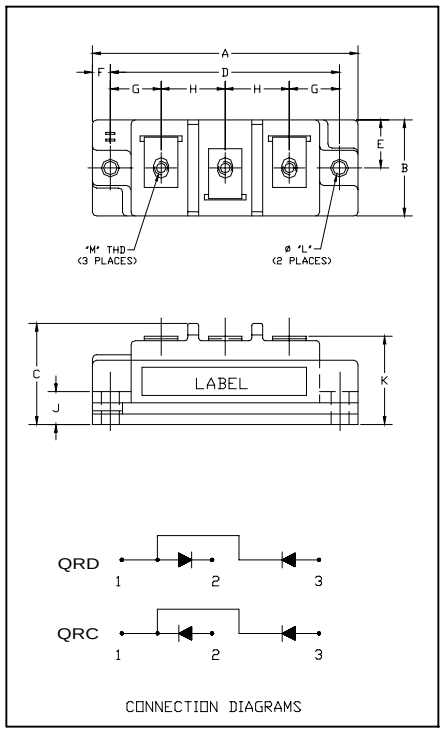
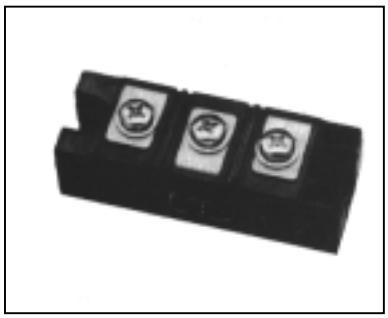
Preliminary

QR_3310001
100 Amp/3300 Volts

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

Fast Recovery Diode Module
100 Amp/3300 Volts





QR_3310001
Fast Recovery Diode Module
100 Amperes / 3300 Volts

Description:
Powerex Fast Recovery Diode Modules are designed for use in applications requiring fast switching. The modules are isolated for easy mounting with other components on a common heatsink.

Features:
- Fast Recovery Time (1.2 µs max.)
- Isolation Material – DBC AlN
- Copper Baseplate
- Low Thermal Impedance
- 6000 V Isolated Mounting

Applications:
- Switching Power Supplies
- Inverters
- Choppers
- Welding Power Supplies
- Free Wheeling Diode
- High Frequency Rectifiers

Dimensions	Inches	Millimeters
A	3.70	94
B	1.34	34
C	1.40	35.6
D	3.15	80
E	0.67	17
F	0.28	6.99
G	0.67	17.1
H	0.91	23
J	0.36	9.0
K	1.18	30
L	0.216	5.5
M	#10-32	#10-32

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Fast Recovery Diode Module
100 Amp/3300 Volts

Absolute Maximum Ratings, T_J=25°C unless otherwise specified

Characteristics	Conditions	Symbol	QRD330001 QRC330001	Units
Repetitive Peak Reverse Blocking Voltage	-	V_{RRM}	3300	Volts
Non-Repetitive Peak Reverse Blocking Voltage	-	V_{RSM}	V_{RRM} + 100	Volts
Average Forward Current	Tc=25°C	$I_{F(AV)}$	100	Amperes
Forward Current	Pulse	I_{FM}	200	Amperes
Operating Junction Temperature	-	T_J	-40 to 150	°C
Storage Temperature	-	T_{STG}	-40 to 150	°C
Maximum Mounting Torque, #10-32 Mounting Screw	-	-	26	In.-lb.
Maximum Terminal Torque, #10-32 Terminal Screw	-	-	26	In.-lb.
Module Weight (Typical)	-	-	250	Grams
V Isolation	60 Hz, circuit to base, all terminals shorted, t = 1 sec	V_{RMS}	6000	Volts

Electrical Characteristics, T_J=25°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_F=100A	-	3.3	4.3	Volts
Reverse Recovery Time	trr	I_F = 100A, di/dt = –200A/μs	-	-	1.2	μs
Reverse Recovery Charge	Qrr	I_F =100A, di/dt = –200A/μs	-	25	-	μC

Thermal Characteristics, T_J=25°C unless otherwise specified

Characteristics	Symbol		Min.	Typ.	Max.	Units
Thermal Resistance, Junction to Case	$R_{\Theta JC}$	Per Diode	-	0.06	TBD	°C/Watt
Thermal Resistance, Case to Sink Lubricated	$R_{\Theta CS}$	Per Module	-	-	0.05	°C/Watt