

Description

The BP1808 is a DC/DC constant current LED driver with an integrated 70V/300mΩ MOSFET designed for a wide input-voltage range of 3V to 60V. The BP1808 can be configured as Buck, Boost and Buck-Boost topology.

With a current sense reference of 200mV, the LED current is programmed by an external current sense resistor and the power loss is minimized. The BP1808 allows both analog and PWM dimming by DIM pin.

The fixed 420kHz operating frequency minimizes size of external inductor, input and output capacitor. Current mode operation provides fast transient response and easy loop stability.

BP1808 offers rich protection functions including VDD under voltage protection, output over voltage protection, cycle-by-cycle peak current limit and thermal regulation.

The BP1808 adopts SOP8-EP package for enhanced power dissipation.

Typical Application (Boost)

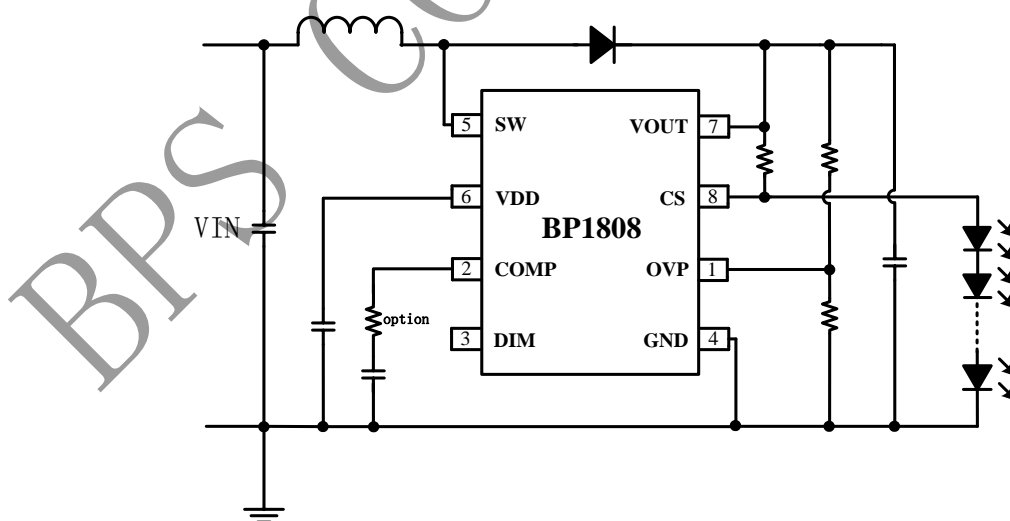


Figure 1. Typical application (Boost)

Features

- Wide 3V to 60V Input Voltage Range
- Supporting Boost, Buck-Boost, Buck Topology
- Integrated 70V/300mΩ MOSFET
- ±3% LED Output Current Accuracy
- Combined Analog and PWM Dimming
- Fixed 420kHz operating Frequency
- Adjustable Soft-Start
- Cycle-by-Cycle Peak Current Limiting
- VDD Under Voltage Protection
- Programmable Over Voltage Protection
- Thermal Regulation Function
- Available in SOP8-EP Package

Applications

- MR16 LED Lighting
- Smart Dimming LED lighting
- Automotive LED Lighting
- Solar LED lighting
- Other LED Lighting

Ordering Information

Part Number	Package	Operating Temperature	Packing Method	Marking
BP1808	SOP8-EP	-40 °C to 105 °C	Tape 4,000 pcs/Reel	BP1808 XXXXXX YYY

Pin Configuration and Marking Information

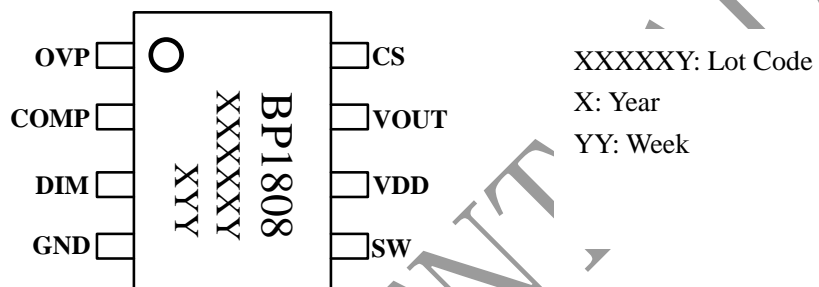


Figure 2. Pin configuration

Pin Definition

Pin No.	Name	Description
1	OVP	Over Voltage Protection Pin.
2	COMP	Loop Compensation Pin.
3	DIM	Dimming Signal Input Pin.
4	GND	Ground Pin.
5	SW	Drain Connection of Internal Low-Side Switch.
6	VDD	Internal Regulator Output. Bypass VDD to GND with a 1uF ceramic capacitor.
7	VOUT	Output Voltage connect, IC Power Supply Pin.
8	CS	Current Sense Pin. Connect a resistor to VOUT to sense the LED current.