

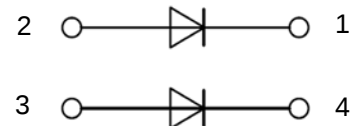
PRODUCT FEATURES

- ☐ Ultrafast Reverse Recovery Time
- ☐ Soft Reverse Recovery Characteristics
- ☐ Low Reverse Recovery Loss
- ☐ High System Power Density
- ☐ Popular SOT-227 Package



APPLICATIONS

- ☐ Inversion Welder
- ☐ Uninterruptible Power Supply
- ☐ Plating Power Supply
- ☐ Ultrasonic Cleaner and Welder
- ☐ Converter & Chopper
- ☐ PFC



ABSOLUTE MAXIMUM RATINGS($T_C=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter/Test Conditions		Values	Unit
V _R	Maximum D.C. Reverse Voltage		1200	V
V _{RRM}	Maximum Repetitive Reverse Voltage			
I _{F(AV)}	Average Forward Current	T _C =70℃, Per Diode	100	A
		T _C =70℃, Per Moudle	200	
I _{F(RMS)}	RMS Forward Current	T _C =70℃, Per Diode	141	
I _{FSM}	Non Repetitive Surge Forward Current	T _J =45℃,t=10ms,Sine,peak value	1400	
		T _J =45℃,t=8.3ms,Sine,peak value	1540	
I ² t	For Fusing	T _J =45℃,t=10ms,Sine,peak value	9800	A ² S
		T _J =45℃,t=8.3ms,Sine,peak value	9840	
P _D	Power Dissipation		312	W
T _J	Junction Temperature		-40 to +150	℃
T _{STG}	Storage Temperature Range		-40 to +125	℃
V _{isol}	Isolation Breakdown Voltage	AC, 50Hz(R.M.S), t=1minute	3000	V
Torque	Module to Sink	Recommended (M4)	0.7~1.1	Nm
Torque	Module Electrodes	Recommended (M4)	0.7~1.1	Nm
R _{thJC}	Junction to Case Thermal Resistance(Per Diode)		0.4	℃ /W
Weight			26.5	g

MacMic Science & Technology Co., Ltd.

Add: #18, Hua Shan Zhong Lu, New District, Changzhou City, Jiangsu Province, P. R .of China

MMF2X100J120D

ELECTRICAL CHARACTERISTICS ($T_c=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter/Test Conditions		Min.	Typ.	Max.	Unit
I_{RM}	Maximum Reverse Leakage Current	$V_R = 1200\text{V}$			0.5	mA
		$V_R = 1200\text{V}, T_J = 125^{\circ}\text{C}$			10	
V_F	Forward Voltage	$I_F=100\text{A}$		2.15	2.6	V
		$I_F=100\text{A}, T_J=125^{\circ}\text{C}$		1.7		
t_{rr}	Reverse Recovery Time ($I_F = 1\text{A}, di_F/dt = -200\text{A}/\mu\text{s}, V_R = 30\text{V}$)			50		ns
t_{rr}	Reverse Recovery Time	$I_F=100\text{A}, V_R=600\text{V}, di_F/dt = -200\text{A}/\mu\text{s}$		125		ns
I_{RRM}	Maximum Reverse Recovery Current			9		A
t_{rr}	Reverse Recovery Time	$I_F=100\text{A}, V_R=600\text{V}, di_F/dt = -200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$		275		ns
I_{RRM}	Maximum Reverse Recovery Current			19		A
t_{rr}	Reverse Recovery Time	$I_F=100\text{A}, V_R=600\text{V}, di_F/dt = -1000\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$		215		ns
I_{RRM}	Maximum Reverse Recovery Current			76		A

