



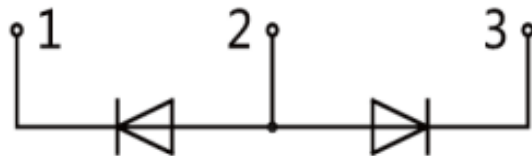
## Features

- 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



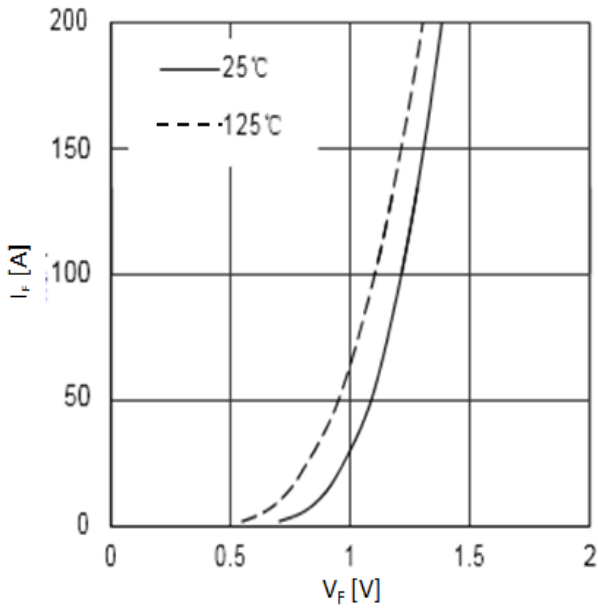
## Absolute Maximum Ratings ( $T_j=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter/Test Conditions		Values	Unit
$V_{RSM}$	Maximum Non-repetitive Reverse Voltage		667	V
$V_{RRM}$	Maximum Repetitive Reverse Voltage		600	
$I_{F(AV)}$	Average Forward Current	$T_c=100^{\circ}\text{C}$ , Per Diode	100	A
		$T_c=100^{\circ}\text{C}$ , Per Mouldle	200	
$I_F(\text{RMS})$	RMS Forward Current	$T_c=100^{\circ}\text{C}$ , Per Diode	150	
$I_{FSM}$	Non Repetitive Surge Forward Current	$T_j=45^{\circ}\text{C}$ , $t=10\text{ms}$ , Sine, peak value	1200	
		$T_j=45^{\circ}\text{C}$ , $t=8.3\text{ms}$ , Sine, peak value	1320	
$I^2t$	For Fusing	$T_j=45^{\circ}\text{C}$ , $t=10\text{ms}$ , Sine, peak value	7200	$\text{A}^2\text{S}$
		$T_j=45^{\circ}\text{C}$ , $t=8.3\text{ms}$ , Sine, peak value	7230	
$P_D$	Power Dissipation		370	W
$T_j$	Junction Temperature		-40 to +175	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
Torque	Module to Sink	Recommended (M5)	2.5~4	Nm
Torque	Module Electrodes	Recommended (M6)	3~4.7	Nm
$R_{thJC}$	Junction to Case Thermal Resistance(Per Diode)		0.34	$^{\circ}\text{C}/\text{W}$
Weight			100	g

