

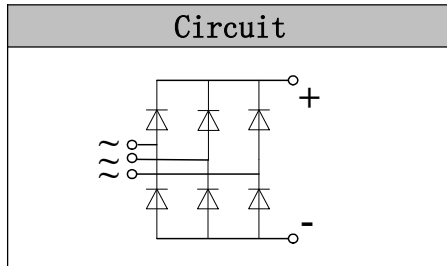


Glass Passivated Three Phase Rectifier Bridge

V_{RRM} 800 to 1800V
ID 200 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: 800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Module Type

TYPE	V _{RRM}	V _{RSM}
MD200S08M9	800V	900V
MD200S12M9	1200V	1300V
MD200S16M9	1600V	1700V
MD200S18M9	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave T _c =100°C	200	A
I _{FSM}	t=10ms T _{vj} =45°C	2600	A
i ² t	t=10ms T _{vj} =45°C	33800	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(M5)	2.5~3.5	Nm
M _s	To heatsink(M5)	2.5~3.5	Nm
Weight	Module (Approximately)	330	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per Module	0.11	°C/W
R _{th(j-c)}	Per Diode	0.66	°C/W
R _{th(c-s)}	Module	0.03	°C/W



Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	$T=25^{\circ}C$ $I_F=200A$	—	1.2	1.4	V
r_f	$T_J=150^{\circ}C$		1.96		mΩ
V_{fO}	$T_J=150^{\circ}C$		0.74		V
I_{RD}	$T_{vj}=25^{\circ}C$ $V_{RD}=V_{RRM}$	—	—	0.1	mA
	$T_{vj}=150^{\circ}C$ $V_{RD}=V_{RRM}$			2	mA

