

CIPOS™

Control Integrated POver System

Dual In-Line Intelligent Power Module

3Φ-bridge 600V / 6A, Single Phase Diode Bridge Rectifier

Features

Fully isolated Dual In-Line molded module

- Reverse conducting IGBTs with monolithic body diode
- Optimized diodes for single phase diode bridge rectifier
- Rugged SOI gate driver technology with stability against transient and negative voltage
- Allowable negative VS potential up to -11V for signal transmission at VBS=15V
- Integrated bootstrap functionality
- Over current shutdown
- Under-voltage lockout at all channels
- Low side common emitter
- Cross-conduction prevention
- All of 6 switches turn off during protection
- Lead-free terminal plating; RoHS compliant

Target Applications

- Dish washers
- Refrigerators
- Fans
- Low power motor drives

Description

The CIPOS™ module family offers the chance for integrating various power and control components to increase reliability, optimize PCB size and system costs.

It is designed to control three phase AC motors and permanent magnet motors in variable speed drives for applications like a refrigerator and a dish washer. The package concept is specially adapted to power applications, which need good thermal conduction and electrical isolation, but also EMI-save control and overload protection.

The reverse conducting IGBTs are combined with an optimized SOI gate driver for excellent electrical performance.

System Configuration

- 3 half bridges with reverse conducting IGBTs
- Single phase diode bridge rectifier
- 3Φ SOI gate driver
- Pin-to-heatsink clearance distance typ. 1.6mm

Pin Configuration

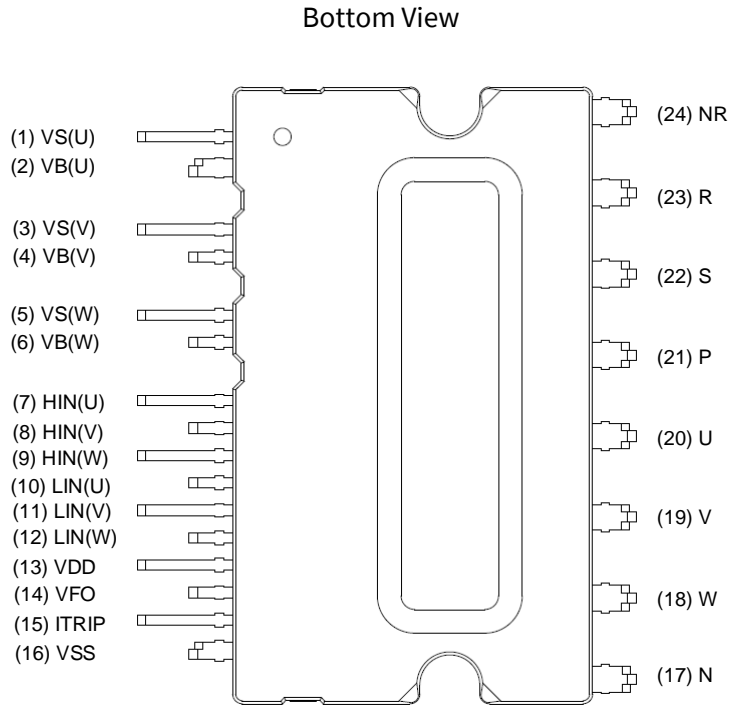


Figure 1 Pin configuration

Internal Electrical Schematic

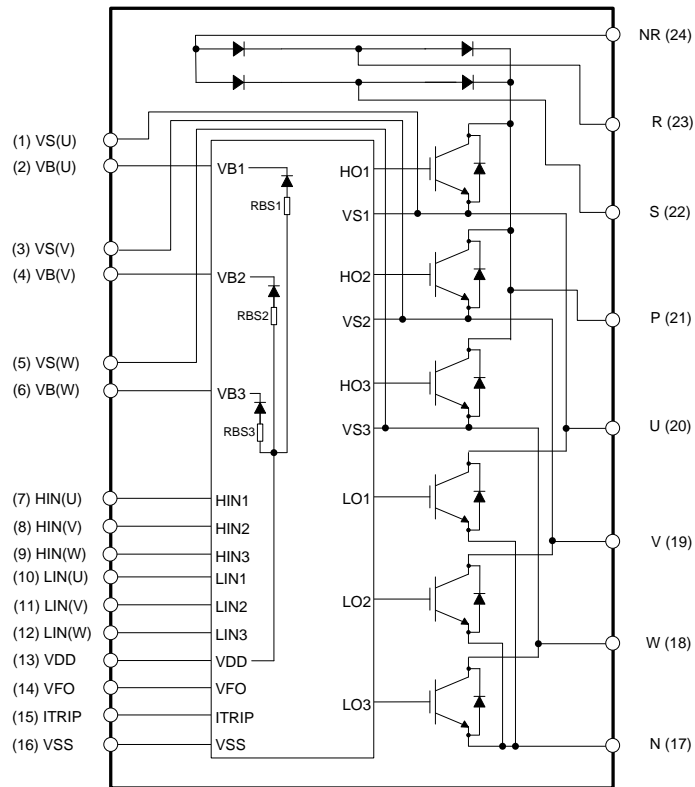


Figure 2 Internal schematic