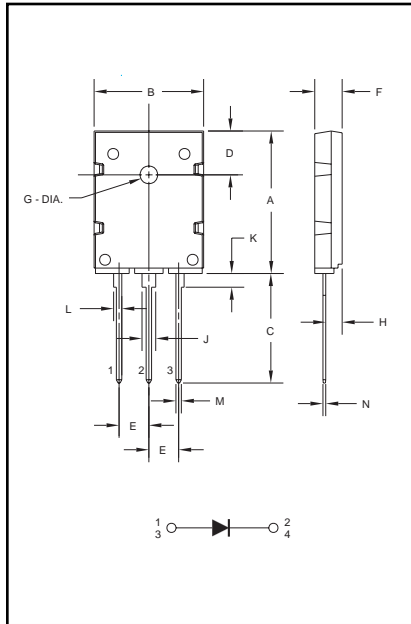
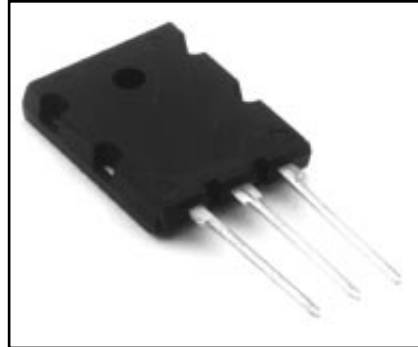


### Super Fast Recovery Single Diode 50 Amperes/600 Volts



#### Outline Drawing

Dimension	Inches	Millimeters
A	1.02±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.	3.2±0.2 Dia.
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



**RM50HG-12S**  
Super Fast Recovery  
Single Diode  
50 Amperes/600 Volts

#### Description:

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

#### Features:

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

#### Applications:

- Snubber Circuits
- Switching Power Supplies
- Free Wheeling

#### Ordering Information:

Select the complete eight digit part number you desire from the table below.

Example: RM50HG-12S is a 600 Volt, 50 Ampere Super Fast Recovery Single Diode.

Type	Current Rating Amperes	Voltage Volts (x50)
RM	50	12

**RM50HG-12S**  
**Super Fast Recovery**  
**Single Diode**  
 50 Amperes/600 Volts

### Absolute Maximum Ratings

Characteristics	Symbol	Conditions	RM50HG-12S	Units
Peak Forward Blocking Voltage	$V_{DRM}$	—	600	Volts
Peak Reverse Blocking Voltage (Non-Repetitive)	$V_{RRM}$	—	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)	$I^2t$	—	—	$\text{A}^2\text{sec}$
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	—	—	10	kg.-cm.
Weight (Typical)	—	—	10	Grams

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

Characteristics	Symbol	Test Conditions	RM50HG-12S	Units
<b>Blocking State Maximums</b>				
Reverse Leakage Current, Peak	$I_{RRM}$	$V_{RRM}$ applied, $T_j = 150^\circ\text{C}$	1.0	mA
		$V_{RRM}$ applied, $T_j = 25^\circ\text{C}$	0.1	mA
<b>Conducting State Maximums</b>				
Forward Voltage Drop	$V_{FM}$	$T_j = 25^\circ\text{C}$ , $I_{FM} = 200\text{A}$	4.0	Volts
<b>Switching Minimums</b>				
Reverse Recovery Time	$t_{rr}$	$T_j = 25^\circ\text{C}$ , $I_{FM} = 100\text{A}$	0.2	$\mu\text{s}$
Reverse Recovery Charge	$Q_{rr}$	$di/dt = -1000\text{A}/\mu\text{s}$ , $V_R = 300\text{V}$	—	$\mu\text{C}$
<b>Lead Integrity</b>				
	—	Tension Load: 25 kg	30.0	s
	—	Bending Load: 1 kg bent to $90^\circ$	2.0	times
<b>Thermal Maximums</b>				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Diode	0.5	$^\circ\text{C}/\text{Watt}$
Contact Thermal Resistance, Case-to-Fin	$R_{\theta(C-S)}$	Case to Fin, Thermal Grease Applied	0.5	$^\circ\text{C}/\text{Watt}$

\*Maximum ratings unless otherwise specified