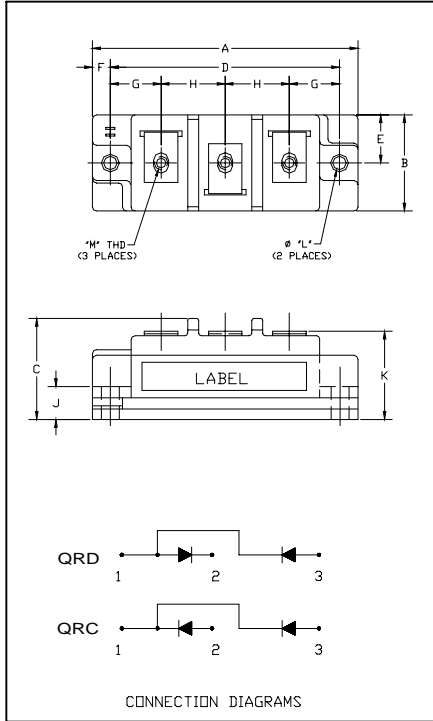


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

### 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  $\mu$ s 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



Preliminary

QR\_3310001  
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**Fast Recovery Diode Module**  
**100 Amp/3300 Volts**

**Absolute Maximum Ratings, T<sub>J</sub>=25°C unless otherwise specified**

Characteristics	Conditions	Symbol	QRD330001	
			QRC330001	Units
Repetitive Peak Reverse Blocking Voltage	-	V <sub>RRM</sub>	3300	Volts
Non-Repetitive Peak Reverse Blocking Voltage	-	V <sub>RSM</sub>	V <sub>RRM</sub> + 100	Volts
Average Forward Current	T <sub>C</sub> =25°C	I <sub>F(AV)</sub>	100	Amperes
Forward Current	Pulse	I <sub>FM</sub>	200	Amperes
Operating Junction Temperature	-	T <sub>J</sub>	-40 to 150	°C
Storage Temperature	-	T <sub>STG</sub>	-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 <sub>RMS</sub>	6000	Volts

**Electrical Characteristics, T<sub>J</sub>=25°C unless otherwise specified**

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Peak Reverse Leakage Current	I <sub>RRM</sub>	Rated V <sub>RRM</sub>	-	-	5	mA
Peak On-State Voltage	V <sub>FM</sub>	I <sub>F</sub> =100A	-	3.3	4.3	Volts
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 100A, di/dt = -200A/μs	-	-	1.2	μs
Reverse Recovery Charge	Q <sub>rr</sub>	I <sub>F</sub> = 100A, di/dt = -200A/μs	-	25	-	μC

**Thermal Characteristics, T<sub>J</sub>=25°C unless otherwise specified**

Characteristics	Symbol		Min.	Typ.	Max.	Units
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	Per Diode	-	0.06	TBD	°C/Watt
Thermal Resistance, Case to Sink Lubricated	R <sub>θCS</sub>	Per Module	-	-	0.05	°C/Watt