



POW-R-PAK™ IGBT Assembly

Overview

The Powerex POW-R-PAK™ is a configurable IGBT based power platform that can be used for quick and easy product feasibility testing, rapid prototyping and design validation. POW-R-PAK systems are suited for energy storage, uninterruptible power supplies (UPS), motor drives, solar, wind, photovoltaics, EV and hybrid electric vehicle applications.

The power assembly is mounted on a forced air-cooled heatsink and features state-of-the-art Powerex IGBTs with low conduction and low switching losses for high efficiency operation. The POW-R-PAK includes a low inductance laminated bus structure, optically isolated gate drive interfaces, isolated gate drive power supplies, and a DC-link capacitor bank. The interface board provides simple user connections along with built-in protection features including overvoltage, undervoltage lockout, overcurrent, overtemperature, and short circuit detection.

The POW-R-PAK is available for operation with DC bus voltages of up to 800VDC (1200V assembly); DC bus voltages of up to 400VDC (600V assembly); switching frequencies below 20kHz.

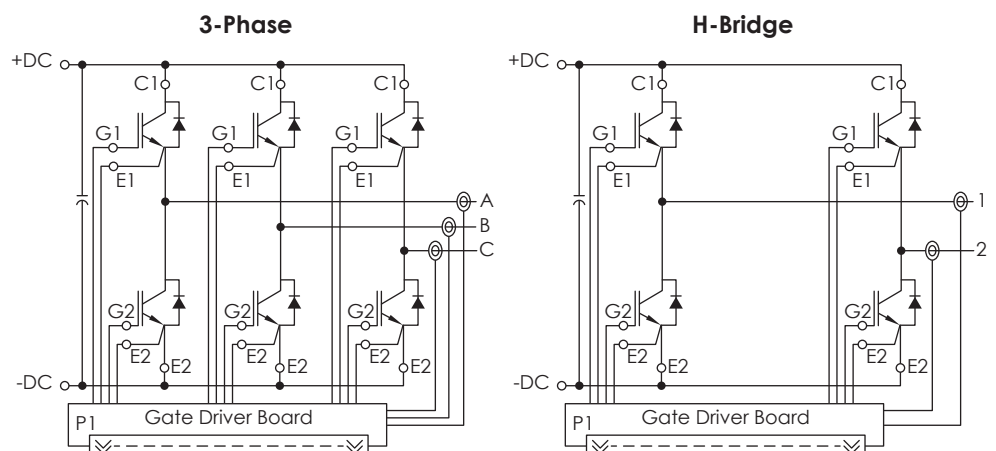
Applications

- 3-phase inverter
- Converter
- Chopper
- Half or full bridge
- Power supply

Product Advantages

- Customer control system flexibility
- High performance IGBT inverter bridge
- Integrated gate drive with fault monitoring & protection
- System status/troubleshooting LEDs to verify or monitor proper operation
- Isolated gate drive power supplies
- Low inductance laminated bus
- Output current measurement & feedback
- Superior short circuit detection & shoot through prevention

Simplified Block Diagram

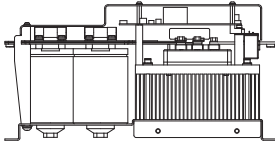
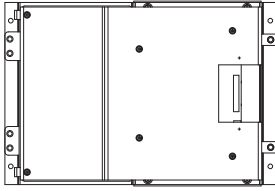


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POW-R-PAK™ IGBT Assembly Line-up Table

Package inch (mm)



14.9 x 10.15 x 7.6
(378.4 x 257.8 x 193)

PP75B120-ND	PP200B120-ND
PP75T120-ND	PP200T060-ND
PP100B120-ND	PP200T120-ND
PP100T120-ND	PP300B120-ND
PP150B120-ND	PP300T060-ND
PP150T120-ND	

Part Number	Connection	V _{CES} (V)	I _C (A)
PP75B120-ND	H-Bridge	1200	75
PP75T120-ND	3-Phase	1200	75
PP100B120-ND	H-Bridge	1200	100
PP100T120-ND	3-Phase	1200	100
PP150B120-ND	H-Bridge	1200	150
PP150T120-ND	3-Phase	1200	150
PP200B120-ND	H-Bridge	1200	200
PP200T060-ND	3-Phase	600	200
PP200T120-ND	3-Phase	1200	200
PP300B120-ND	H-Bridge	1200	300
PP300T060-ND	3-Phase	600	300
PP300T120-ND	3-Phase	1200	300
PP400B060-ND	H-Bridge	600	400
PP400T060-ND	3-Phase	600	400

NOTE: The standard configuration does not include a fan for forced air cooling. Consult factory for more information.

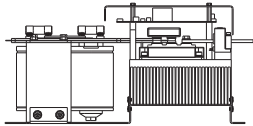
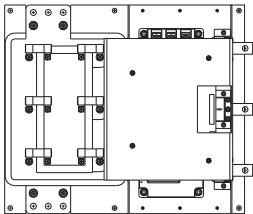
Numbering System

Example:

The PP300T120-ND is a 300A three-phase 1200V POW-R-PAK™ IGBT Assembly

PP 300 T 120 -ND
 (1) (2) (3) (4)

(1) POW-R-PAK™ (3) B = H-Bridge
 (2) Amperes T = 3-Phase
 (4) Volts (x10)



16.1 x 14.0 x 8.1
(378.4 x 257.8 x 205.1)

PP300T120-ND
 PP400B060-ND
 PP400T060-ND

Powerex can also provide Diode and SCR-based rectifier products; buck and boost converters; forced air cooled, liquid cooled, or a customized system specific to your needs.

For more information:

visit: <http://www.pwr.com/summary/IGBTAssembly.aspx>

email: globalsales@pwr.com

phone: 724-925-7272, Option 3 (Applications Engineering Assistance)

