MBRH40010

Schottky Diode Module

Reverse Voltage 100V

Forward Current 400 Amp

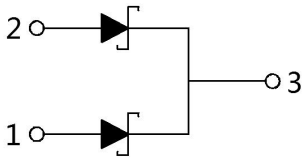
Features

- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package

Applications

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

Circuit



■ Maximum Ratings

Symbol	Item	Conditions	Values	Unit
V_R	Maximum D.C. Reverse Voltage		100	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
I_{FAV}	Average Forward Current	Rectangular， d=0.5， Tc=106℃， Per Leg	200	A
		Rectangular， d=0.5， Tc=106℃， Per Moudle	400	
I_{FSM}	Non-Repetitive Peak Surge Current	T_j = 25℃, t = 50Hz(10ms), V_R = 0V， Per Leg	3300	A
I^2t	Circuit Fusing Consideration	t = 10ms T_j =25℃	54450	A^2s
T_j	Operating Junction Temperature		-40 to +150	℃
T_{stg}	Storage Temperature		-40 to +125	℃
M_t	Mounting Torque	To Terminals(M6)	5±15%	N·m
M_s		To Heatsink(M6)	5±15%	
Weight	Module (Approximately)		65	g

■ Thermal Characteristics

Symbol	Item	Conditions	Values	Unit
$R_{th(j-c)}$	Thermal Impedance, Max	Junction to Case(Per Leg)	0.2	℃/W

■ Electrical Characteristics

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
V_{FM}	Forward Voltage Drop Per Leg, Max	Tj=25℃， I_F=200A	—	—	0.9	V
I_{RRM}	Repetitive Peak Reverse Current Per Leg, Max	T_j = 25℃ V_R = V_{RRM}	—	—	0.2	mA
		T_j = 150℃ V_R = V_{RRM}	—	—	40	
V_{T0}	Threshold Voltage, for power loss calculation only	T_j = 125℃		0.5		V
r_T	Slope Resistance, for power loss calculation only	T_j = 125℃		1.5		mΩ

