

Schottky Diode Module

Reverse Voltage 100V
Forward Current 200 Amp

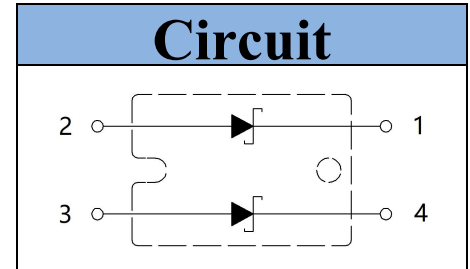


Features

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

Applications

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



■ **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, $d=0.5$, $T_c=106^\circ\text{C}$, Per Leg	100	A
		Rectangular, $d=0.5$, $T_c=106^\circ\text{C}$, Per Module	200	
I_{FSM}	Non-Repetitive Peak Surge Current	$T_j = 25^\circ\text{C}$, $t = 50\text{Hz}(10\text{ms})$, $V_R = 0\text{V}$, Per Leg	1650	A
I^2t	Circuit Fusing Consideration	$t = 10\text{ms}$ $T_j = 25^\circ\text{C}$	13600	A^2s
V_{ISO}	Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	2500	V
T_j	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$
T_{stg}	Storage Temperature		-40 to +125	$^\circ\text{C}$
M_t	Mounting Torque	To Terminals(M4)	0.7~1.1	N·m
M_s		To Heatsink(M4)	0.7~1.1	
Weight	Module (Approximately)		34	g

■ **Thermal Characteristics**

Symbol	Item	Conditions	Values	Unit
$R_{th(j-c)}$	Thermal Impedance, Max	Junction to Case(Per Leg)	0.4	$^\circ\text{C}/\text{W}$
$R_{th(c-s)}$	Thermal Impedance, Max	Case to Heat Sink	0.1	$^\circ\text{C}/\text{W}$

■ **Electrical Characteristics**

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
V_{FM}	Forward Voltage Drop Per Leg, Max	$T_j=25^\circ\text{C}$, $I_F=100\text{A}$	—	—	0.95	V
I_{RRM}	Repetitive Peak Reverse Current Per Leg, Max	$T_j = 25^\circ\text{C}$ $V_R = V_{RRM}$	—	—	0.2	mA
		$T_j = 150^\circ\text{C}$ $V_R = V_{RRM}$	—	—	20	
V_{T0}	Threshold Voltage, for power loss calculation only	$T_j = 125^\circ\text{C}$	0.5			V
r_T	Slope Resistance, for power loss calculation only	$T_j = 125^\circ\text{C}$	3.0			m Ω

