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

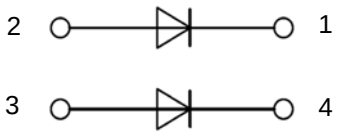
☐ Uninterruptible Power Supply

☐ Plating Power Supply

☐ Ultrasonic Cleaner and Welder

☐ Converter & Chopper

☐ PFC



ABSOLUTE MAXIMUM RATINGS(T_C *=25°C unless otherwise specified)*

Symbol	Parameter/Test Conditions		Values	Unit
V_R	Maximum D.C. Reverse Voltage		600	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	T_C=90℃, Per Diode	100	A
		T_C=90℃, Per Moudle	200	
$I_{F(RMS)}$	RMS Forward Current	T_C=90°C, Per Diode	150	
I_{FSM}	Non Repetitive Surge Forward Current	T_J=45℃,t=10ms,Sine,peak value	1500	
		T_J=45℃,t=8.3ms,Sine,peak value	1800	
I^2t	For Fusing	T_J=45℃,t=10ms,Sine,peak value	11250	A^2S
		T_J=45℃,t=8.3ms,Sine,peak value	16200	
P_D	Power Dissipation		417	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)		0.3	℃ /W
Weight			26.5	g

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ELECTRICAL CHARACTERISTICS *(T_C=25°C unless otherwise specified)*

Symbol	Parameter/Test Conditions		Min.	Typ.	Max.	Unit
I_{RM}	Maximum Reverse Leakage Current	V_R = 600V			1	mA
		V_R = 600V, T_J = 125℃			5	
V_F	Forward Voltage	I_F=100A		1.35	1.8	V
		I_F=100A,T_J=125℃		1.15		
trr	Reverse Recovery Time (I_F = 1A, dI_F/dt = -200A/μs, V_R = 30V)			50		ns
trr	Reverse Recovery Time	I_F=100A,V_R =300V,		95		ns
I_{RRM}	Maximum Reverse Recovery Current	dI_F/dt =-200A/μs		8.5		A
trr	Reverse Recovery Time	I_F=100A,V_R =300V,		190		ns
I_{RRM}	Maximum Reverse Recovery Current	dI_F/dt =-200A/μs ,T_J=125℃		19		A

