



Glass Passivated Rectifier Diode Modules

V_{RRM} 800 to 1800V
I_{FAV} 250 A

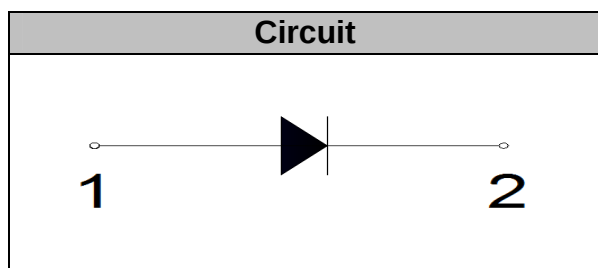
Applications

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

Features

- Blocking voltage: 800 to 1800V
- Heat transfer through aluminum oxide ceramic isolated metal baseplate
- Glass passivated chip

Circuit



Module Type

TYPE	V _{RRM}	V _{RSM}
MD250U08F6	800V	900V
MD250U12F6	1200V	1300V
MD250U16F6	1600V	1700V
MD250U18F6	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	Single phase ,half wave 180° conduction T _c =95°C	250	A
I _{FSM}	t=10mS T _{vj} =45°C	6500	A
i ² t	t=10mS T _{vj} =45°C	211250	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T _{vj}		-40 to 150	°C
T _{stg}		-40 to 125	°C
M _t	To terminals(M6)	5±15%	Nm
M _s	To heat sink(M6)	5±15%	Nm
Weight	Module (Approximately)	130	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per Module	0.2	°C/W
R _{th(c-s)}	Module	0.05	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C I _F =250A	—	1.03	1.13	V
I _{RD}	T _{vj} =150°C V _{RD} =V _{RRM}	—	—	10	mA
r _F	T _J =25°C		0.83		mΩ
V _{FO}			0.82		V

