SEMICONDUCTOR

JA5F800-20

fast reverse recovery diode module

Features

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

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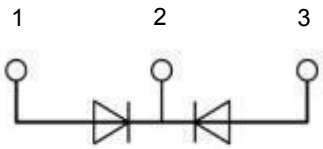
Typical Applications

- Inversion Welder
- Uninterruptible Power Supply
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- PFC



ABSOLUTE MAXIMUM RATINGS(T_C =25°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 ℃, Per Diode	800	A
		T_C= 100 ℃, Per Moudle	1600	
$I_{F(RMS)}$	RMS Forward Current	T_C= 100 ℃, Per Diode	1120	
I_{FSM}	Non Repetitive Surge Forward Current	T_J= 45℃, t= 10 ms, Sine, peak value	6000	
		T_J= 45℃, t=8.3 ms, Sine, peak value	6600	
I^2t	For Fusing	T_J= 45℃, t= 10 ms, Sine, peak value	45000	A^2S
		T_J= 45℃, t=8.3 ms, Sine, peak value	45190	
P_D	Power Dissipation		3000	W
T_J	Junction Temperature		-40 to + 150	°C
T_{STG}	Storage Temperature Range		-40 to + 125	°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	℃/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 =200V			1	mA
		V_R =200V, T_J = 125°C			10	
V_F	Forward Voltage per leg	I_F=800A		1	1.3	V
		I_F=800A, T_J=125℃		0.9		
trr	Reverse Recovery Time per leg (I_F = 0.5A, IR=1A, IRR=250mA)			250		ns

