

# RM50HG-12S

HIGH SPEED SWITCHING USE  
NON-INSULATED TYPE

## RM50HG-12S



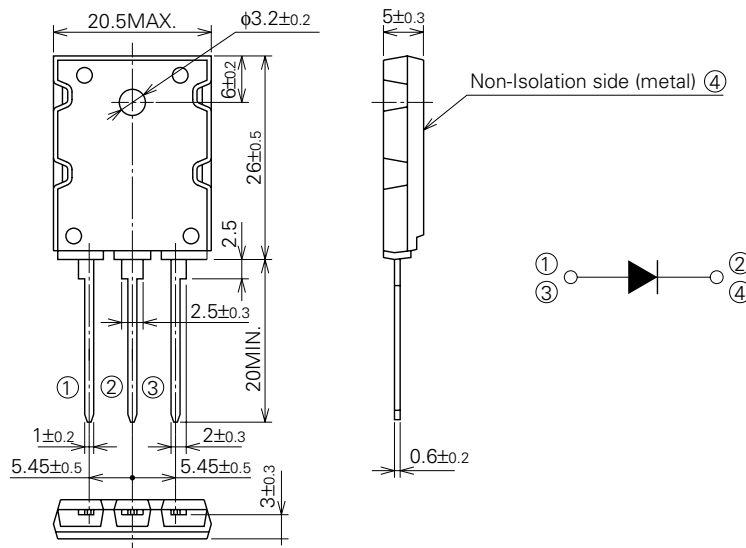
- **Idc** DC current ..... **50A**
- **VRRM** Repetitive peak reverse voltage ..... **600V**
- **trr** Reverse recovery time ..... **0.2μs**
- **ONE ARM**
- **Non-Insulated Type**

## APPLICATION

For snubber circuit (IPM or IGBT module)

## OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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## ABSOLUTE MAXIMUM RATINGS (T<sub>j</sub>=25°C)

Symbol	Parameter	Voltage class		Unit
		12		
VRRM	Repetitive peak reverse voltage	600		V
VR (DC)	Reverse DC voltage	480		V

Symbol	Parameter	Conditions	Ratings	Unit
I <sub>DC</sub>	DC current	Resistive load, T <sub>c</sub> =80°C ①, ③ Collective of terminal	50	A
I <sub>FSM</sub>	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value ①, ③ Collective of terminal	1000	A
I <sup>2</sup> <sub>t</sub>	I <sup>2</sup> <sub>t</sub> for fusing	Value for one cycle surge current	—	A <sup>2</sup> s
T <sub>j</sub>	Junction temperature		-40~+150	°C
T <sub>stg</sub>	Storage temperature		-40~+125	°C
V <sub>iso</sub>	Isolation voltage	Charged part to case	—	V
—	Mounting torque	Mounting screw M3	0.59-0.98	N·m
			6~10	kg·cm
—	Weight	Typical value	5	g

## ELECTRICAL CHARACTERISTICS

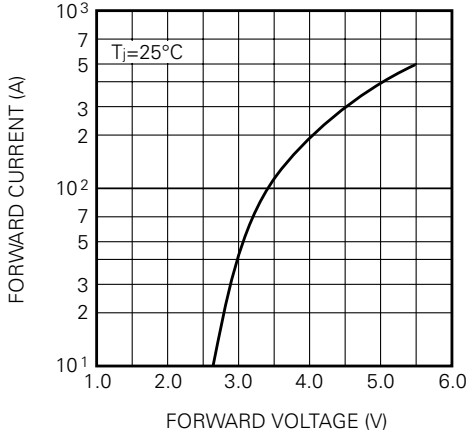
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I <sub>RRM</sub>	Repetitive reverse current	T <sub>j</sub> =25/125°C, V <sub>RRM</sub> applied	—	—	0.1/1.0	mA
V <sub>FM</sub>	Forward voltage	T <sub>j</sub> =25°C, I <sub>FM</sub> =200A, Instantaneous meas.	—	—	4.0	V
t <sub>rr</sub>	Reverse recovery time	I <sub>FM</sub> =200A, T <sub>j</sub> =25°C, di/dt=-1000A/μs, V <sub>R</sub> =300V	—	—	0.2	μs
Q <sub>rr</sub>	Reverse recovery charge		—	—	—	μC
R <sub>th (j-c)</sub>	Thermal resistance	Junction to case	—	—	0.5	°C/W
R <sub>th (c-f)</sub>	Contact thermal resistance	Case to fin, conductive grease applied	—	—	0.5	°C/W

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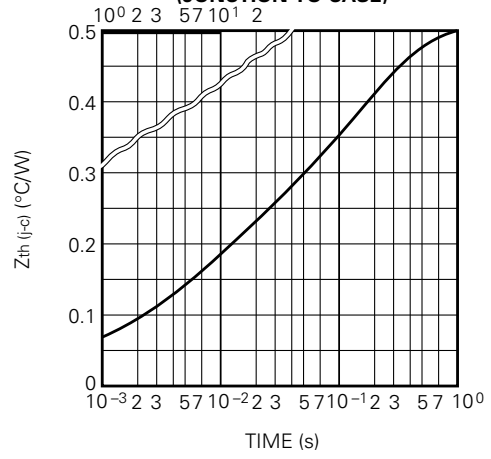
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## PERFORMANCE CURVES

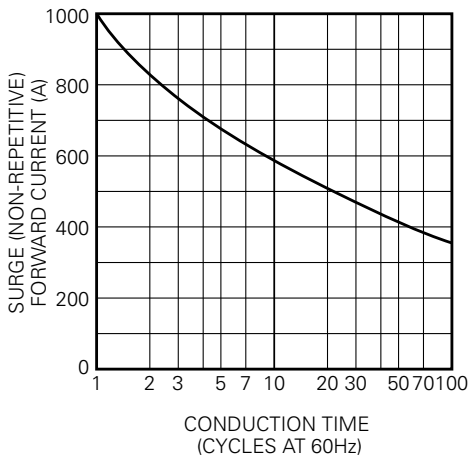
MAXIMUM FORWARD CHARACTERISTIC



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



RATED SURGE (NON-REPETITIVE) FORWARD CURRENT



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Datasheets for electronics components.