

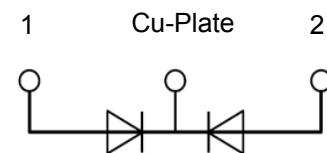
PRODUCT FEATURES

- ☐ Ultrafast Reverse Recovery Time
- ☐ Soft Reverse Recovery Characteristics
- ☐ Low Reverse Recovery Loss
- ☐ Low Forward Voltage
- ☐ High Surge Current Capability
- ☐ Low Leakage Current



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		400	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℃, Per Diode	280	
I _{FSM}	Non Repetitive Surge Forward Current	T _J =45℃, t=10ms, Sine, peak value	2550	
		T _J =45℃, t=8.3ms, Sine, peak value	2800	
I ² t	For Fusing	T _J =45℃, t=10ms, Sine, peak value	32.51	KA ² S
		T _J =45℃, t=8.3ms, Sine, peak value	32.53	
P _D	Power Dissipation		1562	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)		0.08	℃ /W
Weight			92	g

MMF400Y040DK1B

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	$V_R=400\text{V}$		0.5	mA
		$V_R=400\text{V}, T_J=125^{\circ}\text{C}$		10	
V_F	Forward Voltage	$I_F=200\text{A}$		1.2	V
		$I_F=200\text{A}, T_J=125^{\circ}\text{C}$		1.0	
t_{rr}	Reverse Recovery Time ($I_F=1\text{A}, di_F/dt=-200\text{A}/\mu\text{s}, V_R=30\text{V}$)		52		ns
t_{rr}	Reverse Recovery Time	$I_F=200\text{A}, V_R=200\text{V},$		75	ns
I_{RRM}	Maximum Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}$		7.5	A
t_{rr}	Reverse Recovery Time	$I_F=200\text{A}, V_R=200\text{V},$		140	ns
I_{RRM}	Maximum Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$		15	A

