

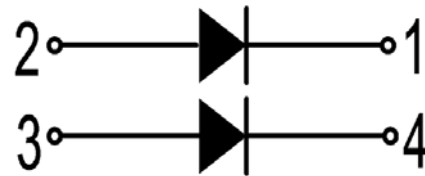
## PRODUCT FEATURES

- Ultrafast Recovery Time
- Low Recovery Loss
- Soft Reverse Recovery Characteristics
- Low Leakage Current
- Popular SOT-227 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	t
$V_R$	Maximum D.C. Reverse Voltage		1200	V
$V_{RRM}$	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	$T_C=50^{\circ}\text{C}$ , Per Diode	100	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=50^{\circ}\text{C}$ , Per Diode	140	
$I_{FSM}$	Non-Repetitive Surge Forward Current	$T_J=45^{\circ}\text{C}$ , 1/2 Cycle, 50Hz, $T_J=45^{\circ}\text{C}$ , 1/2 Cycle, 60Hz,	950 1050	
$I^2t$	For Fusing	$T_J=45^{\circ}\text{C}$ , $t=10\text{ms}$ , 50Hz, Sine $T_J=45^{\circ}\text{C}$ , $t=10\text{ms}$ , 60Hz, Sine	4510 4570	$\text{A}^2\text{S}$
$P_D$	Power Dissipation		280	W
$V_{isol}$	Insulation Test Voltage	AC, $t=1\text{min}$	3000	V
$T_J$	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
<b>Torque</b>	Module to Sink	Recommended (M4)	0.7~1.1	Nm
<b>Torque</b>	Module Electrodes	Recommended (M4)	0.7~1.1	Nm
$R_{thJC}$	Junction to Case Thermal Resistance		0.44	$^{\circ}\text{C/W}$
<b>Weight</b>			26.5	g

ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$  unless otherwise specified

Symbol	Parameter/Test Conditions		Min	Typ	Max	t
$I_{RM}$	Maximum Reverse Leakage Current	$V_R = 1200\text{V}$			1	mA
		$V_R = 1200\text{V}, T_J = 125^{\circ}\text{C}$			20	
$V_F$	Forward Voltage	$I_F=100\text{A}$		3.25		V
		$I_F=100\text{A}, T_J=125^{\circ}\text{C}$		2.55		
$t_{rr}$	Reverse Recovery Time ( $I_F = 1\text{A}, di_F/dt = -200\text{A}/\mu\text{s}, V_R = 30\text{V}$ )			55		ns
$t_{rr}$	Reverse Recovery Time			150		ns
$I_{RRM}$	Maximum Reverse Recovery Current	$di_F/dt = -200\text{A}/\mu\text{s}$		16		A
$t_{rr}$	Reverse Recovery Time			320		ns
$I_{RRM}$	Maximum Reverse Recovery Current	$di_F/dt = -200\text{A}/\mu\text{s}, T_J=125$		30		A
$t_{rr}$	Reverse Recovery Time			200		ns
$I_{RRM}$	Maximum Reverse Recovery Current	$di_F/dt = -1000\text{A}/\mu$		105		A

