

[> Products](#)[> Applications](#)[> New Products](#)[> Customer Support](#)[> Sales Contacts](#)[> Contact Us](#)[HOME](#) > [Products](#) > [ICs](#) > [Motor Driver ICs](#) > [High Voltage](#) > [3-Phase Brushless DC Motor Driver ICs](#) > SMA6861MZ

## SMA6861MZ

[Data sheet](#)[Application Note](#)

### Description

SMA6861MZ incorporates 250V/2A IGBT, MOSFET (built-in FRD) for the 3-phase bridge, pre-drive ICs with protection functions such as UVLO (undervoltage lock out), OCP (over current protection), TSD (thermal shutdown), etc., and bootstrap diodes with limiting resistors into 1 package. Full mold package.

### Application

For driving fan motors, air purifier fan motors, and dryer fan motors

### Features

Built-in boot diode with 210Ω limiting resistor, built-in overcurrent protection circuit (OCP), overcurrent protection with off-time period adjustable by an external capacitor, overcurrent limiting operation, built-in thermal shutdown circuit (TSD), externally controllable shutdown operation, SIP package.

### Remarks

### Representative Circuit

### Package

Package Name:ZIP24(SMA-24)



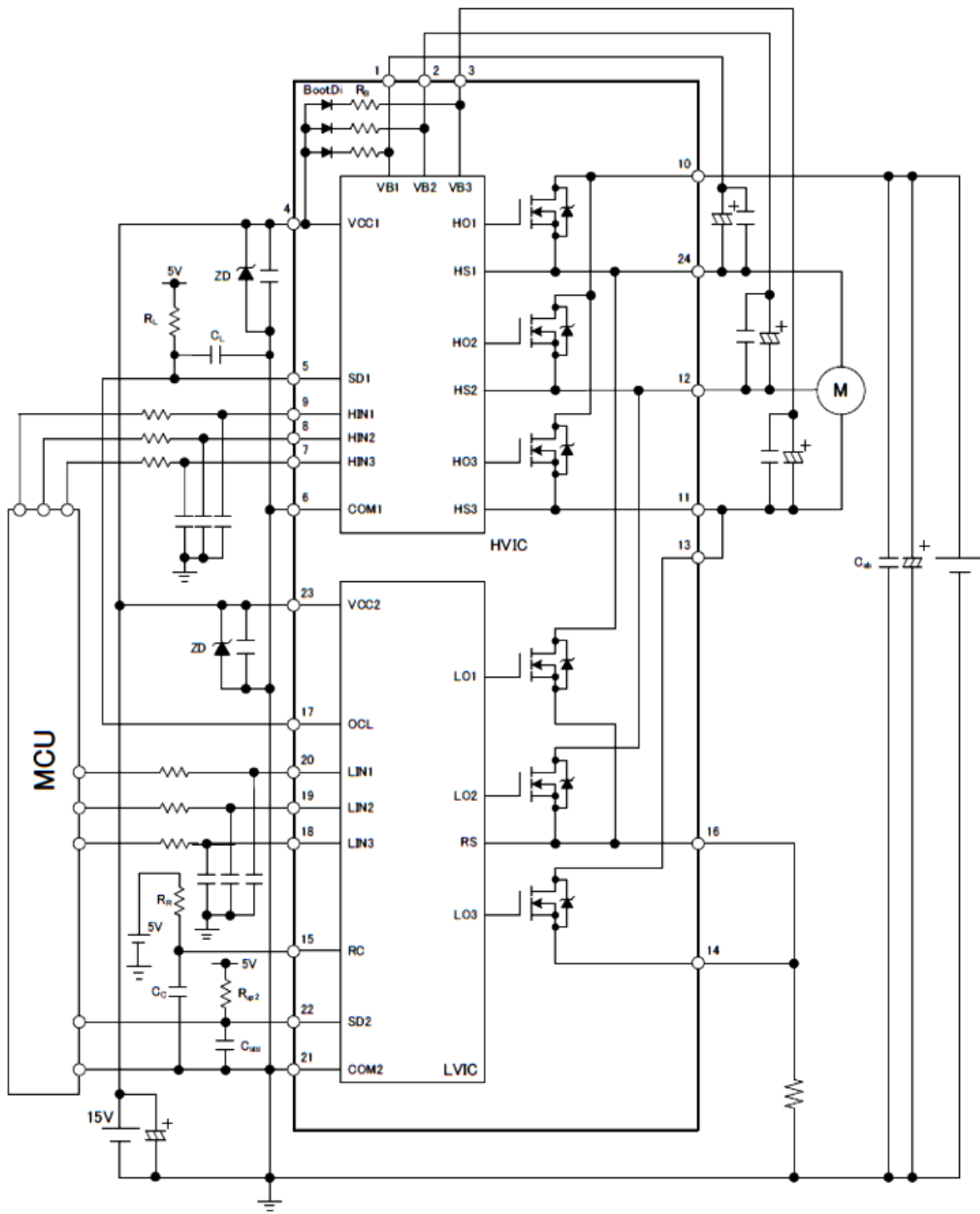
### Specifications

|                                                        |        |
|--------------------------------------------------------|--------|
| Output Breakdown Voltage                               | 250V   |
| Output Current                                         | 2A     |
| R <sub>ds(ON)</sub> (Ω)max/V <sub>CE(sat)</sub> (V)typ | 1.5Ω   |
| Output Element                                         | MOSFET |
| Input Threshold (3.3V/5V)                              | 5V     |
| Boot Di Series Resistance                              | 210Ω   |