**Electrical Characteristics** ( $T_j = 25^\circ\text{C}$  unless otherwise specified)

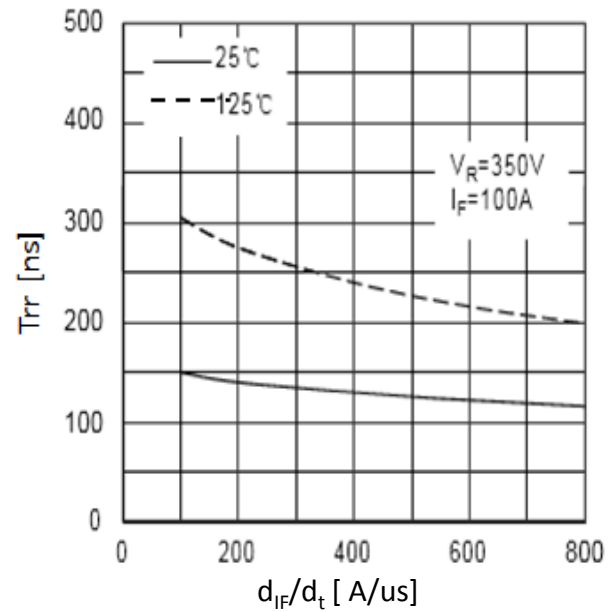
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Maximum Reverse Leakage Current	$I_{RM}$	$V_R = 600\text{V}$			500	$\mu\text{A}$
		$V_R = 600\text{V}, T_j = 125^\circ\text{C}$			10	$\text{mA}$
Forward Voltage	$V_F$	$I_F = 100\text{A}$		1.4	1.6	$\text{V}$
		$I_F = 100\text{A}, T_j = 125^\circ\text{C}$		1.3		
Reverse Recovery Time	$t_{rr}$	$I_F = 100\text{A}, V_R = 300\text{V}, d_{IF} / d_t = -200\text{A}/\mu\text{s}$		140		$\text{ns}$
Maximum Reverse Recovery Current	$I_{RRM}$			14.5		$\text{A}$
Reverse Recovery Time	$t_{rr}$	$I_F = 100\text{A}, V_R = 300\text{V}, d_{IF} / d_t = -200\text{A}/\mu\text{s}, T_j = 125^\circ\text{C}$		275		$\text{ns}$
Maximum Reverse Recovery Current	$I_{RRM}$			28		$\text{A}$

forward voltage drop vs forward current



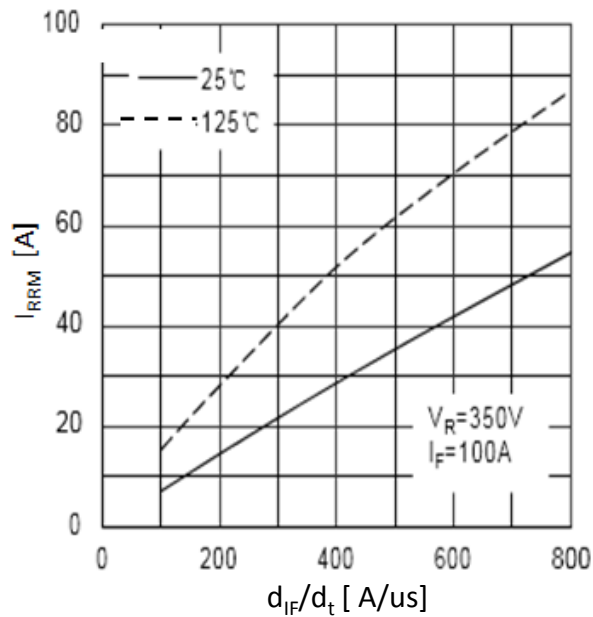
reverse recovery time vs  $d_{IF}/d_t$

$V_R=350V, I_F=100A$



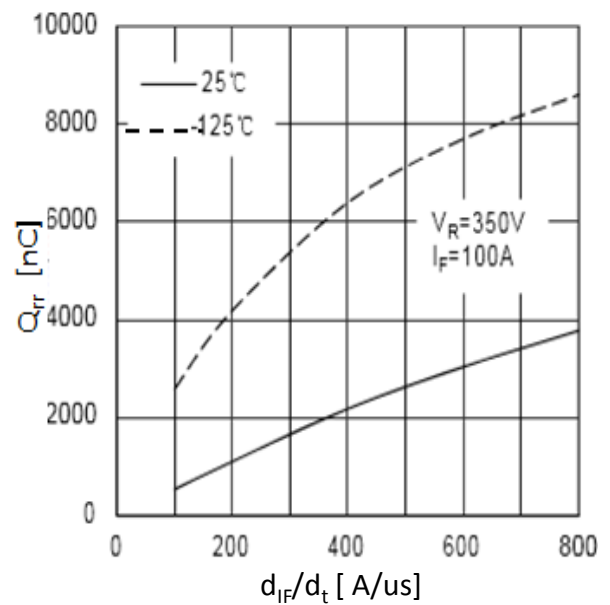
reverse recovery current vs  $d_{IF}/d_t$

