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CN* FAST RECOVERY DUAL DIODE MODULES

50 Amperes/600-1200 Volts

Abstract:

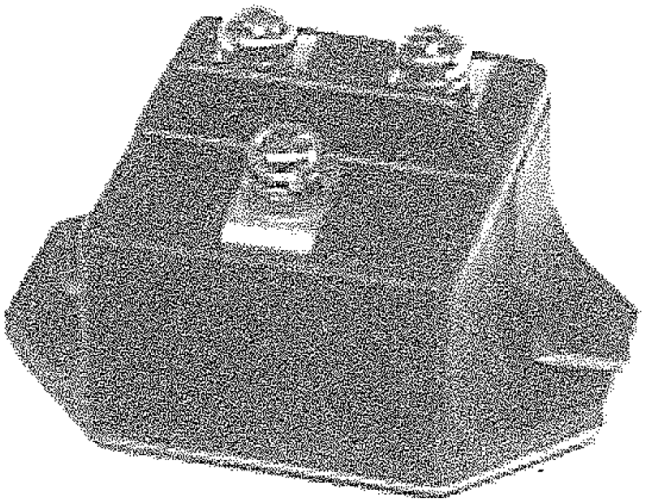
Fast Recovery Dual Diode Modules are designed for use in applications requiring fast switching. The modules are isolated for easy mounting with other components on common heatsinks.

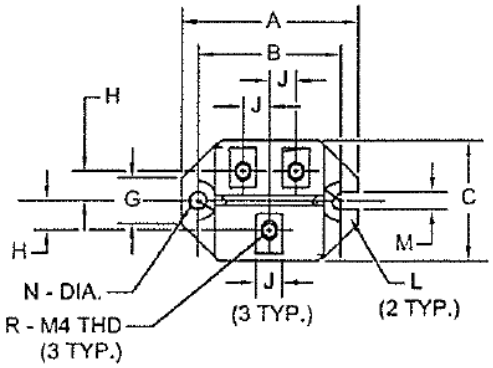
Features:

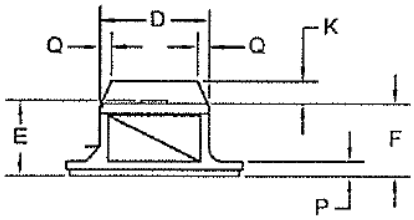
- ☐ Isolated Mounting
- ☐ Planar Chips

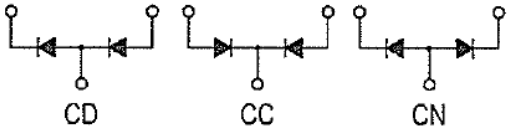
Applications:

- ☐ Free Wheeling









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

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

Ordering Information:

Select the complete eight digit module part number you desire from the table below.
Example: CN241250 is a 1200 Volt, 50 Ampere Fast Recovery Common AnodeDiode Module.

Type	Voltage Volts (x100)	Current Rating Amperes (50)
CN24	06	50
CD24	12	

Tel. 1-973-377-9566, Fax. 1-973-377-3078

133 Kings Road,
Madison, New Jersey 07940
United States of America

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Aerospace Mgmt. Sys. Cert.
AS/EN/JISQ9100:2009 Rev. C
ISO9001:2008
Cert No. 45325

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Absolute Maximum Ratings

Characteristics	Symbol	CN240650 CD240650 CC240650	CN241250 CD241250 CC241250	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 = 105°C	$I_{F(DC)}$	50	50	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	1000	1000	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	I_{FSM}	910	910	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	4165	4165	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

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

Characteristics	Symbol	Test Conditions	CN24_ _50 CD24_ _50 CC24_ _50	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	T_j = 150°C, V_{RRM} = Rated	10	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	I_{FM} = 50A	1.5	Volts
Switching Maximums				
Reverse Recovery Time	t_{rr}	I_{FM} = 50A, T_j = 150°C di/dt =-100A/µs, V_R = 1/2V_{RM}	0.8	µs
Reverse Recovery Charge	Q_{rr}	I_{FM} = 50A, T_j = 150°C di/dt =-100A/µs, V_R = 1/2V_{RM}	30	µC
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.6	°C/Watt
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.4	°C/Watt

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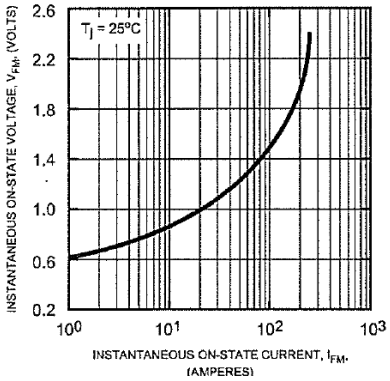
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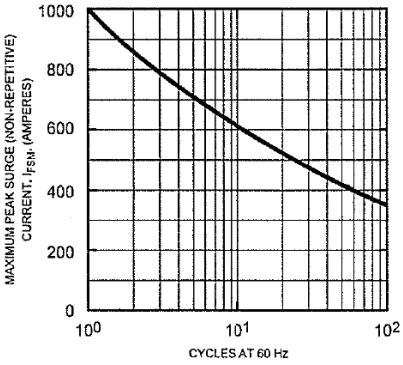
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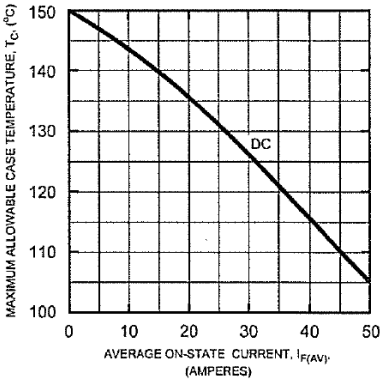
MAXIMUM ON-STATE CHARACTERISTICS



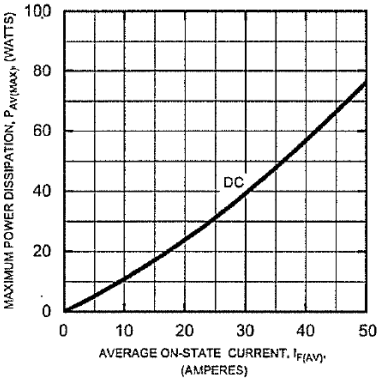
MAXIMUM ALLOWABLE PEAK SURGE (NON-REPETITIVE) CURRENT



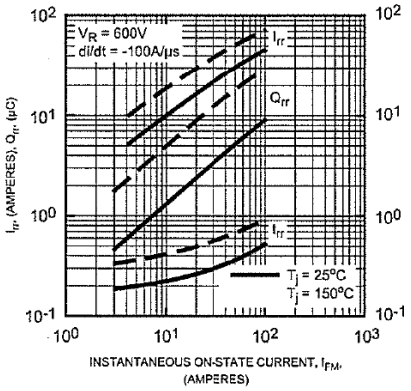
MAXIMUM ALLOWABLE CASE TEMPERATURE



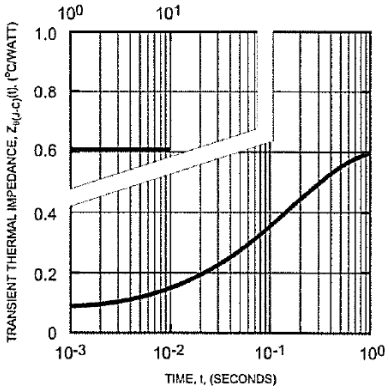
MAXIMUM ON-STATE POWER DISSIPATION



REVERSE RECOVERY CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION-TO-CASE)



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