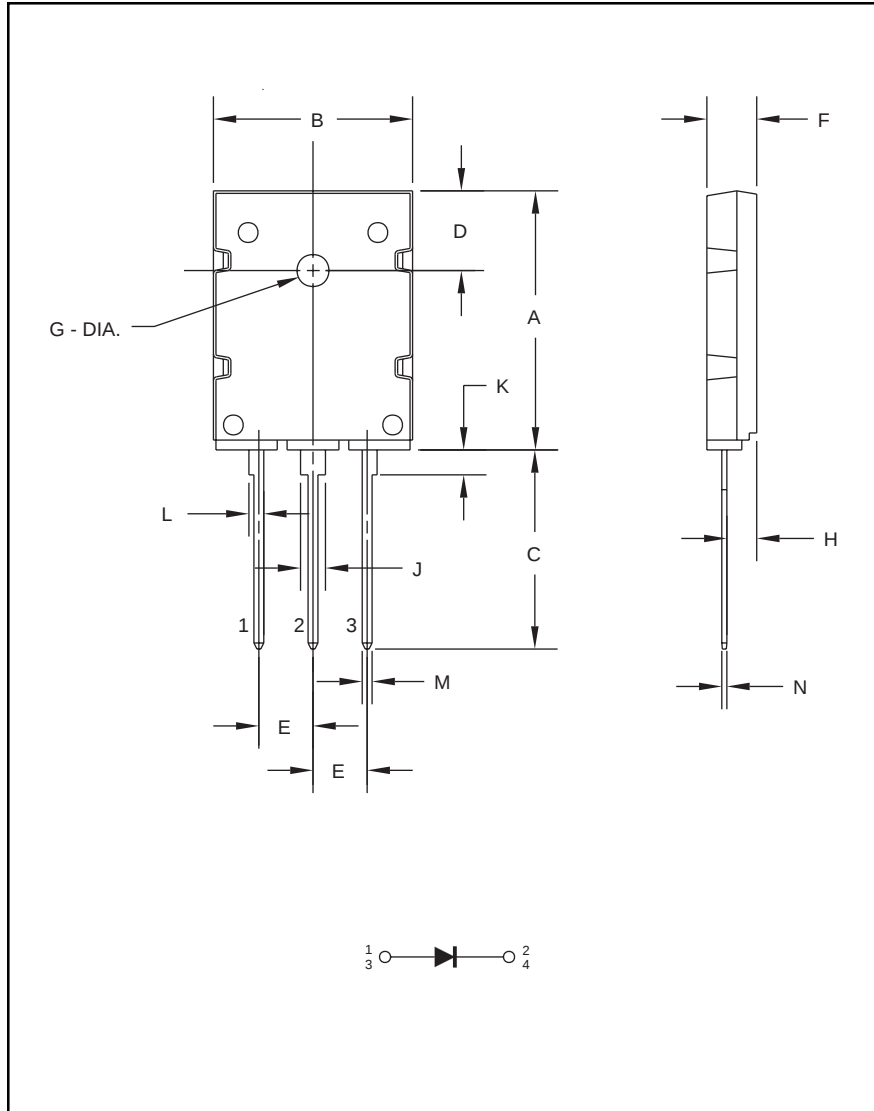


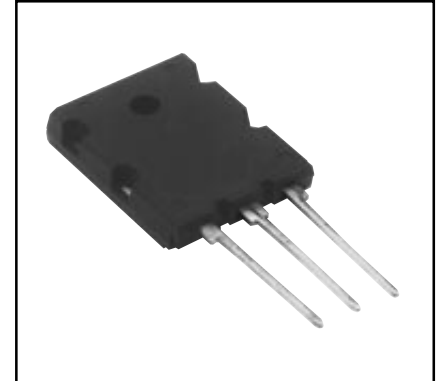
Super Fast Recovery Single Diode Module 50 Amperes/600 Volts



Outline Drawing and Circuit Diagram

Dimension	Inches	Millimeters
A	1.102±0.02	26.0±0.5
B	0.81 Max.	20.5 Max.
C	0.79 Min.	20.0 Min.
D	0.24±0.008	6.0±0.2
E	0.214±0.012	5.45±0.3
F	0.20±0.012	5.0±0.3
G	0.214±0.012 Dia.	Dia. 3.2±0.2

Dimension	Inches	Millimeters
H	0.12±0.012	3.0±0.3
J	0.10±0.012	2.5±0.3
K	0.10	2.5
L	0.08±0.012	2.0±0.3
M	0.04±0.008	1.0±0.2
N	0.02±0.008	0.6±0.2



Description:

Powerex Super Fast Recovery Diodes are designed for use in applications requiring fast switching.

Features:

- ☐ Non-Isolated Package
- ☐ Planar Chips
- ☐ $t_{rr} = 200\text{ns}$ Max.

Applications:

- ☐ Snubber Circuits
- ☐ Switching Power Supplies
- ☐ Free-Wheeling

Ordering Information:

Example: Select the complete part number from the table below -i.e. RM50HG-12S is a 600V, 50 Ampere Super Fast Recovery Single Diode Module.

Type	Current Rating Amperes	Voltage Volts (x 50)
RM	50	12

RM50HG-12S

Super Fast Recovery Single Diode Module

50 Amperes/600 Volts

Absolute Maximum Ratings, $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	RM50HG-12S	Units
Peak Reverse Blocking Voltage (Repetitive)	V_{RRM}	600	Volts
Peak Reverse Blocking Voltage (Non-Repetitive)	V_{RSM}	720	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	480	Volts
DC Current, $T_C = 80^\circ\text{C}$ (Resistive Load)	$I_{F(DC)}$	50	Amperes
Peak Half-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	1000	Amperes
I^2t for Fusing, (8.3 milliseconds)	I^2t	—	A^2sec
Storage Temperature	T_{stg}	-40 to +125	$^\circ\text{C}$
Operating Temperature	T_j	-40 to +150	$^\circ\text{C}$
Maximum Mounting Torque M3 Mounting Screw	—	8.85	in-lb
Module Weight (Typical)	—	10	Grams

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

Characteristics	Symbol	Test Conditions	Max.	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I _{RRM}	V _{RRM} applied, T _j = 25°C	0.1	mA
		V _{RRM} applied, T _j = 125°C	1.0	mA
Conducting State Maximums				
Forward Voltage Drop	V _{FM}	T _j = 25°C, I _{FM} = 200A	4.0	Volts
Switching Minimums				
Reverse Recovery Time	t _{rr}	I _{FM} = 200A, T _j = 150°C	0.2	μs
Reverse Recovery Charge	Q _{rr}	di/dt = -1000A/μs, V _R = 300V	—	μC
Lead Integrity				
	—	Tension Load: 2.5 kg	30.0	s
	—	Bending Load: 1 kg bent to 90°	2.0	times
Thermal Maximums				
Junction to Case Thermal Resistance	R _{th(j-c)}	Diode	0.5	°C/Watt
Contact Thermal Resistance	R _{th(c-f)}	Case to Fin, Thermal Grease Applied	0.5	°C/Watt

*Maximum ratings unless otherwise specified

