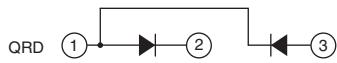
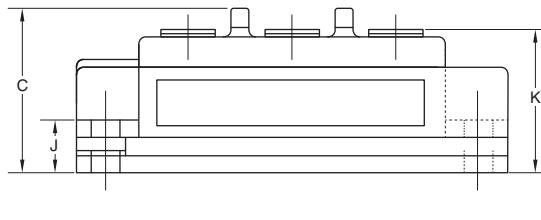
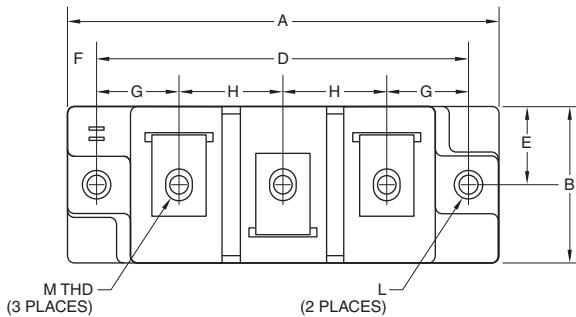


**Fast Recovery
 Diode Module
 100 Amperes/3300 Volts**



Outline Drawing and Circuit Diagram

Dimensions	Inches	Millimeters
A	3.70	94.0
B	1.34	34.0
C	1.40	35.6
D	3.15	80.0
E	0.67	17.0
F	0.28	6.99

Dimensions	Inches	Millimeters
G	0.67	17.1
H	0.91	23.0
J	0.36	9.0
K	1.18	30.0
L	0.216 Dia.	5.5 Dia.
M	#10-32	#10-32



Description:

High voltage diodes feature highly insulating housings that offer enhanced protection by means of greater creepage and strike clearance distance for many demanding applications like medium voltage drives and auxiliary traction applications.

Features:

- Aluminum Nitride (AlN) Ceramic Substrate for Low Thermal Impedance
- Copper Baseplate
- Fast Recovery Time (1.2 μ s max.)
- Industry Standard Packages Allow Common Bus Work to Complementary High Isolation Diodes
- No Additional Insulation Components Required

Applications:

- Diodes for 18-24 Pulse Front End Rectifiers in 10.2 KV Isolation
- High Voltage Power Supplies
- Medium Voltage Drives
- Motor Drives
- Traction

QR_3310001

Fast Recovery Diode Module

100 Amperes/3300 Volts

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

Ratings	Symbol	QRD3310001	QRC3310001	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	$T_C = 80^\circ\text{C}$	$I_F(\text{avg})$	86	Amperes
	$T_C = 63^\circ\text{C}$	$I_F(\text{avg})$	100	Amperes
	$T_C = 25^\circ\text{C}$	$I_F(\text{avg})$	127	Amperes
Forward Current (Pulse)	I_{FM}	200	Amperes	
Operating Junction Temperature	T_j	-40 to 150	$^\circ\text{C}$	
Storage Temperature	T_{stg}	-40 to 150	$^\circ\text{C}$	
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	

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

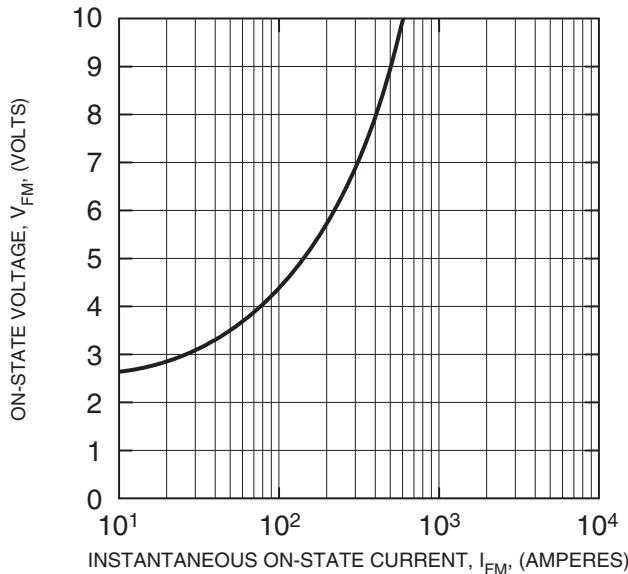
Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Peak Reverse Leakage Current	I_{RRM}	Rated V_{RRM}	—	—	5	mA
Peak On-State Voltage	V_{FM}	$I_F = 100\text{A}$	—	3.3	4.3	Volts
Reverse Recovery Time	t_{rr}	$I_F = 100\text{A}$, $di/dt = -200\text{A}/\mu\text{s}$	—	—	1.2	μs
Reverse Recovery Charge	Q_{rr}	$I_F = 100\text{A}$, $di/dt = -200\text{A}/\mu\text{s}$	—	25	—	μC