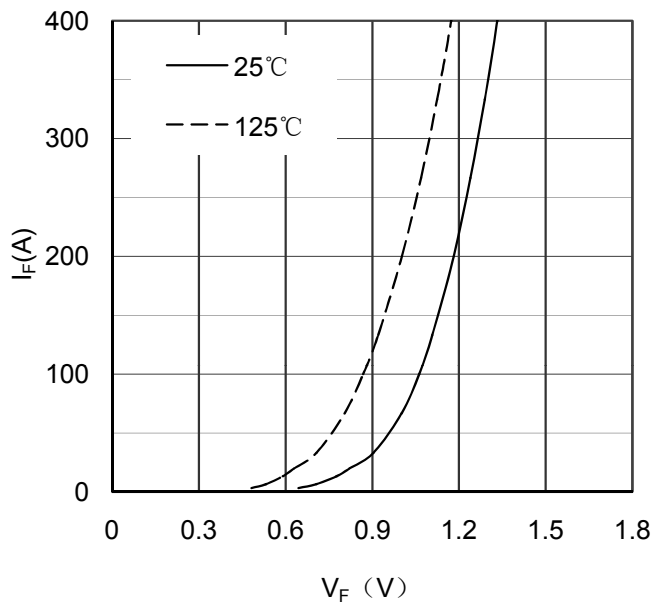


Figure 1. Forward Voltage Drop vs Forward Current

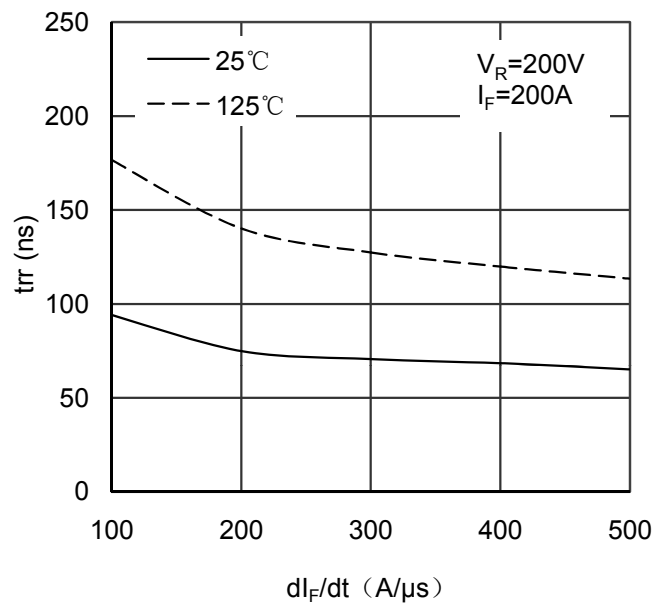


Figure 2. Reverse Recovery Time vs di_F/dt

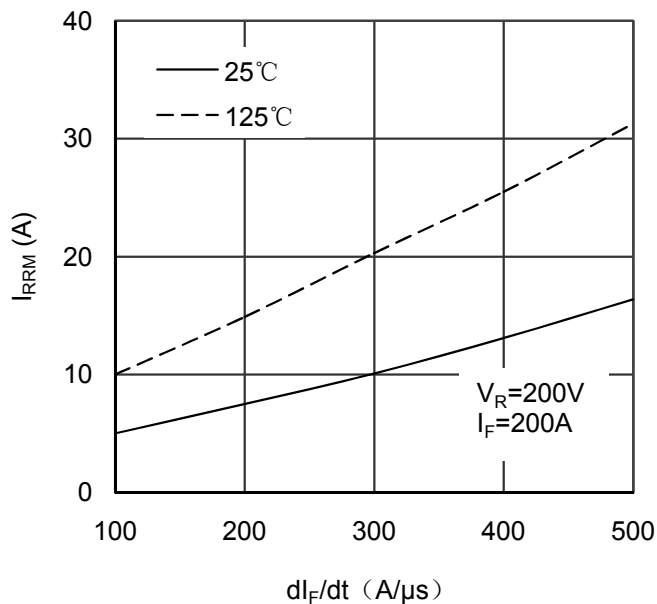


Figure 3. Reverse Recovery Current vs di_F/dt

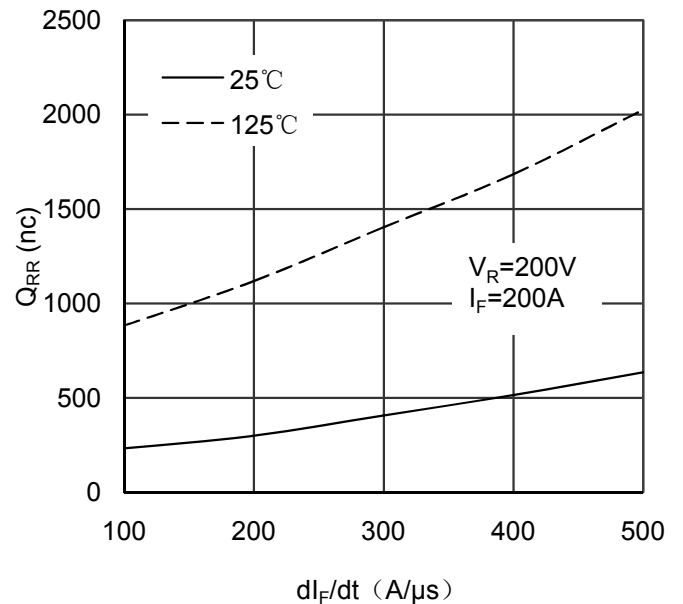