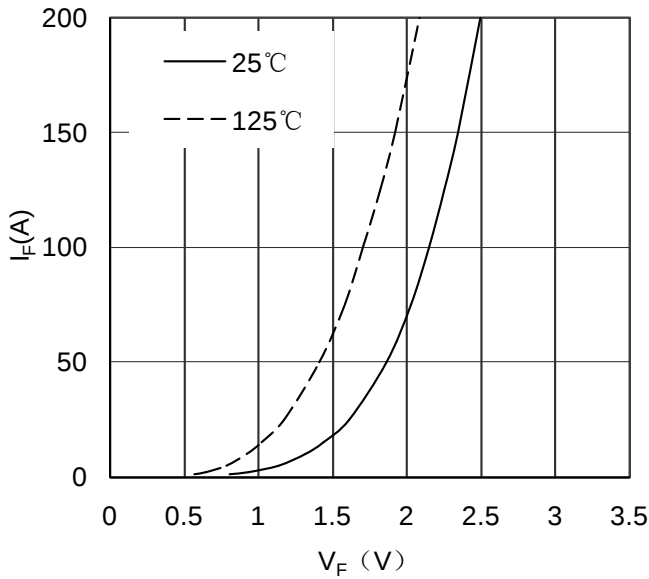


Figure 1. Forward Voltage Drop vs Forward Current

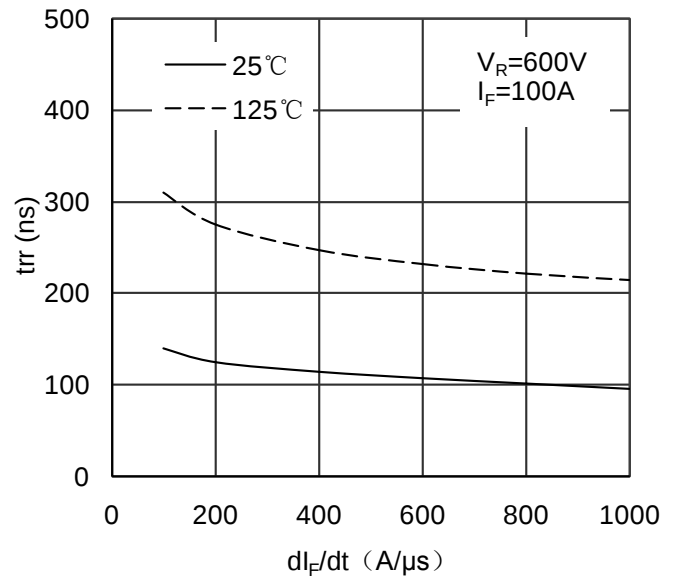


Figure 2. Reverse Recovery Time vs di_F/dt

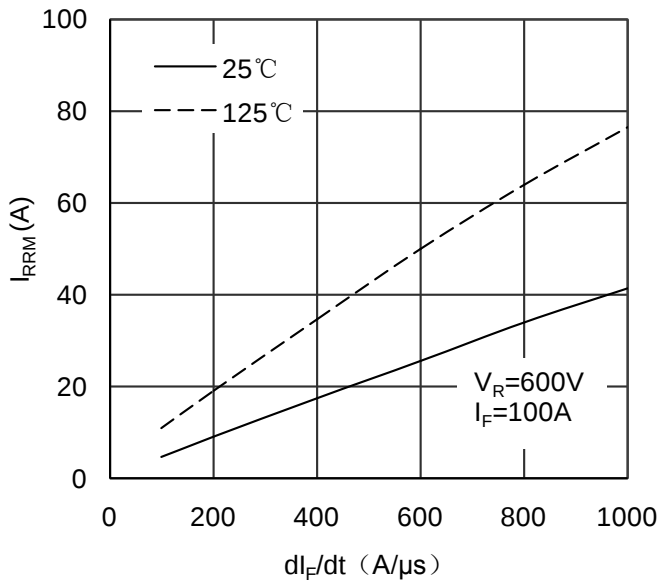


Figure 3. Reverse Recovery Current vs di_F/dt

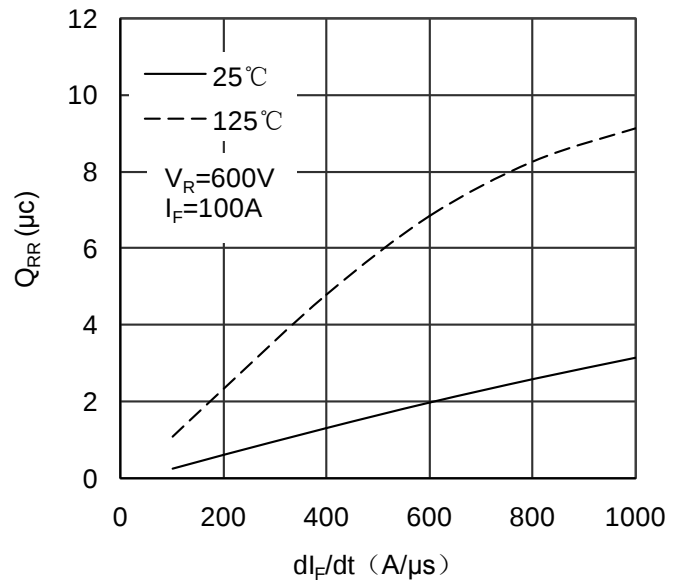