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

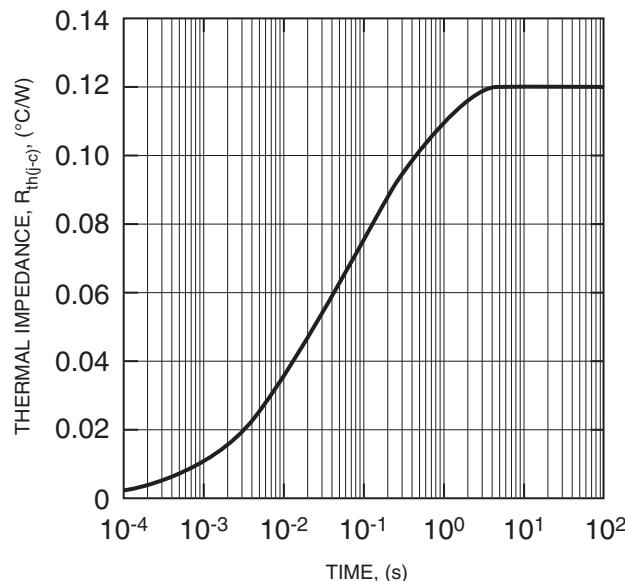
Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal Resistance, Junction to Case	$R_{th(j-c)Q}$	Per Diode	—	—	0.12	$^\circ\text{C}/\text{W}$
Thermal Resistance, Case to Sink Lubricated	$R_{th(c-s)Q}$	Per Module	—	—	0.05	$^\circ\text{C}/\text{W}$

QR_3310001

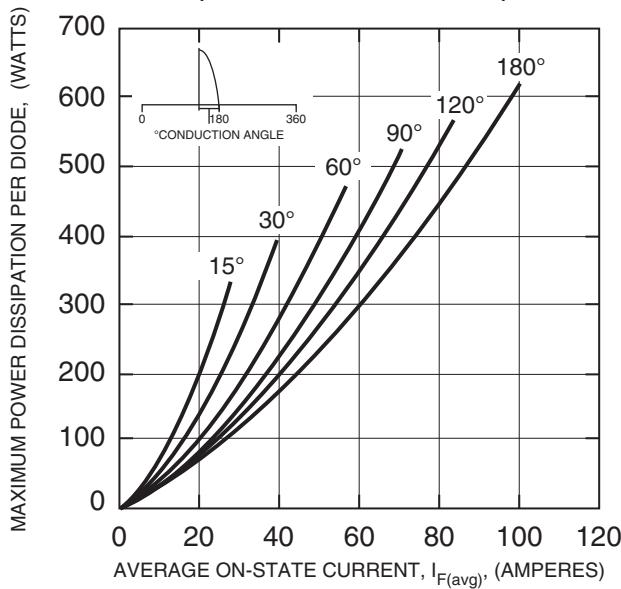
 Fast Recovery Diode Module
 100 Amperes/3300 Volts

 MAXIMUM ON-STATE FORWARD VOLTAGE DROP CHARACTERISTICS
 $(T_j = 150^\circ\text{C})$


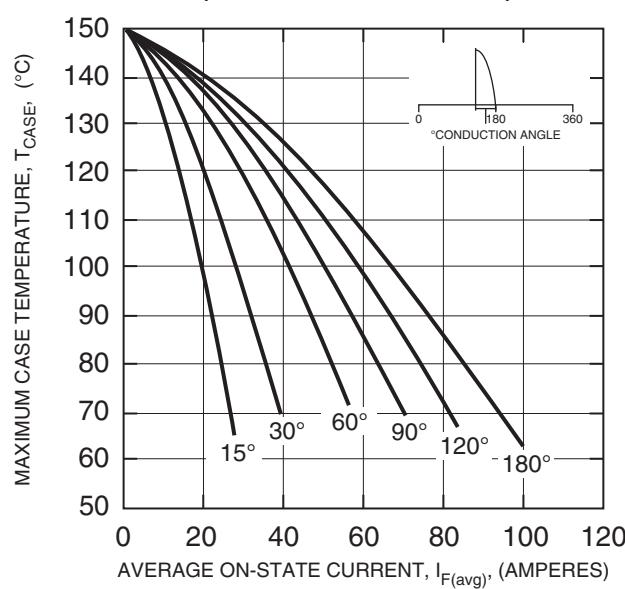
MAXIMUM TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION TO CASE)



MAXIMUM ON-STATE POWER DISSIPATION (SINUSOIDAL WAVEFORM)



MAXIMUM ALLOWABLE CASE TEMPERATURE (SINUSOIDAL WAVEFORM)



Information presented is based upon manufacturers testing and projected capabilities. This information is subject to change without notice.
 The manufacturer makes no claim as to the suitability of use, reliability, capability, or future availability of this product.

QR_3310001

 Fast Recovery Diode Module
 100 Amperes/3300 Volts
