

MITSUBISHI FAST RECOVERY DIODE MODULES

RM20HA-XXF

HIGH SPEED SWITCHING USE
INSULATED TYPE

RM20HA-XXF



- **IDC** DC current **20A**
- **VRRM** Repetitive peak reverse voltage
..... **600/1000/1200V**
- **trr** Reverse recovery time **0.8μs**
- **Insulated Type**
- **UL Recognized**

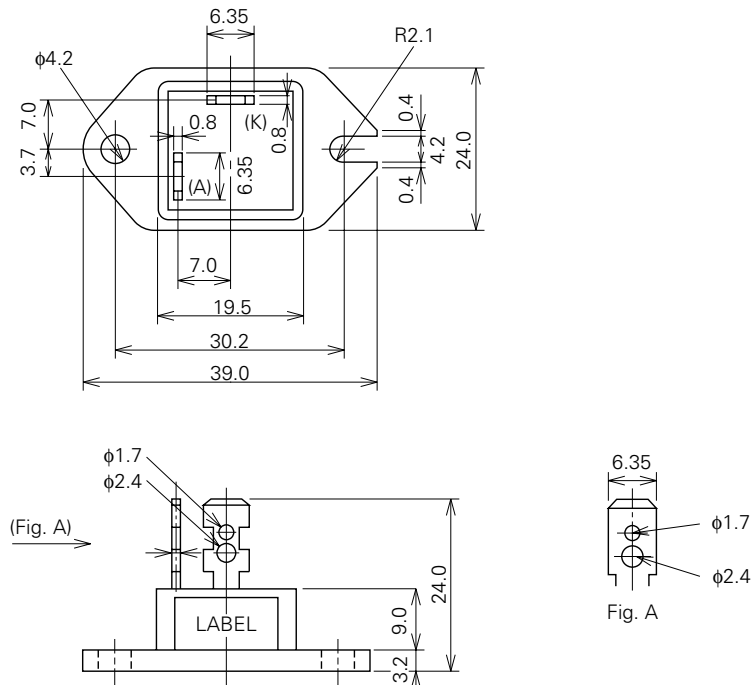
Yellow Card No. E80276 (N)
File No. E80271

APPLICATION

Free wheel use, Welders

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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ABSOLUTE MAXIMUM RATINGS (T_j=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
I _{DC}	DC current	Resistive load, T _C =114°C	20	A
I _{FSM}	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	400	A
I ² _t	I ² _t for fusing	Value for one cycle of surge current	6.7×10 ²	A ² s
T _j	Junction temperature		-40~+150	°C
T _{stg}	Storage temperature		-40~+125	°C
V _{iso}	Isolation voltage	Charged part to case	2500	V
—	Mounting torque	Mounting screw M4	0.98~1.47	N·m
—	Weight	Typical value	10~15	kg·cm
—	Weight	Typical value	25	g

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I _{RRM}	Repetitive reverse current	T _j =150°C, VRRM applied	—	—	5.0	mA
V _{FM}	Forward voltage	T _j =25°C, I _{FM} =20A, instantaneous meas.	—	—	1.5	V
t _{rr}	Reverse recovery time	I _{FM} =20A, di/dt=-50A/μs, V _R =300/600V*1, T _j =150°C	—	—	0.8	μs
Q _{rr}	Reverse recovery charge		—	—	15	μC
R _{th (j-c)}	Thermal resistance	Junction to case	—	—	1.2	°C/W
R _{th (c-f)}	Contact thermal resistance	Case to fin, conductive grease applied	—	—	0.8	°C/W

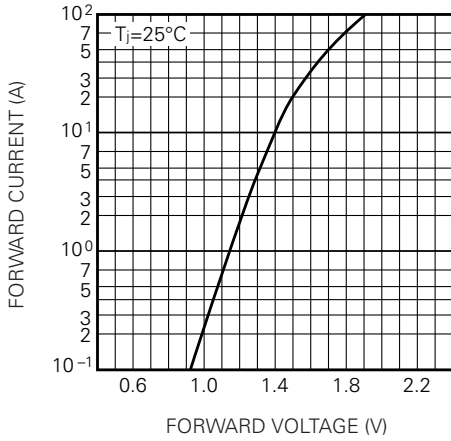
*1 12 class: V_R=300V 20, 24 class: V_R=600V

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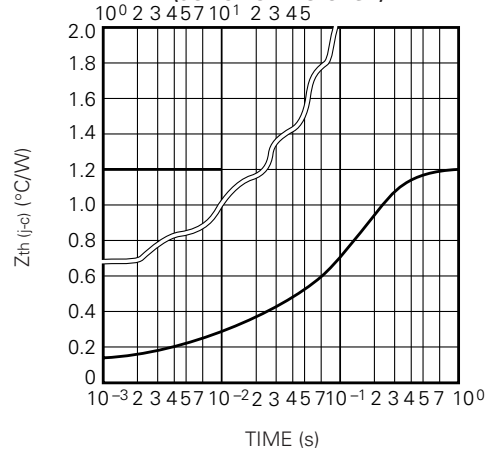
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PERFORMANCE CURVES

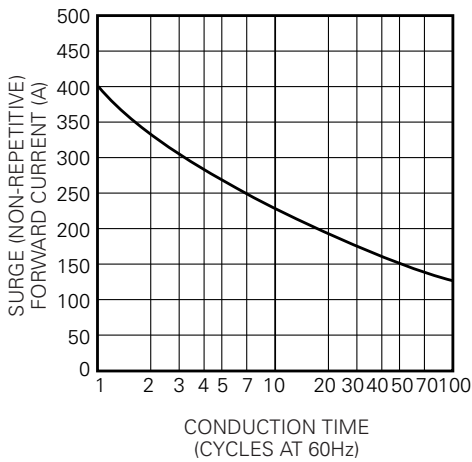
MAXIMUM FORWARD CHARACTERISTIC



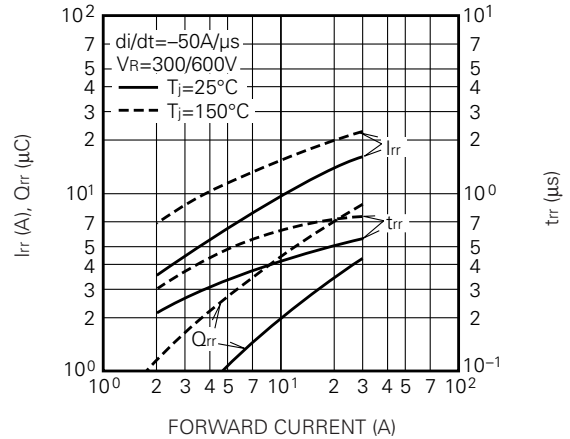
MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



RATED SURGE (NON-REPETITIVE) FORWARD CURRENT



REVERSE RECOVERY CHARACTERISTICS VS. FORWARD CURRENT (TYPICAL)



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

