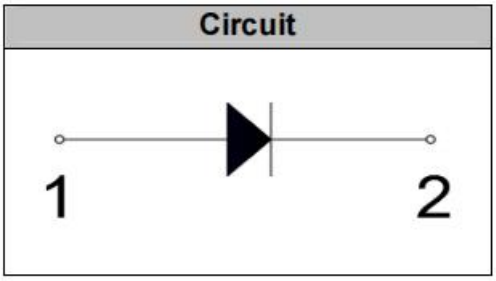


Glass Passivated Rectifier Diode Modules

VRRM 800 to 2000V
IFAV 250 A



Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Features

- Blocking voltage:800 to 2000V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Module Type

TYPE	VRRM	VRSM
MD250U08F6	800V	900V
MD250U12F6	1200V	1300V
MD250U16F6	1600V	1700V
MD250U18F6	1800V	1900V
MD250U20F6	2000V	2100V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Single phase ,half wave 180°conduction Tc=95℃	300	A
I_{FSM}	t=10ms T_J =25℃	7500	A
I^2t	t=10ms T_J=25℃	281200	A^2s
V_{ISO}	AC 50Hz/60Hz; R.M.S; 1min	3000	V
T_J		-40 to +150	℃
Tstg		-40 to +125	℃
Mt	To Terminals(M6)	5±15%	N·m
Ms	To Heatsink(M3)	2±15%	N·m
Weight		130	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Junction to Case(Per Module)	0.15	℃/W
Rth(c-s)	Case to Heat Sink	0.05	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T_J=25℃ I_F =300A	—	1.05	1.25	V
I_{RD}	T_J=150℃ V_R=V_{RRM}	—	—	5	mA
r_F	T_J=125℃		1.1		mΩ
VF0			0.75		V

