

SiC Schottky Power Modules



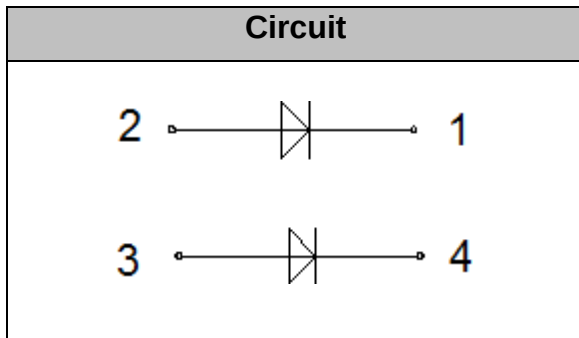
V_{RRM} 650V
I_{FAV} 2×90 A

Applications

- Welding Equipment
- Uninterruptible Power Supply (UPS)
- High Frequency Power Supply
- Induction Heating
- High Speed Rectifiers

Features

- **SiC Schottky Diode:**
 - Zero reverse recovery
 - Zero forward recovery
 - Temperature independent switching behavior
 - Positive temperature coefficient VF
- Very low stray inductance
- High level of integration
- Low Forward Voltage
- Isolated package (SOT-227)
- Low noise switching
- RoHS Compliant



Maximum Ratings

Symbol	Conditions	Values	Units
V _{RRM}		650	V
V _{RSM}		650	V
I _F	T _J =175°C, Per diode	90	A
	T _J =175°C, Per Module	180	A
I _{FSM}	1/2 Cycle , 50Hz, Sine	600	A
T _J		-40 ~ 175	°C
T _{STG}		-40 ~ 150	°C
Torque	To Sink Recommended (M4)	0.6~1.2	N·m
Torque	To Terminal Recommended (M4)	0.6~1.1	N·m
Weight		27	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.34	°C/W
R _{th(c-s)}	Per module	0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
I _{RM}	V _R =650V, T _J =25°C	--	12	100	uA
	V _R =650V, T _J =175°C	--	0.3	1	mA
V _F	I _F =90A, , T _J =25°C	--	1.45	1.65	V
	I _F =90A, , T _J =175°C	--	1.75	2.1	

