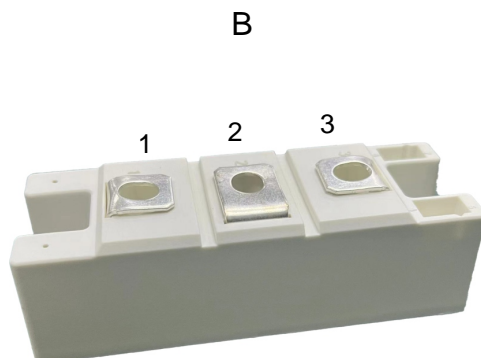


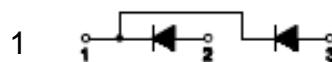
### Features

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



### Typical 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	$T_C=80^{\circ}\text{C}$ , Per Diode	400	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=80^{\circ}\text{C}$ , Per Diode	560	
$I_{FSM}$	Non Repetitive Surge Forward Current	$T_J=45^{\circ}\text{C}$ , $t=10\text{ms}$ , Sine, peak value	2800	
		$T_J=45^{\circ}\text{C}$ , $t=8.3\text{ms}$ , Sine, peak value	3080	
$I^2t$	For Fusing	$T_J=45^{\circ}\text{C}$ , $t=10\text{ms}$ , Sine, peak value	39.2	$\text{KA}^2\text{S}$
		$T_J=45^{\circ}\text{C}$ , $t=8.3\text{ms}$ , Sine, peak value	39.3	
$P_D$	Power Dissipation		1250	W
$T_J$	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
$V_{isol}$	Isolation Breakdown Voltage	AC, 50Hz(R.M.S), $t=1\text{minute}$	3000	V
<b>Torque</b>	Module to Sink	Recommended (M6)	3~5	Nm
<b>Torque</b>	Module Electrodes	Recommended (M6)	3~5	Nm
$R_{thJC}$	Junction to Case Thermal Resistance(Per Diode )		0.1	$^{\circ}\text{C}/\text{W}$
<b>Weight</b>			160	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	$V_R = 400\text{V}$			1	mA
		$V_R = 400\text{V}, T_J = 125^{\circ}\text{C}$			10	
$V_F$	Forward Voltage	$I_F=400\text{A}$		1.9	2.1	V
		$I_F=400\text{A}, T_J=125^{\circ}\text{C}$		1.55		
$t_{rr}$	Reverse Recovery Time ( $I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$ )			148		ns
$t_{rr}$	Reverse Recovery Time	$I_F=20\text{A}, V_R=160\text{V},$		90		ns
$I_{RRM}$	Maximum Reverse Recovery Current	$dI_F/dt = -200\text{A}/\mu\text{s}$		16		A
$t_{rr}$	Reverse Recovery Time	$I_F=400\text{A}, V_R=200\text{V},$		210		ns
$I_{RRM}$	Maximum Reverse Recovery Current	$dI_F/dt = -200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$		26		A

