PRODUCT FEATURES

☐ Low V_F Trench FRED Technology

☐ Ultrafast Reverse Recovery Time

☐ Low Reverse Recovery Loss

☐ High Surge Current Capability

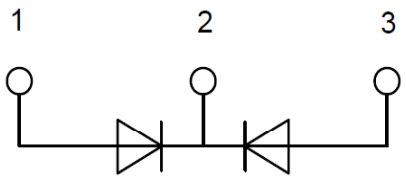
APPLICATIONS

☐ 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=110℃, Per Diode	200	A
		T_C=110℃, Per Moudle	400	
$I_{F(RMS)}$	RMS Forward Current	T_C=110°C, Per Diode	282	
I_{FSM}	Non Repetitive Surge Forward Current	T_J=45℃,t=10ms,Sine,peak value	2500	
		T_J=45℃,t=8.3ms,Sine,peak value	2750	
I^2t	For Fusing	T_J=45℃,t=10ms,Sine,peak value	31.25	KA^2S
		T_J=45℃,t=8.3ms,Sine,peak value	31.38	
P_D	Power Dissipation		520	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（M5）	2.5～4	Nm
Torque	Module Electrodes	Recommended（M5）	2.5～4	Nm
R_{thJC}	Junction to Case Thermal Resistance(Per Diode)		0.24	℃ /W
Weight			100	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	I_F=200A		0.62	0.7	V
		I_F=200A,T_J=125℃		0.6		
trr	Reverse Recovery Time (I_F = 1A, dI_F/dt = -200A/μs, V_R = 30V)			100		ns
trr	Reverse Recovery Time	I_F=200A,V_R =50V,		105		ns
I_{RRM}	Maximum Reverse Recovery Current	dI_F/dt =-200A/μs		9.5		A

