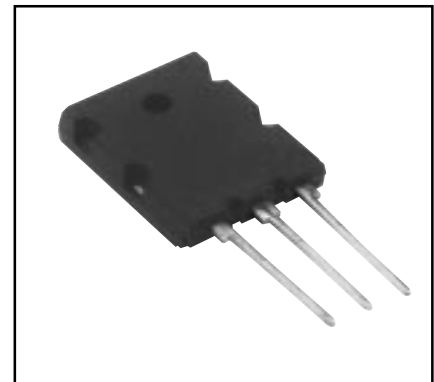
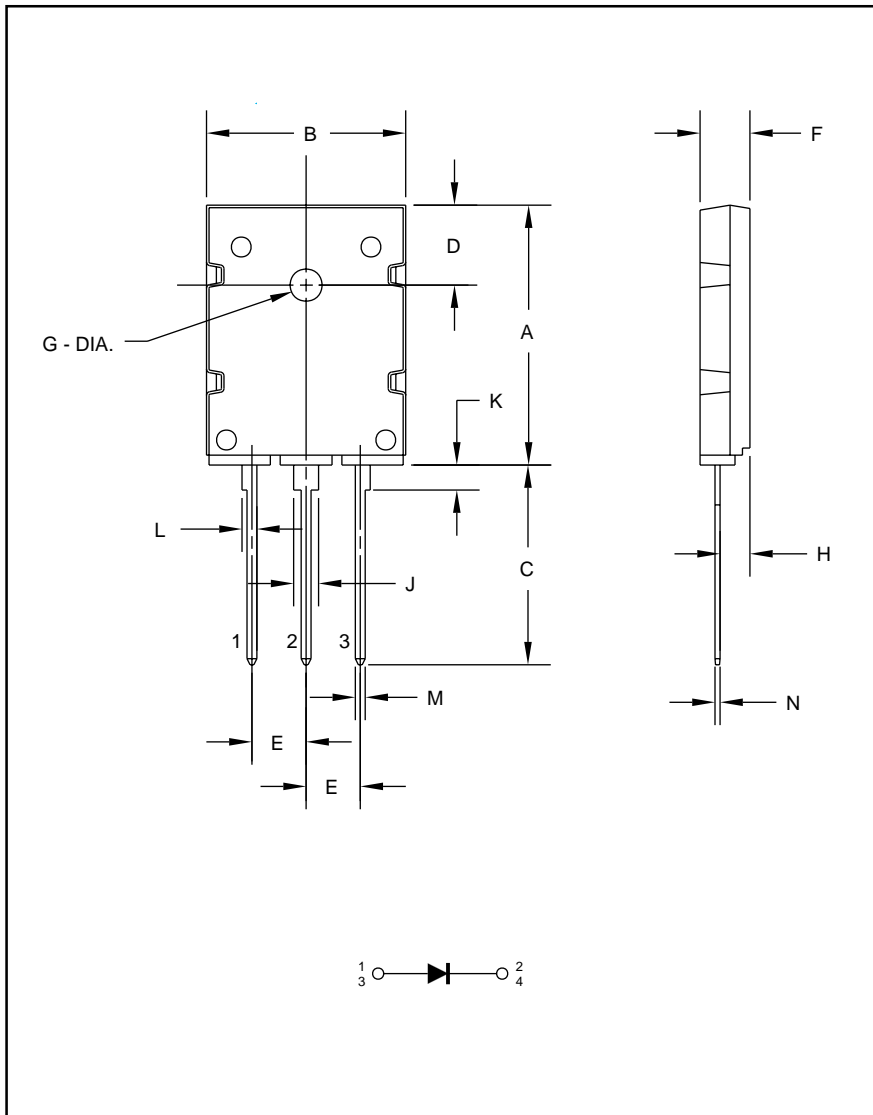


MITSUBISHI FAST RECOVERY DIODE MODULES

# RM50HG-12S

HIGH SPEED SWITCHING USE  
NON-INSULATED TYPE



**Description:**

Mitsubishi 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

**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.

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

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

# RM50HG-12S

HIGH SPEED SWITCHING USE  
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## Absolute Maximum Ratings, $T_j = 25^\circ\text{C}$ unless otherwise specified

Ratings	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
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	—	0.59 ~ 0.98	N · m
Module Weight (Typical)	—	10	Grams

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

Characteristics	Symbol	Test Conditions	Max.	Units
<b>Blocking State Maximums</b>				
Reverse Leakage Current, Peak	$I_{RRM}$	$V_{RRM}$ applied, $T_j = 25^\circ\text{C}$	0.1	mA
		$V_{RRM}$ applied, $T_j = 125^\circ\text{C}$	1.0	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	$t_{rr}$	$I_{FM} = 200\text{A}$ , $T_j = 150^\circ\text{C}$ $di/dt = -1000\text{A}/\mu\text{s}$ , $V_R = 300\text{V}$	0.2	$\mu\text{s}$
<b>Lead Integrity</b>				
	—	Tension Load: 2.5 kg	30.0	s
	—	Bending Load: 1 kg bent to $90^\circ$	2.0	times
<b>Thermal Maximums</b>				
Junction to Case Thermal Resistance	$R_{th(j-c)}$	Junction to case	0.5	$^\circ\text{C}/\text{Watt}$
Contact Thermal Resistance	$R_{th(c-f)}$	Case to Fin, Thermal Grease Applied	0.5	$^\circ\text{C}/\text{Watt}$

\*Maximum ratings unless otherwise specified