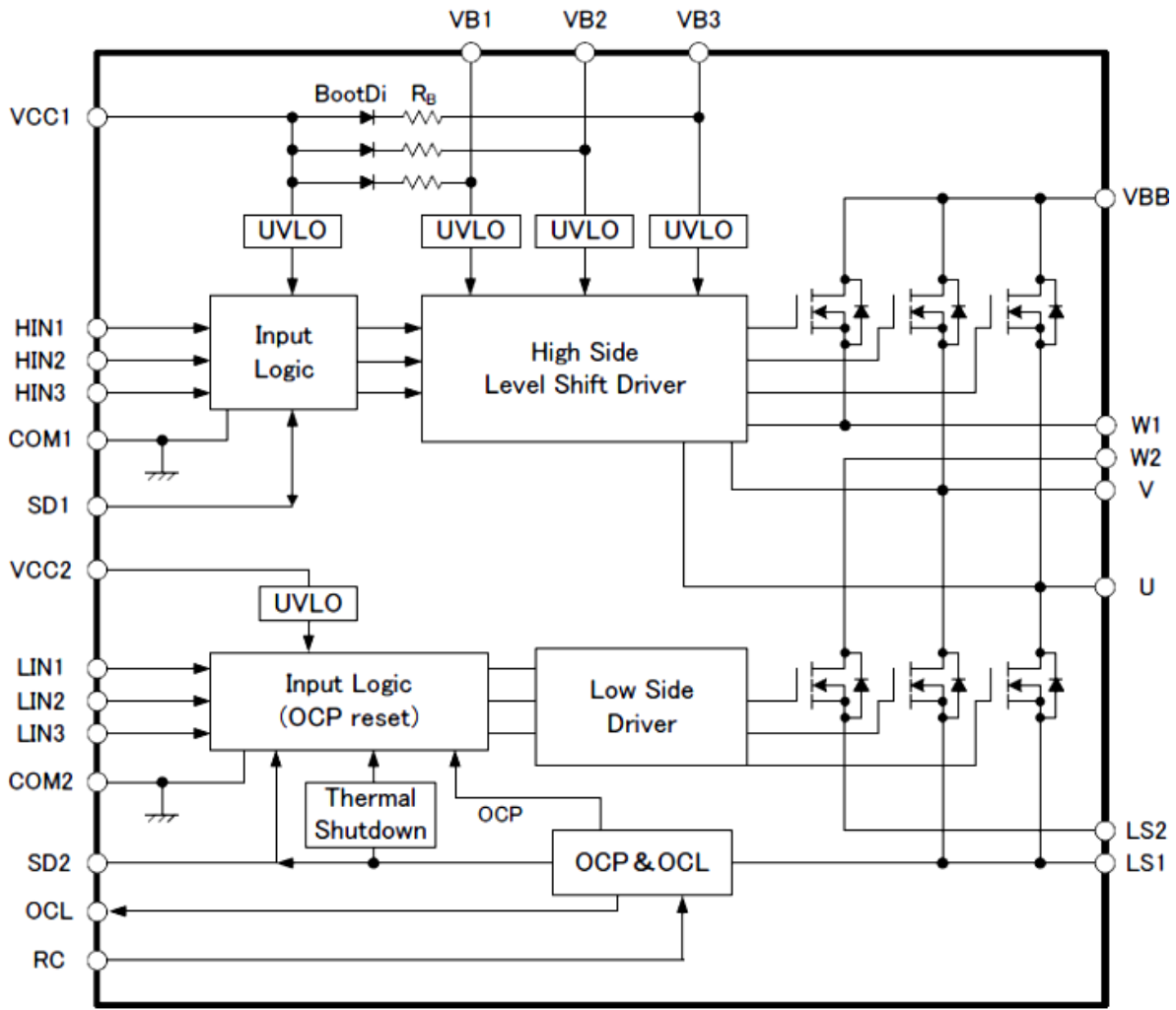
### Support Menu

- [▶ Catalog Library](#)
- [▶ Quality/Reliability Information](#)
- [▶ Discontinued Products](#)
- [▶ Compliance with RoHS Directive](#)
- [▶ Frequently Asked Questions](#)

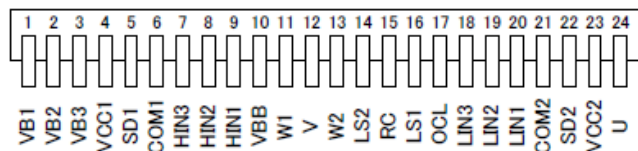




Internal Block Diagram



Pin-out Diagrams



| Pin no. | Pin name | Function                                                         |
|---------|----------|------------------------------------------------------------------|
| 1       | VB1      | High side boot-strap terminal(U-phase)                           |
| 2       | VB2      | High side boot-strap terminal(V-phase)                           |
| 3       | VB3      | High side boot-strap terminal(W-phase)                           |
| 4       | VCC1     | High side logic supply voltage                                   |
| 5       | SD1      | High side shut down input / UVLO signal output                   |
| 6       | COM1     | High side logic GND                                              |
| 7       | HIN3     | High side input terminal(W-phase)                                |
| 8       | HIN2     | High side input terminal(V-phase)                                |
| 9       | HIN1     | High side input terminal(U-phase)                                |
| 10      | VBB      | Main Supply voltage                                              |
| 11      | W1       | Output of W-phase(connected to W2 externally)                    |
| 12      | V        | Output of V-phase                                                |
| 13      | W2       | Output of W-phase(connected to W1 externally)                    |
| 14      | LS2      | Low side source terminal(connected to LS1 externally)            |
| 15      | RC       | Over current protection hold time adjustment terminal            |