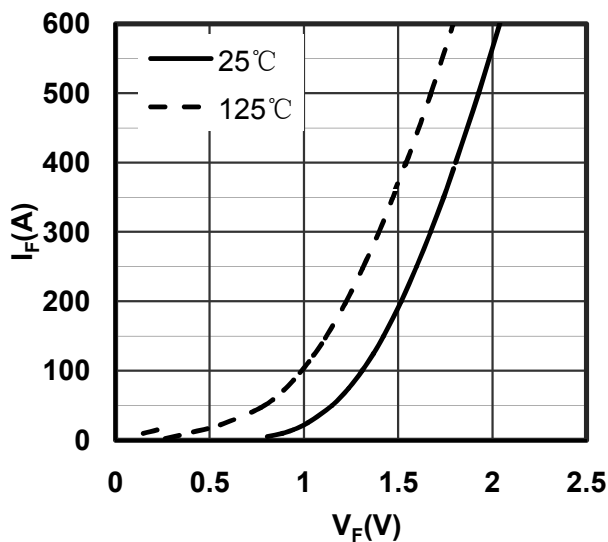


Figure 1. Forward Voltage Drop vs Forward Current

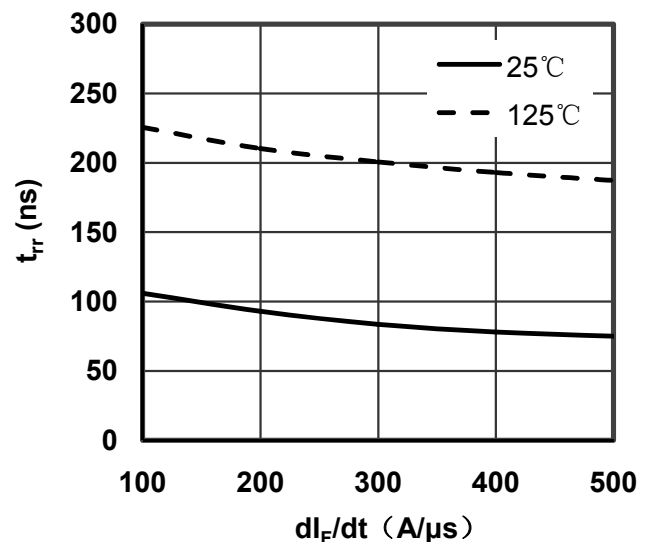


Figure 2. Reverse Recovery Time vs  $dI_F/dt$

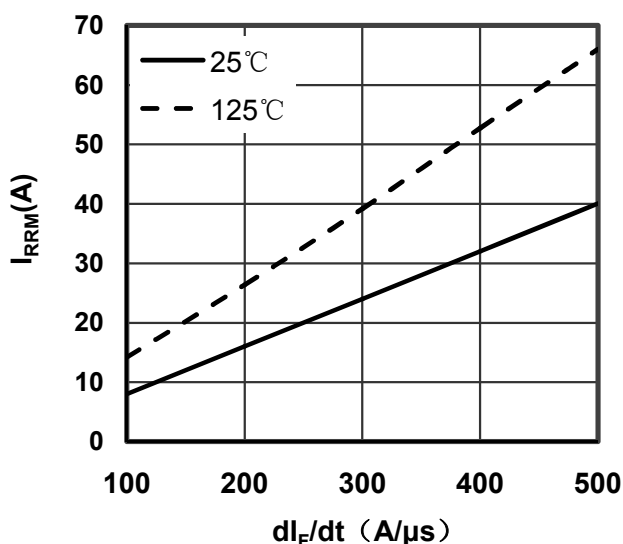


Figure 3. Reverse Recovery Current vs  $dI_F/dt$

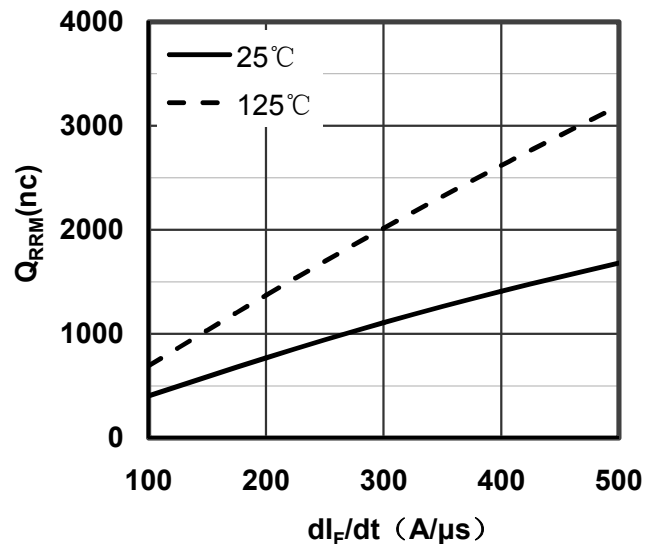


Figure 4. Reverse Recovery Charge vs  $dI_F/dt$

