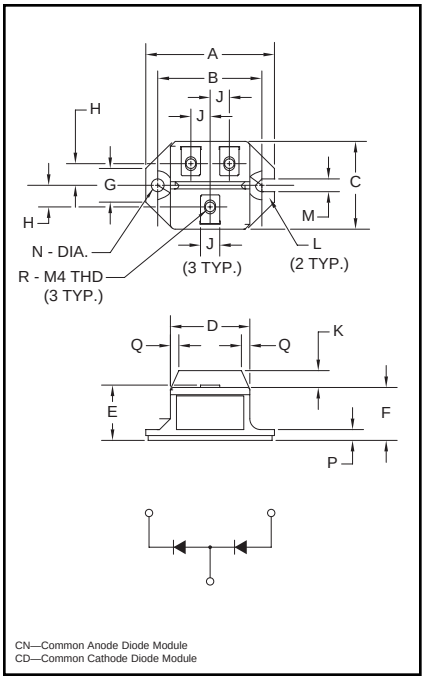
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

Fast Recovery Dual Diode Modules

100 Amperes/600-1200 Volts



Outline Drawing

Dimension	Inches	Millimeters
A	2.106	53.5
B	1.705±0.008	43.3±0.2
C	1.437	36.5
D	1.299	33
E	0.925	23.5
F	0.866	22
G	0.551	14
H	0.354	9
J	0.315	8
K	0.276	7
L	0.236 R	R6
M	0.209	5.3
N	0.209 Dia.	Dia. 5.3
P	0.177	4.5
Q	0.138	3.5
R	M4 Metric	M4



CN24_ _10, CD24_ _10
Fast Recovery Dual Diode Modules
100 Amperes/600-1200 Volts

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

Features:

- ☐ Isolated Mounting
- ☐ Planar Chips

Applications:

- ☐ Free Wheeling

Ordering Information:
Select the complete eight digit module part number you desire from the table below.
Example: CN241210 is a 1200 Volt, 100 Ampere Fast Recovery Common Anode Diode Module.

Type	Voltage Volts (x100)	Current Rating Amperes (x10)
CN24	06	10
CD24	12	

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

CN24_ _10, CD24_ _10
Fast Recovery Dual Diode Modules
100 Amperes/600-1200 Volts

Absolute Maximum Ratings

Characteristics	Symbol	CN240610 CD240610	CC240610 CD241210	Units
Peak Reverse Blocking Voltage	V_{RRM}	600	1200	Volts
Transient Peak Forward Blocking Voltage (Non-Repetitive), t < 5ms	V_{RSM}	720	1350	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	480	960	Volts
DC Output Current, T_C = 75°C	$I_{F(DC)}$	100	100	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	2000	2000	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	I_{FSM}	1825	1825	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	16600	16600	A^2sec
Storage Temperature	T_{STG}	-40 to 125	-40 to 125	°C
Operating Temperature	T_j	-40 to 150	-40 to 150	°C
Maximum Mounting Torque M5 Mounting Screw	—	17	17	in.-lb.
Maximum Mounting Torque M4 Terminal Screw	—	12	12	in.-lb.
Module Weight (Typical)	—	90	90	Grams
V Isolation	V_{RMS}	2500	2500	Volts

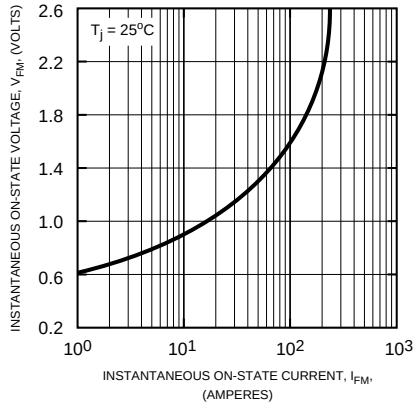
CN24_ _10, CD24_ _10
Fast Recovery Dual Diode Modules
100 Amperes/600-1200 Volts

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

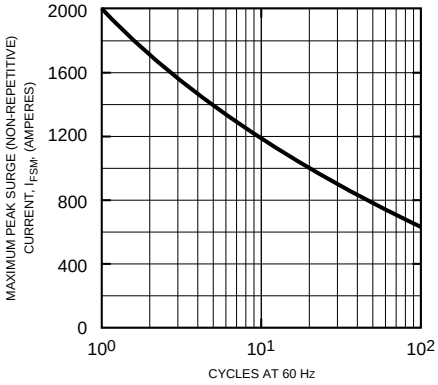
Characteristics	Symbol	Test Conditions	CN24_ _10/CD24_ _10	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	T_j = 150°C, V_{RRM} = Rated	20	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	I_{FM} = 100A	1.5	Volts
Switching Maximums				
Reverse Recovery Time	t_{rr}	I_{FM} = 100A, T_j = 150°C di/dt =-200A/μs, V_R = 1/2V_{RM}	0.8	μs
Reverse Recovery Charge	Q_{rr}	I_{FM} = 100A, T_j = 150°C di/dt =-200A/μs, V_R = 1/2V_{RM}	30	μC
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.5	°C/Watt
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.4	°C/Watt

CN24_ _10, CD24_ _10
Fast Recovery Dual Diode Modules
100 Amperes/600-1200 Volts

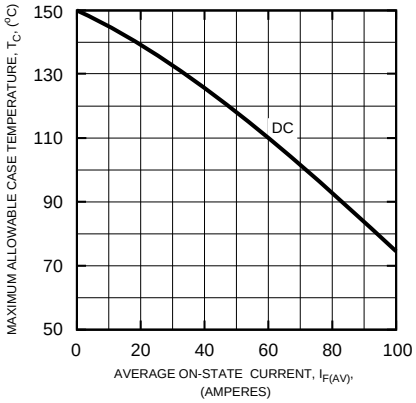
MAXIMUM ON-STATE CHARACTERISTICS



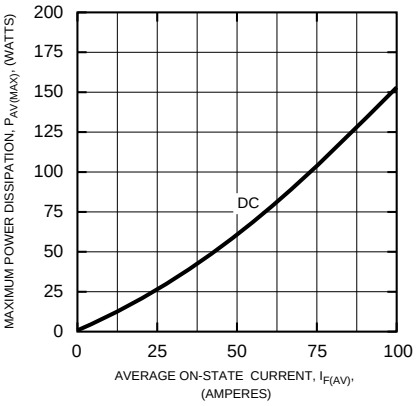
MAXIMUM ALLOWABLE PEAK SURGE (NON-REPETITIVE) CURRENT



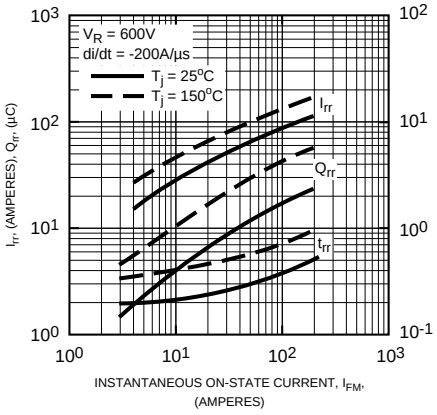
MAXIMUM ALLOWABLE CASE TEMPERATURE



MAXIMUM ON-STATE POWER DISSIPATION



REVERSE RECOVERY CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION-TO-CASE)

