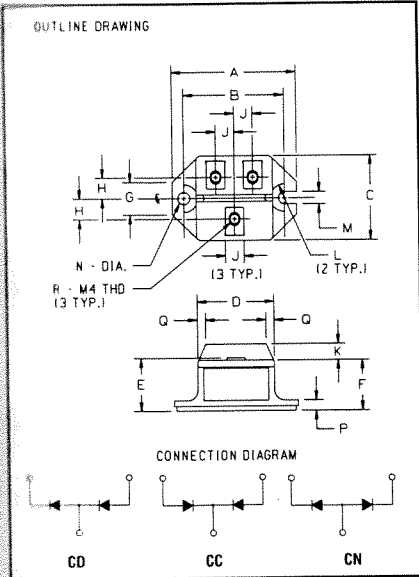


Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
 Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 72.75.15

Fast Recovery Dual Diode Modules

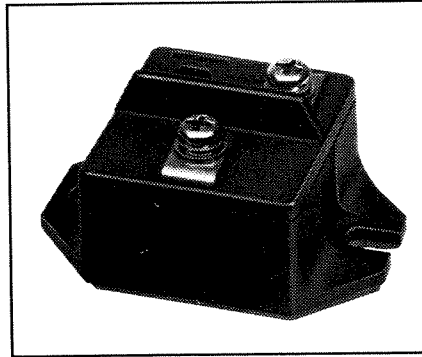
100 Amperes/600-1200 Volts



600-1200 Volts, CN24 ___ 10,
 CD24 ___ 10, CC24 ___ 10
Outline Drawing

Dimension	Inches	Millimeters
A	2.106	53.5
B	1.705 ± .008	43.3 ± 0.2
C	1.437	36.5
D	1.299	33
E	.925	23.5
F	.866	22
G	.551	14
H	.354	9
J	.315	8
K	.276	7
L	.236 R	R6
M	.209	5.3
N	.209 Dia.	Dia. 5.3
P	.177	4.5
Q	.138	3.5
R	M4 Metric	M4

CN—Common Anode Diode Module
 CD—Dual Diode Module
 CC—Common Cathode Diode Module



CN24 ___ 10, CD24 ___ 10,
 CC24 ___ 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

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

Type	V _{RRM} Volts (x100)	Current Rating Amperes (x10)
CN24	06	10
CD24	12	
CC24		



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Absolute Maximum Ratings

Characteristics	Symbol	CN240610	CN241210	Units
		CD240610	CD241210	
		CC240610	CC241210	
Peak Reverse Blocking Voltage	V_{RRM}	600	1200	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive) $t < 5$ ms	V_{RSM}	720	1350	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	480	960	Volts
DC Current, $T_C = 75^\circ\text{C}$	$I_{F(DC)}$	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	16,600	16,600	A^2sec
Storage Temperature	T_{STG}	-40 to 125	-40 to 125	$^\circ\text{C}$
Operating Temperature	T_J	-40 to 150	-40 to 150	$^\circ\text{C}$
Maximum Mounting Torque M5 Mounting Screw	—	17	17	in.-lb.
Maximum Terminal 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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Electrical and Thermal Characteristics, $T_J = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Test Conditions	CN24 ___ 10	Units
			CD24 ___ 10	
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	$T_J = 150^\circ\text{C}$, $V_{RRM} = \text{rated}$	20	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	$I_{FM} = 100\text{A}$	1.5	Volts
Switching Maximums				
Reverse Recovery Time	t_{rr}	$I_{FM} = 100\text{A}$, $T_J = 150^\circ\text{C}$ $-di/dt = 200 \text{ A}/\mu\text{s}$, $V_R = 1/2 V_{RRM}$	0.8	μs
Reverse Recovery Charge	Q_{rr}	$I_{FM} = 100\text{A}$, $T_J = 150^\circ\text{C}$ $-di/dt = 200 \text{ A}/\mu\text{s}$, $V_R = 1/2 V_{RRM}$	30	μC
Thermal Maximums				
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Per Device	0.5	$^\circ\text{C}/\text{Watt}$
Thermal Resistance, Case to Sink Lubricated	$R_{\theta CS}$	Per Device	0.4	$^\circ\text{C}/\text{Watt}$



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