Performance Curves

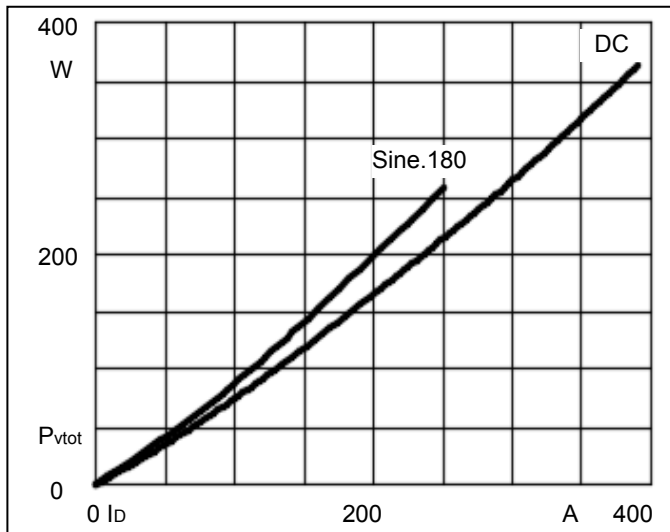


Fig1. Power dissipation

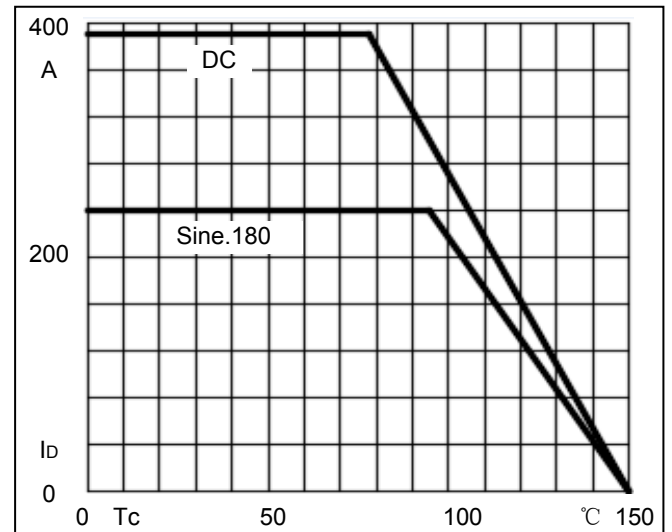


Fig2. Forward Current Derating Curve

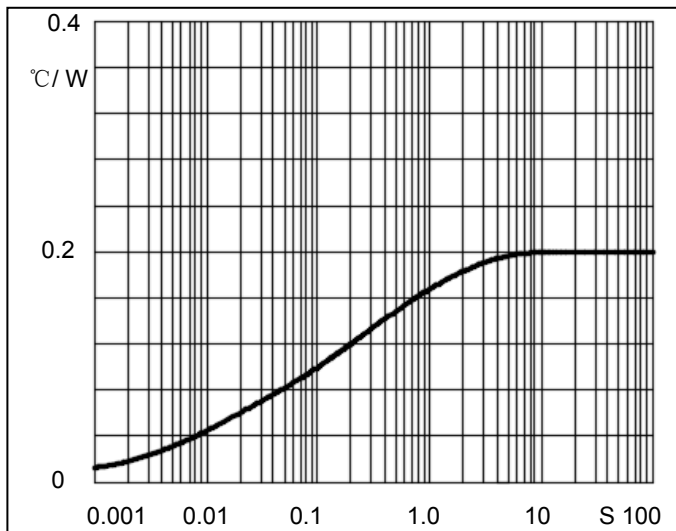


Fig3. Transient thermal impedance

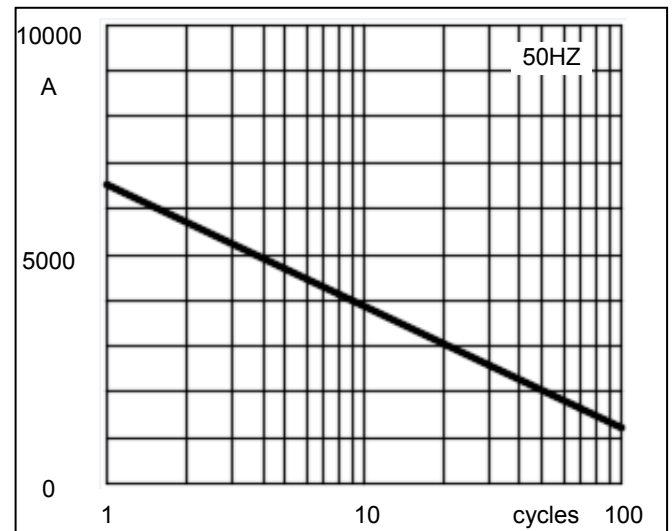


Fig4. Max Non-Repetitive Forward Surge Current

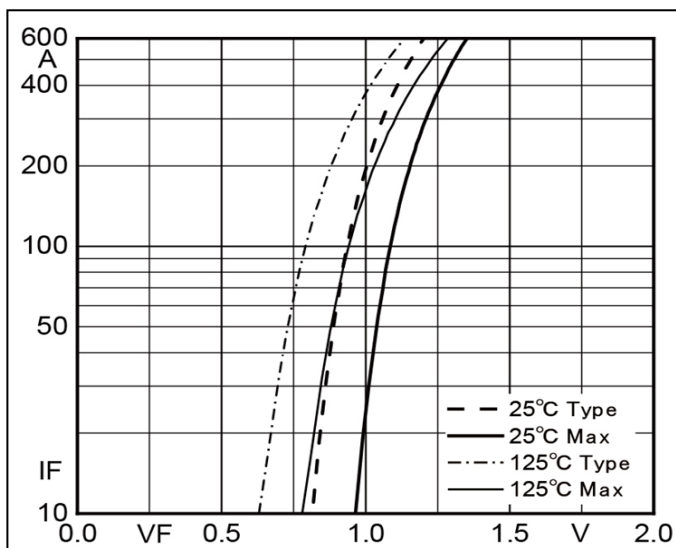
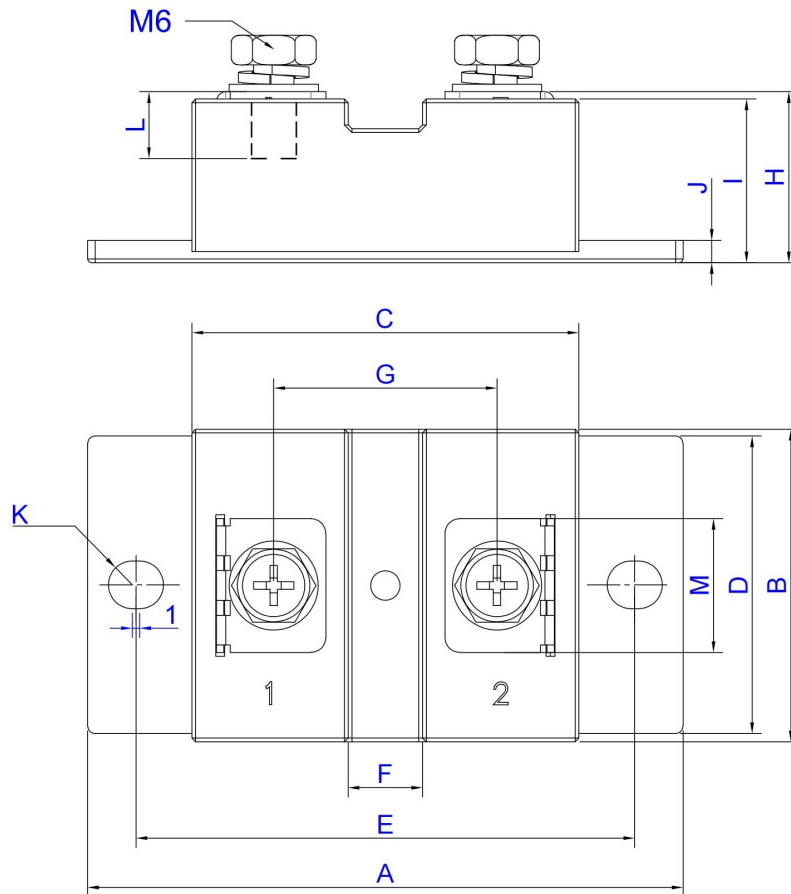


Fig5. Forward Characteristics

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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