

# CIPOS™

## Control Integrated Power System

*Dual In-Line Intelligent Power Module*  
*3Φ-bridge 600V / 10A*

### Features

Fully isolated Dual In-Line molded module

- Reverse conducting IGBTs with monolithic body diode
- 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
- Temperature monitor
- Under-voltage lockout at all channels
- Low side emitter pins accessible for all phase current monitoring (open emitter)
- Cross-conduction prevention
- All of 6 switches turn off during protection
- Lead-free terminal plating; RoHS compliant

### Target Applications

- Dish washers
- Refrigerators
- Washing machines
- Air-conditioners
- 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 an air conditioning, a refrigerator and a washing machine. 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
- 3Φ SOI gate driver
- Thermistor
- Pin-to-heatsink clearance distance typ. 1.6mm

## Pin Configuration

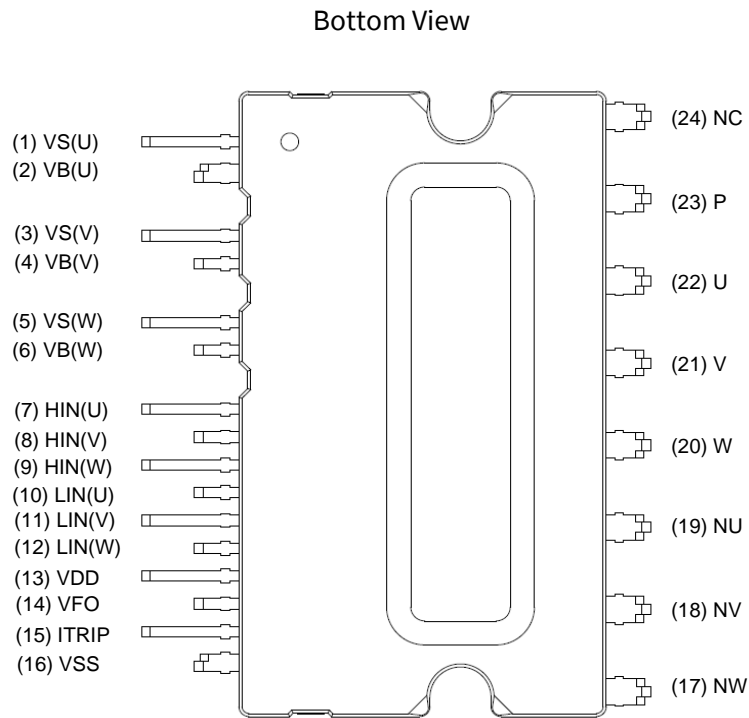


Figure 1 Pin configuration

## Internal Electrical Schematic

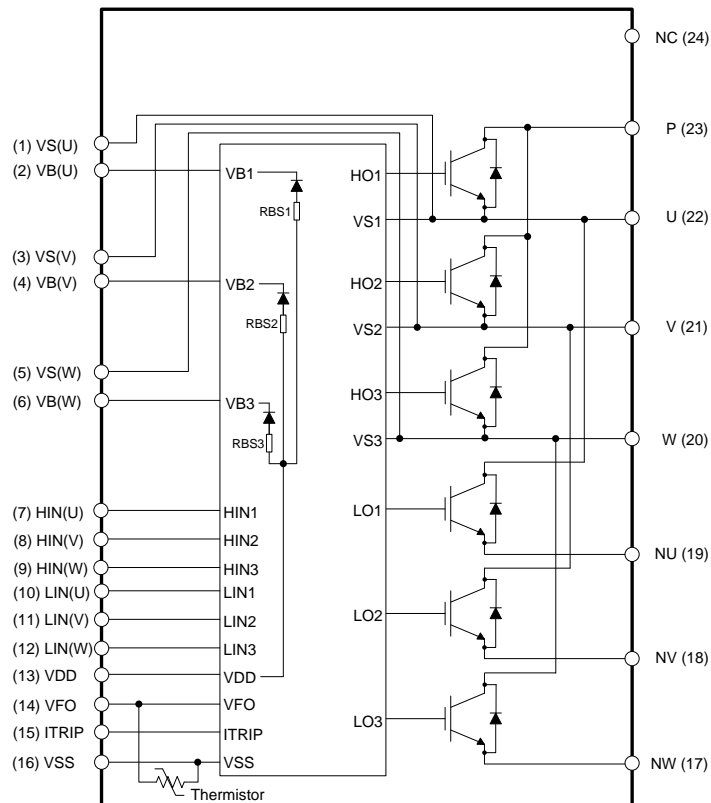


Figure 2 Internal schematic