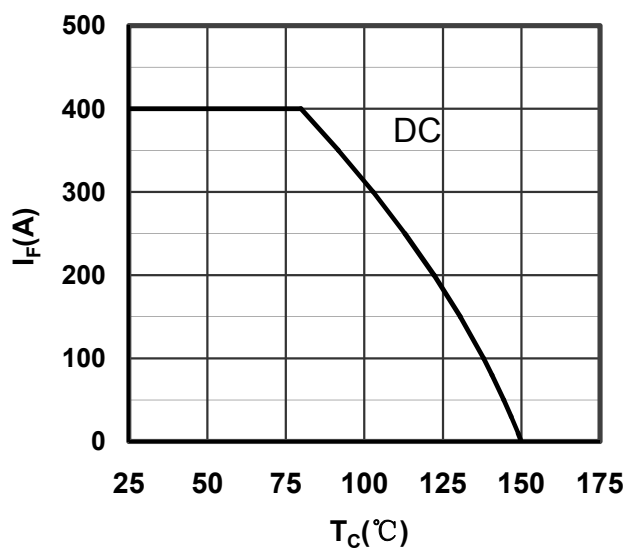


Figure 5. Forward current vs Case temperature

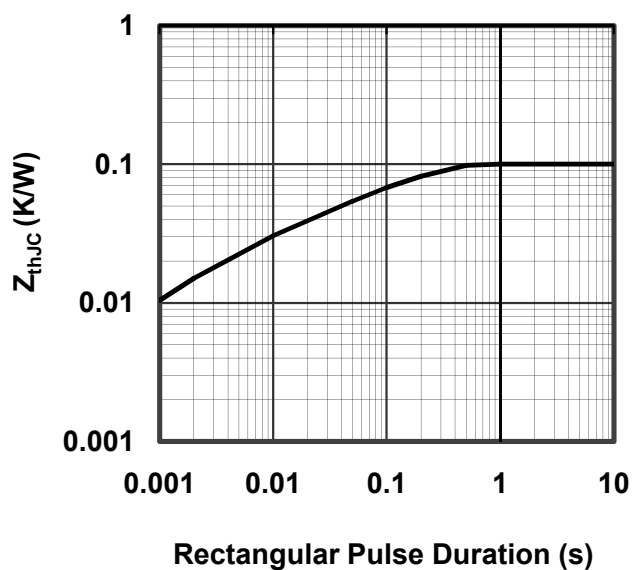
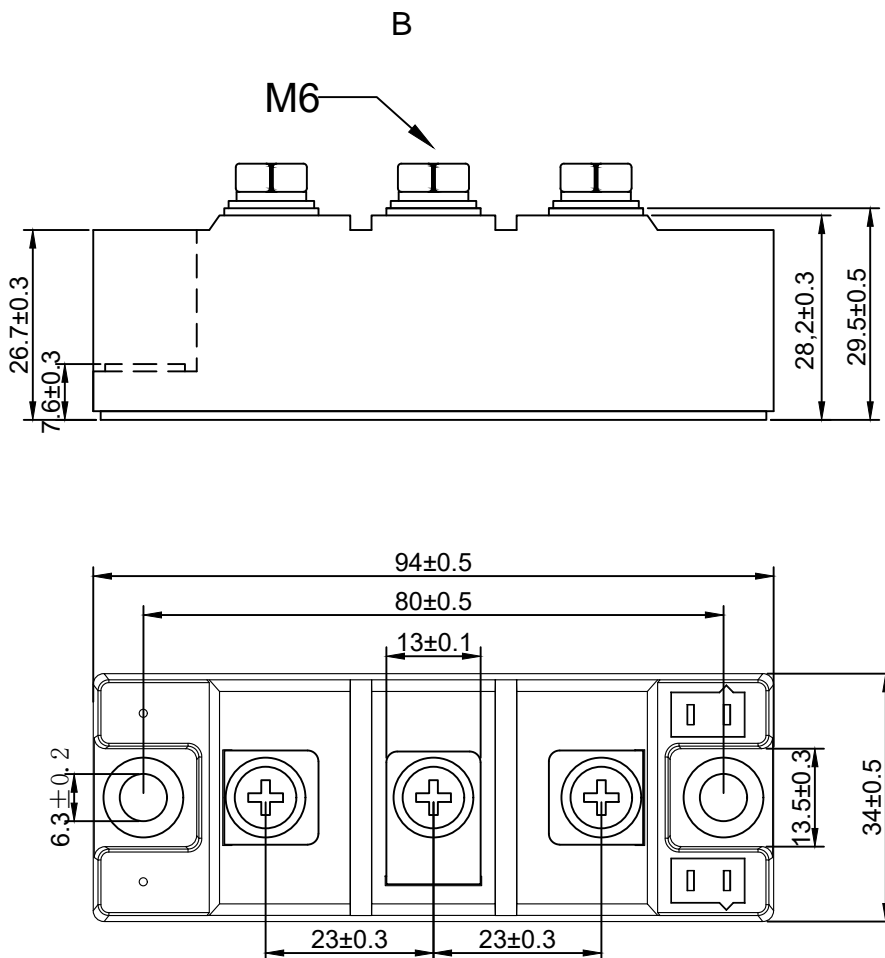


Figure 6. Transient Thermal Impedance

## Package Outline Information



Dimensions in mm

## Friendship Reminder

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