



## Product Overview

### STK531U369A-E: Inverter IPM for 3-phase Motor Drive

For complete documentation, see the data sheet

#### Product Description

This "Inverter IPM" is highly integrated device containing all High Voltage (HV) control from HV-DC to 3-phase outputs in a single SIP module (Single-In line Package). Output stage uses IGBT/FRD technology and implements Under Voltage Protection (UVP) and Over Current Protection (OCP) with a Fault Detection output flag. Internal Boost diodes are provided for high side gate boost drive.

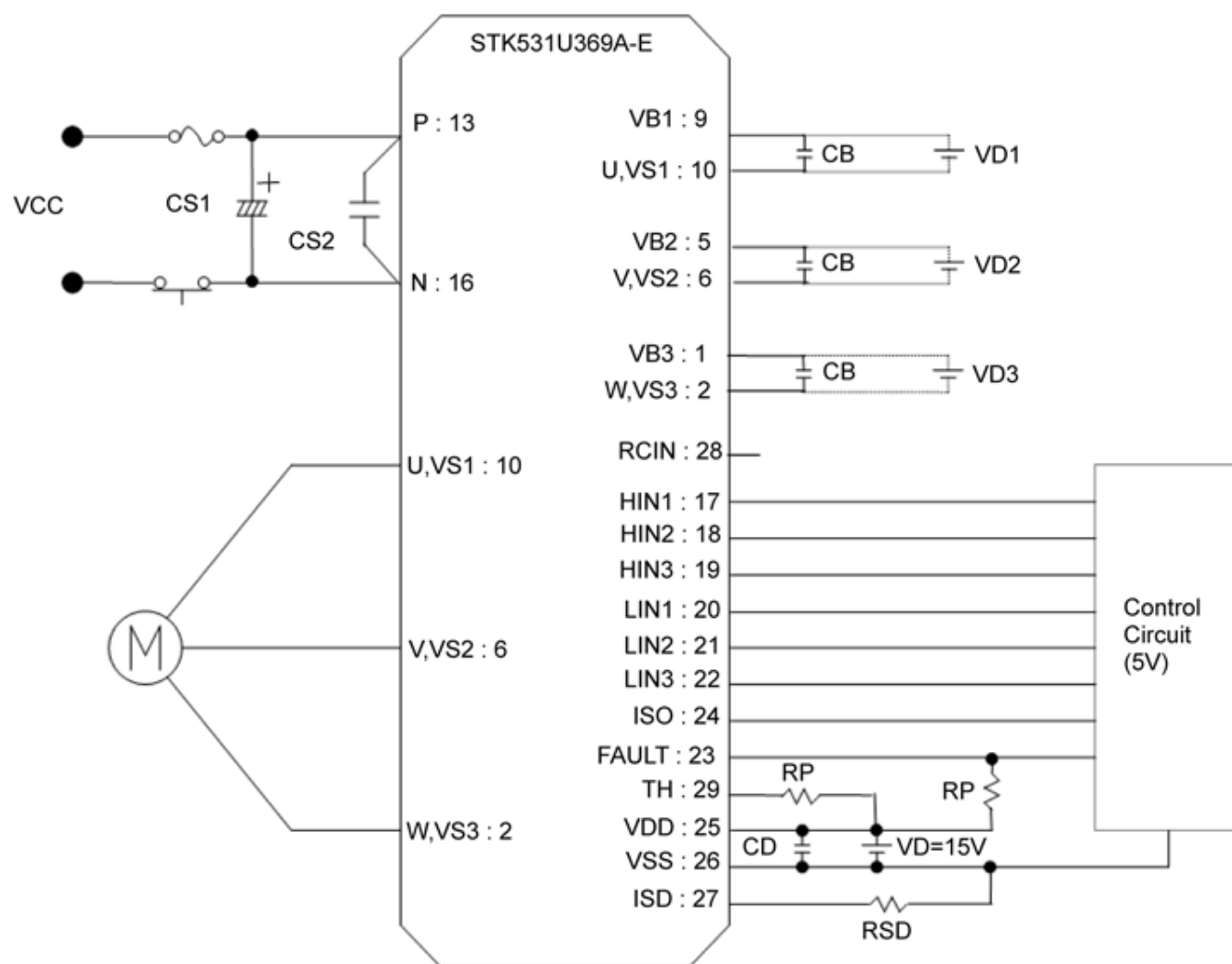
Features	Benefits
<ul style="list-style-type: none"> <li>Protective circuits including over current (bus line) and pre-drive low voltage protection are built in.</li> <li>Direct input of CMOS level control signals without insulating circuits is possible. (Active HIGH)</li> <li>A single power supply drive is enabled through the use of bootstrap circuits for upper power supplies. (externally set)</li> <li>Built-in simultaneous upper/lower ON prevention circuit to prevent arm shorting through simultaneous ON input for the upper and lower side transistors. (Dead time is required for preventing shorting due to switching delay.)</li> <li>The level of the overcurrent protection current can be changed with the external resistor "RSD" between the "ISD" and "VSS" terminals.</li> <li>Monitoring substrate temperature is possible through the use of an internal thermistor.</li> <li>Certification : UL Recognized (File number : E339285)</li> </ul>	<ul style="list-style-type: none"> <li>Fast speed protection is possible (Self protection)</li> <li>No need photo-coupler design</li> <li>No need bootstrap diode and resistor at externally</li> <li>All IGBT Gate shutdown at abnormal for safety</li> <li>Can be customized by each application</li> <li>High precision monitor is possible</li> </ul>

Applications	End Products
<ul style="list-style-type: none"> <li>3-phase inverter motor</li> </ul>	<ul style="list-style-type: none"> <li>Motor Control System</li> <li>Industrial /General Control Syst</li> <li>HVAC</li> <li>Clothes Washer /Dryer</li> <li>Dish Washer</li> </ul>

#### Part Electrical Specifications

Product	Compliance	Status	Type	V <sub>M</sub> Min (V)	V <sub>M</sub> Max (V)	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	I <sub>O</sub> Max (A)	I <sub>O</sub> Peak Max (A)	Step Reso lution	Cont rol Type	Feed back Method	Curr ent Sense	Reg ulato r Out put	Fault Dete ction	Flyb ack Prot ectio n	R <sub>DS(on)</sub> Typ (Ω)	Pack age Type
STK531U369A-E	Pb-free	Active	Inver ter		600		20	10	20		PW M	Non e	Fully Integrated		Over-Cur rent Therma l UV LO			SIP-29

## Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

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