

RM50HA-XXF

**HIGH SPEED SWITCHING USE
INSULATED TYPE**

RM50HA-XXF



- **IdC** DC current **50A**
- **VRRM** Repetitive peak reverse voltage
..... **600/1000/1200V**
- **trr** Reverse recovery time **0.8μs**
- **Insulated Type**
- **UL Recognized**

Yellow Card No. E80276 (N)

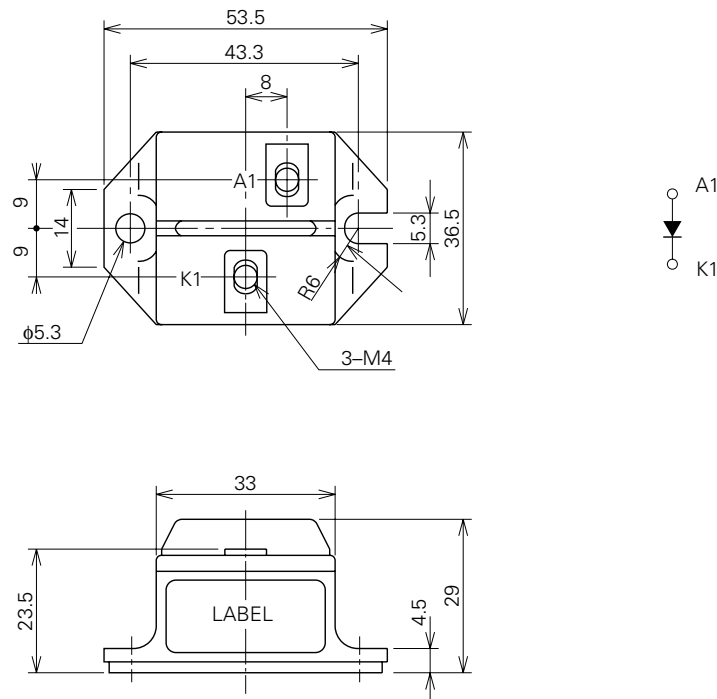
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APPLICATION

Free wheel use, Welders

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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ABSOLUTE MAXIMUM RATINGS (Tj=25°C)

Symbol	Parameter	Voltage class			Unit
		12	20	24	
VRRM	Repetitive peak reverse voltage	600	1000	1200	V
VDRM	Non-repetitive peak reverse voltage	720	1100	1350	V
VR (DC)	Reverse DC voltage	480	800	960	V

Symbol	Parameter	Conditions	Ratings	Unit
Idc	DC output current	Resistive load, Tc=105°C	50	A
IFSM	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	1000	A
I ² t	I ² t for fusing	Value for one cycle of surge current	4.2x10 ³	A ² s
Tj	Junction temperature		-40~150	°C
Tstg	Storage temperature		-40~125	°C
Viso	Isolation voltage	Charged part to case	2500	V
—	Mounting torque	Main terminal screw M4	0.98~1.47	N·m
			10~15	kg·cm
		Mounting screw M5	1.47~1.96	N·m
			15~20	kg·cm
—	Weight	Typical value	90	g

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
IRRM	Repetitive reverse current	Tj=150°C, VRRM applied	—	—	10	mA
VFM	Forward voltage	Tj=25°C, IFM=50A, instantaneous meas.	—	—	1.5	V
trr	Reverse recovery time	IFM=50A, di/dt=-100A/μs, VR=300/600V*1, Tj=150°C	—	—	0.8	μs
Qrr	Reverse recovery charge		—	—	30	μC
Rth (j-c)	Thermal resistance	Junction to case	—	—	0.6	°C/W
Rth (c-f)	Contact thermal resistance	Case to fin, conductive grease applied	—	—	0.15	°C/W

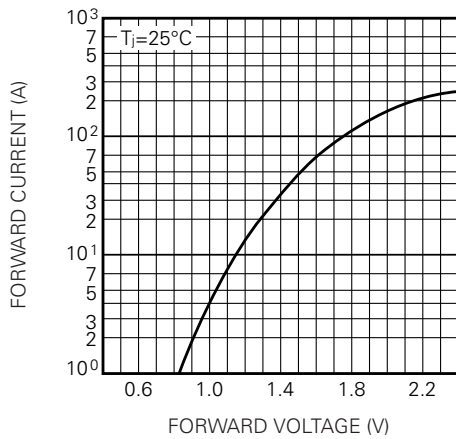
*1 12 class: VR=300V 20, 24 class: VR=600V

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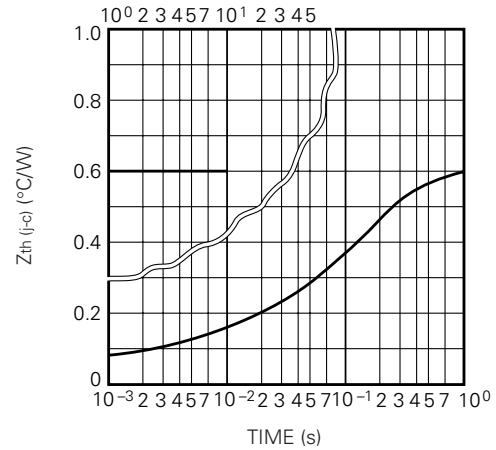
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PERFORMANCE CURVE

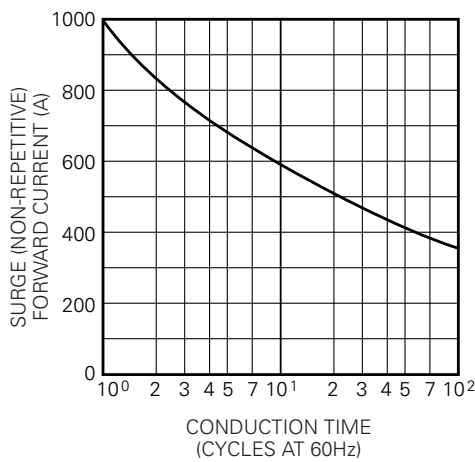
MAXIMUM FORWARD CHARACTERISTICS



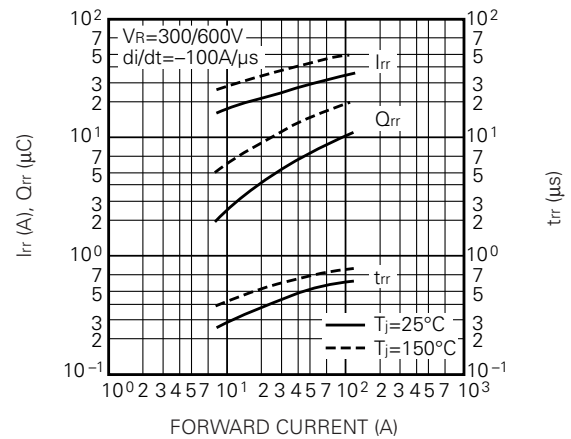
MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



RATED SURGE (NON-REPETITIVE) FORWARD CURRENT



REVERSE RECOVERY CHARACTERISTICS VS. FORWARD CURRENT (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. $-di/dt$ (TYPICAL)