Figure 4. Reverse Recovery Charge vs di_F/dt

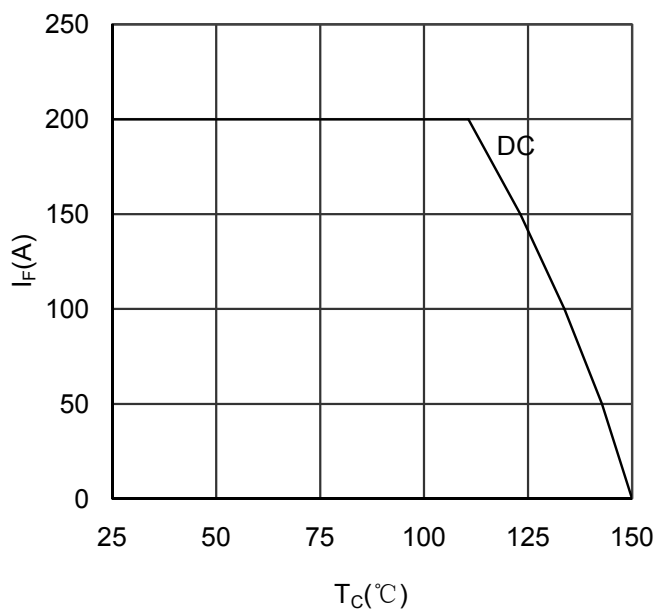


Figure 5. Forward current vs Case temperature

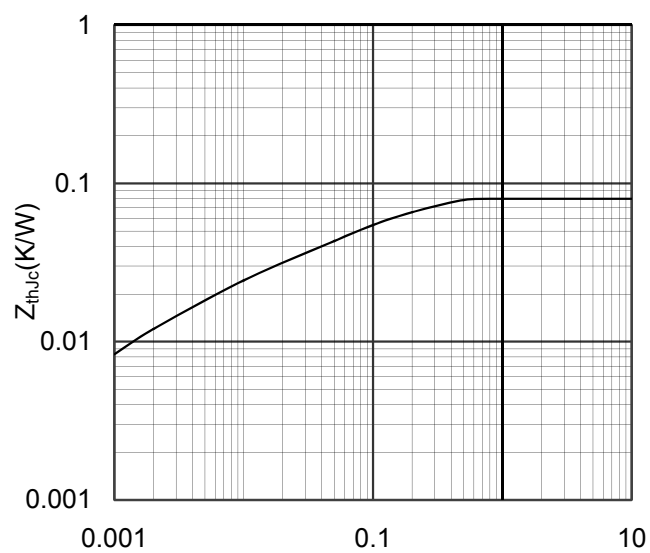
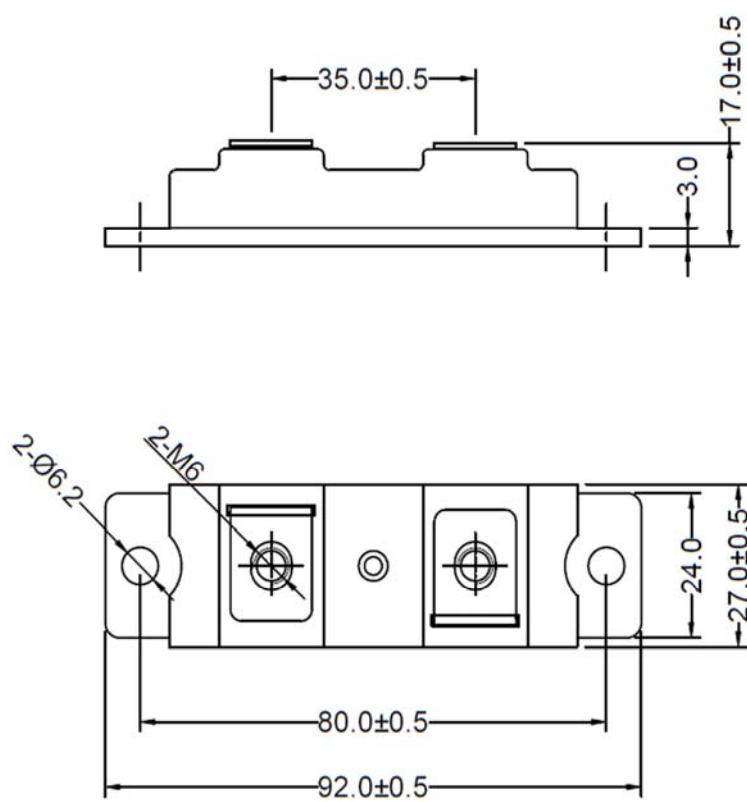


Figure 6. Transient Thermal Impedance

Dimensions in (mm)
Figure 7. Package Outline