

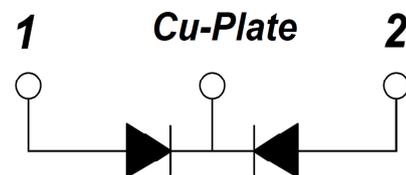
PRODUCT FEATURES

- 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		400	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	$T_C = 110^\circ\text{C}$, Per Diode	200	A
		$T_C = 110^\circ\text{C}$, Per Module	400	
$I_{F(RMS)}$	RMS Forward Current	$T_C = 110^\circ\text{C}$, Per Diode	280	
I_{FSM}	Non Repetitive Surge Forward Current	$T_J = 45^\circ\text{C}$, $t = 10\text{ms}$, Sine, peak value	2400	
		$T_J = 45^\circ\text{C}$, $t = 8.3\text{ms}$, Sine, peak value	2620	
I^2t	For Fusing	$T_J = 45^\circ\text{C}$, $t = 10\text{ms}$, Sine, peak value	28.8	KA ² S
		$T_J = 45^\circ\text{C}$, $t = 8.3\text{ms}$, Sine, peak value	28.5	
P_D	Power Dissipation		1250	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
	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°C unless otherwise specified

Symbol	Parameter/Test Conditions		Min.	Typ.	Max.	Unit
I_{RM}	Maximum Reverse Leakage Current	$V_R = 400V$			0.5	mA
		$V_R = 400V, T_J = 125^\circ C$			10	
V_F	Forward Voltage	$I_F = 200A$		1.5	2.0	V
		$I_F = 200A, T_J = 125^\circ C$		1.2		
t_{rr}	Reverse Recovery Time ($I_F = 1A, di_F/dt = -200A/\mu s, V_R = 30V$)			50		ns
t_{rr}	Reverse Recovery Time	$I_F = 200A, V_R = 200V,$		80		ns
I_{RRM}	Maximum Reverse Recovery Current	$di_F/dt = -200A/\mu s$		11		A
t_{rr}	Reverse Recovery Time	$I_F = 200A, V_R = 200V,$		130		ns
I_{RRM}	Maximum Reverse Recovery Current	$di_F/dt = -200A/\mu s, T_J = 125^\circ C$		18		A

