

Glass Passivated Three Phase Rectifier Bridge

V_{RRM} 2000V
I_D 100 A

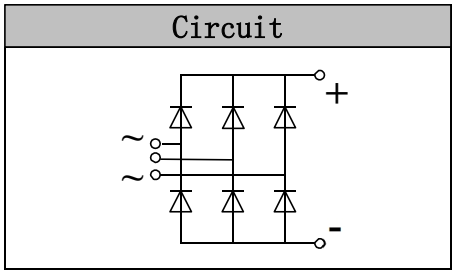
Applications

- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers
- Input rectifiers for variable frequency drives

Features

- Three phase bridge rectifier
- Blocking voltage:2000V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL recognized applied for file no. E230084

Circuit



Module Type

TYPE	V_{RRM}	V_{RSM}
MD100S20M2	2000V	2100V

Maximum Ratings

Symbol	Conditions	Values	Units
I_D	Three phase, full wave Tc=100℃	100	A
I_{FSM}	t=10mS Tvj =45℃	1000	A
i^2t	t=10mS Tvj =45℃	5000	A^2s
V_{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}		-40 to +150	℃
T_{stg}		-40 to +125	℃
Mt	To terminals(M5)	3±15%	Nm
Ms	To heatsink(M5)	3±15%	Nm
Weight	Module (Approximately)	130	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.6	℃/W
Rth(c-s)	Module (Approximately)	0.07	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25℃ I_F =150A	—	1.35	1.55	V
I_{RD}	T_{vj}=25℃ V_{RD}=V_{RRM} T_{vj}=150℃ V_{RD}=V_{RRM}	—	—		mA mA