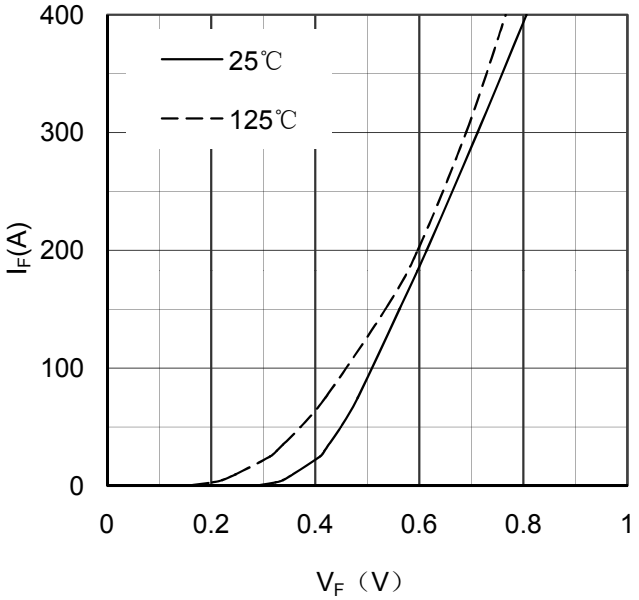


Figure 1. Forward Voltage Drop vs Forward Current

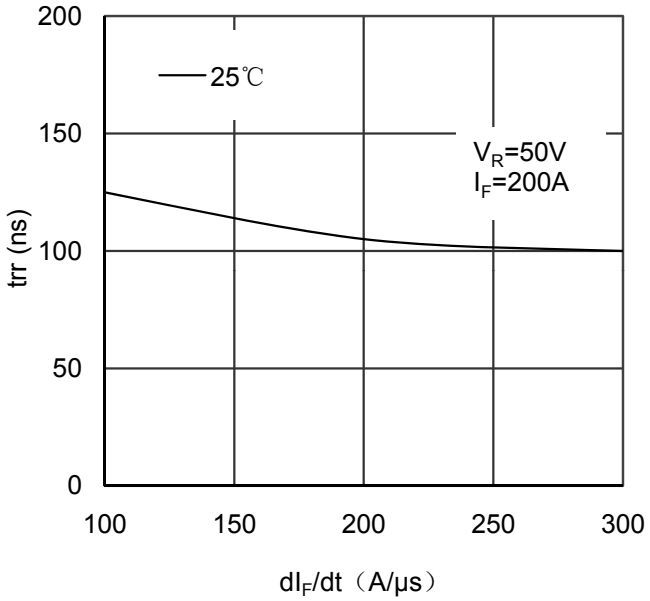


Figure 2. Reverse Recovery Time vs dI_F/dt

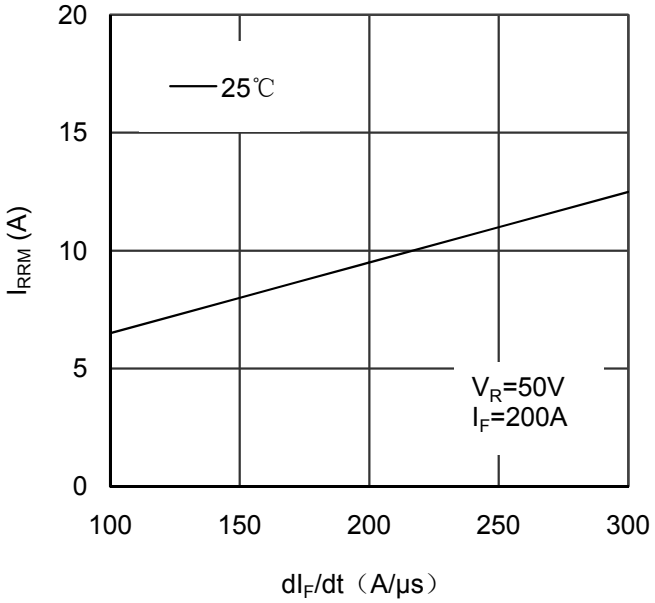


Figure 3. Reverse Recovery Current vs dI_F/dt

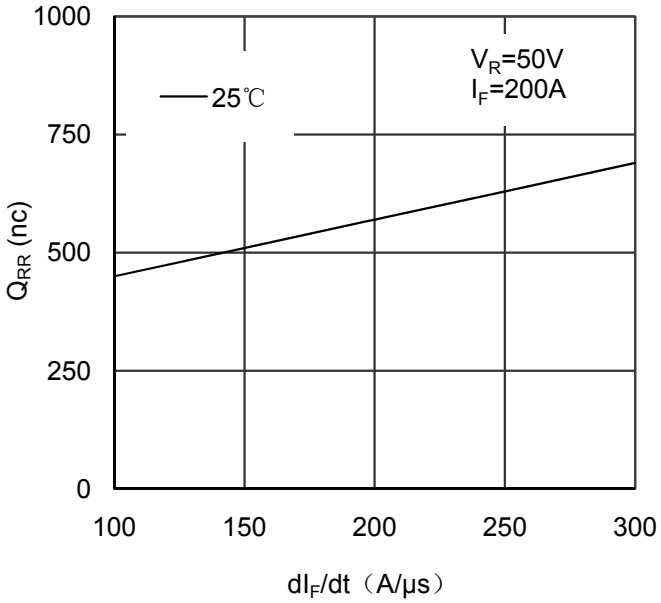


