

### Description

BP5136HC is a high-precision multi-channel linear LED driver which integrates high voltage rectifier and JFET for IC power supply. It is mainly used to drive high-voltage and low-current LED strings from AC mains directly. BP5136HC can achieve small size, long life and compliance with EMI regulations, since it doesn't need electrolytic capacitors or any of magnetic components

The BP5136HC can set the LED current precisely through an external resistor. The chip can reduce the THD by optimizing the current through each segment.

BP5136HC has a function of thermal fold back. This function will reduce the output current when the input voltage or the current of LED is too high.

BP5136HC integrates current compensation for input line voltage; When the input line voltage is too high, BP5136HC will reduce the output current according to the external compensation resistor to ensure that the input power does not change with the line voltage.

### Features

- ◆ Simple BOM, small size
- ◆ No electrolytic capacitor or magnetic component needed
- ◆ Integrated with 500V MOS
- ◆ Can working with  $\pm 20\%$  variation on line voltage;
- ◆ Fast start-up
- ◆  $\pm 5\%$  output LED current accuracy
- ◆ External setting of LED current
- ◆ Input line voltage compensation
- ◆ SOP8-EP package

### Application

- ◆ GU10/E27 LED Bulb, spotlight
- ◆ LED candle light
- ◆ Other LED lights

### Typical Application

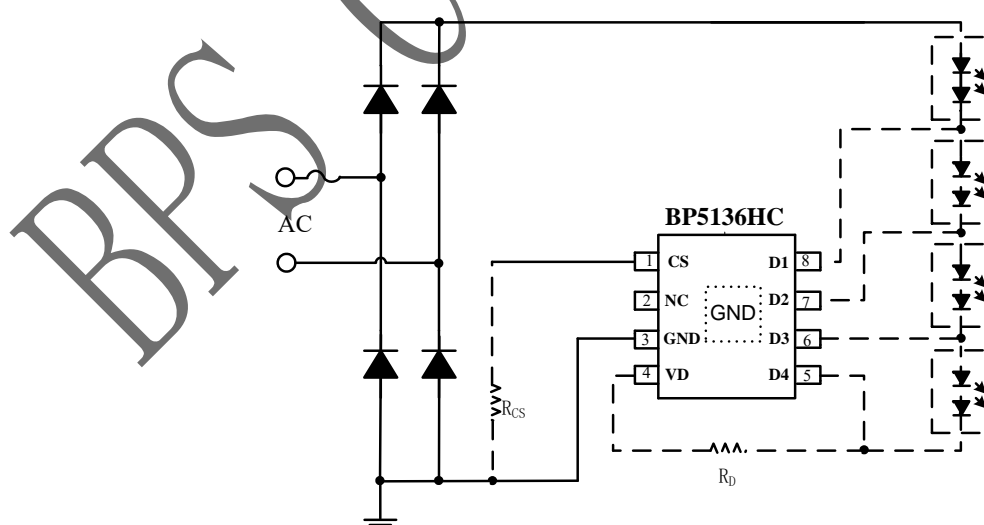


Fig.1 BP5136HC Typical Application



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# BP5136HC

High Voltage Multi-channel linear LED Driver

## Order Information

Part Number	package	Temperature	Packing Method	Mark
BP5136HC	SOP8-EP	-40 °C to 105 °C	Tape 4,000 pcs/reel	BP5136H XXXXXY XYXC

## Pin Definition

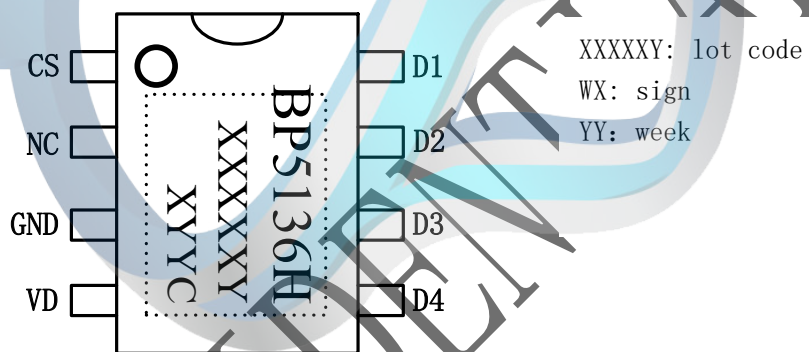


Fig2 Pin Definition

## Pin Descriptions

Pin No.	Pin name	Description
1	CS	Current sense, connect the current sense resistor with GND Pin
2	NC	Floating
3	GND	IC ground
4	VD	Input signal of Drain's voltage of external MOS, connected with the GND pin through resistor divider.
5	D4	Drain for LED string4
6	D3	Drain for LED string3
7	D2	Drain for LED string2
8	D1	Drain for LED string1