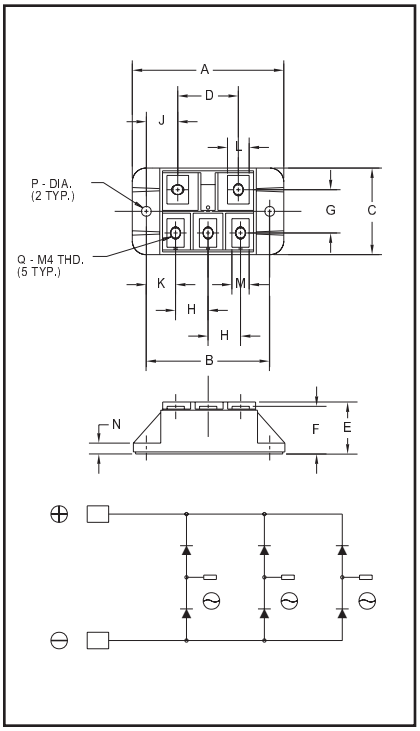
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

Three-Phase Diode Bridge Modules

40 Amperes/800 Volts



Outline Drawing

Dimension	Inches	Millimeters
A	2.76	70
B	2.244±0.010	57±0.25
C	1.57	40
D	1.10	28
E	0.94	24
F	0.87	22
G	0.79	20
H	0.59	15
J	0.57	14.5
K	0.53	13.5
L	0.39	10
M	0.31	8
N	0.20	5
P	0.18 Dia.	Dia. 4.5
Q	Metric M4	M4

RM20TPM-H
Three-Phase Diode Bridge Modules
40 Amperes/800 Volts

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 baseplate for easy mounting on a common heatsink with other components.

Features:

- ☐ Isolated Mounting
- ☐ Metal Baseplate
- ☐ Low Thermal Impedance

Applications:

- ☐ Motor Control
- ☐ Inverters
- ☐ UPS

Ordering Information:
Select the complete eight digit module part number you desire from the table below.
Example: RM20TPM-H is an 800 Volt, 40 Ampere Three-Phase Diode Bridge Module.

Type	Current Rating Amperes (x2)	Voltage Volts (800)
RM	20	H

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RM20TPM-H
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Absolute Maximum Ratings

Characteristics	Symbol	RM20TPM-H	Units
Peak Reverse Blocking Voltage	V_{RRM}	800	Volts
Peak Reverse Blocking Voltage (Non-Repetitive)	V_{RSM}	960	Volts
Recommended AC Input Voltage	E_A	640	Volts
DC Output Current	$I_{F(DC)}$	40	Amperes
Peak Half-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	400	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	670	A^2sec
Junction Temperature	T_j	-40 to 125	°C
Storage Temperature	T_{STG}	-40 to 150	°C
Maximum Mounting Torque M4 Mounting Screw	—	15	kg.-cm.
Maximum Mounting Torque M4 Terminal Screw	—	15	kg.-cm.
Module Weight (Typical)	—	100	Grams
V Isolation	V_{RMS}	2500	Volts

Electrical and Thermal Characteristics, T_j = 25°C unless otherwise specified

Characteristics	Symbol	Test Conditions	RM20TPM-H	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	T_j = 150°C, V_{RRM} = Rated	10	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	T_j = 25°C, I_{FM} = 40A	1.3	Volts
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.33	°C/Watt
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.09	°C/Watt