PRODUCT FEATURES

☐ Low V_F Trench FRED Technology

☐ Ultrafast Reverse Recovery Time

☐ Low Reverse Recovery Loss

☐ High Surge Current Capability

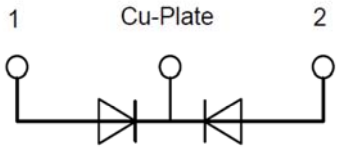
APPLICATIONS

☐ 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		100	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	T_C=100℃, Per Diode	500	A
		T_C=100℃, Per Moudle	1000	
$I_{F(RMS)}$	RMS Forward Current	T_C=100℃, Per Diode	700	
I_{FSM}	Non Repetitive Surge Forward Current	T_J=45℃,t=10ms,Sine,peak value	3800	
		T_J=45℃,t=8.3ms,Sine,peak value	4180	
I^2t	For Fusing	T_J=45℃,t=10ms,Sine,peak value	72.2	KA^2S
		T_J=45℃,t=8.3ms,Sine,peak value	72.5	
P_D	Power Dissipation		1041	W
T_J	Junction Temperature		-40 to +150	℃
T_{STG}	Storage Temperature Range		-40 to +125	℃
Torque	Module to Sink	Recommended（M6）	3～4.7	Nm
Torque	Module Electrodes	Recommended（M6）	3～4.7	Nm
R_{thJC}	Junction to Case Thermal Resistance(Per Diode)		0.12	℃ /W
Weight			92	g

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 =100V			1	mA
		V_R =100V, T_J = 125℃			100	
V_F	Forward Voltage (chip)	I_F=500A		0.84	0.93	V
		I_F=500A,T_J=125℃		0.74		
	Forward Voltage (terminal)	I_F=500A		1.05	1.15	
		I_F=500A,T_J=125℃		0.93		
trr	Reverse Recovery Time (I_F = 1A, dI_F/dt = -200A/μs, V_R = 30V)			100		ns
trr	Reverse Recovery Time	I_F=250A,V_R =50V,		105		ns
I_{RRM}	Maximum Reverse Recovery Current	dI_F/dt =-200A/μs		9.5		A

