



Description:

Powerex Three-Phase Full Wave Bridge Module designed specially for customer applications. Each module consists of six diodes connected in a three-phase bridge configuration. The modules are isolated for easy mounting with other components on a common heatsink.

Features:

- Fast Recovery Diode
- Copper Base Plate
- Isolated Mounting
- (2) 100 Amps Chips per Bridge Element

Dimensions	Inches	Millimeters
A	4.02	102.0
B	3.15±0.01	80.0±0.25
C	3.58	91.0
D	2.91±0.01	74.0±0.25
E	0.43	11.0
F	0.79	20.0
G	0.39	10.0
H	0.75	19.1
J	0.79	20.0

Dimensions	Inches	Millimeters
K	0.05	1.25
L	0.74	18.7
M	1.55	39.3
N	0.12	3.05
P	0.32	8.1
Q	1.02	26.0
R	0.47	11.85
S	0.22 Dia.	5.5 Dia.

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

Characteristics	Conditions	Symbol	QRE0620001	Units
Repetitive Peak Reverse Blocking Voltage	-	V_{RRM}	600	Volts
Non-Repetitive Peak Reverse Blocking Voltage	-	V_{RSM}	$V_{RRM} + 100$	Volts
DC Output Current	Three phase full wave, $T_C=96^{\circ}\text{C}$	I_O	200	Amperes
Peak Half Cycle Non-Repetitive Surge Current	$t = 8.3\text{mS}$, 100% V_{RRM} Reapplied	I_{FSM}	1670	Amperes
I^2t for Fusing for One Cycle	$t = 8.3\text{mS}$, 100% V_{RRM} Reapplied	I^2t	11620	A^2sec
Operating Junction Temperature	-	T_J	-40 to 150	$^{\circ}\text{C}$
Storage Temperature	-	T_{STG}	-40 to 125	$^{\circ}\text{C}$
Maximum Mounting Torque, M5 Mounting Screw	-	-	31	In.-lb.
Maximum Terminal Torque, M4 Terminal Screw	-	-	15	In.-lb.
Module Weight (Typical)	-	-	570	Grams
V Isolation	60 Hz, circuit to base, all terminals shorted, $t = 1 \text{ sec}$	V_{RMS}	3000	Volts

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

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Peak Reverse Leakage Current	I_{RRM}	Rated V_{RRM}	-	-	5	mA
Peak On-State Voltage	V_{FM}	$I_{FM}=200\text{A}$ $I_{FM}=67\text{A}$	-	2.0 1.3	2.8 -	Volts
Reverse Recovery Time	t_{rr}	$I_{FM} = 200\text{A}$, $di/dt = -400\text{A}/\mu\text{s}$	-	-	110	ns
Reverse Recovery Charge	Q_{rr}	$I_{FM} = 200\text{A}$, $di/dt = -400\text{A}/\mu\text{s}$	-	0.54	-	μC

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

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Per Module	-	-	0.10	$^{\circ}\text{C}/\text{Watt}$
Thermal Resistance, Case to Sink Lubricated	$R_{\theta CS}$	Per Module	-	0.018	-	$^{\circ}\text{C}/\text{Watt}$