Performance Curves

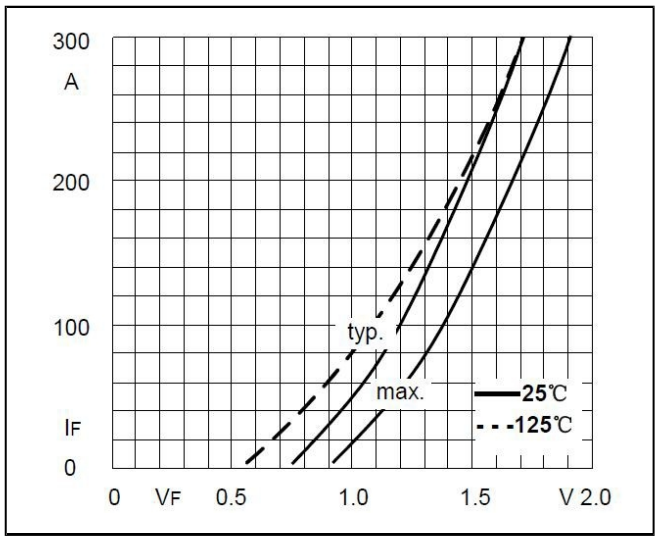


Fig1. Forward Characteristics

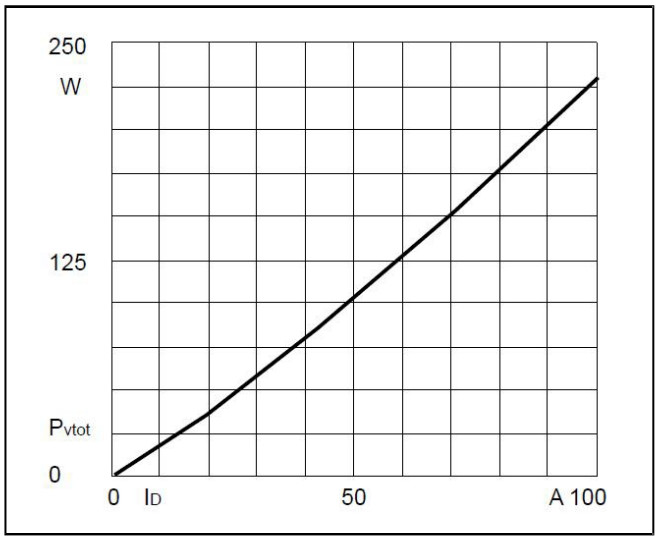


Fig2. Power dissipation

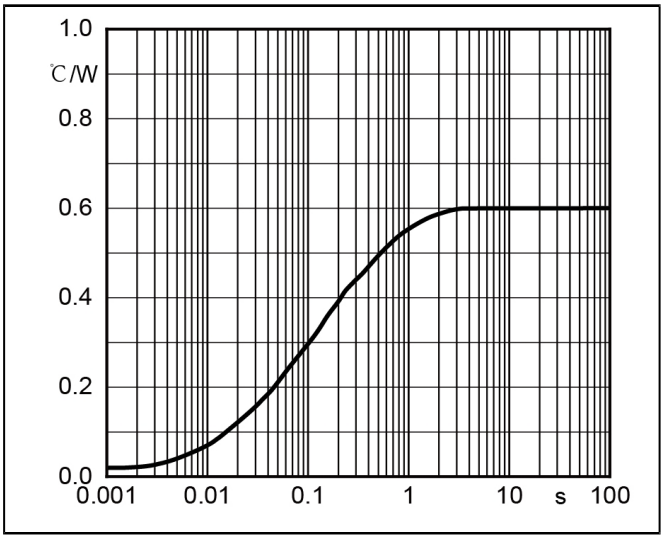


Fig3. Transient thermal impedance

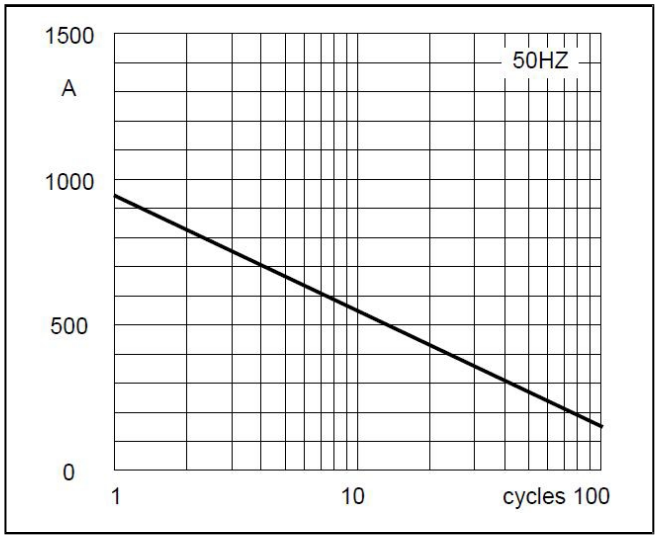


Fig4. Max Non-Repetitive Forward Surge Current

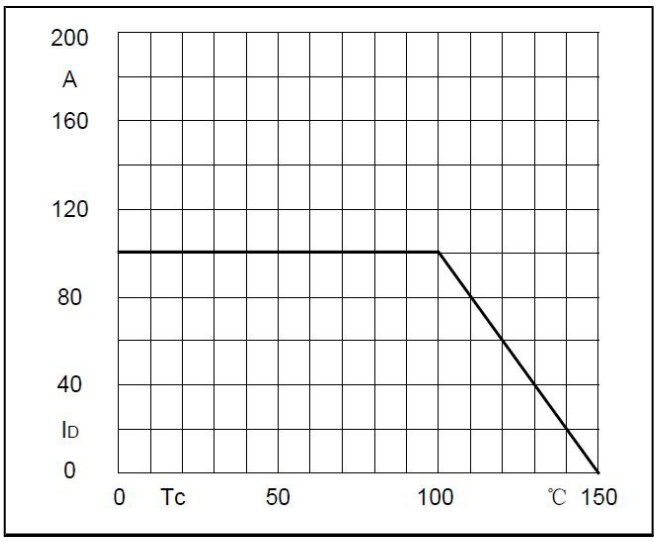
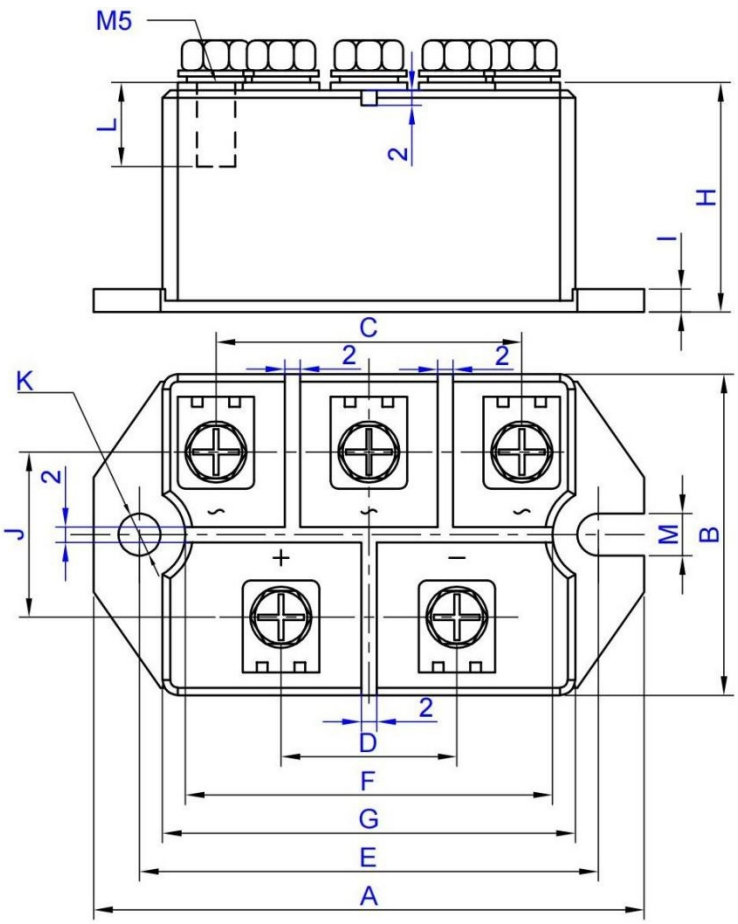


Fig5.Forward Current Derating Curve

Package Outline Information

CASE:M2



DIM	Min (mm)	Max (mm)	Note
A	71.5	72.5	
B	41.5	42.5	
C	39.5	40.5	
D	22.7	23.3	
E	59.5	60.5	
F	47.5	48.5	
G	53.5	54.5	
H	29.5	30.5	
I	2.9	3.1	
J	21.3	21.9	
K	5.4	5.6	Ø
L	10	11	
M	5.2	5.8	

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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