

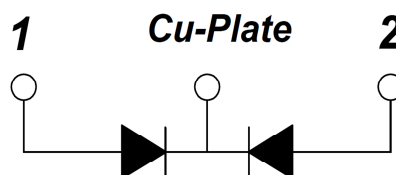
PRODUCT FEATURES

- Ultrafast Recovery Time
- Low Recovery Loss
- Low Forward Voltage
- Low Leakage Current
- Low Inductance 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		200	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	$T_C = 100^{\circ}\text{C}$, Per Diode	400	A
		$T_C = 100^{\circ}\text{C}$, Per Module	800	
$I_{F(RMS)}$	RMS Forward Current	$T_C = 100^{\circ}\text{C}$, Per Diode	560	
I_{FSM}	Non Repetitive Surge Forward Current	$T_J = 45^{\circ}\text{C}$, $t = 10\text{ms}$, Sine, peak value	3000	
		$T_J = 45^{\circ}\text{C}$, $t = 8.3\text{ms}$, Sine, peak value	3300	
I^2t	For Fusing	$T_J = 45^{\circ}\text{C}$, $t = 10\text{ms}$, Sine, peak value	45000	A^2S
		$T_J = 45^{\circ}\text{C}$, $t = 8.3\text{ms}$, Sine, peak value	45190	
P_D	Power Dissipation		1562	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
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	$^{\circ}\text{C} / \text{W}$
Weight			92	g

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	$V_R = 200\text{V}$			1	mA
		$V_R = 200\text{V}, T_J = 125^\circ\text{C}$			10	
V_F	Forward Voltage	$I_F = 400\text{A}$		1.0	1.2	V
		$I_F = 400\text{A}, T_J = 125^\circ\text{C}$		0.9		
t_{rr}	Reverse Recovery Time ($I_F = 1\text{A}, dI_F/dt = -200\text{A}/\mu\text{s}, V_R = 30\text{V}$)			70		ns
t_{rr}	Reverse Recovery Time	$I_F = 400\text{A}, V_R = 100\text{V},$		165		ns
I_{RRM}	Maximum Reverse Recovery Current	$dI_F/dt = -200\text{A}/\mu\text{s}$		26		A
t_{rr}	Reverse Recovery Time	$I_F = 400\text{A}, V_R = 100\text{V},$		210		ns
I_{RRM}	Maximum Reverse Recovery Current	$dI_F/dt = -200\text{A}/\mu\text{s}, T_J = 125^\circ\text{C}$		35		A

