



Glass Passivated Rectifier Diode Modules

VRRM 800 to 1800V

IFAV 100 A

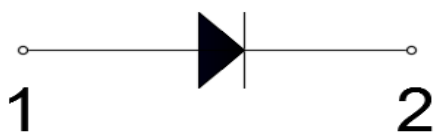
Applications

- 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 DBC ceramic isolated metal baseplate
- Glass passivated chip

Circuit



Module Type

TYPE	VRRM	VRRM
MD100U08D1	800V	900V
MD100U12D1	1200V	1300V
MD100U16D1	1600V	1700V
MD100U18D1	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=109℃	100	A
IFSM	t=10mS Tvj =45℃	2500	A
i ² t	t=10mS Tvj =45℃	31250	A ² s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	℃
Tstg		-40 to +125	℃
Mt	To terminals(M5)	3±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	100	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.35	℃/W
Rth(c-s)	Module	0.1	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25℃ IF =300A	—	1.20	1.40	V
IRD	Tvj=150℃ VRD=VRRM	—	—	5	mA



Performance Curves

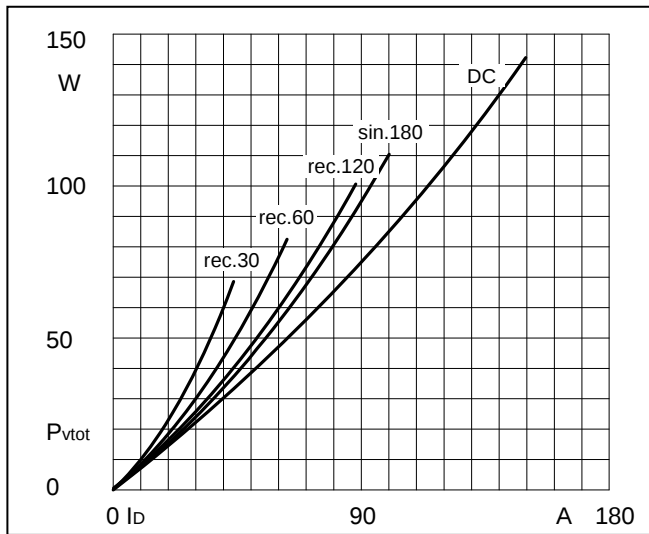


Fig1. Power dissipation

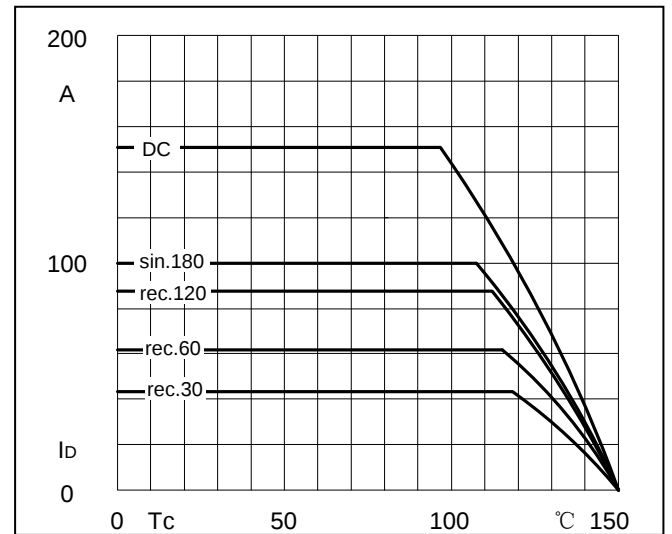


Fig2. Forward Current Derating Curve

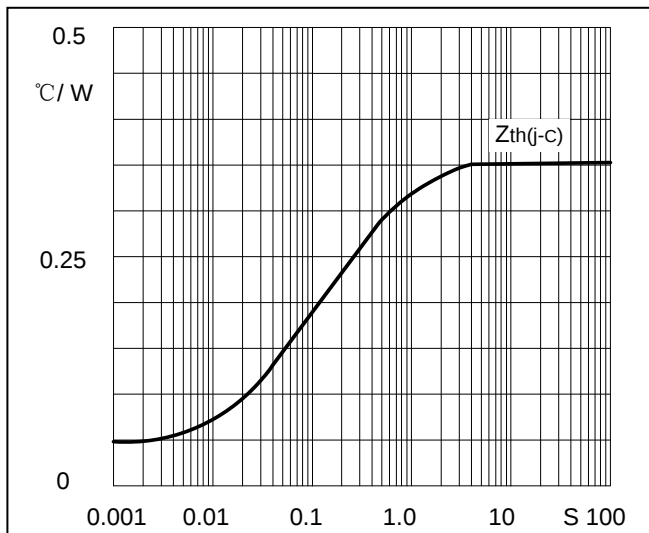


Fig3. Transient thermal impedance

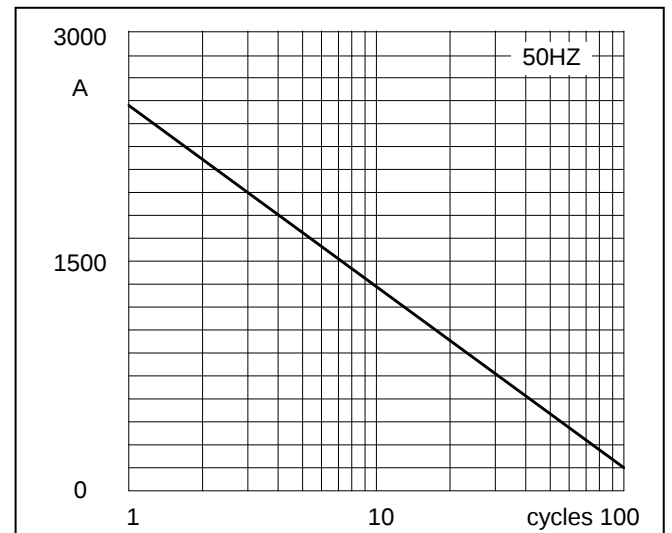


Fig4. Max Non-Repetitive Forward Surge Current

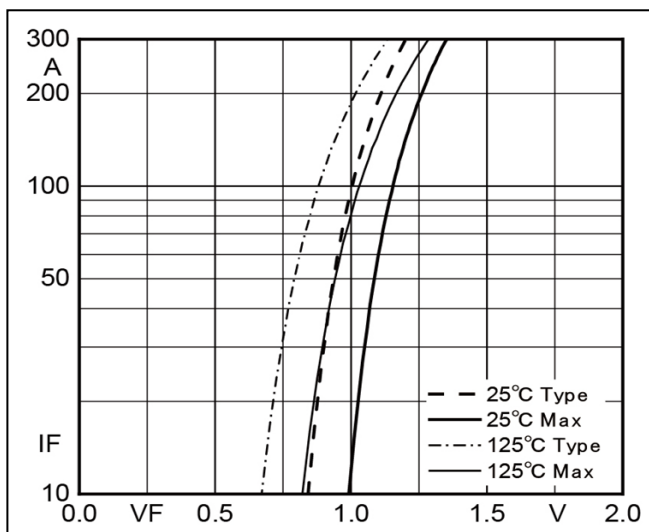
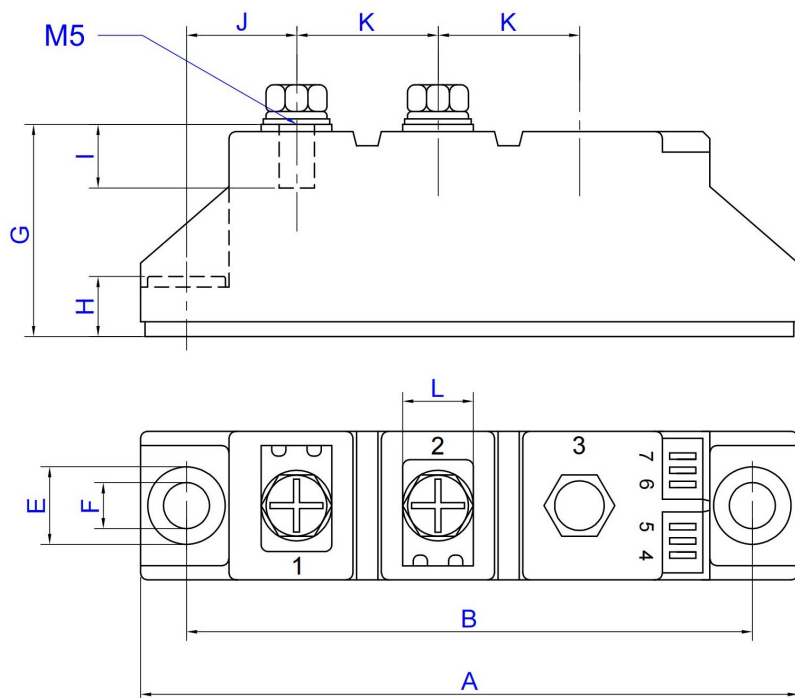


Fig5. Forward Characteristics



Package Outline Information

CASE: D1A



DIM	Min (mm)	Max (mm)	Note
A	92.5	93.5	
B	79.5	80.5	
C	16.5	17.5	
D	20.5	21.5	
E	10.7	11.3	Ø
F	6.2	6.8	Ø
G	29.5	30.5	
H	8	9	
I	8.5	9.5	
J	15	15.5	
K	19.7	20.3	
L	9.8	10.2	

Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	40	10
Outer Carton	545	295	240	120



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