SLA6816MZ

Inverter Power Module, High Voltage, 3-Phase Motor Driver

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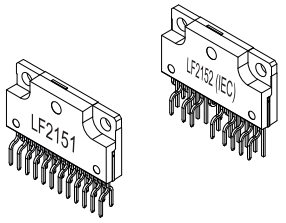
Inverter Power Modules,
High Voltage, 3-Phase Motor Driver



Package

SIP-23

Description

The SLA6816MZ inverter power module (IPM) device provides a robust, highly-integrated solution for optimally controlling 3-phase motor power inverter systems and variable speed control systems used in energy-conserving designs to drive motors of residential and commercial appliances. These ICs take 85 to 253 VAC input voltage, and provide 3A (continuous) output current. They can withstand voltages of up to 600 V (IGBT breakdown voltage).

The SLA6816MZ power package includes all of the necessary power elements (six IGBTs), and pre-driver ICs (two), needed to configure the main circuit of an inverter. This enables the main circuit of the inverter to be configured with fewer external components than traditional designs.

Selection Table

Device Name	Body Size (mm)	Output Current (A)	Break-down Voltage (V)	Vsat (typ) (V)
SLA6816MZ	31 x 16 x 4.8	3.0	600	1.75

Target Applications

- Applications include residential white goods (home applications) and commercial appliance motor control:
- Air conditioner fan
- Refrigerator compressor
- Dishwasher pump

Technical Support

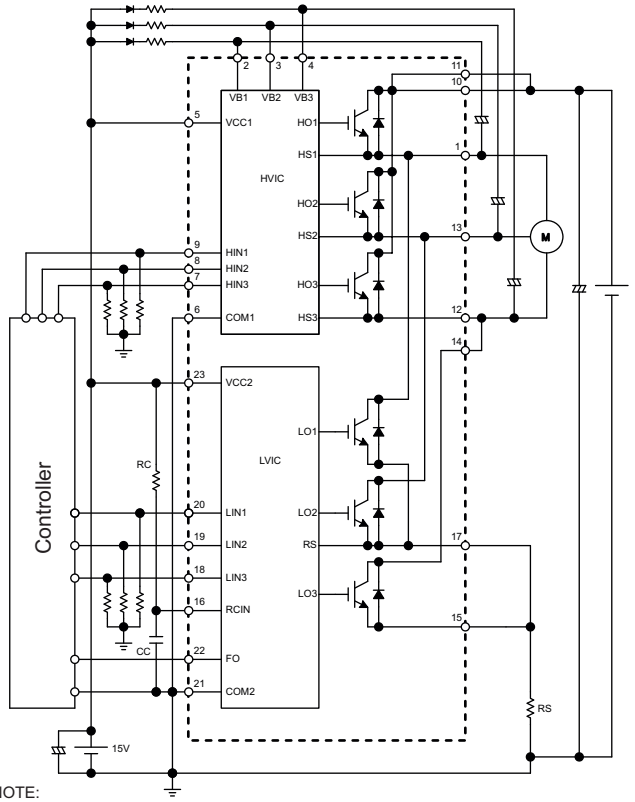
Contact local sales representative or a SPS field application engineer for technical support.

Sanken Power Systems Ltd.,
Pencoed Technology Park,
Bridgend, CF35 5HY, UK.

Features & Benefits

- Built-in pre-drive IC
- IGBT power element
- Low EMC noise.
- CMOS compatible input (5 V)
- High-side gate driver using bootstrap circuit or floating power supply
- Built-in protection circuit for controlling power supply voltage drop (UVLO)
- Overcurrent protection circuit (OCP)
- Output of fault signal during operation of protection circuit
- Output current 3 A
- Small SIP (SLA 23-pin)

Typical Application



NOTE:

- All of the input pins are connected to GND with internal pull-down resistors rated at 100 kΩ, however, an external pull-down resistor may be required to secure stable condition of the inputs if high impedance conditions are applied to them.
- To use the OCP circuit, an external shunt resistor, RS, is needed. The RS value can be obtained from the formula: RS(Ω) = 0.5 V / Overcurrent Detection Set Current (A).
- A blanking timer is built-in to mask the noise generated on RS at turn-on.
- The external electrolytic capacitors should be placed as close to the IC as possible, in order to avoid malfunctions from external noise interference. Put a ceramic capacitor in parallel with the electrolytic capacitor if further reduction of noise susceptibility is necessary.

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