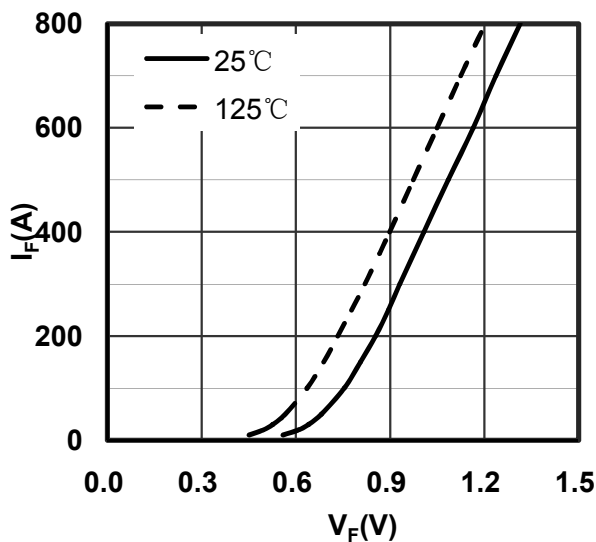
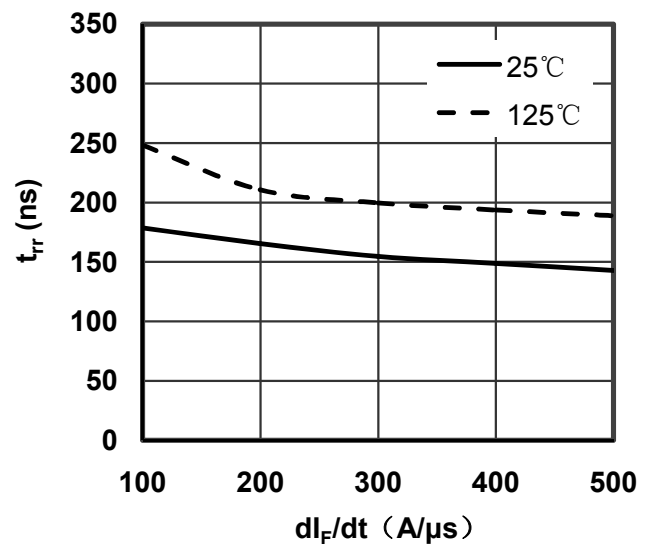
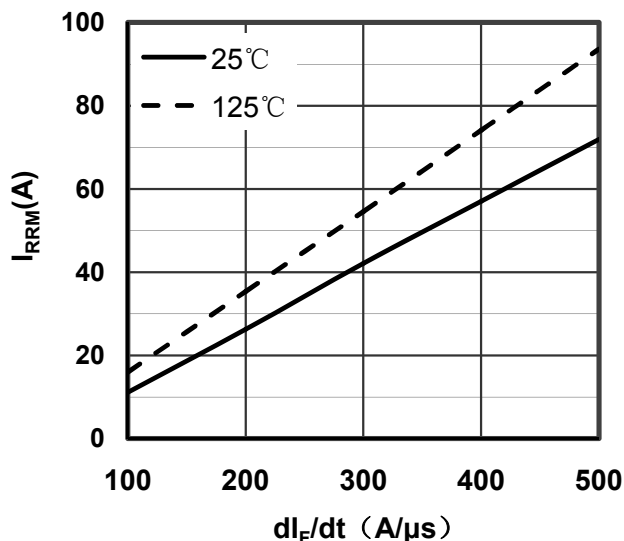
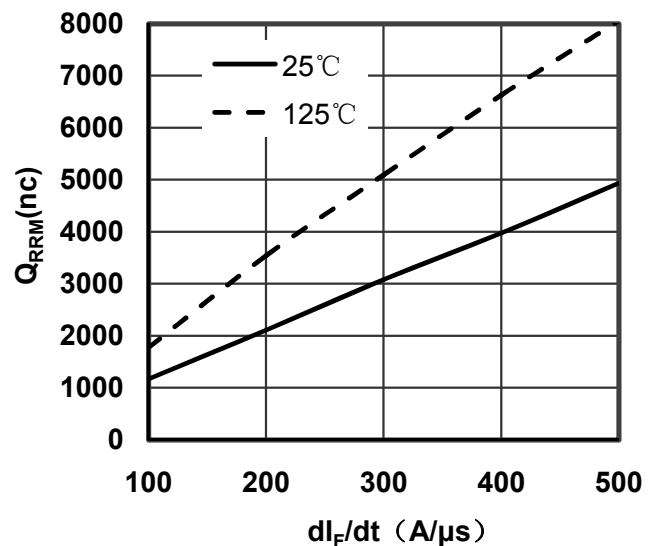