Figure 4. Reverse Recovery Charge vs di_F/dt

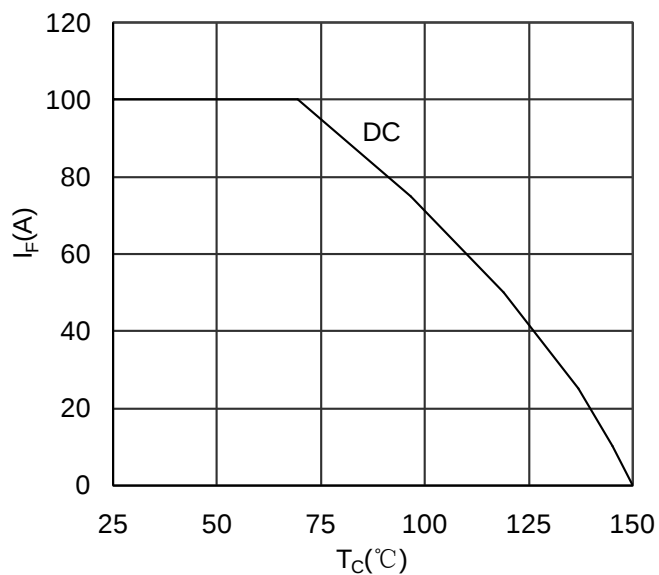


Figure 5. Forward current vs Case temperature

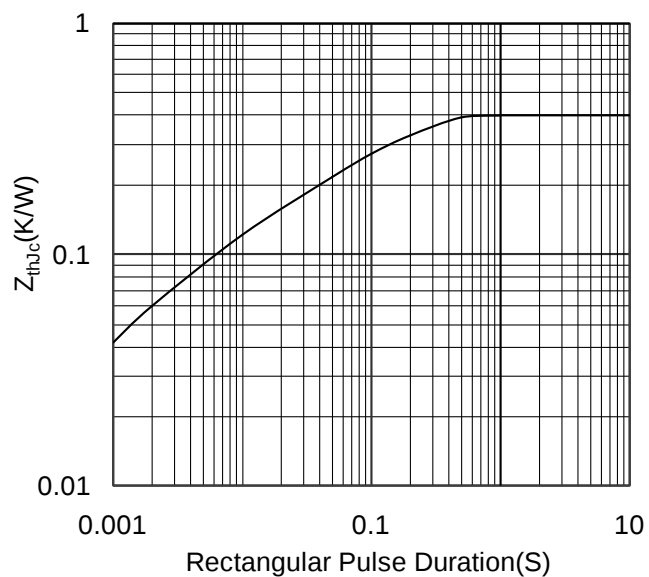
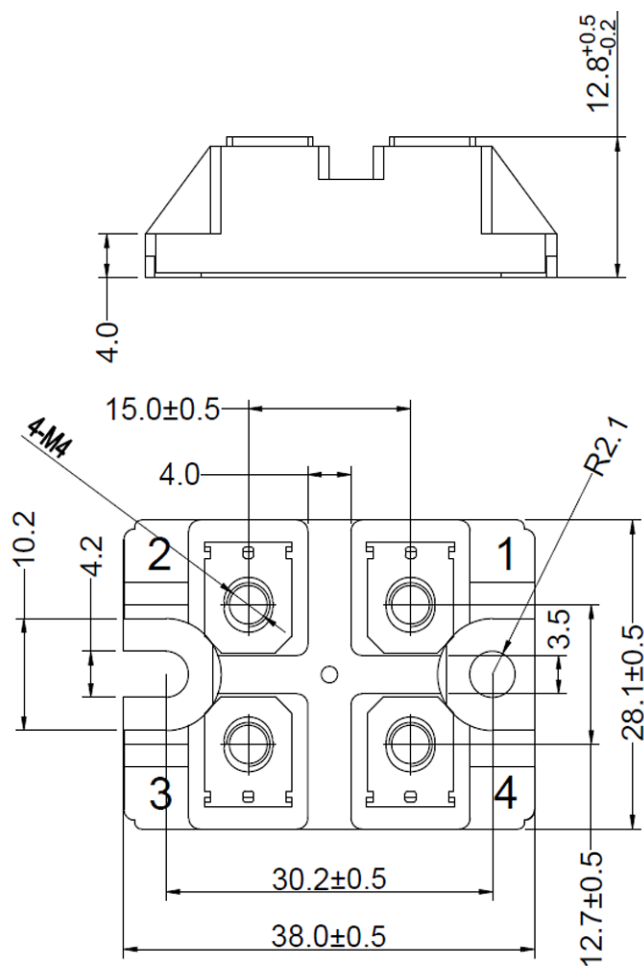


Figure 6. Transient Thermal Impedance



Dimensions in (mm)

Figure 7. Package Outline