

## Description

The BP8009 is a highly integrated converter which provides constant voltage regulation during the relay is on for no neutral wire required smart switch. The BP8009 has the features of power-on delay signal, line zero voltage detection, programmable output voltage. Thus, less components are needed, which reduces solution size, and can lead to a lower system cost.

The BP8009 is available in a SOP8 package.

## Features

- Power supply during relay-on
- Power-on delay signal
- Line zero voltage detection
- Integrated high voltage sensing resistor
- Programmable output voltage

## Applications

- No neutral wire required smart switch
- Other applications of no neutral wire required

## Typical Application

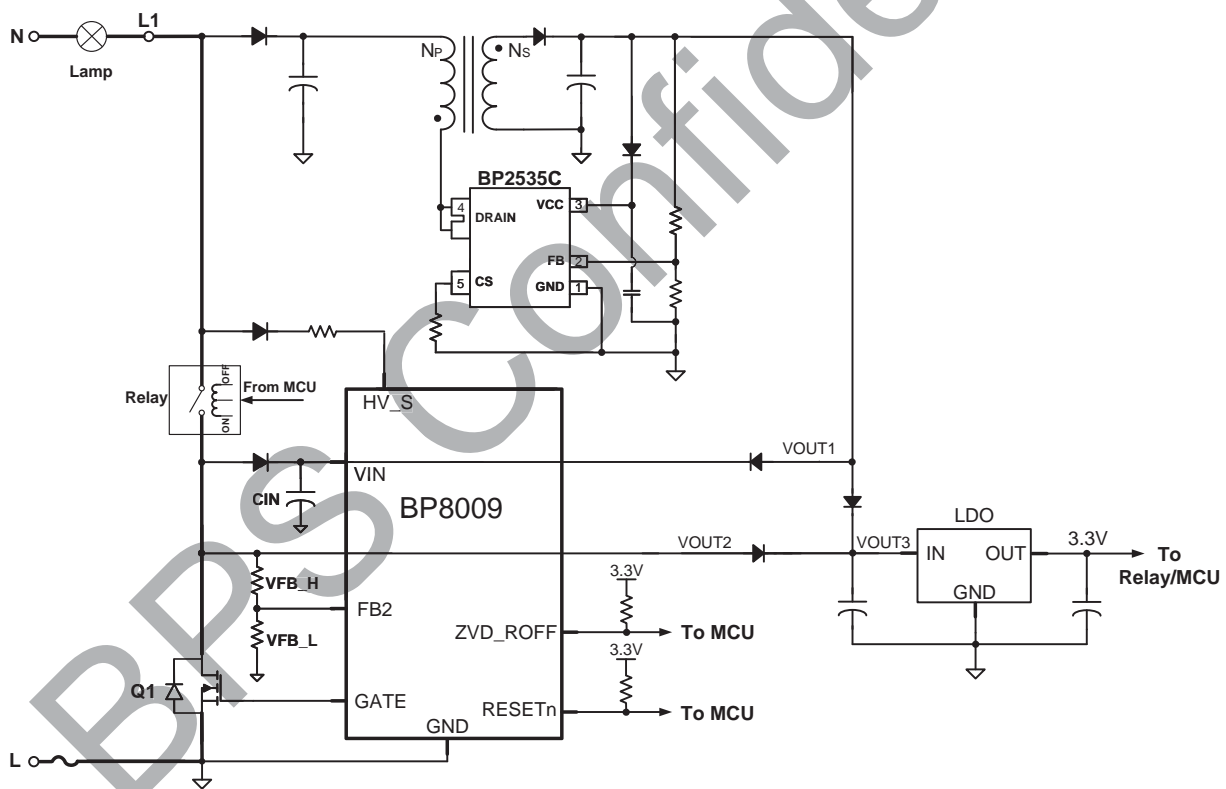


Figure 1. BP8009 typical application

## Ordering Information

| Part Number | Package | Operating Temperature | Packing               | Marking                   |
|-------------|---------|-----------------------|-----------------------|---------------------------|
| BP8009      | SOP8    | -40 °C to 105 °C      | Tape<br>4,000pcs/Reel | BP8009<br>XXXXXX<br>ZZWWX |

## Pin Configuration and Marking Information

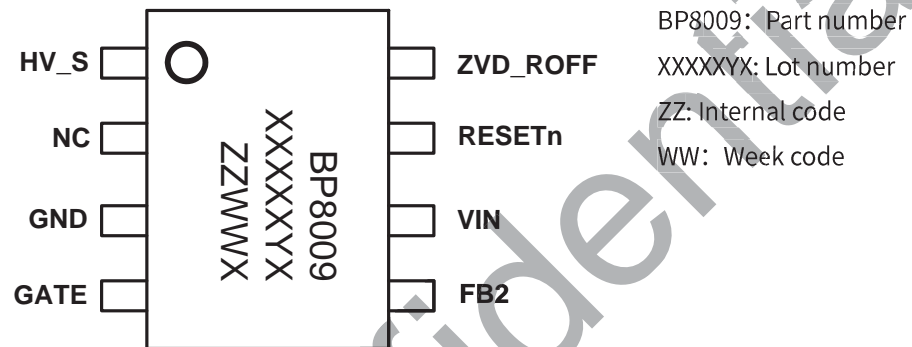


Figure 2. BP8009 pin configuration

## Pin Functions

| Pin NO. | Pin Name | Descriptions                                                                     |
|---------|----------|----------------------------------------------------------------------------------|
| 1       | HV_S     | Input of line zero voltage detection during relay-off.                           |
| 2       | NC       | Not connected.                                                                   |
| 3       | GND      | Ground.                                                                          |
| 4       | GATE     | Gate driver output for MOSFET.                                                   |
| 5       | FB2      | Output feedback.                                                                 |
| 6       | VIN      | Power supply.                                                                    |
| 7       | RESETn   | Output of the power-on delay signal. Open-drain terminal.                        |
| 8       | ZVD_ROFF | Output of the line zero voltage detection during relay-off. Open-drain terminal. |

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