mode (QRM) operation
- Various protection schemes.
- Power-on soft-start
- Compact package: SOP8

APPLICATIONS

- E27/PAR30/PAR38/GU10 lamp
- T8/T10 LED tube
- Other LED lighting applications

Typical Application Circuit



ABSOLUTE MAXIMUM RATINGS

VDD Pin Voltage	-0.3V to VDD Clamp
COMP/CS/DSEN Pin Voltage	-0.3V to 6V
Lead Temperature (soldering, 10 sec.)	260°C
P _{DMAX} (maximum power consumption)	0.8W
Storage Temperature	-55°C to 150°C

Recommended operating conditions

Supply voltage	9V to 24V
Operating Temperature (Environment)	-40°C to 105°C

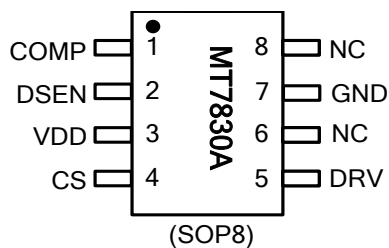
Thermal resistance^①

Junction to ambient (R _{θJA})	128°C/W
---	---------

Note:

- ① R_{θJA} 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 plane.

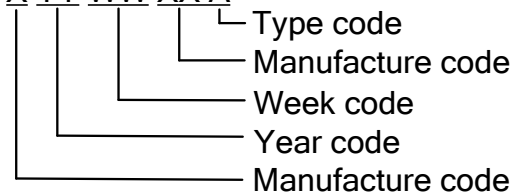
PIN CONFIGURATIONS



Chip Mark

MT7830

X YY WW XX A



PIN DESCRIPTION

Name	Pin No.	Description
COMP	1	Internal EA's output pin. Connect a capacitor to ground for frequency compensation.
DSEN	2	Feedback pin for inductor zero current crossing detection.
VDD	3	Power Supply pin.
CS	4	Current Sense pin.
DRV	5	External MOSFET drive pin
NC	6,8	No connection pin.
GND	7	Ground pin.