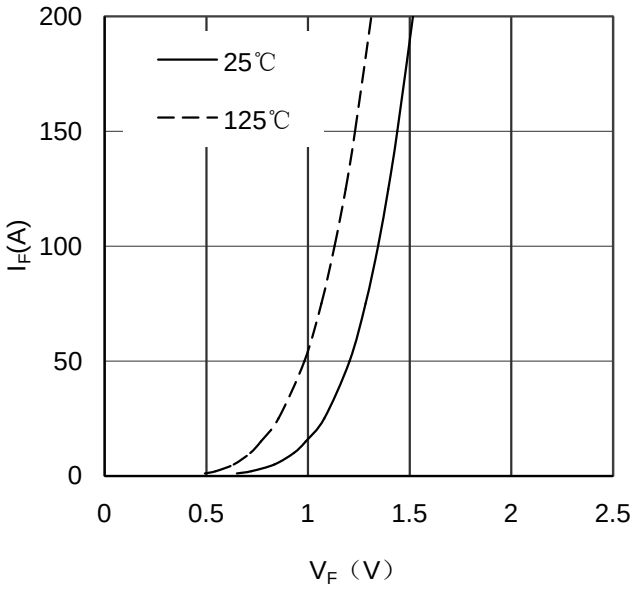


Figure 1. Forward Voltage Drop vs Forward Current

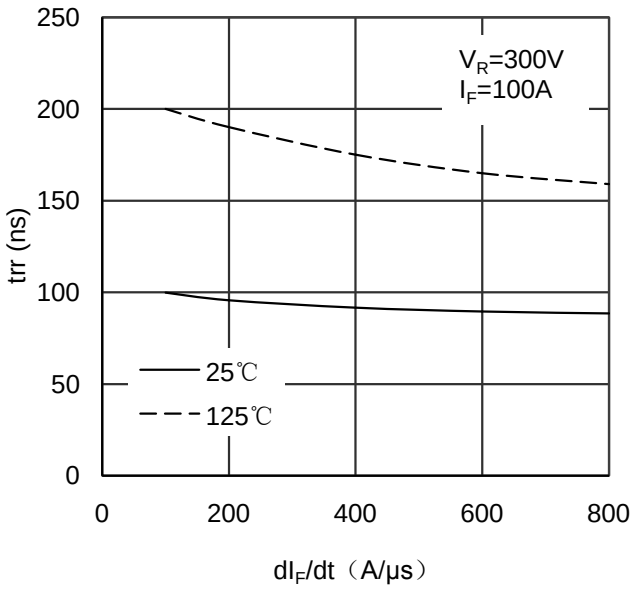


Figure 2. Reverse Recovery Time vs dI_F/dt

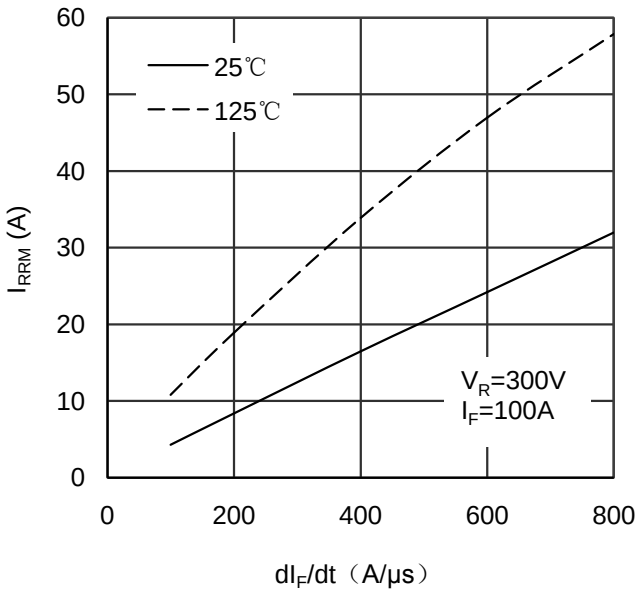


Figure 3. Reverse Recovery Current vs dI_F/dt

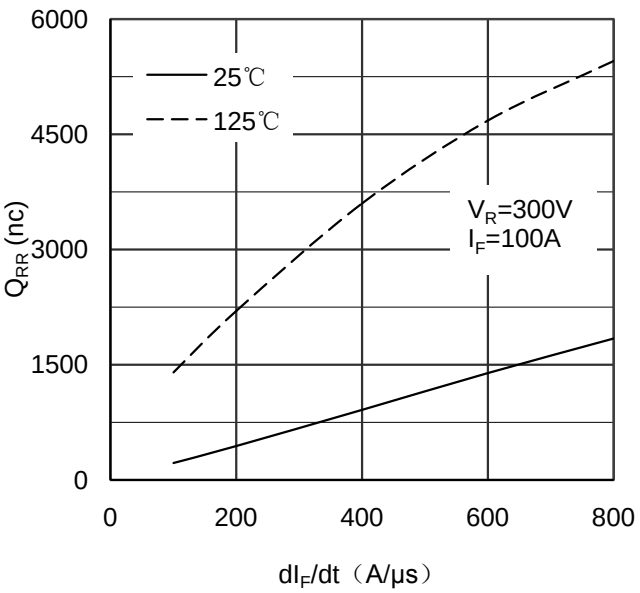


Figure 4. Reverse Recovery Charge vs dI_F/dt