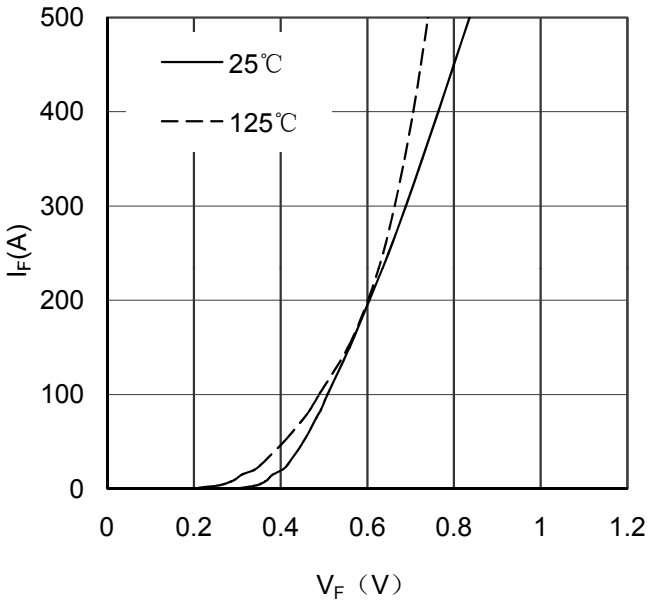


Figure 1. Forward Voltage Drop vs Forward Current .Chip

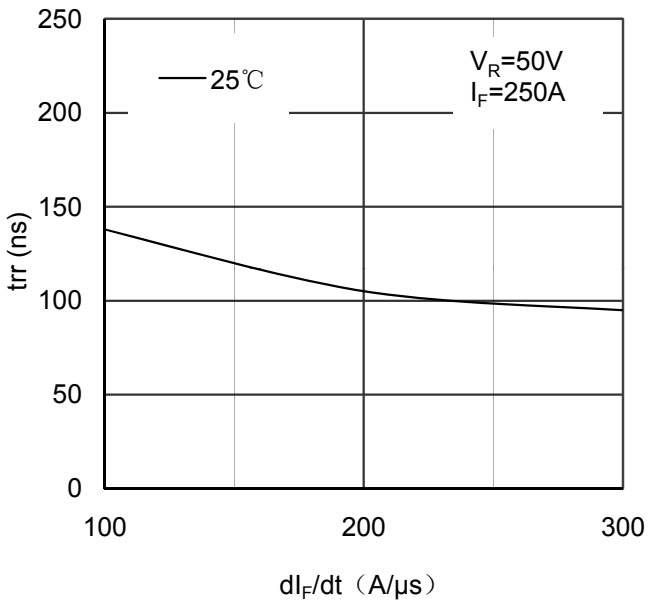


Figure 2. Reverse Recovery Time vs dI_F/dt

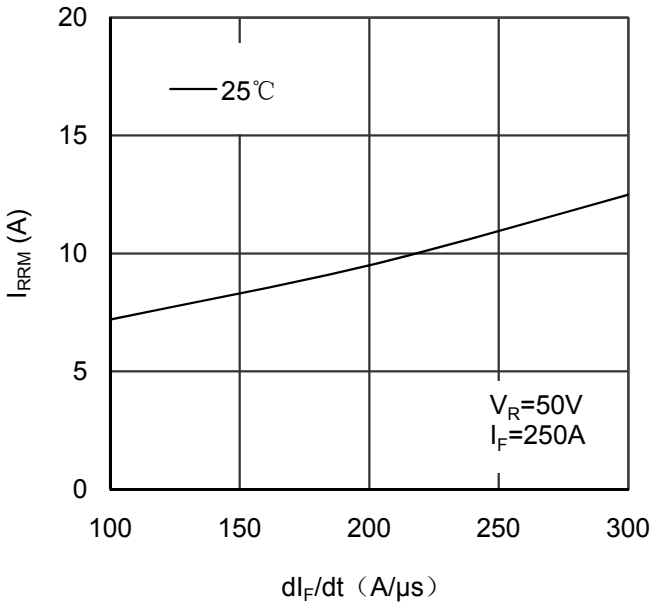


Figure 3. Reverse Recovery Current vs dI_F/dt

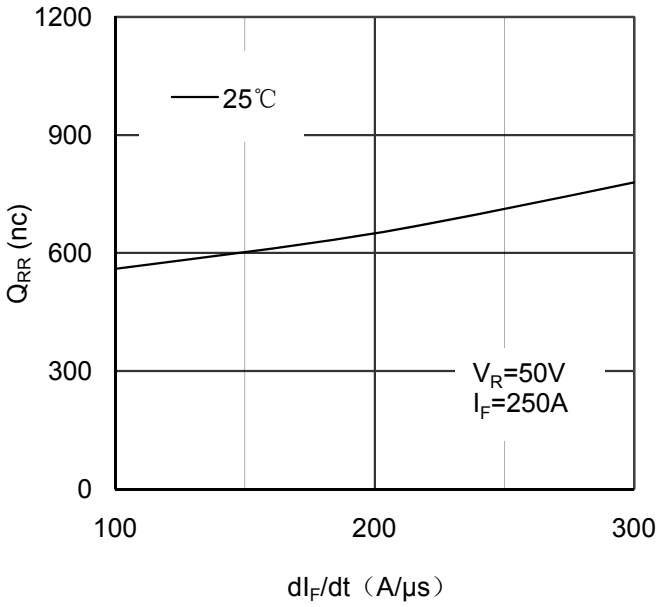