Performance Curves

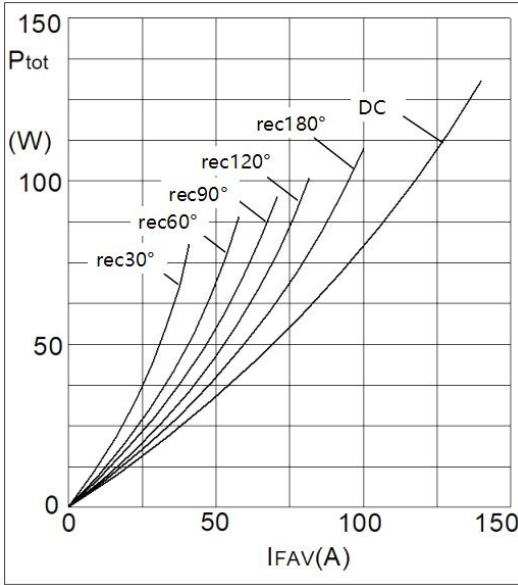


Fig1. Power Dissipation

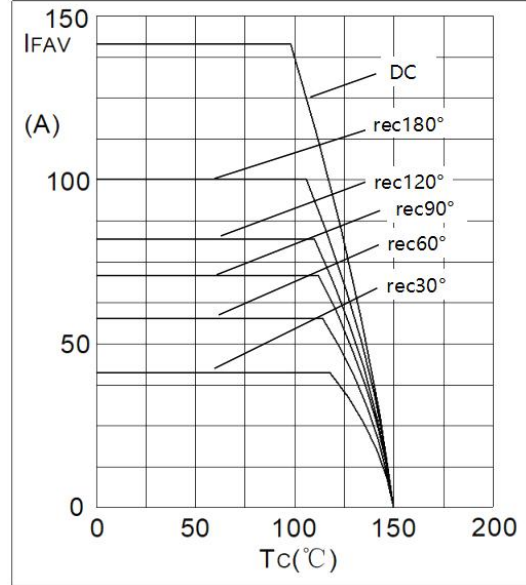


Fig2. Forward Current Derating Curve

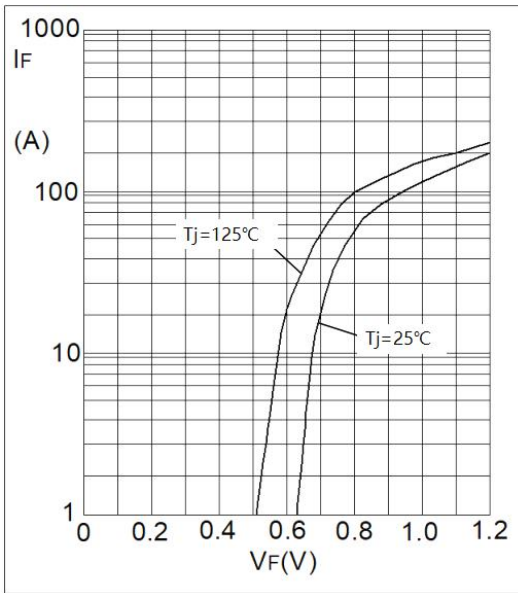


Fig3. Forward Characteristics

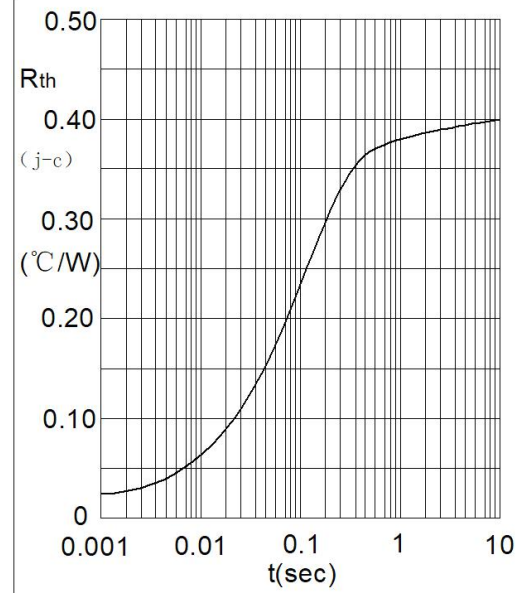


Fig4. Transient Thermal Impedance