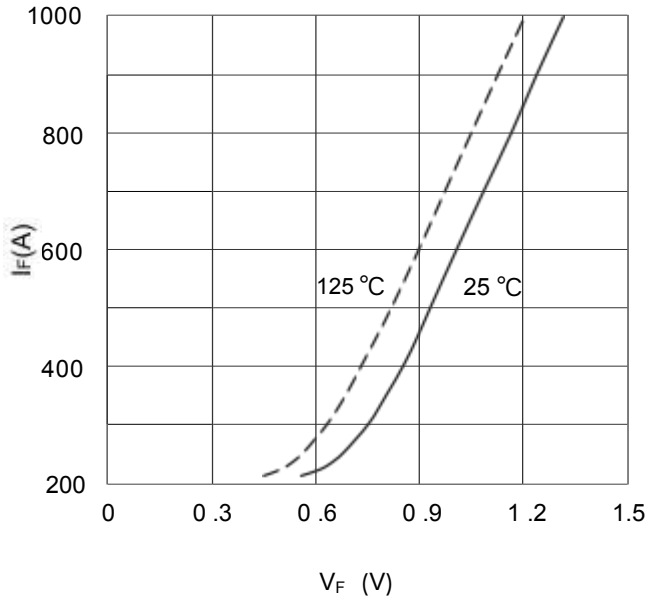


Figure 1 . Forward Voltage Drop vs Forward Current

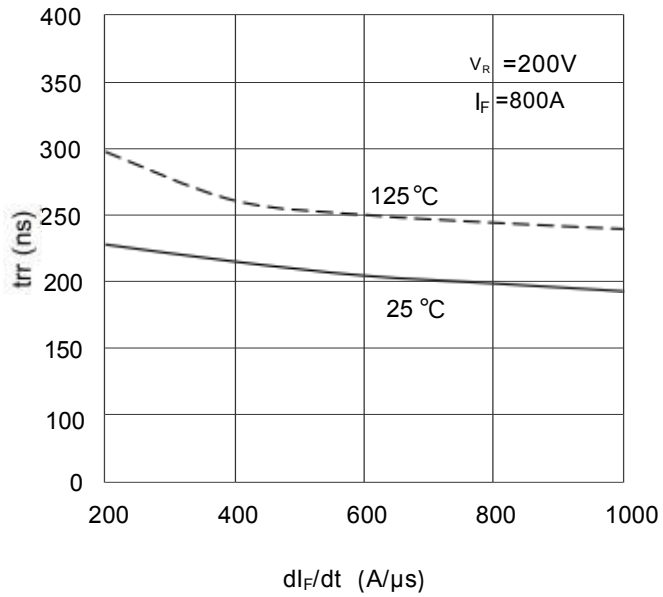


Figure 2 . Reverse Recovery Time vs dI_F/dt

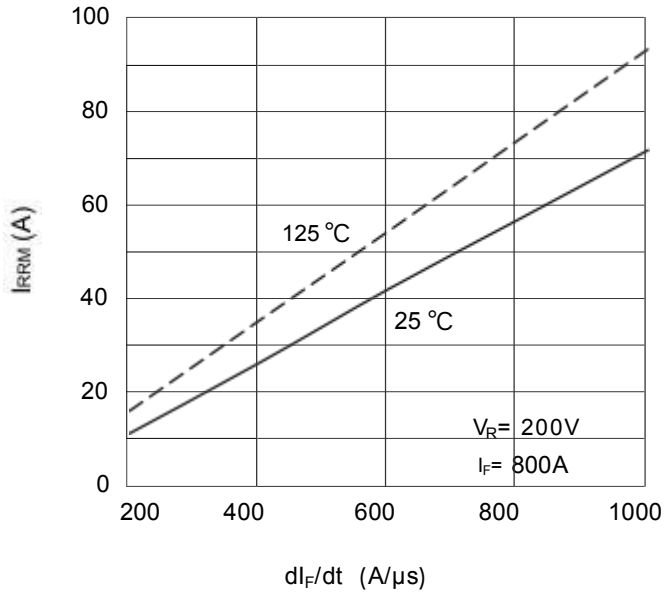


Figure 3 . Reverse Recovery Current vs dI_F/dt

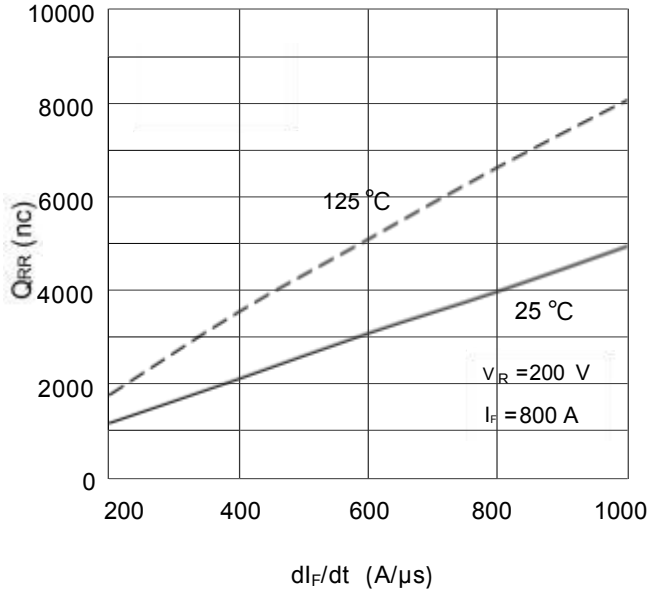


Figure 4 . Reverse Recovery Charge vs dI_F/dt