Performance Curves

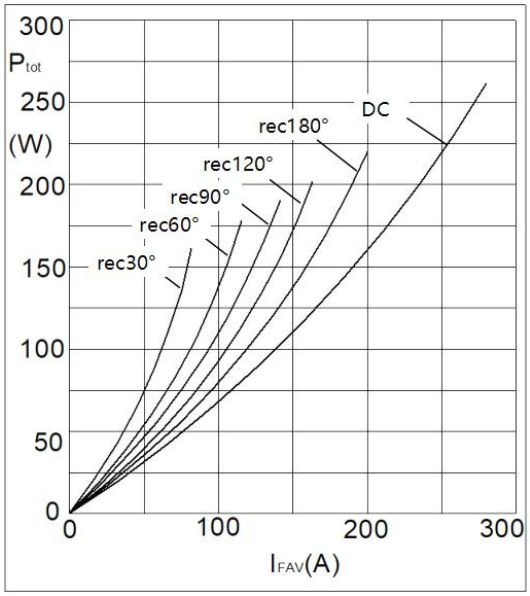


Fig1. Power Dissipation

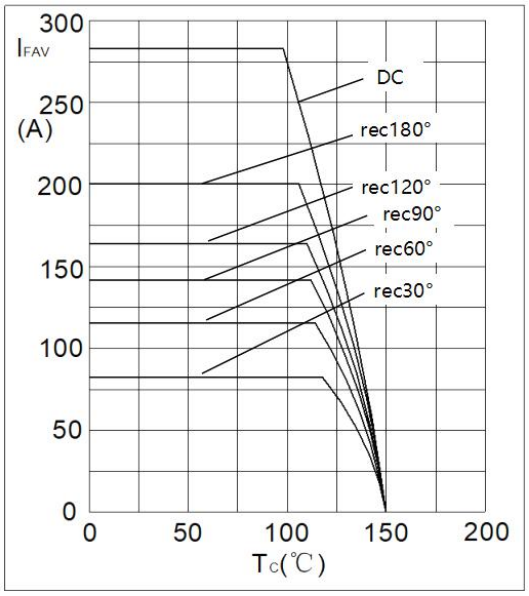


Fig2. Forward Current Derating Curve

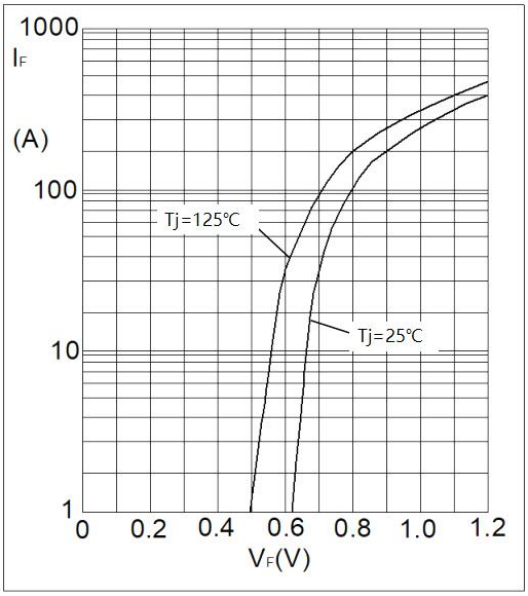


Fig3. Forward Characteristics

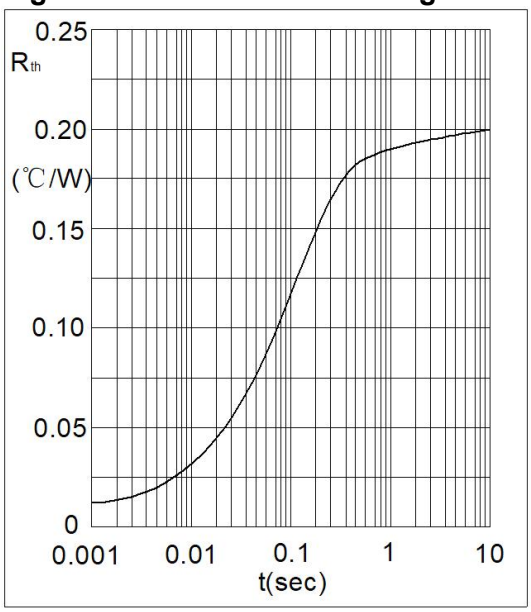


Fig4. Transient Thermal Impedance