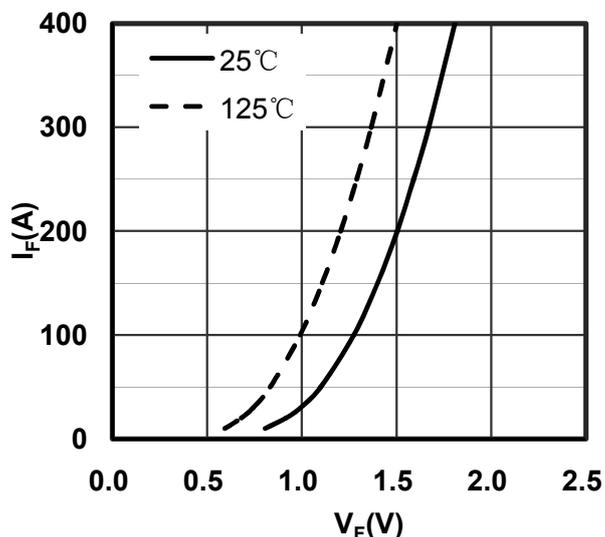


Figure 1. Forward Voltage Drop vs Forward Current

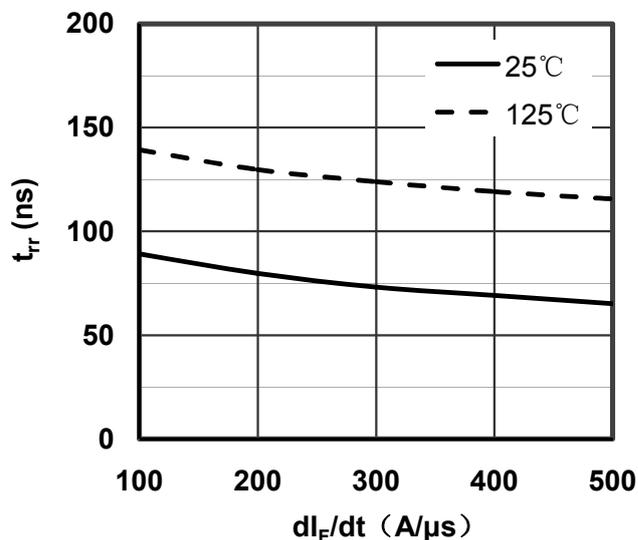


Figure 2. Reverse Recovery Time vs di_F/dt

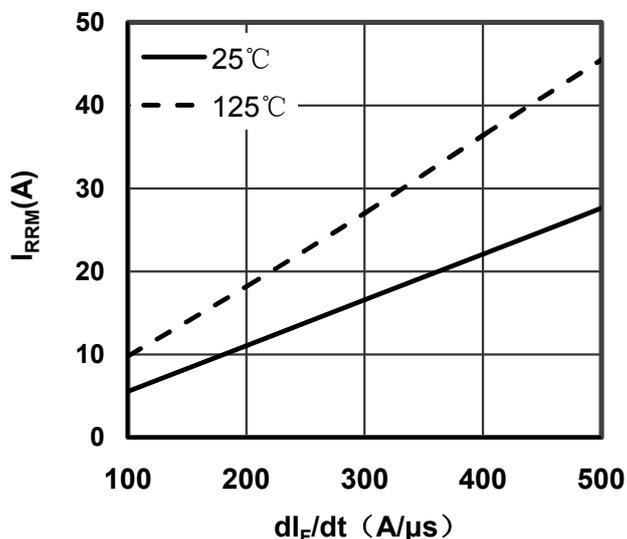


Figure 3. Reverse Recovery Current vs di_F/dt

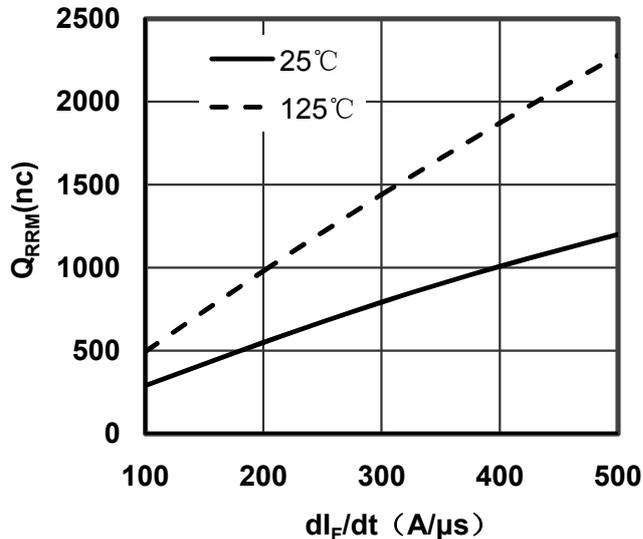


Figure 4. Reverse Recovery Charge vs di_F/dt

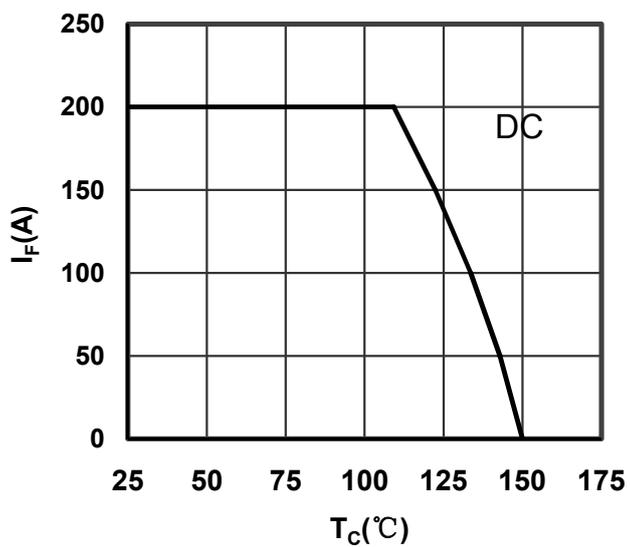


Figure 5. Forward current vs Case temperature

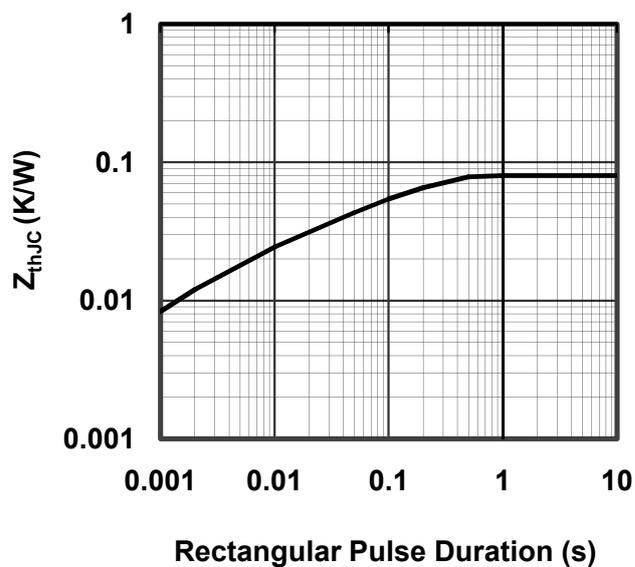
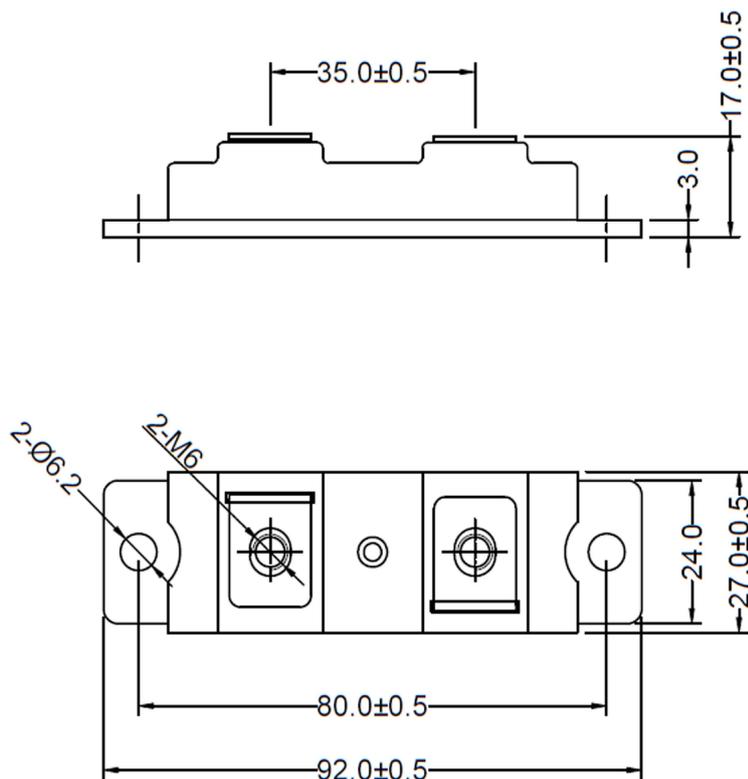


Figure 6. Transient Thermal Impedance



Dimensions in (mm)
Figure 7. Package Outline