



Glass Passivated Three Phase Rectifier Bridge

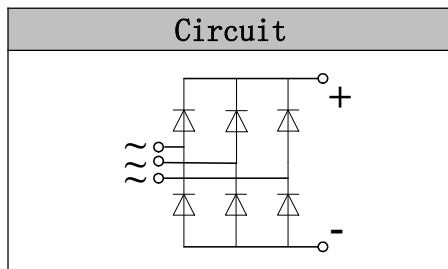
V_{RRM} 1800-2000V
I_D 100 A

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: 1800-2000V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip



Module Type

TYPE	V _{RRM}	V _{RSM}
MD100S18M2	1800V	1900V
MD100S20M2	2000V	2100V

Maximum Ratings

Symbol	Conditions	Values	Units
I _D	Three phase, full wave T _c =100°C	100	A
I _{FSM}	t=10mS T _{vj} =45°C	750	A
i ² t	t=10mS T _{vj} =45°C	2800	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
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
R _{th(j-c)}	Per diode	1.0	°C/W
R _{th(c-s)}	Module (Approximately)	0.07	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C I _F =150A	—	1.38	1.60	V
I _{RD}	T _{vj} =25°C V _{RD} =V _{RRM} T _{vj} =150°C V _{RD} =V _{RRM}	—	—	0.3 5	mA mA