Figure 4. Reverse Recovery Charge vs dI_F/dt

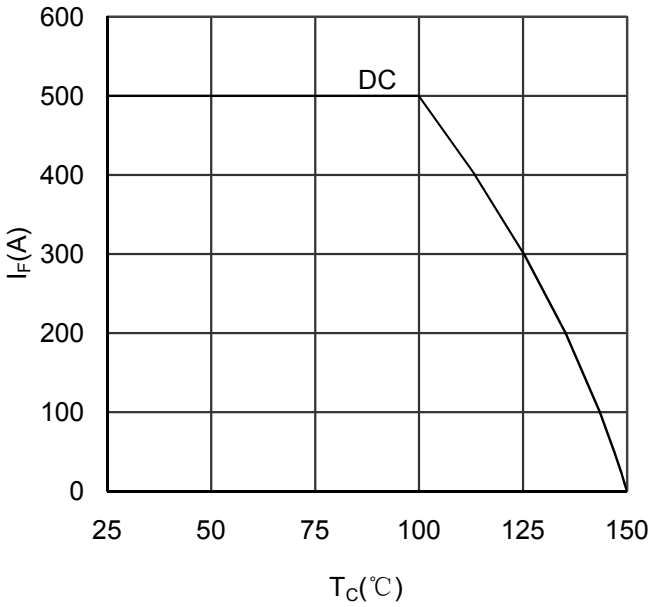


Figure 5. Forward current vs Case temperature

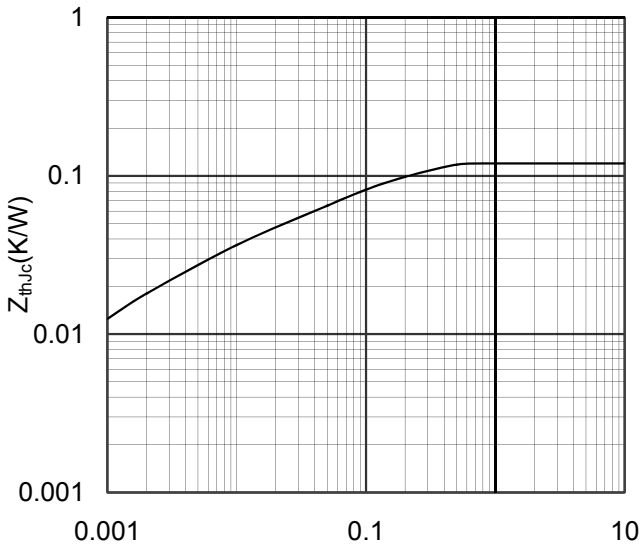
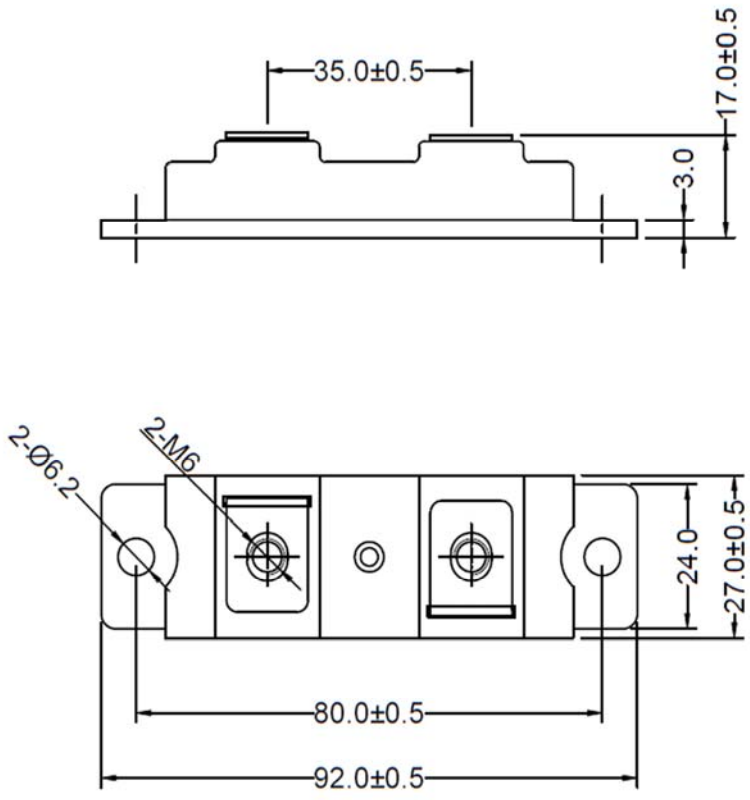


Figure 6. Transient Thermal Impedance



Dimensions in (mm)

Figure 7. Package Outline