Figure 1. Forward Voltage Drop vs Forward Current

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

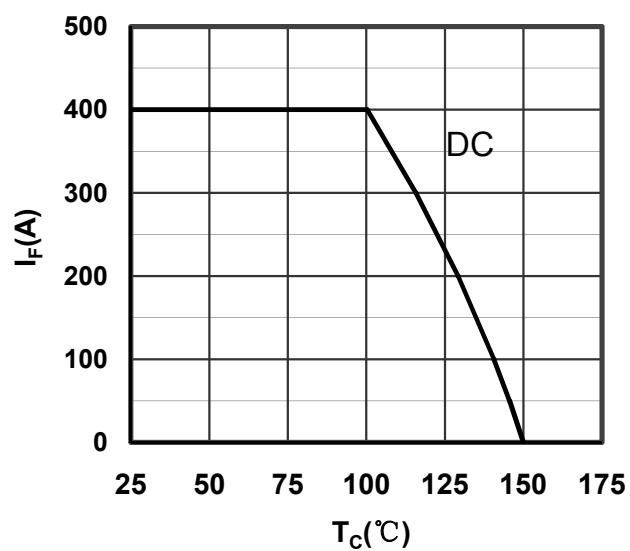


Figure 5. Forward current vs Case temperature

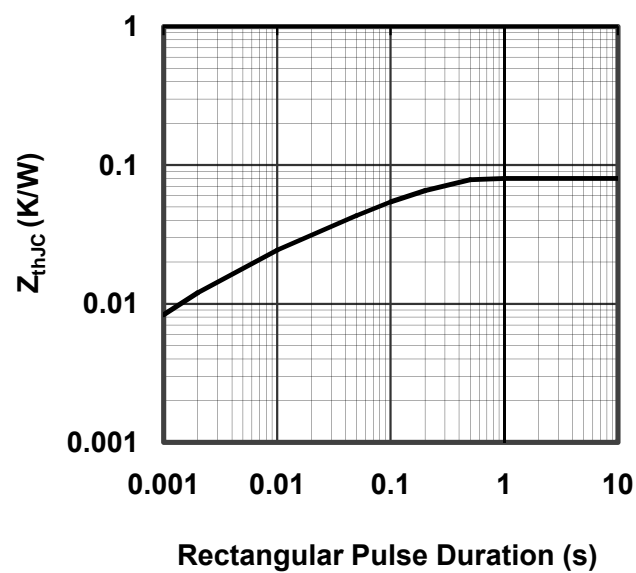
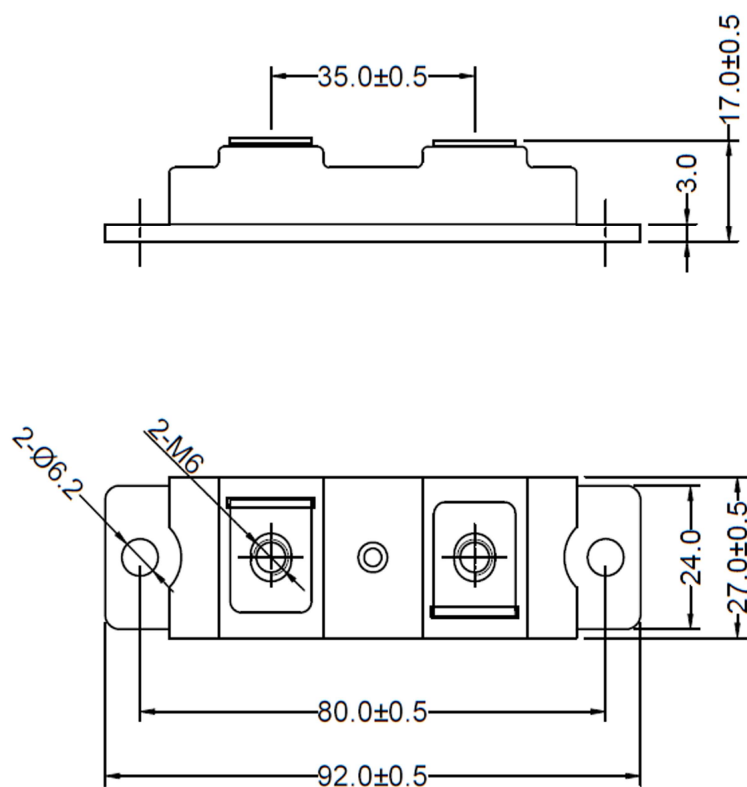


Figure 6. Transient Thermal Impedance



Dimensions in (mm)
Figure 7. Package Outline