Figure 4. Reverse Recovery Charge vs dI_F/dt

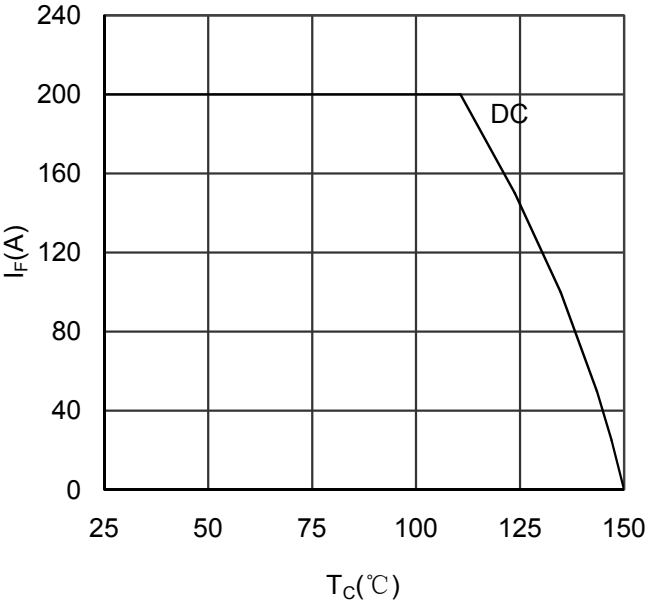


Figure 5. Forward current vs Case temperature

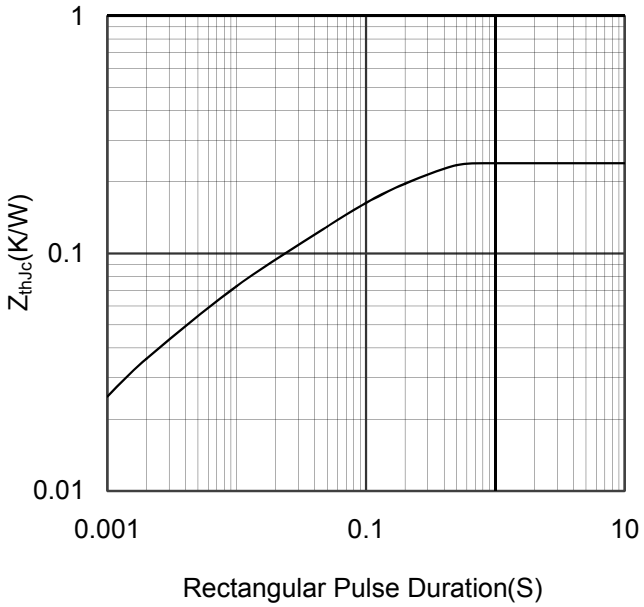
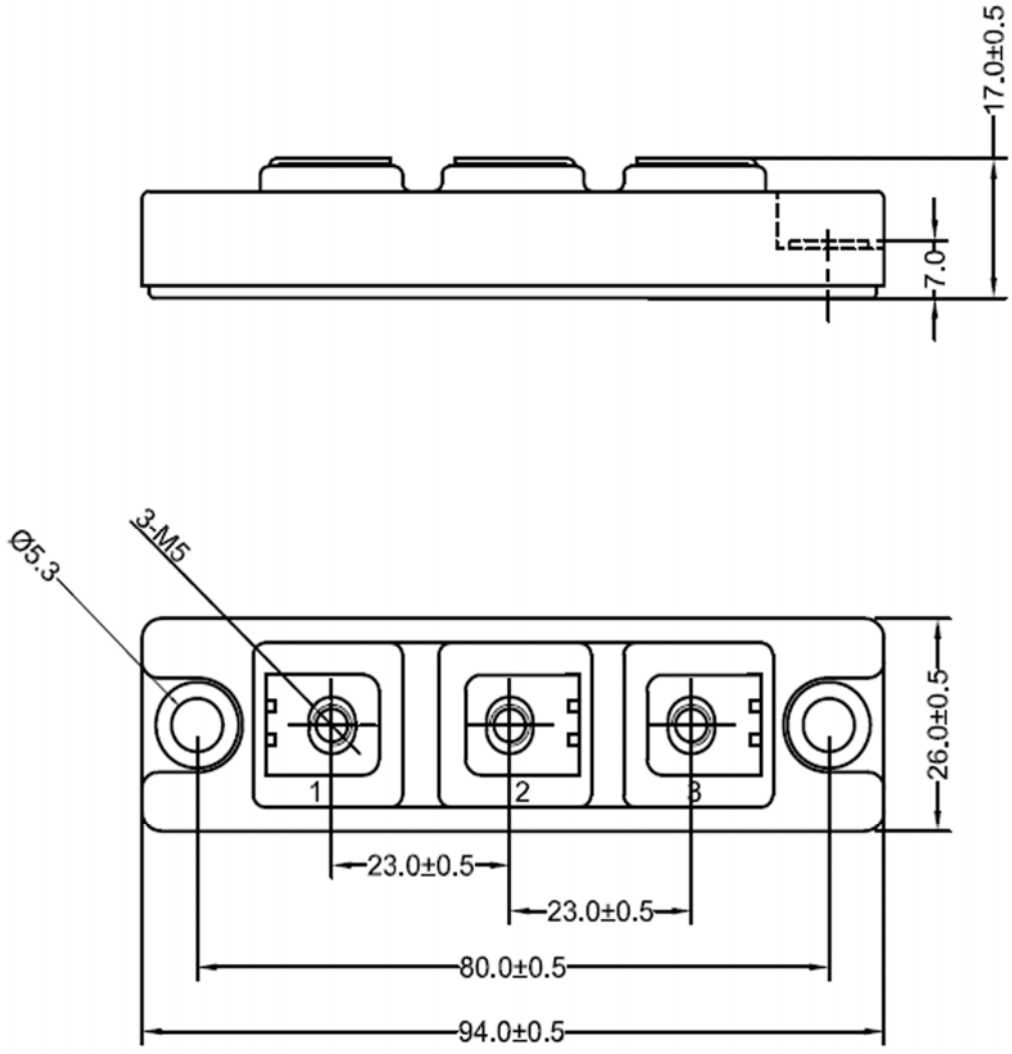


Figure 6. Transient Thermal Impedance



Dimensions in (mm)

Figure 7. Package Outline