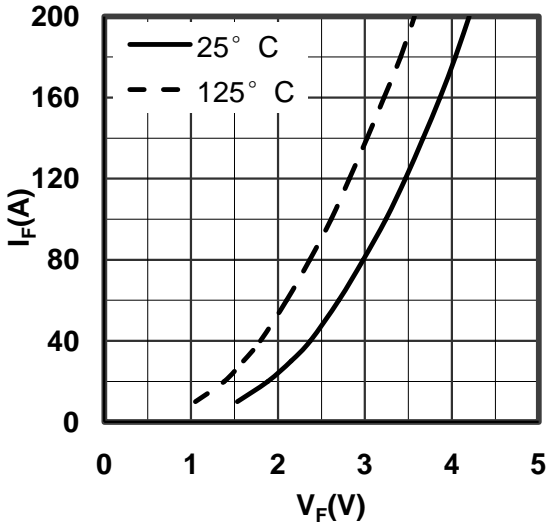


Figure 1. Forward Voltage Drop vs Forward Current

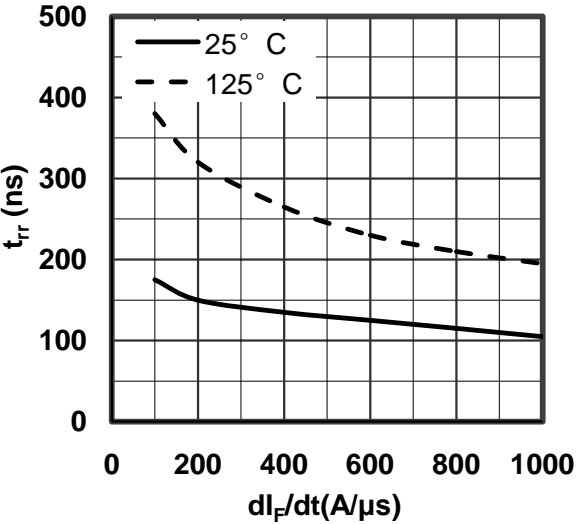


Figure 2. Reverse Recovery Time vs  $di_F/dt$

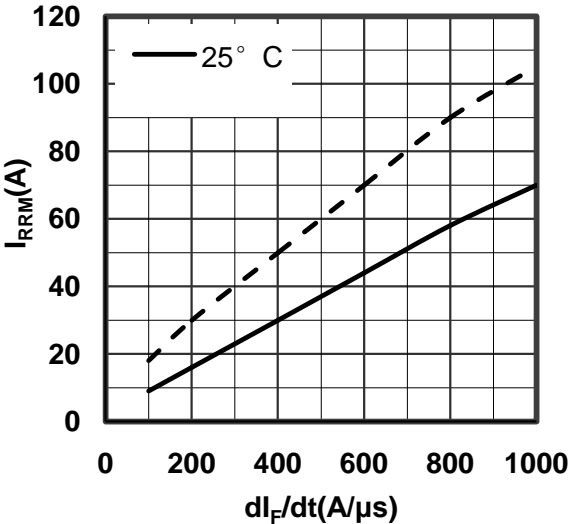


Figure 3. Reverse Recovery Current vs  $di_F/dt$

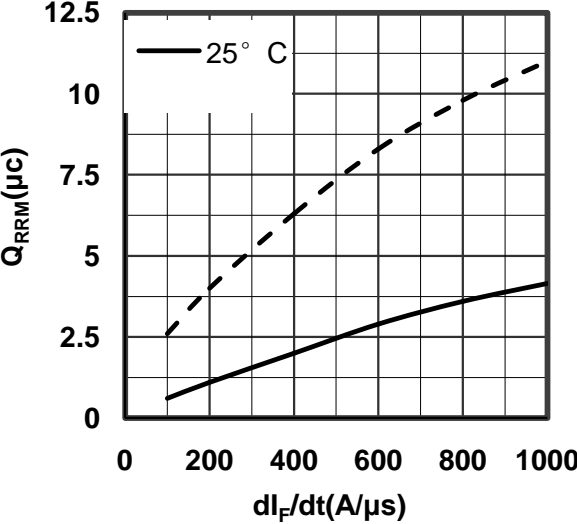


Figure 4. Reverse Recovery Charge vs  $di_F/dt$

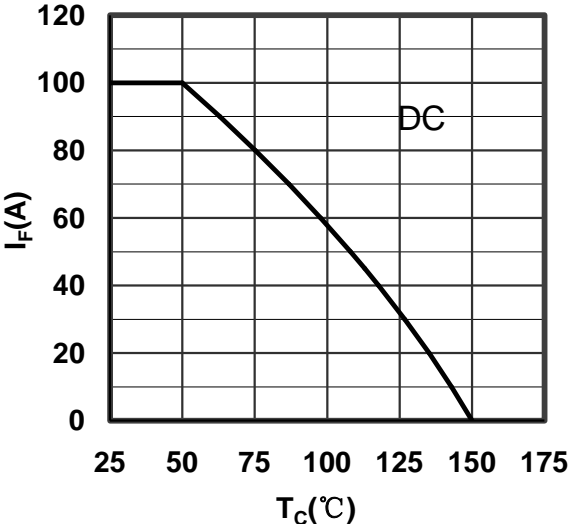


Figure 5. Forward current vs Case temperature

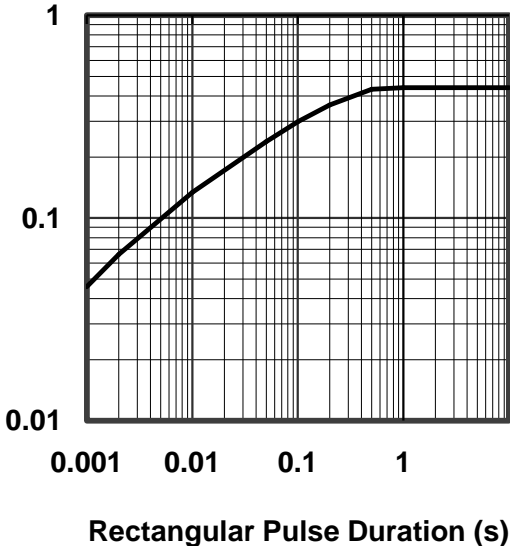
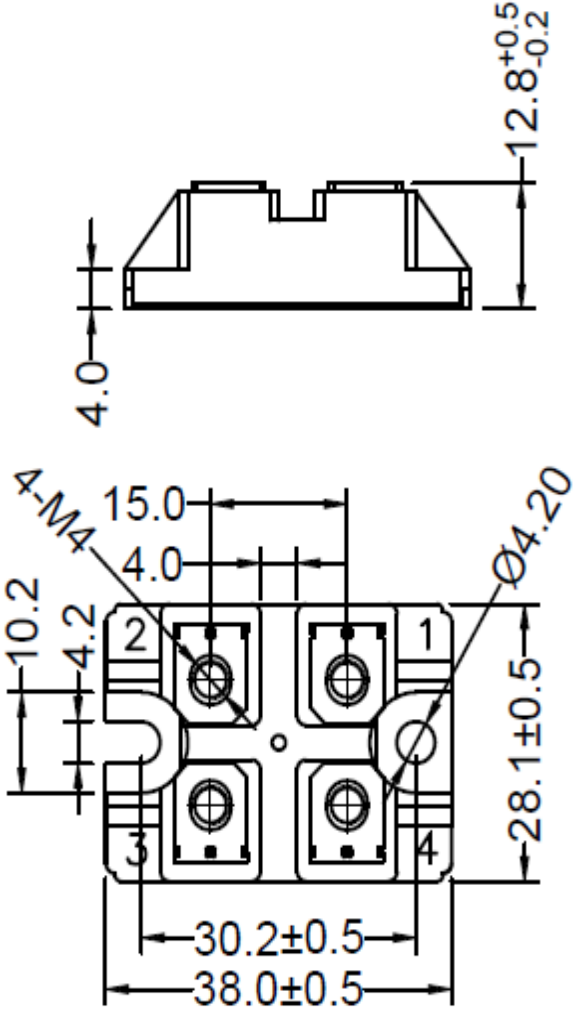


Figure 6. Transient Thermal Impedance



Dimensions in (mm)  
Figure 7. Package Outline