晶丰明源半导体

BP2333

Non-isolated Buck APFC LED Driver

Description

The BP2333 is a high precision non-isolated buck driver with active PFC, specially designed for universal input offline constant current LED lighting. The driver with on-chip PFC circuit achieves high power factor and low THD. Operating in critical conduction mode, the power MOSFET switching loss is reduced and the inductor is fully utilized.

The BP2333 integrates a 500V power MOSFET. With few external components, the LED output current can be precisely controlled.

The BP2333 utilizes patented floating ground structure. The inductor current is sensed during the whole switching cycle. So it achieves high precision output current control, and excellent line regulation and load regulation.

The BP2333 utilizes patented start up technology with HV JFET. So it achieves fast start up, reduce count of external components, and realize smaller form factor.

The BP2333 offers rich protection functions to improve the system reliability, including LED open circuit protection, LED short circuit protection, VCC under voltage protection, CS resistor open circuit protection and cycle by cycle current limit. All the protection functions are auto-recovery. The system reliability is further improved by the thermal regulation function. The output current is reduced when the driver is over temperature.

Features

- Fast start up and power supply with HV JFET
- Integrated with 500V Power MOSFET
- Active PFC for High Power Factor and Low THD
- System Efficiency up to 95%
- ±3% LED Output Current Accuracy
- Excellent Line and Load Regulation
- Critical Conduction Mode Operation
- Ultra Low (300uA) Operating Current
- LED Short/Open Protection
- Current Sensing Resistor Open Protection
- Cycle by Cycle Current Limit
- VCC Under Voltage Protection
- Auto Fault Recovery
- Thermal Regulation Function

Applications

- LED retrofit lamps, Bulb, Spot Light, GU10/E27
- LED PAR30, PAR38 Lamp
- LED tube, LED String
- Other LED Lighting

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Typical Application

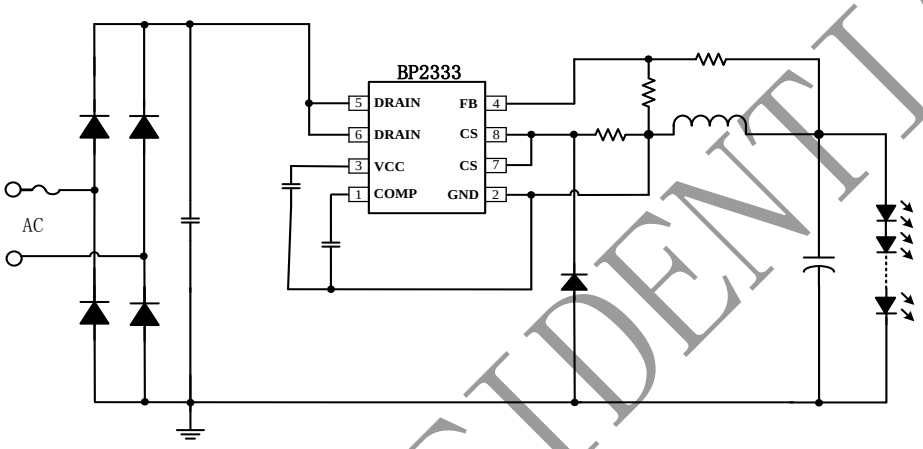

Figure 1. Typical application circuit for BP2333

Ordering Information

Part Number	Package	Operating Temperature	Package Method	Marking
BP2333	SOP-8	-40 ℃ to 105 ℃	Tape 4,000 pcs/Reel	BP2333 XXXXXY WWXYY

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