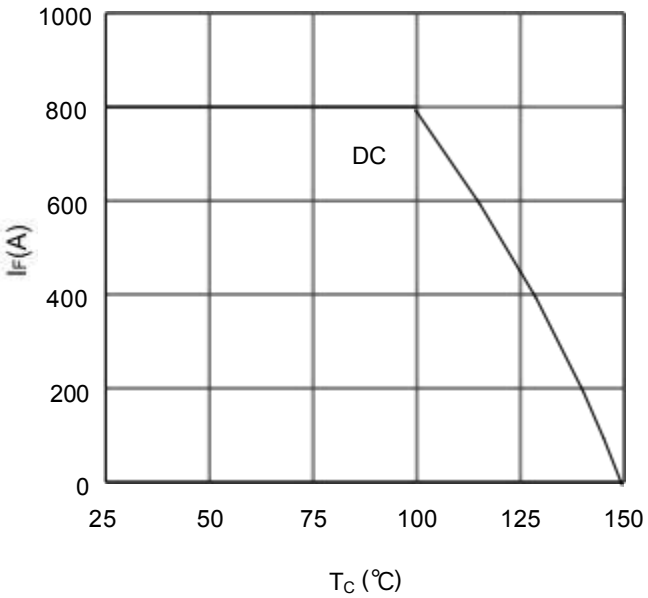


Figure 5 . Forward current vs Case temperature

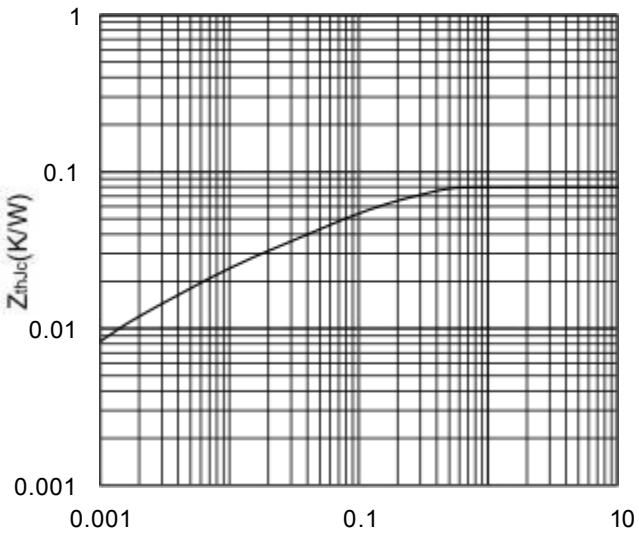


Figure 6 . Transient Thermal Impedance

Package Outline Information

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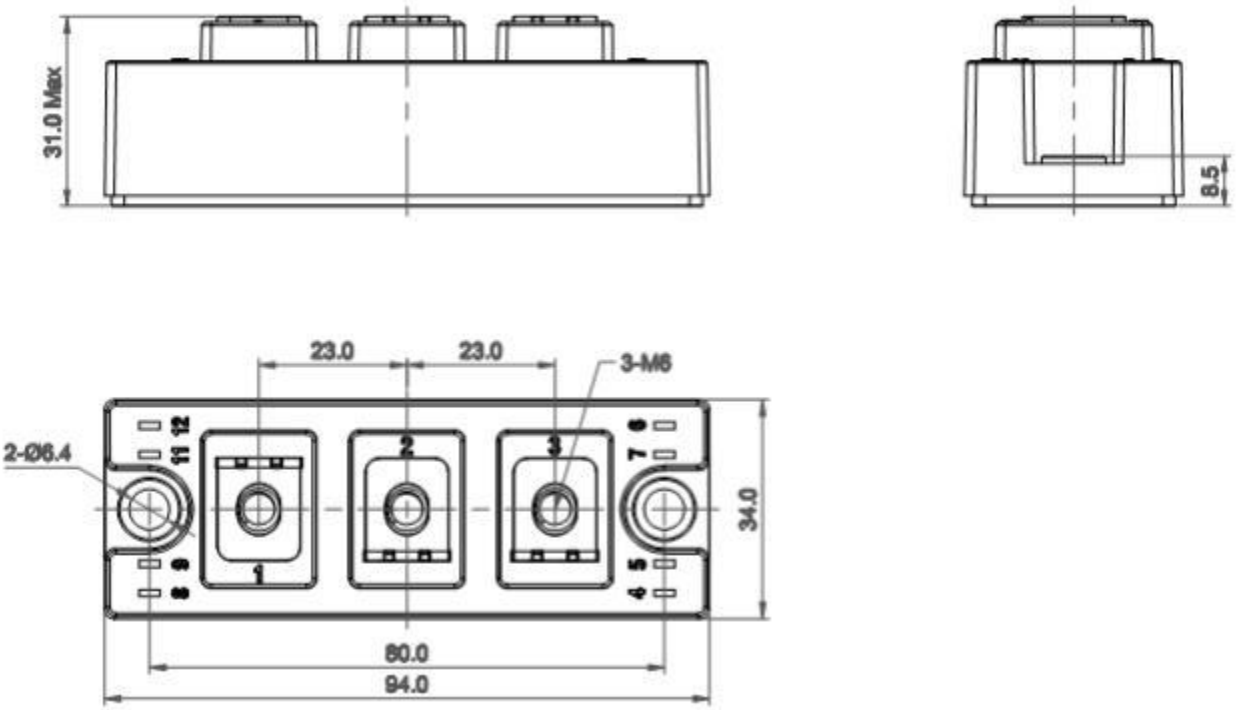

Dimensions in mm

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