晶丰明源半导体

BP9833A

Non-isolated Buck Offline LED Driver

Description

The BP9833A is a high precision buck constant current LED driver. The device operates in critical conduction mode and is suitable for 85Vac~265Vac universal input offline LED lighting.

The BP9833A integrates a 500V power MOSFET. With patent pending MOSFET driving technique, the operating current of the IC is very low. So it doesn't need the auxiliary winding for supplying the chip. It can achieve excellent constant current performance with very few external components, so the system cost and size are minimized.

The BP9833A utilizes patent pending current control method. It can achieve precise output current and excellent line regulation. The driver operates in critical conduction mode, the output current does not change with the inductance and LED output voltage.

The BP9833A offers rich protection functions to improve the system reliability, including LED open circuit protection, LED short circuit protection, VCC under voltage protection, CS resistor short circuit protection and thermal regulation function.

Features

- Critical Conduction Mode Operation
- Internal 500V Power MOSFET
- No Auxiliary Winding
- Ultra Low Operating Current
- ±5% LED Output Current Accuracy
- LED Open Protection
- LED Short Protection
- Current Sensing Resistor Short Protection
- VCC Under Voltage Protection
- Thermal Regulation Function
- Available in SOP8 Package

Applications

- LED Candle Light
- LED Bulb
- Other LED Lighting

Typical Application

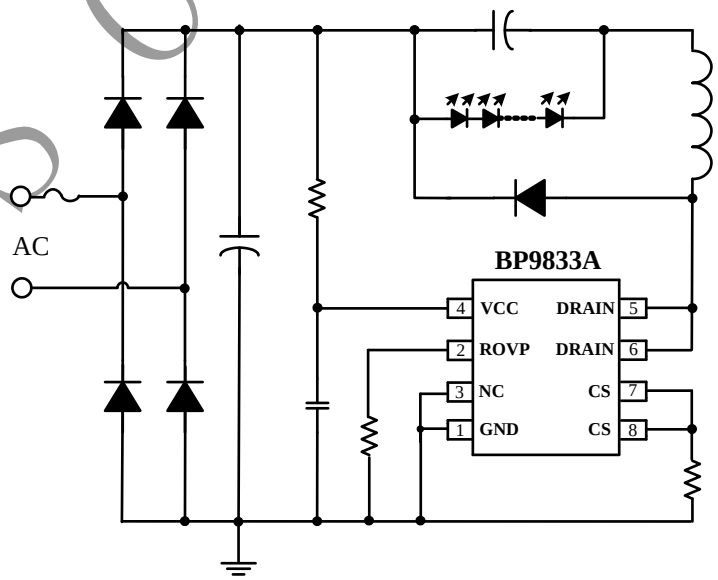

Figure 1. Typical application circuit for BP9833A

Ordering Information

Part Number	Package	Operating Temperature	Packing Method	Marking
BP9833A	SOP8	-40 ℃ to 105 ℃	Tape 4,000 Piece/Reel	BP9833A XXXXXY WWXYY

Pin Configuration and Marking Information

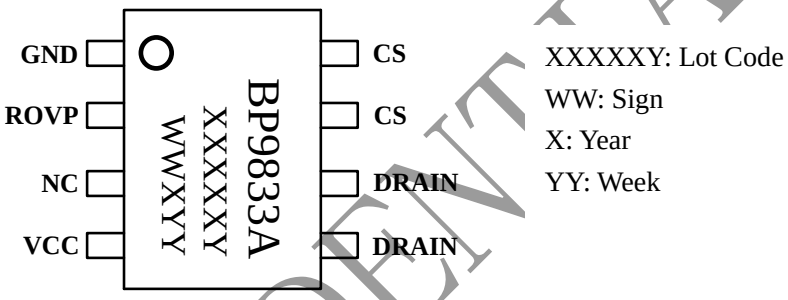

Figure 2. Pin configuration

Pin Definition

Pin No.	Name	Description
1	GND	Ground
2	ROVP	Over Voltage Protection Setting Pin. Connect a resistor to GND
3	NC	No Connection. Should be connected to GND(Pin1)
4	VCC	Power Supply Pin
5,6	DRAIN	Internal HV Power MOSFET Drain
7,8	CS	Current Sense Pin. Connect a sense resistor between this pin and GND pin.