$V_R=350V, I_F=100A$

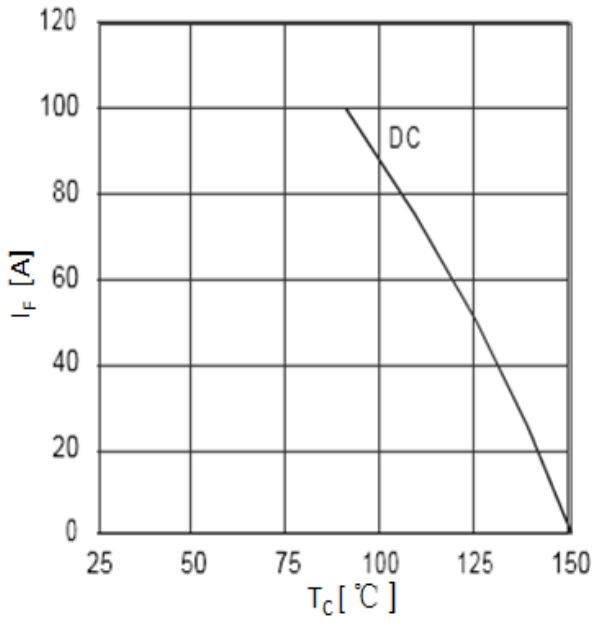


reverse recovery charge vs  $d_{IF}/d_t$

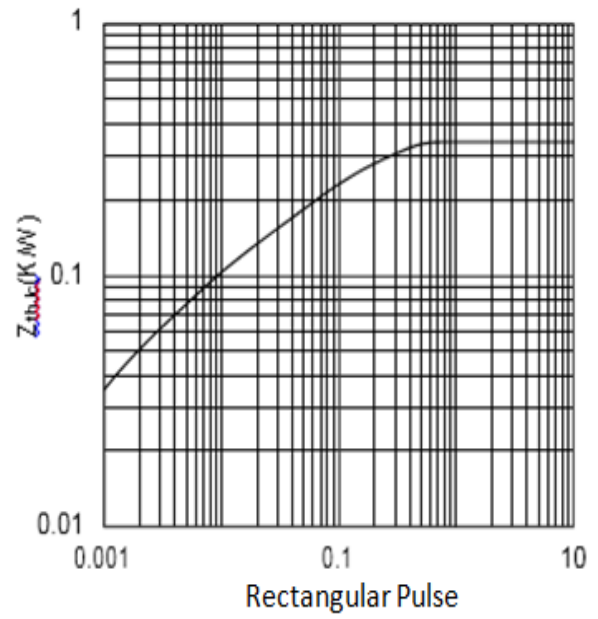
$V_R=350V, I_F=100A$



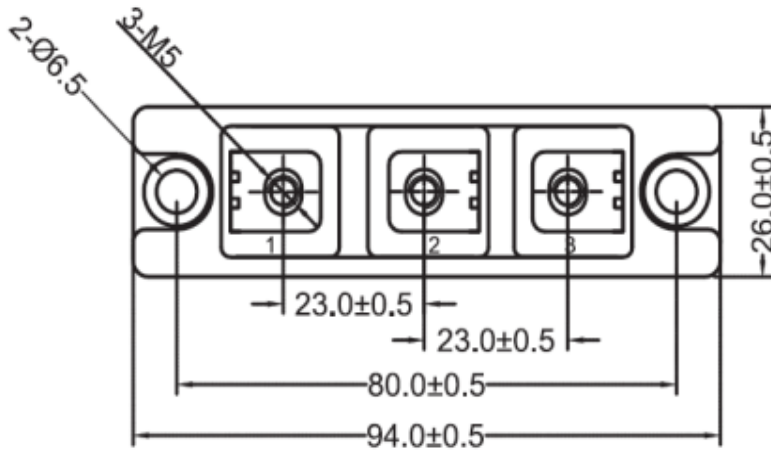
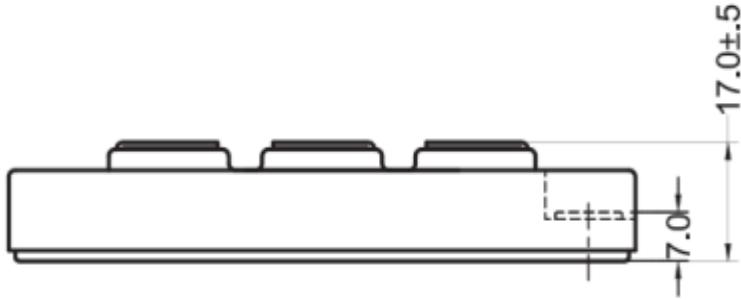
forward current vs case temperature



transient thermal impedance



Package outlines (Units: mm)



Circuit diagram headline