Performance Curves

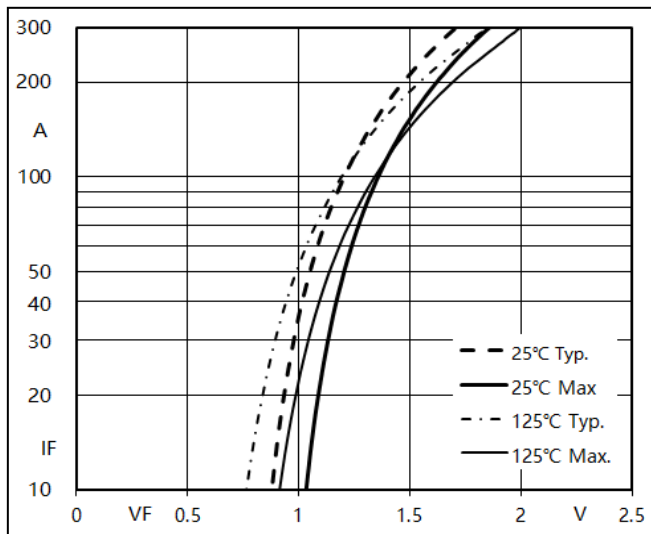


Fig1. Forward Characteristics

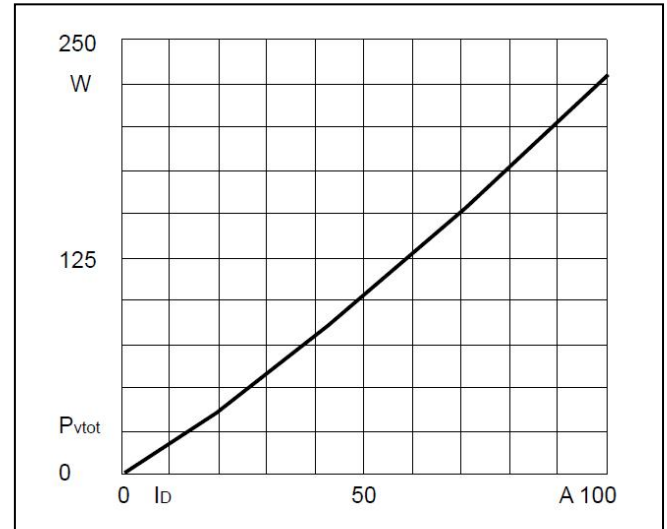


Fig2. Power dissipation

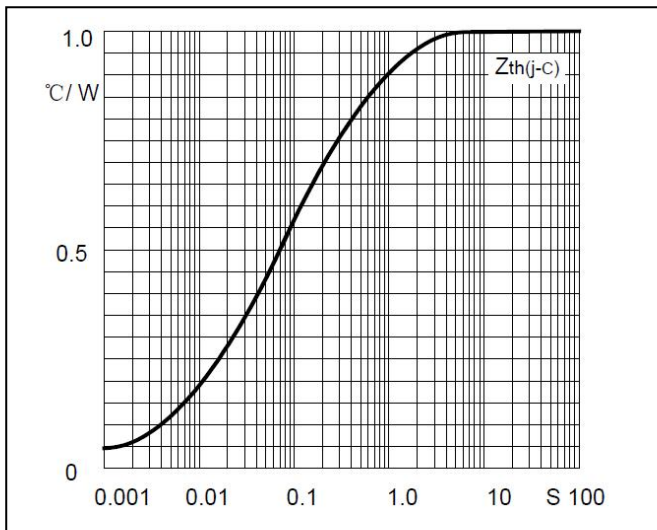


Fig3. Transient thermal impedance

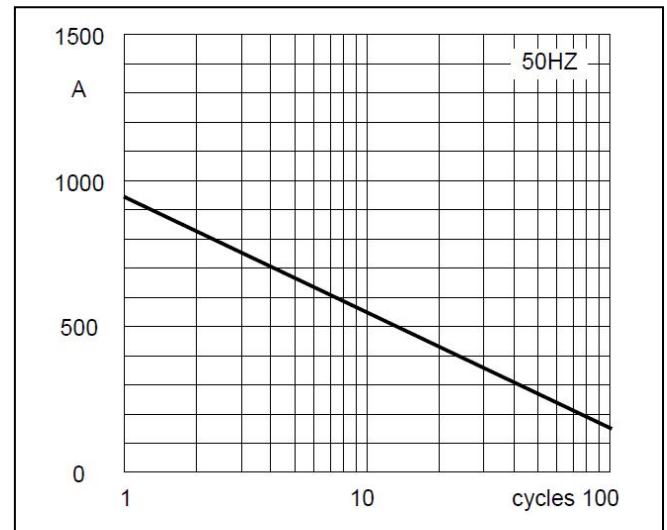


Fig4. Max Non-Repetitive Forward Surge Current

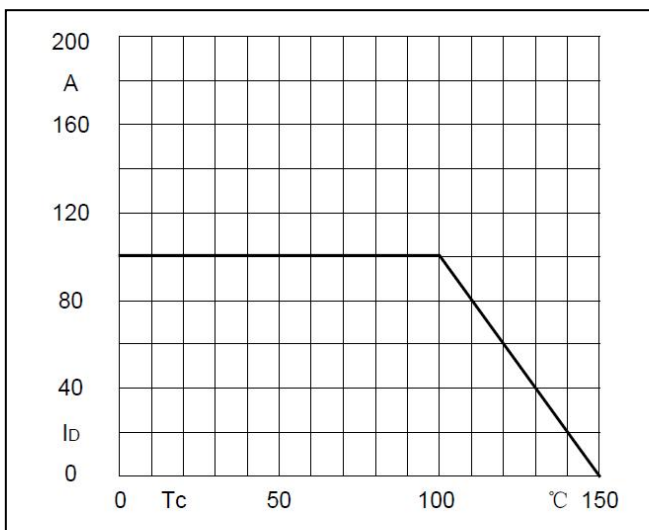
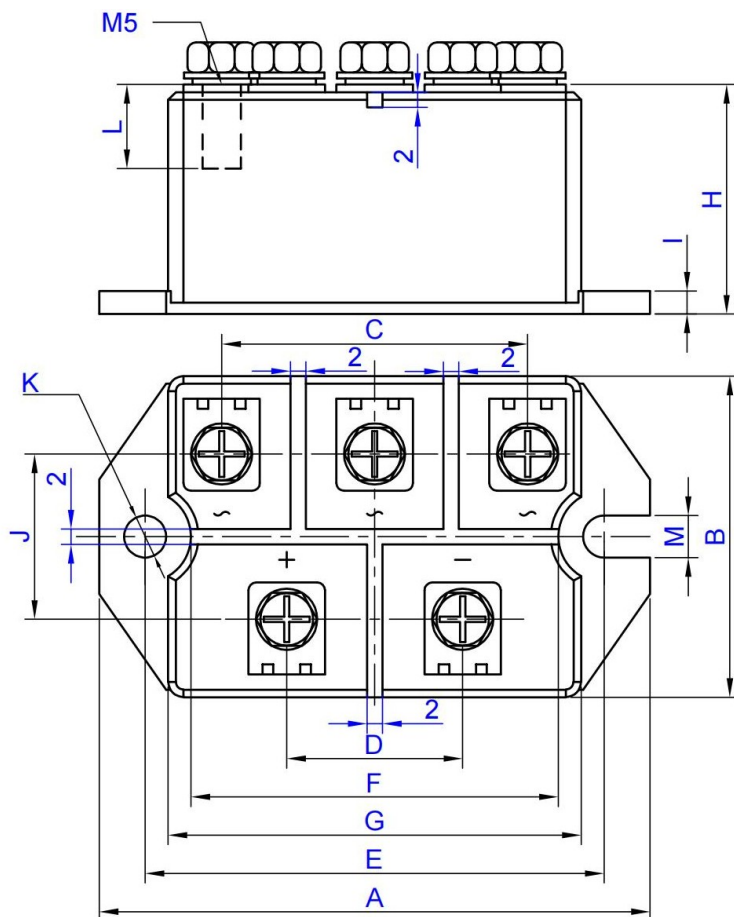


Fig5. Forward Current Derating Curve

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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