| 16      | LS1      | Low side source terminal(connected to LS1 externally)            |
| 17      | OCL      | Output for Over current limiter                                  |
| 18      | LIN3     | Low side input terminal(W-phase)                                 |
| 19      | LIN2     | Low side input terminal(V-phase)                                 |
| 20      | LIN1     | Low side input terminal(U-phase)                                 |
| 21      | COM2     | Low side GND                                                     |
| 22      | SD2      | Over temp. & over current signal output / L-side Shut down input |
| 23      | VCC2     | Low side logic supply voltage                                    |
| 24      | U        | Output of U-phase                                                |

|                  |  |
|------------------|--|
| Data sheet       |  |
| Application Note |  |

Back to Top

[HOME](#) > [Products](#) > [ICs](#) > [Motor Driver ICs](#) > [High Voltage](#) > [3-Phase Brushless DC Motor Driver ICs](#) > SMA6861MZ

#### ■ Products

- [ICs](#)
- [Discretes](#)
- [Automotive](#)
- [Power Modules](#)
- [LED](#)
- [Allegro Products](#)

#### ■ Applications

- [Automotive](#)
- [Appliances \(White Goods\)](#)
- [Office Automation \(OA\)](#)
- [Switching Power Supply](#)
- [LED Lighting](#)

#### ■ Customer Support

- [Legal Notice \(Please Read First\)](#)
- [Catalog Library](#)
- [Reliability Information](#)
- [Discontinued Products](#)
- [Compliance with RoHS Directive](#)
- [FAQ](#)

#### ■ Contact us

- [Sales Contacts](#)
- [Contact Us](#)

□SANKEN ELECTRIC CO.,LTD. Top Page

[Semiconductors Home](#) | [Privacy Policy](#) | [Terms & Conditions](#) | [Sitemap](#)

Copyright (C) SANKEN ELECTRIC CO.,LTD. 2013, All Rights Reserved.