

### Description

The BP2325AJ 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 BP2325AJ integrates a 550V power MOSFET. With few external components, the LED output current can be precisely controlled.

The BP2325AJ utilizes patent pending 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 BP2325AJ 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

- Active PFC for High Power Factor and Low THD
- Internal 550V Power MOSFET
- System Efficiency up to 95%
- $\pm 3\%$  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

- GU10/E27 LED Bulb, Spot Light
- PAR30, PAR38 Lamp
- T8/T10 LED String
- Other LED Lighting

### Typical Application

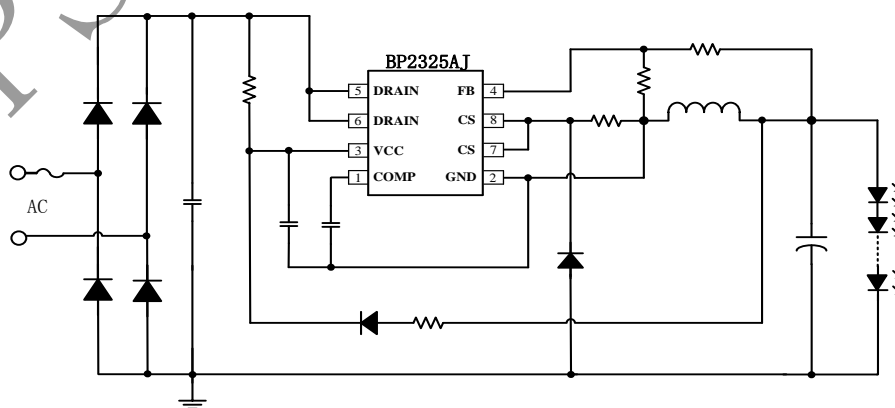


Figure 1. Typical application circuit for BP2325AJ

### Ordering Information

Part Number	Package	Operating Temperature	Packing Method	Marking
BP2325AJ	SOP8	-40 °C to 105 °C	Tape 4,000 Pcs/Reel	BP2325A XXXXXY WXYJ

### Pin Configuration and Marking Information

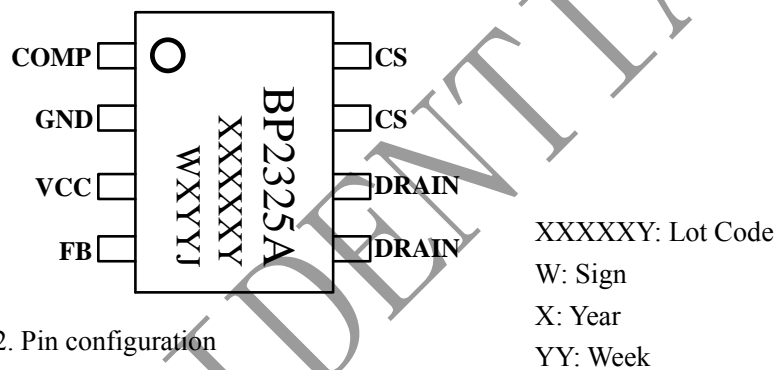


Figure 2. Pin configuration

### 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 Input 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.