

Description

The BP2327AJ is a high precision non-isolated buck APFC LED driver, specially designed for universal mains with constant current control. The driver with on-chip PFC circuit achieves high power factor, low THD and high efficiency.

The BP2327AJ integrates a 650V power MOSFET, utilizes patent pending floating ground structure, and operates in Critical Conduction Mode. The switching loss is reduced and the inductor is fully utilized. The inductor current is sensed during the whole switching cycle and limited cycle by cycle. With few external components, it achieves high precision output current, excellent line regulation and load regulation.

The BP2327AJ offers full of protection functions to improve the system reliability, including LED load open circuit protection, LED load short protection, VCC under voltage protection, Current Sense resistor open circuit protection, and over temperature protection. 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 in condition of over temperature.

Features

- Active PFC for High Power Factor and Low THD
- Integrated with 650V Power MOSFET
- System Efficiency up to 95%
- ±3% LED Output Current Accuracy
- Excellent Line and Load Regulation
- Critical Conduction Mode Operation
- Ultra Low (33uA) Start Up Current
- 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
- Available in SOP8 Package

Applications

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

Typical Application

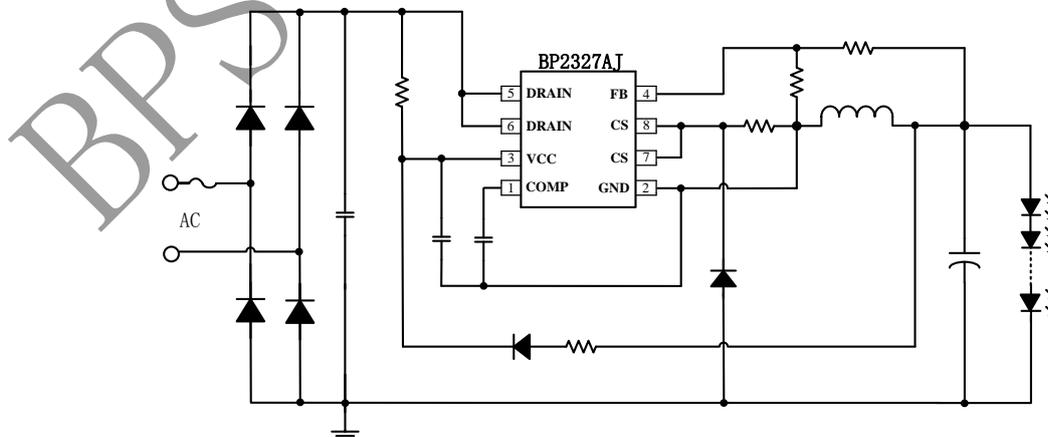


Figure 1. Typical application circuit for BP2327AJ

Ordering Information

Part Number	Package	Operating Temperature	Packing Method	Marking
BP2327AJ	SOP8	-40 °C to 105 °C	Tape 4,000 Pcs/Reel	BP2327A XXXXXY WXYJ

Pin Configuration and Marking Information

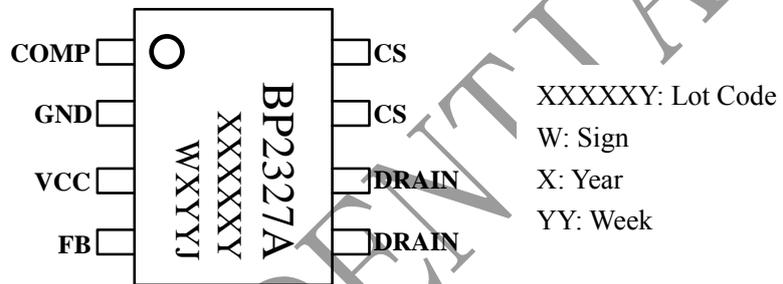


Figure 2. Pin configuration

Pin Definition

Pin No.	Name	Description
1	COMP	Loop Compensation Node. This pin connects a capacitor to GND for stabilization of the control loop, achieving accurate LED current, high Power Factor and low THD.
2	GND	Ground.
3	VCC	Power Supply Pin. Connect a bypass capacitor from this pin to GND.
4	FB	Feedback Voltage detection Pin. This pin detects the inductor demagnetization signal and the output voltage.
5,6	DRAIN	Internal HV Power MOSFET Drain.
7,8	CS	Current Sense Pin. Connect a resistor to GND to sense the inductor current.