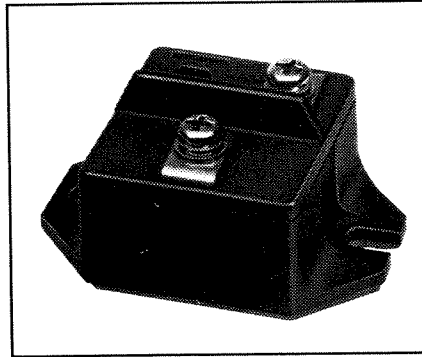
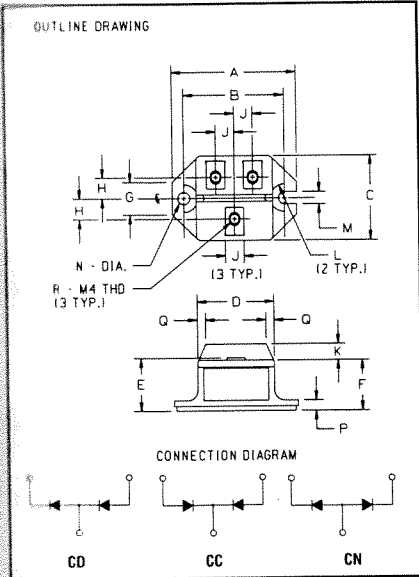


Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272  
 Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 72.75.15

## Fast Recovery Dual Diode Modules

100 Amperes/600-1200 Volts



CN24 \_\_\_ 10, CD24 \_\_\_ 10,  
 CC24 \_\_\_ 10  
**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

### 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 <sub>RRM</sub> 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	$\text{A}^2\text{sec}$
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	
<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	$t_{rr}$	$I_{FM} = 100\text{A}$ , $T_J = 150^\circ\text{C}$ $-di/dt = 200 \text{ A}/\mu\text{s}$ , $V_R = 1/2 V_{RRM}$	0.8	$\mu\text{s}$
Reverse Recovery Charge	$Q_{rr}$	$I_{FM} = 100\text{A}$ , $T_J = 150^\circ\text{C}$ $-di/dt = 200 \text{ A}/\mu\text{s}$ , $V_R = 1/2 V_{RRM}$	30	$\mu\text{C}$
<b>Thermal Maximums</b>				
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	$^\circ\text{C}/\text{Watt}$

# POWEREX

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