Performance Curves

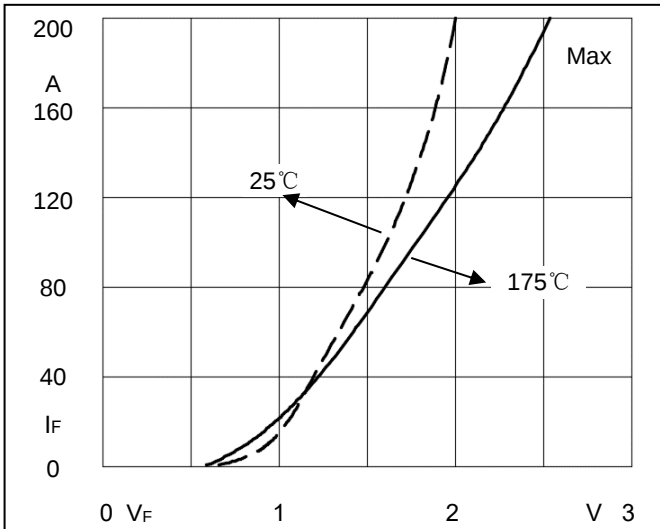


Fig1. Forward Voltage Drop vs Forward Current

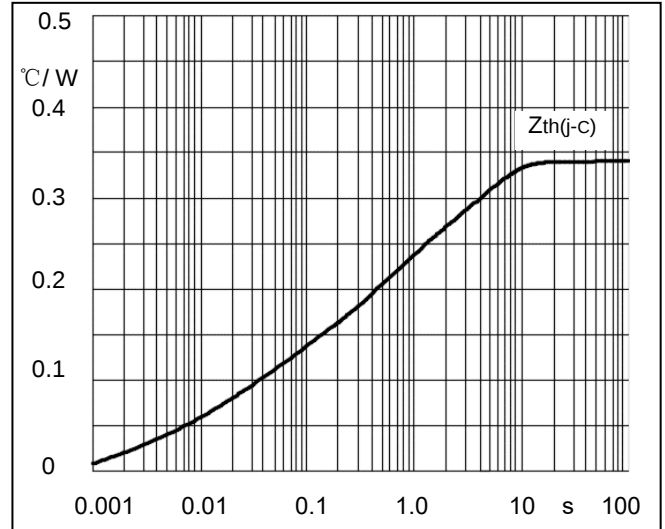


Fig2. Transient thermal impedance

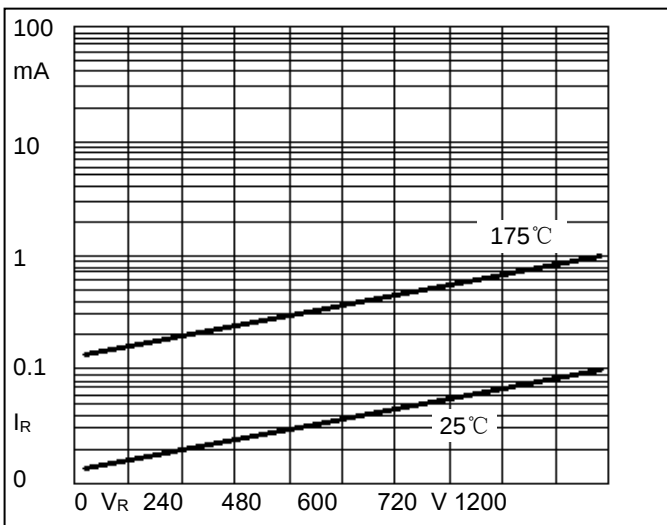


Fig3. Typical Reverse Current

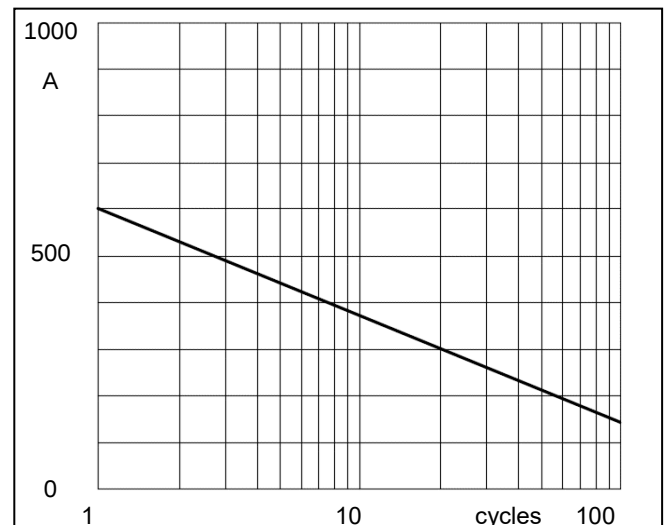
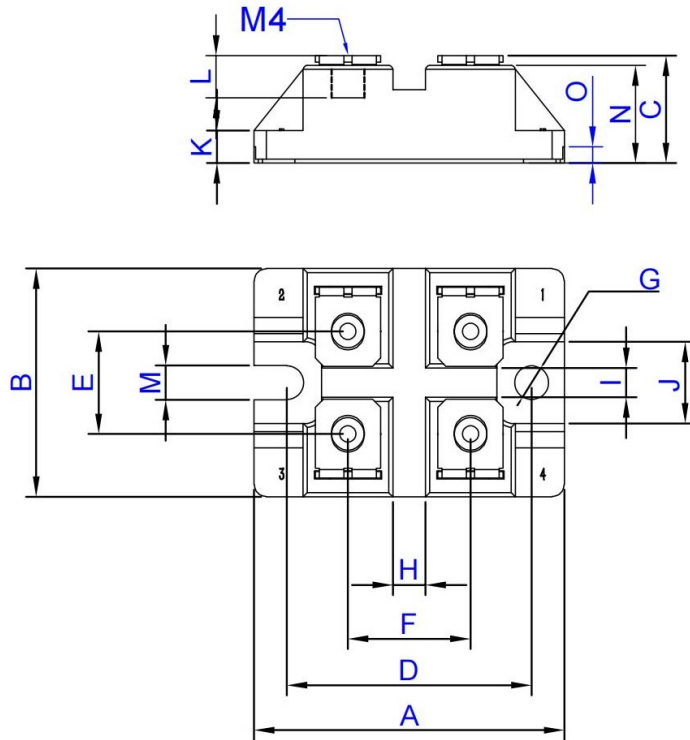


Fig4. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: FJ



DIM	Min (mm)	Max (mm)	Note
A	37.5	38.5	
B	27.5	28.5	
C	12.8	13.5	
D	29.5	30.5	
E	12.1	13.1	
F	14.5	15.5	
G	4.0	4.4	Ø
H	3.7	4.3	
I	3.3	3.9	
J	9.5	10.5	
K	3.7	4.3	
L	5.0	5.5	
M	4.0	4.4	
N	11.7	12.3	
O	1.8	2.2	

Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner EPE	252	246	25	25
Inner Box	290	252	40	25
Outer Carton	300	270	280	150



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