Performance Curves

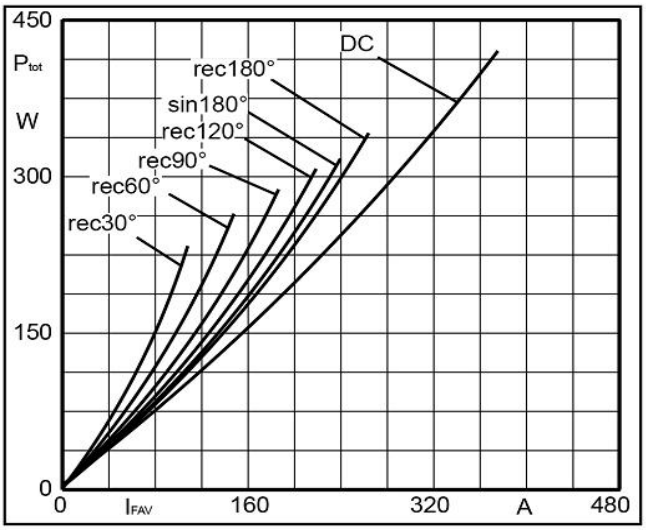


Fig1. Power dissipation

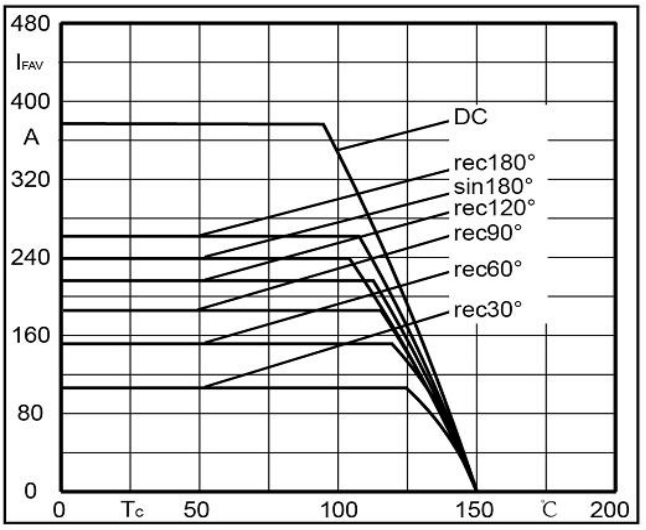


Fig2.Forward Current Derating Curve

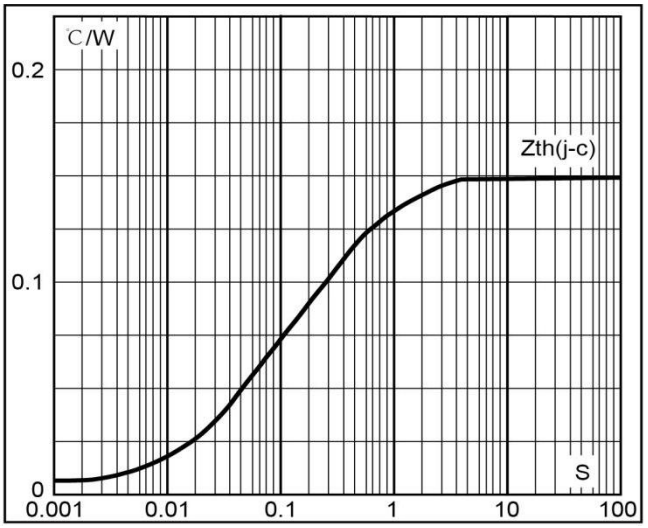


Fig3. Transient thermal impedance

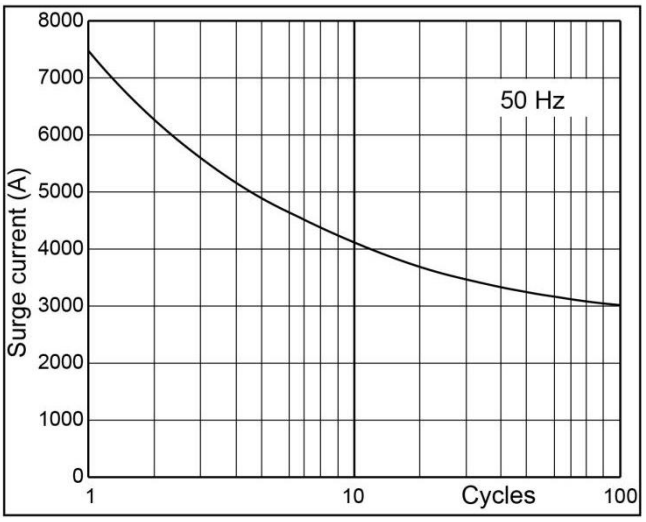


Fig4. Max Non-Repetitive Forward Surge Current

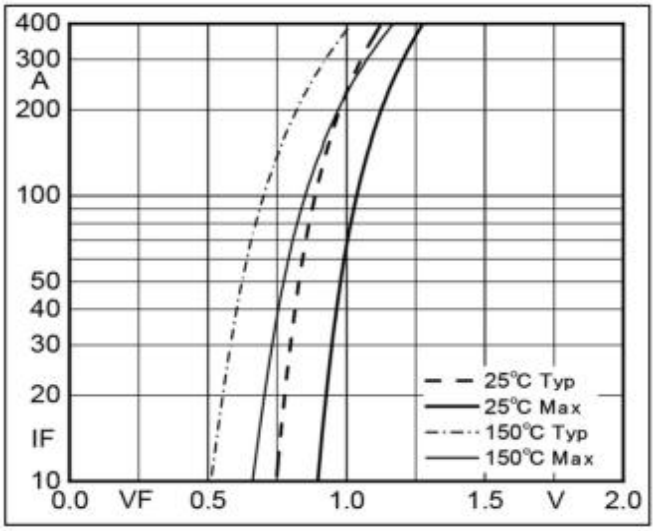
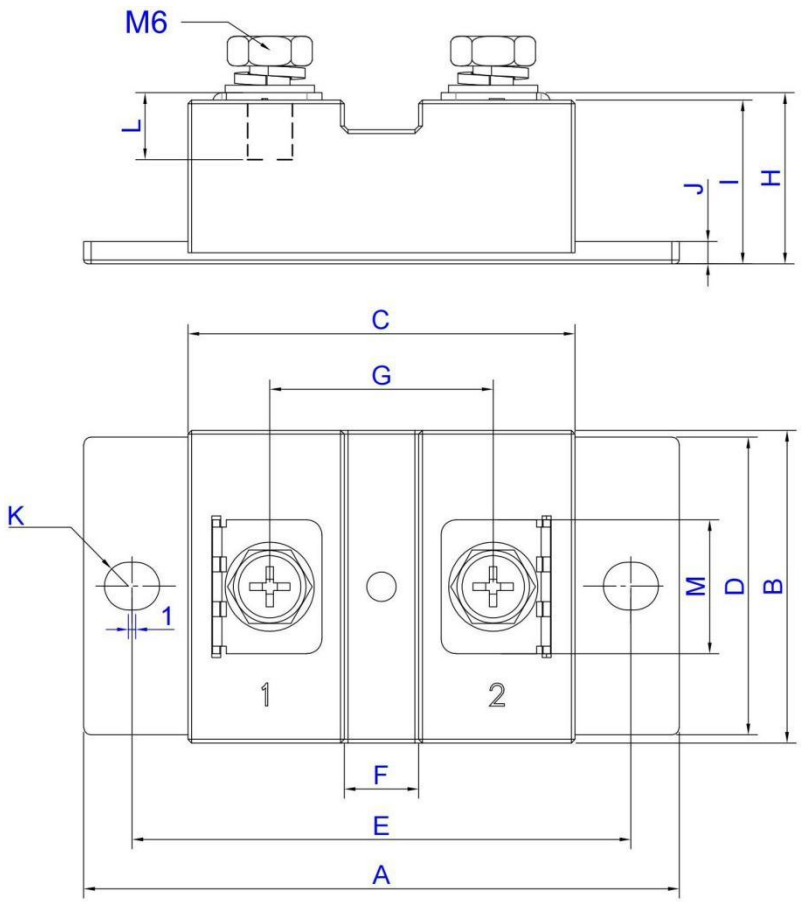


Fig5. Forward Characteristics

Package Outline Information

CASE: F6



DIM	Min (mm)	Max (mm)	Note
A	79.5	80.5	
B	41.5	42.5	
C	51.5	52.5	
D	39.5	40.5	
E	66.5	67.5	
F	9.5	10.5	
G	29.5	30.5	
H	22.5	23.5	
I	21.5	22.5	
J	2.5	3.5	
K	2.7	3.7	Ø
L	9	9.5	
M	17.9	18.1	

Packing Standard

Item	Length: A(mm)	Width: B(mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	48	8
Outer Carton	545	295	240	80

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