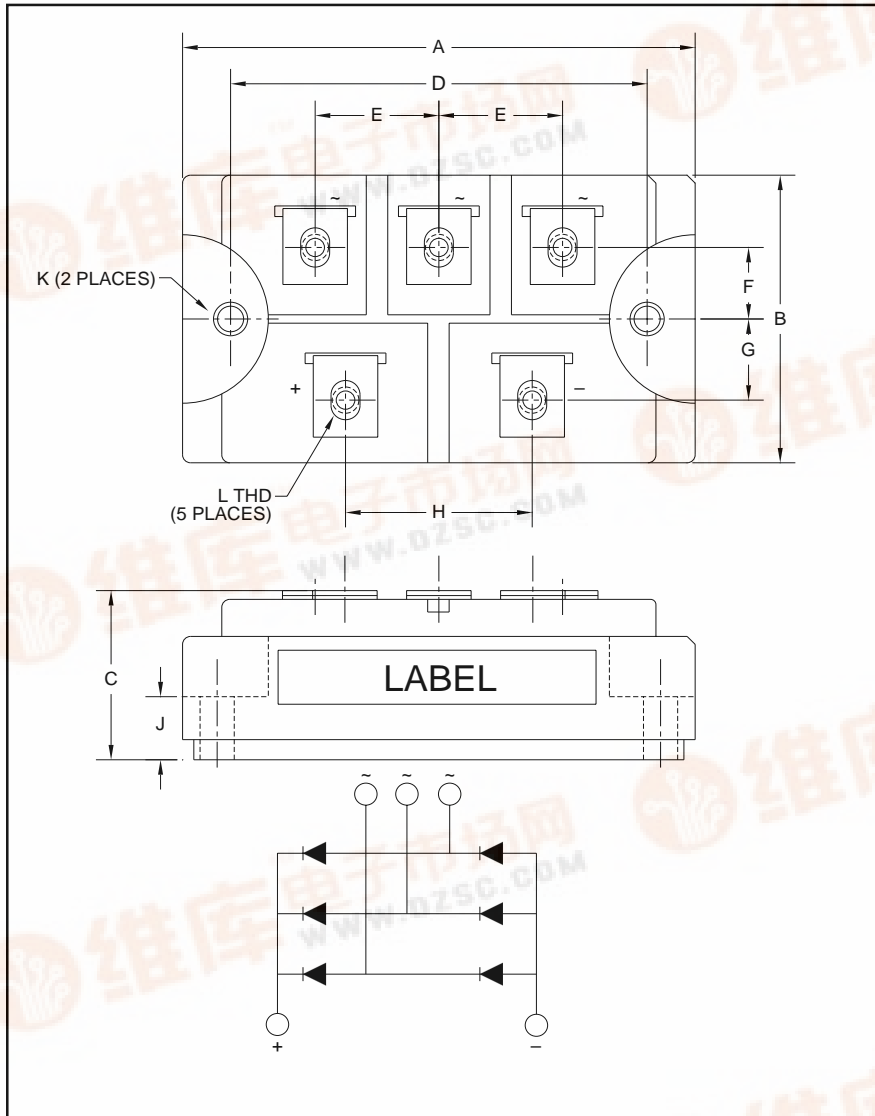




Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

RM75TPM-H / -24 / -2H

Three-Phase Diode Bridge Module 150 Amperes / 800-1600 Volts



Outline Drawing and Circuit Diagram

| Dimensions | Inches | Millimeters |
|------------|------------------|----------------|
| A | 3.15 | 80.0 |
| B | 1.58 | 40.0 |
| C | 0.95 +0.06/+0.02 | 24.1 +1.5/-0.5 |
| D | 2.68±0.01 | 68.0±0.25 |
| E | 0.79 | 20.0 |
| F | 0.41 | 10.5 |
| G | 0.45 | 11.5 |
| H | 1.18 | 30.0 |
| J | 0.32 | 8.0 |
| K | 0.217 | 5.5 |
| L | M5 | M5 |



Description:

Powerex Three-Phase Diode Bridge Modules are designed for use in applications requiring rectification of three-phase AC lines into DC voltage. Each module consists of six diodes and the interconnect required to form a complete three-phase bridge circuit. Each diode is electrically insulated from the mounting base plate for easy mounting on a common heatsink with other components.

Features:

- Isolated Mounting
- Metal Base Plate
- Low Thermal Impedance

Applications:

- Motor Control
- Inverters
- UPS

Ordering Information:

Example: Select the complete module number you desire from the table - i.e. RM75TPM-H is a 800V (V_{CES}), 150 Ampere Three-Phase Diode Bridge Module.

| Type | Current Rating Amperes | V_{CES} Volts |
|------|---------------------------|--------------------|
| -H | 150 | 800 |
| -24 | 150 | 1200 |
| -2H | 150 | 1600 |





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RM75TPM-H / -24 / -2H
Three-Phase Diode Bridge Module
 150 Amperes / 800-1600 Volts

Absolute Maximum Ratings, $T_j = 25^\circ\text{C}$ unless otherwise specified

| Characteristics | Symbol | RM75TPM | | | Units |
|---|-----------|--|------------|------|------------------------|
| | | -H | -24 | -2H | |
| Repetitive Peak Reverse Voltage | V_{RRM} | 800 | 1200 | 1600 | Volts |
| Non-Repetitive Peak Reverse Voltage | V_{RSM} | 960 | 1350 | 1700 | Volts |
| Recommended AC Input Voltage | E_A | 220 | 370 | 440 | Volts |
| DC Output Current (Three-Phase Full Wave Rectifying Circuit) | I_{DC} | 150 | 150 | 150 | Amperes |
| | | ($T_C=99^\circ\text{C}$) ($T_C=85^\circ\text{C}$) ($T_C=85^\circ\text{C}$) | | | |
| Surge (Non-Repetitive) Forward Current (One Half Cycle at 60Hz, Peak Value) | I_{FSM} | | 1500 | | Amperes |
| I^2t for Fusing (Value for One Cycle of Surge Current) | I^2t | | 9400 | | A^2sec |
| Junction Temperature | T_j | | -40 ~ +150 | | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -40 ~ +125 | | $^\circ\text{C}$ |
| Maximum Mounting Torque M5 Mounting Screw | - | | 17 | | in-lb |
| Maximum Mounting Torque M5 Terminal Screw | - | | 17 | | in-lb |
| Weight | - | | 200 | | Grams |
| Dielectric Strength (AC 60Hz, 1 minute between terminal and base plate) | V_{iso} | | 2500 | | Volts |

Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

| Characteristics | Symbol | Test Conditions | Min. | Typ. | Max. | Units |
|---------------------------------|---------------|--|------|------|------|--------------------|
| Repetitive Reverse Current | I_{RRM} | $T_j = 150^\circ\text{C}$, $V_{RM} = V_{RRM}$, V_{RRM} Applied | - | - | 15 | mA |
| Forward Voltage Drop | V_{FM} | $T_j = 25^\circ\text{C}$, $I_{FM} = 150\text{A}$, $tw \leq 1\text{ms}$ | - | - | 1.3 | Volts |
| Thermal Resistance | $R_{th(j-c)}$ | Junction to Case | - | - | 0.2 | $^\circ\text{C/W}$ |
| Thermal Resistance | $R_{th(c-f)}$ | Case to Fin, Conductive Grease Applied | - | - | 0.06 | $^\circ\text{C/W}$ |
| Isolation Resistance (-24, -2H) | | Measured with a 500V Megohmmeter | 10 | - | - | $\text{M}\Omega$ |
| | | Between Main Terminal and Case | | | | |

