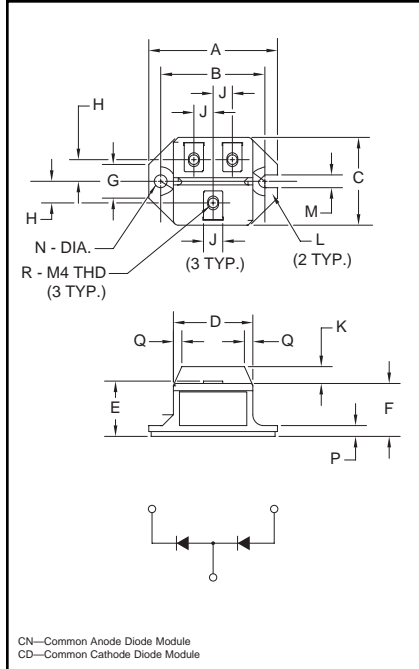


**Fast Recovery  
Dual Diode Modules  
100 Amperes/600-1200 Volts**



**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	

**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



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**CN24\_ \_10, CD24\_ \_10**  
**Fast Recovery Dual Diode Modules**  
 100 Amperes/600-1200 Volts

**Absolute Maximum Ratings**

Characteristics	Symbol	CN240610	CC240610	Units
		CD240610	CD241210	
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, $T_C = 75^\circ C$	$I_{F(DC)}$	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 <sup>2</sup> sec
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



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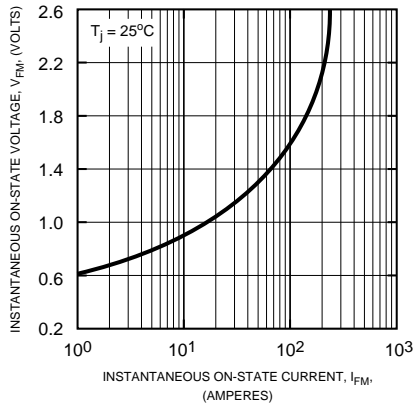
CN24\_ \_10, CD24\_ \_10  
Fast Recovery Dual Diode Modules  
100 Amperes/600-1200 Volts

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

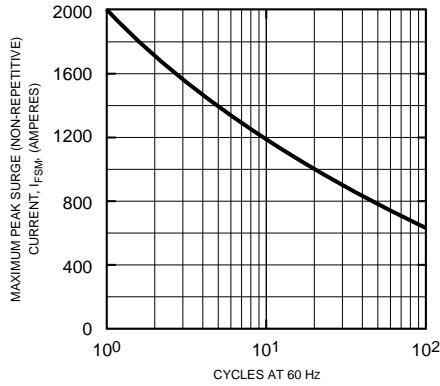
Characteristics	Symbol	Test Conditions	CN24_ _10/CD24_ _10	Units
<b>Blocking State Maximums</b>				
Reverse Leakage Current, Peak	$I_{RRM}$	$T_j = 150^\circ\text{C}$ , $V_{RRM} = \text{Rated}$	20	mA
<b>Conducting State Maximums</b>				
Peak On-State Voltage	$V_{FM}$	$I_{FM} = 100\text{A}$	1.5	Volts
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

**CN24\_10, CD24\_10**  
**Fast Recovery Dual Diode Modules**  
 100 Amperes/600-1200 Volts

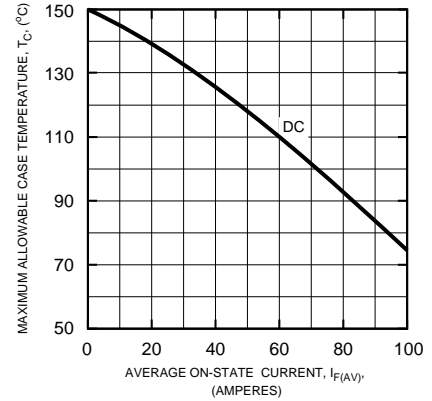
**MAXIMUM ON-STATE CHARACTERISTICS**



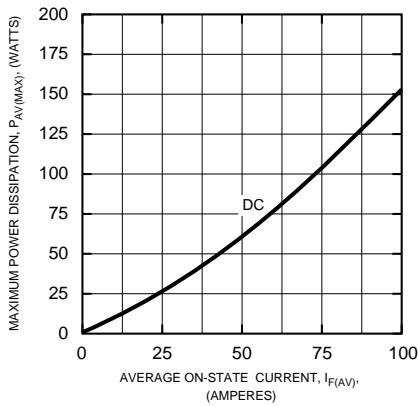
**MAXIMUM ALLOWABLE PEAK SURGE (NON-REPETITIVE) CURRENT**



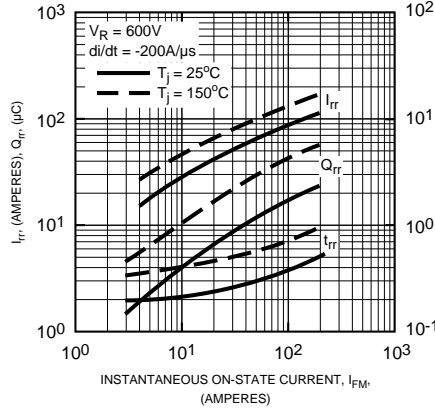
**MAXIMUM ALLOWABLE CASE TEMPERATURE**



**MAXIMUM ON-STATE POWER DISSIPATION**



**REVERSE RECOVERY CHARACTERISTICS**



**TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION-TO-CASE)**