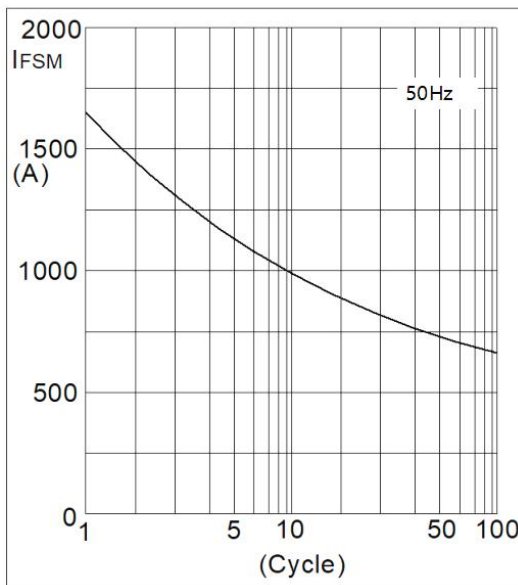


Fig5. Max Non-Repetitive Forward Surge Current

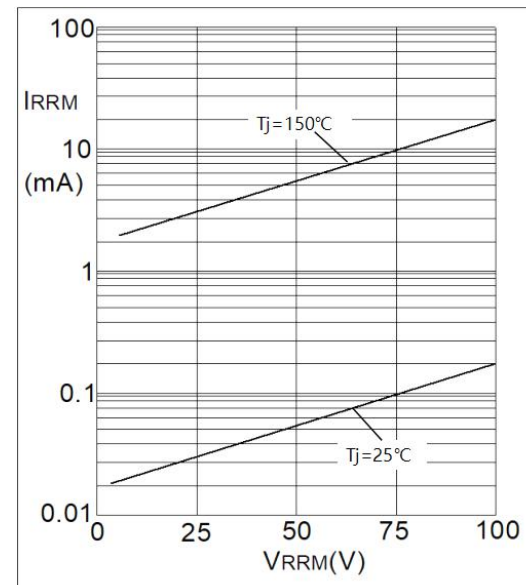
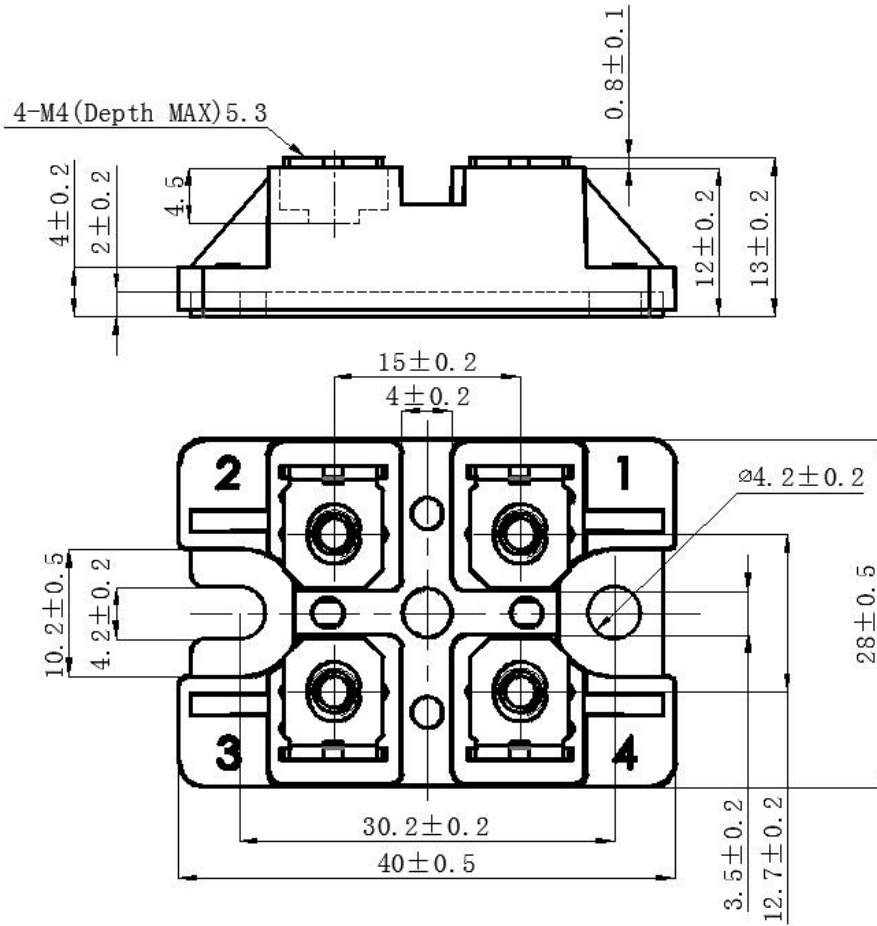


Fig6. Reverse Current VS Reverse Voltage

Package Outline Information

CASE: M58



Dimensions in mm

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