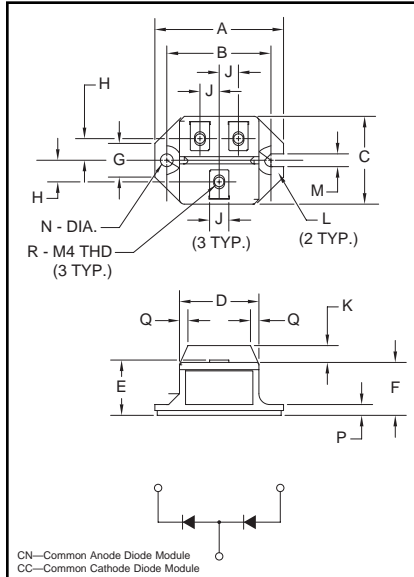


## Super Fast Recovery Dual Diode Modules 50 Amperes/300-600 Volts



CN24\_ \_500N, CC24\_ \_500N  
Super Fast Recovery  
Dual Diode Modules  
50 Amperes/300-600 Volts

### Description:

Powerex Super Fast Recovery Dual Diode Modules are designed for use in applications requiring high speed rectification or voltage clamping in isolated packaging. The modules are insulated for easy mounting onto a common heatsink with other components. They consist of two diodes connected in either a common cathode (CC) or a common anode (CN) configuration.

### Features:

- Isolated Mounting
- Metal Baseplate
- Low Thermal Impedance
- $t_{rr} = 200$  ns, Maximum

### Applications:

- Battery Supplies
- Freewheeling Diodes
- Motor Control Inverters
- UPS Inverters

### Ordering Information:

Select the complete ten digit module part number you desire from the table below. Example: CC2406500N is a 600 Volt, 50 Ampere,  $t_{rr} = 200$ ns Common Cathode Super Fast Recovery Diode Module.

Type	Voltage Volts (x100)	Current Rating Amperes (50)	Current Recovery Time (200ns)
CC24	03	50	ON
CN24	06		

### 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

**CC24\_500N, CN24\_500N**  
**Super Fast Recovery Dual Diode Modules**  
 50 Amperes/300-600 Volts

**Absolute Maximum Ratings**

Characteristics	Symbol	CC2403500N	CC2406500N	Units
		CN2403500N	CN2406500N	
Peak Reverse Blocking Voltage	$V_{RRM}$	300	600	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5ms$	$V_{RSM}$	360	720	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	240	480	Volts
DC Current, $T_C = 90^\circ C$	$I_{F(DC)}$	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	$I^2t$	4200	4200	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 M4 Mounting Screw	—	12	12	in.-lb.
Maximum Mounting Torque M5 Terminal Screw	—	17	17	in.-lb.
Module Weight (Typical)	—	90	90	Grams
V Isolation	$V_{RMS}$	2500	2500	Volts

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

Characteristics	Symbol	Test Conditions	CC24_500N/CN24_500N	Units
<b>Blocking State Maximums</b>				
Reverse Leakage Current, Peak	$I_{RRM}$	$T_j = 125^\circ C, V_{RRM} = \text{Rated}$	20	mA
<b>Conducting State Maximums</b>				
Peak On-State Voltage	$V_{FM}$	$I_{FM} = 50A$	2.5	Volts
<b>Switching Maximums</b>				
Reverse Recovery Time	$t_{rr}$	$I_{FM} = 50A$ $di/dt = -100 A/\mu s, V_R = 1/2 V_{RRM}$	200	ns
<b>Thermal Maximums</b>				
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	0.3	°C/Watt