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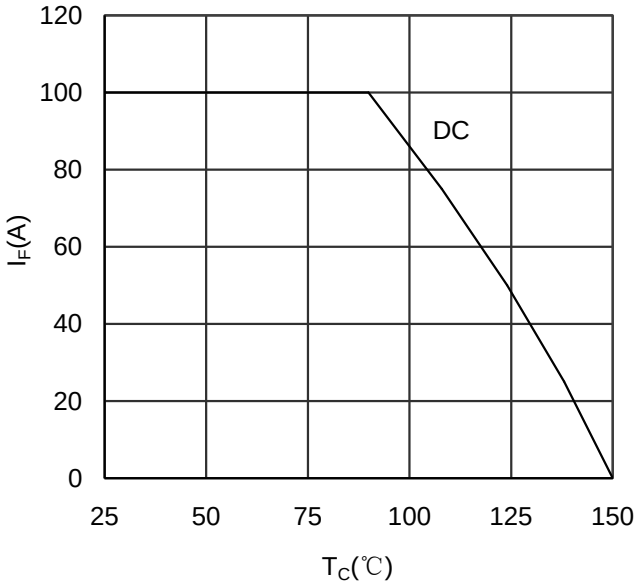


Figure 5. Forward current vs Case temperature

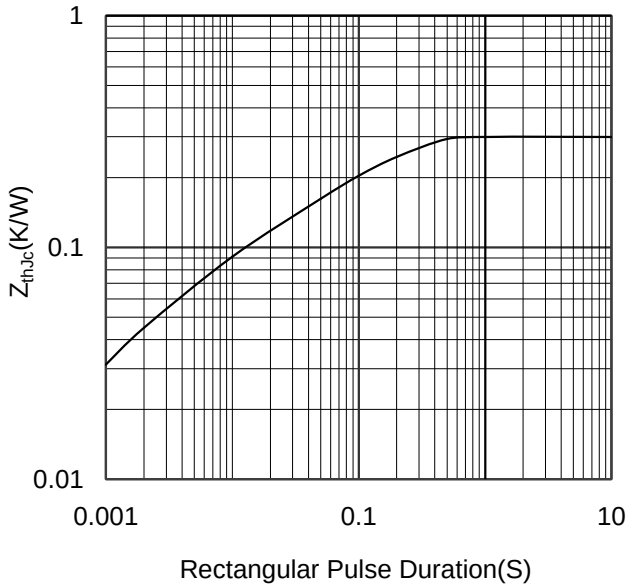
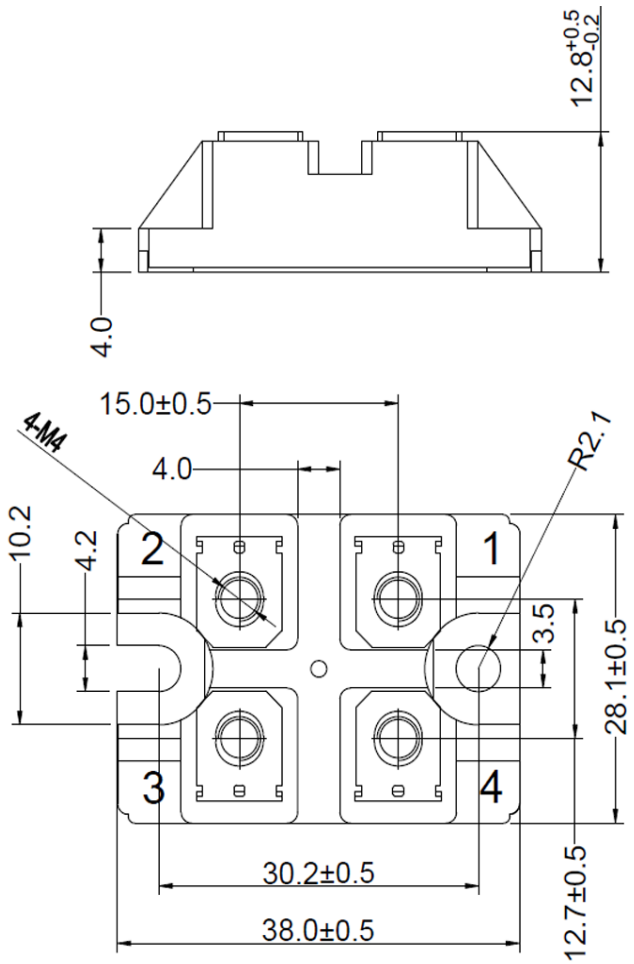


Figure 6. Transient Thermal Impedance



Dimensions in (mm)

Figure 7. Package Outline

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