BP3106

High Precision PSR Constant Current LED Driver

Description

The BP3106 is a high precision primary-side feedback and regulation controller for LED lighting, it operates in constant current control mode and is designed to work in inductor current discontinuous conduction mode and extremely suitable for buckboost/flyback convertor under universal input.

Since adopting primary sense and feedback control technology, the secondary sense and feedback circuit is eliminated. The loop compensation components are also removed while maintaining stability overall operating conditions. The low component counts and low BOM cost are realized.

Since using the proprietary high accurate current sense method, the BP3106 realizes ±5% accuracy of LED current along with excellent line regulation and load regulation.

The BP3106 offers rich protection functions including LED short circuit protection, LED open circuit protection, die over-temperature protection, VCC over voltage protection, VCC under voltage protection and FB short circuit protection. All the protection features are auto-recovery.

Features

- Constant current control without secondary sense and feedback circuit.
- ±5% LED current accuracy
- Ultra low operating current to improve efficiency
- High resistance feedback resistor to improve efficiency
- Universal input voltage
- LED short and open circuit protection
- VCC under-voltage protection
- Feedback loop short circuit protection
- Current sense resistor open circuit protection
- Over temperature protection
- No external loop compensation component required
- Available in SOT23-5 package

Applications

- GU10/E27 LED bulb, spot light
- Other LED lighting

Typical Application

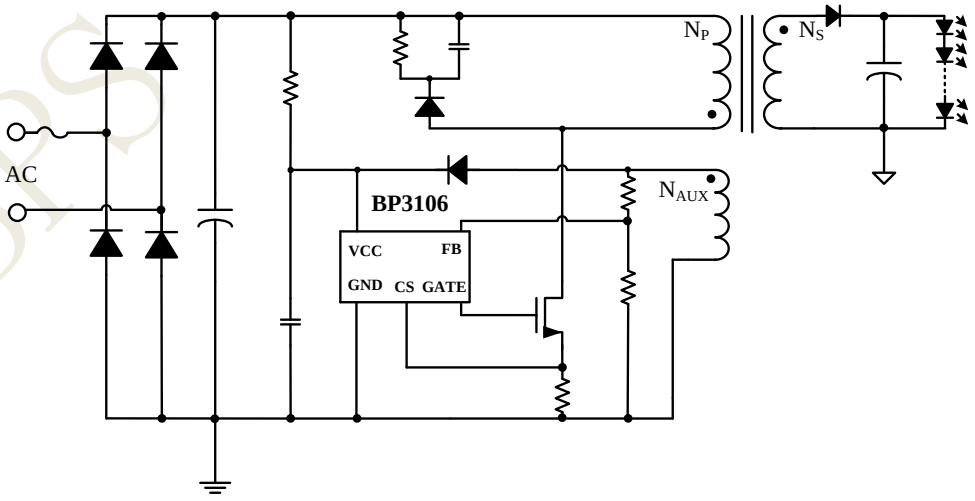

Figure 1. Typical application circuit for BP3106

Ordering Information

Part Number	Package	Operating Temperature	Packing Method	Marking
BP3106	SOT23-5	-40℃ to 105℃	Tape 3,000 Piece/Reel	3106X

Pin Configuration and Marking Information

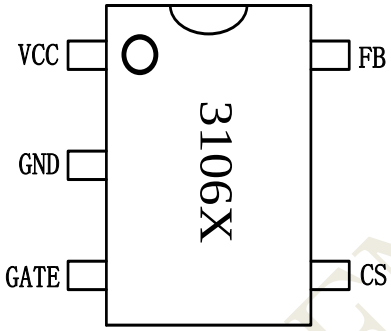

Figure 2. Pin configuration

Pin Definition

Pin No.	Name	Description
1	VCC	Power supply
2	GND	Ground
3	GATE	Gate Driver Pin. Connect it to the gate of external power MOSFET.
4	CS	Current sense. This pin connects a current sense resistor to GND to detect the primary current of transformer.
5	FB	Feedback Pin. This pin detects the output information from auxiliary winding.