晶丰明源
Bright Power Semiconductor

BPP1D5007QA

500V 1-Phase Intelligent Power Module

Description

The BPP1D5007QA is a high voltage 1-Phase IPM (Intelligent Power Module). It integrates HVIC and high-performance MOSFET for BLDC and PMSM motors. Separate Open-Source Pins from Low-Side MOSFETs are for Current-Sensing.

The input works with Schmitt-trigger and the logic voltage level is compatible with 3.3V/5V/15V signal. UVLO and dead time are also provided.

Features

- Built-in high-performance 500V/7A MOSFET
- Built-in 600V Bootstrap diode
- Robust at negative transient voltage
- Gate drive supply range from 10V to 20V
- 3.3V, 5V and 15V input logic compatible
- UVLO for both high side and low side
- Built-in dead time to avoid cross-conduction
- Available in QFN 9x9 package

Typical Application

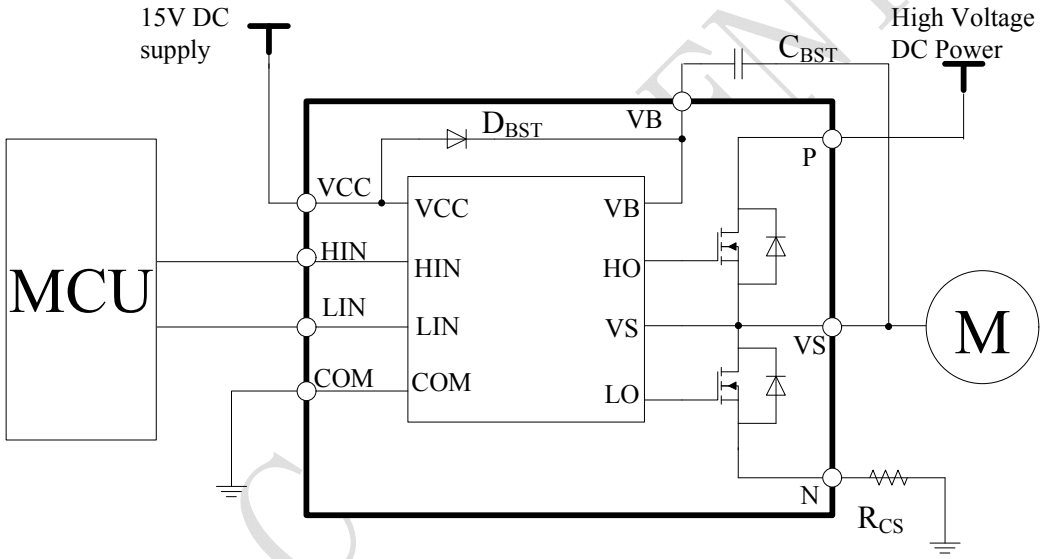
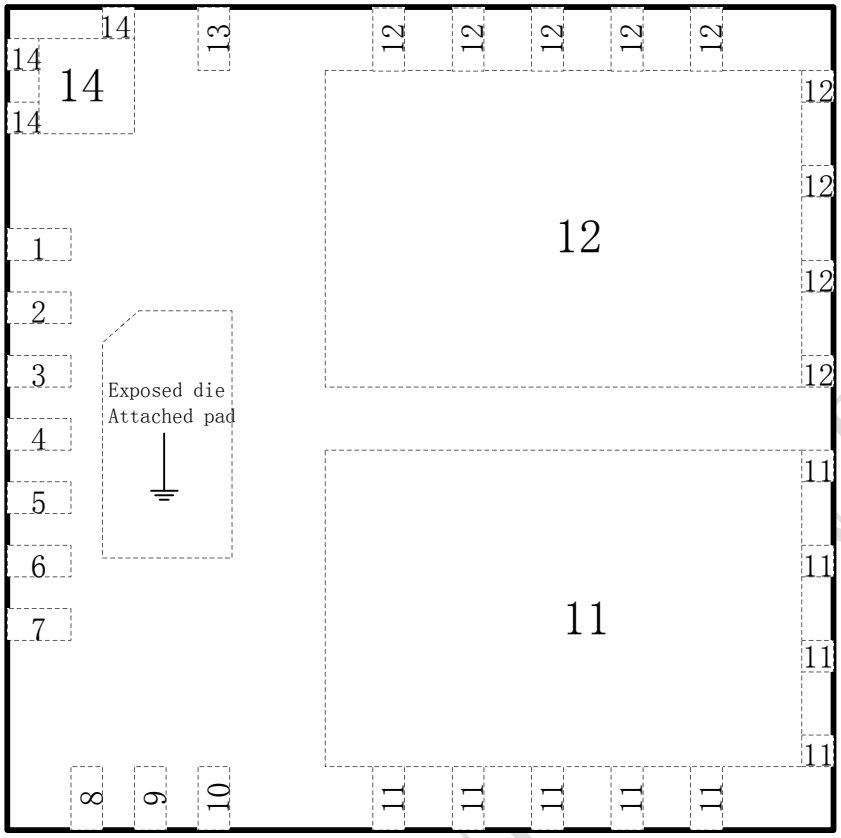


Figure 1. Typical application circuit for BPP1D5007QA

Ordering Information

Part Number	Package	Operation Temperature	Package Method	Marking
BPP1D5007QA	QFN 9x9	-40 ℃ to 105 ℃	Tray 260 pcs/Tray	BPP1D5007QA XXXXXAX C1ETWWY

Pin Configuration and Marking Information



XXXXX: lot code
A: assembly house
X: Special string
C: fab cord
1: generation
ET: MOS cord
WW: week
Y: special string

Figure 2. Pin configuration and perspective view

Pin Definition

Pin No.	Name	Description
1	VCC	Logic and low side MOSFET driving supply
2	HIN	Logic input for high side
4	LIN	Logic input for low side
3，5，6	COM	Logic common ground
8，9，10	N	Negative reference and low side MOSFET return
11，13	VS	Output and high side MOSFET return
12	P	Positive high voltage DC Power supply
14	VB	High side MOSFET driving supply
7	NC	Not Connect

Note: Exposed pad has been connected to pin3,6 as logic common ground and there is small impedance between pin5 and COM. Pin5 and pin6 must be shorted on PCB board. Pin13 has been shorted to pin11 in die, it's just convenient that placing a bootstrap cap between VB and VS. So large current of VS should transmit through pin11.

Disclaimer

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