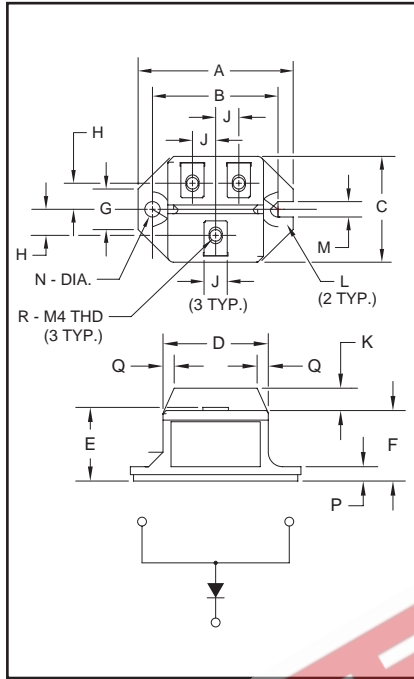


### Fast Recovery Single Diode Module 200 Amperes/1000 Volts



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



**CS241020**  
Fast Recovery  
Single Diode Module  
200 Amperes/1000 Volts

#### Description:

Powerex Fast Recovery Single 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: CS241020 is a 1000 Volt, 200 Ampere Fast Recovery Single Diode Module.

Type	Voltage Volts (x100)	Current Rating Amperes (x10)
CS64	10	20



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

**CS241020**  
**Fast Recovery Single Diode Module**  
 200 Amperes/1000 Volts

**Absolute Maximum Ratings**

Characteristics	Symbol	CS241020	Units
Peak Reverse Blocking Voltage	$V_{RRM}$	1000	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5ms$	$V_{RSM}$	1100	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	800	Volts
DC Current, $T_C = 75^\circ C$	$I_{FM}$	200	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	$I_{F(DC)}$	2000	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	$I_{FSM}$	1825	Amperes
$I^2t$ (for Fusing), 8.3 milliseconds	$I^2t$	16500	A <sup>2</sup> sec
Storage Temperature	$T_{STG}$	-40 to 125	$^\circ C$
Operating Temperature	$T_j$	-40 to 150	$^\circ C$
Maximum Mounting Torque M5 Mounting Screw	—	17	in.-lb.
Maximum Mounting Torque M4 Terminal Screw	—	12	in.-lb.
Module Weight (Typical)	—	90	Grams
V Isolation	$V_{RMS}$	2500	Volts

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

Characteristics	Symbol	Test Conditions	CS241020	Units
<b>Blocking State Maximums</b>				
Forward Leakage Current, Peak	$I_{RRM}$	$T_j = 150^\circ C, V_{DRM} = \text{Rated}$	40	mA
<b>Conducting State Maximums</b>				
Peak On-State Voltage	$V_{FM}$	$I_{FM} = 200A$	1.5	Volts
<b>Switching Maximums</b>				
Reverse Recovery Time	$t_{rr}$	$I_{FM} = 200A, T_j = 150^\circ C$ $di/dt = -400A/\mu s, V_R = 600V$	0.8	$\mu s$
Reverse Recovery Charge	$Q_{rr}$	$I_{FM} = 200A, T_j = 150^\circ C$ $di/dt = -400A/\mu s, V_R = 600V$	80	$\mu C$
<b>Thermal Maximums</b>				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.25	$^\circ C/Watt$
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.15	$^\circ C/Watt$

