

### Description

The BP2339JF is a high precision non-isolated buck controller with APFC, specially designed for universal input offline constant current LED lighting. The controller with on-chip PFC circuit achieves high PF and low THD. Operating in BCM, the power MOSFET switching loss is reduced and the inductor is fully utilized.

The BP2339JF features a patented high-voltage JFET start-up and VCC supply circuit that allows the system to start up quickly and reduces external component counts for compact design.

The BP2339JF has a high-degree of integration and requires only a few peripheral components to achieve accurate constant current.

The BP2339JF utilizes patent pending floating ground structure. The inductor current is sensed during the whole switching cycle. So it provides high-precision output current control, and excellent line regulation and load regulation.

The BP2339JF offers rich protection functions to ensure system reliability.

### Features

- HV JFET start-up and power supply
- Fast start-up time (<100ms @85Vac)
- High PF and Low THD
- ±3% LED Output Current Accuracy
- Excellent Line and Load Regulation
- Critical Conduction Mode
- 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

- High performance Luminaire
- Panel Light
- Other LED Lighting

### Typical Application

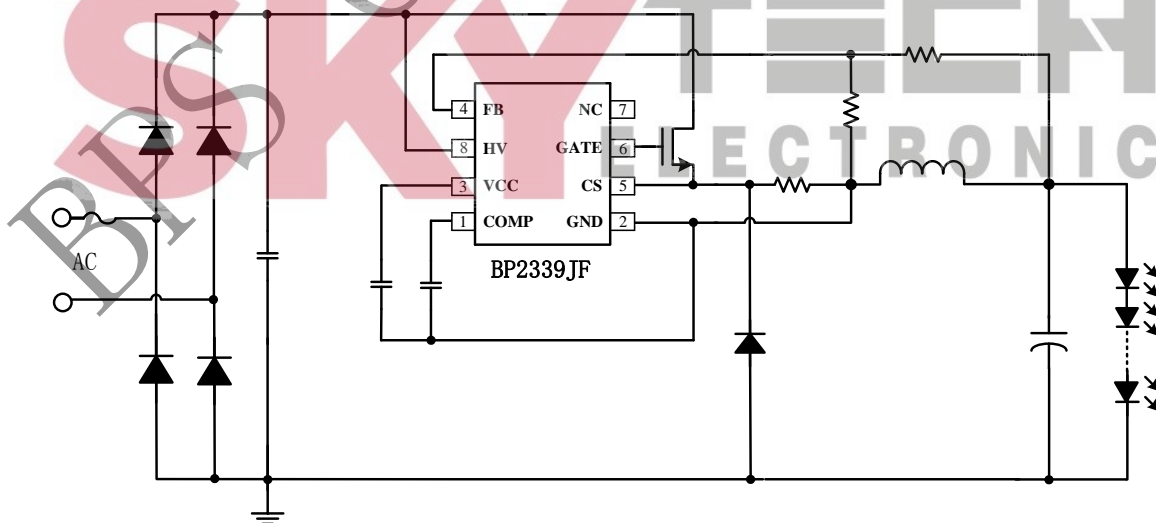


Figure 1. Typical application circuit for BP2339JF