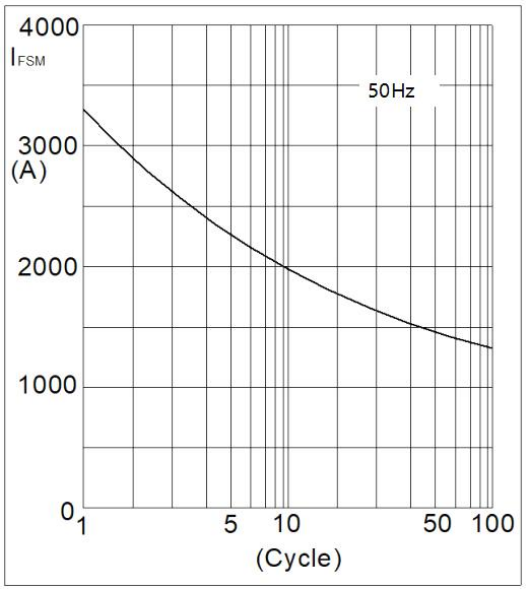


Fig5. Max Non-Repetitive Forward Surge Current

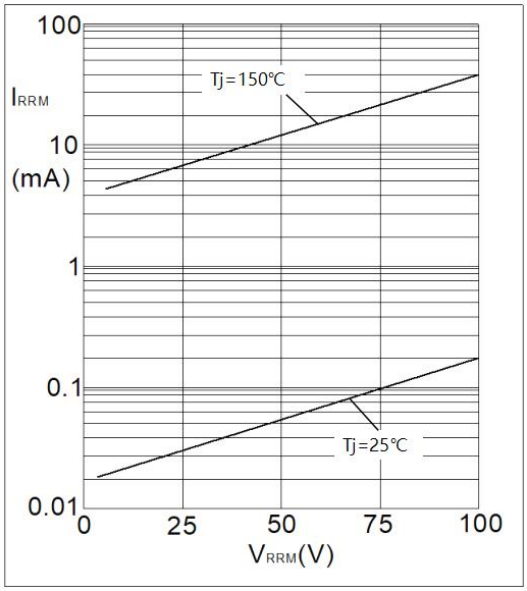
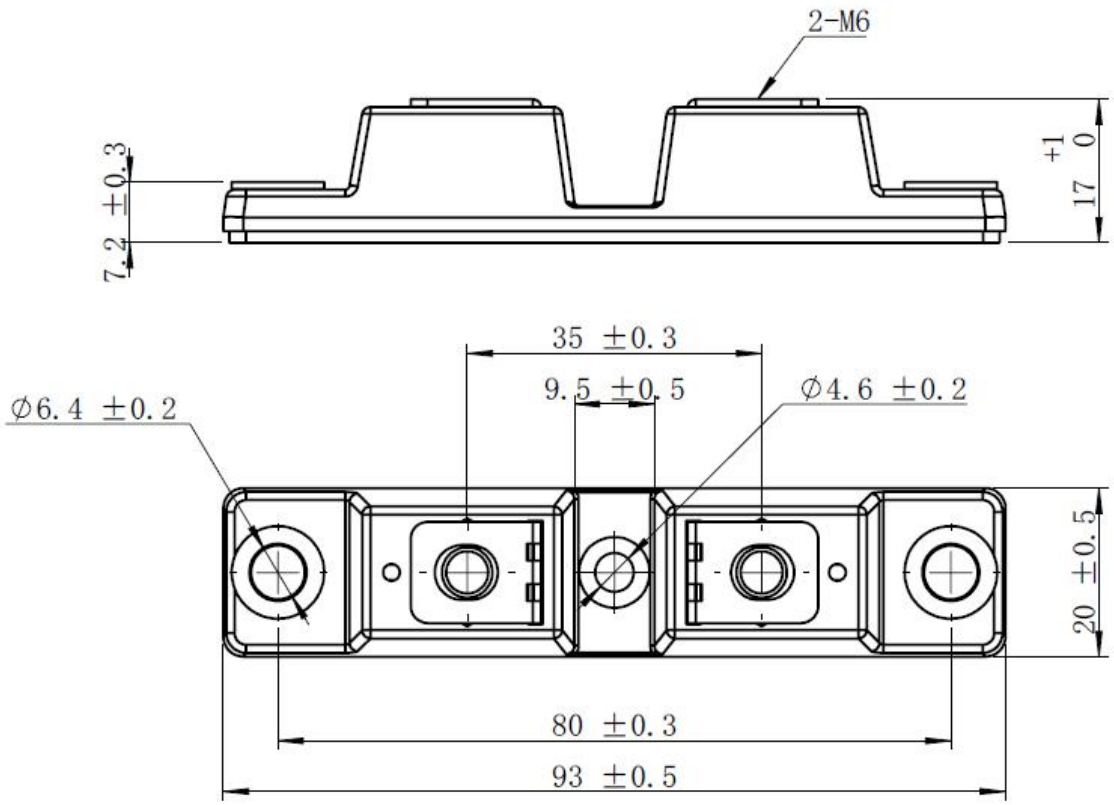


Fig6. Reverse Current VS Reverse Voltage

Package Outline Information

CASE: M31



Dimensions in mm

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