Performance Curves

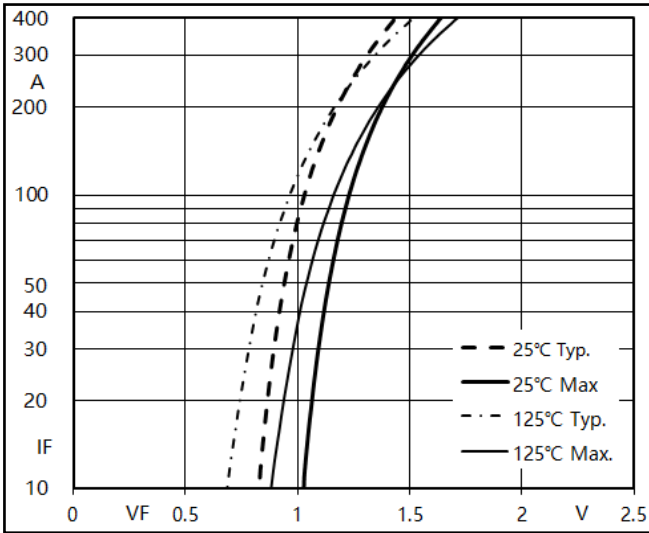


Fig1. Forward Characteristics

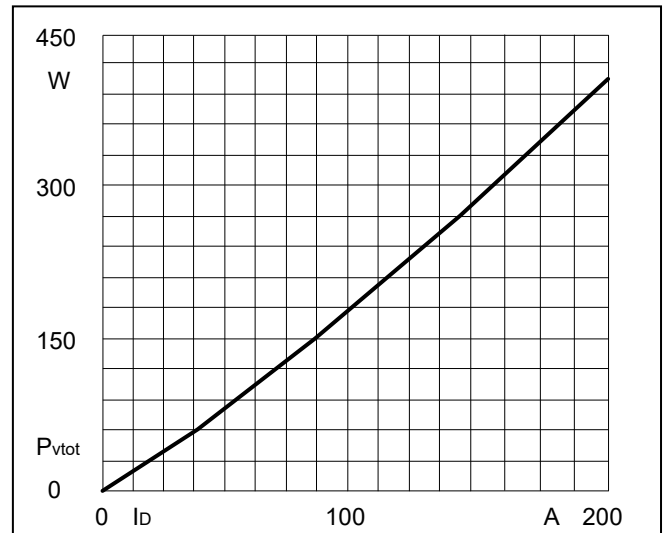


Fig2. Power dissipation

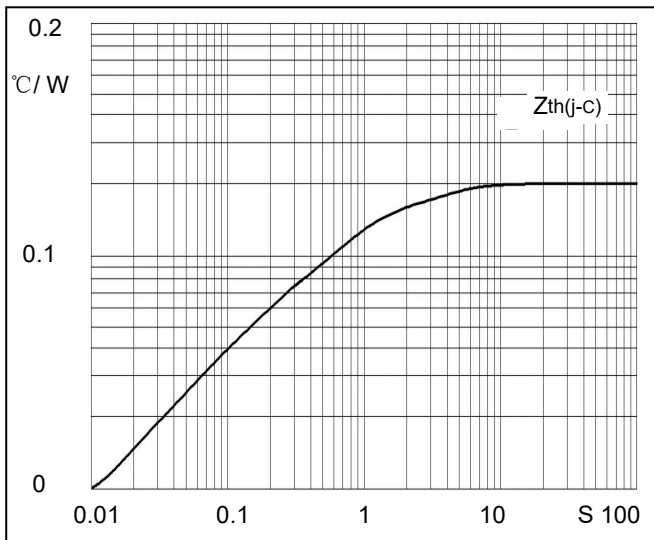


Fig3. Transient thermal impedance

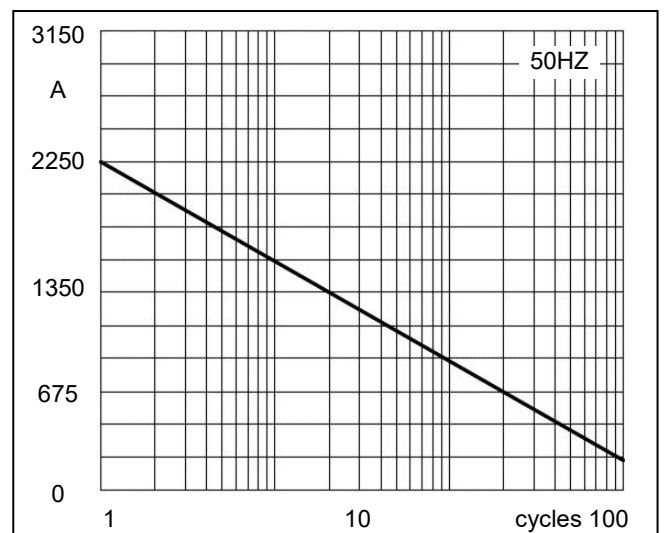


Fig4. Max Non-Repetitive Forward Surge Current

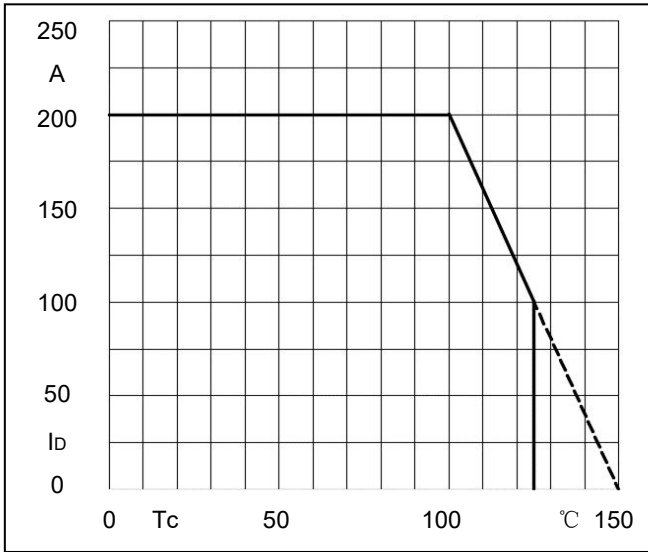
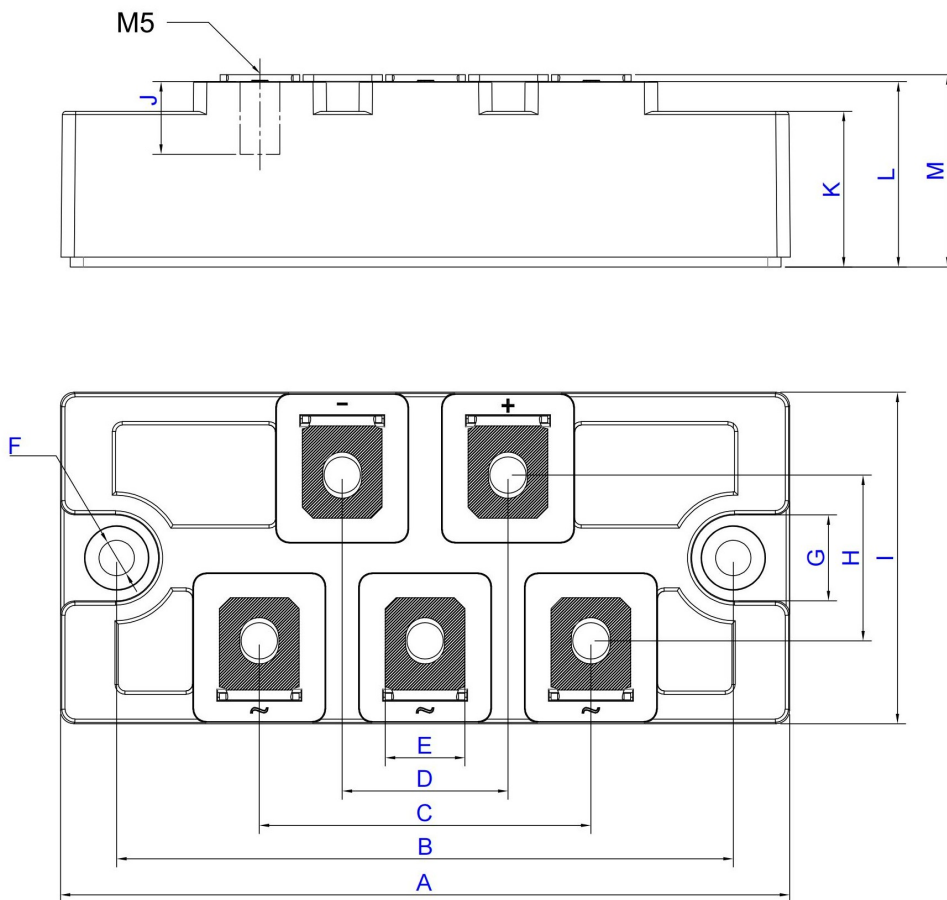


Fig5. Forward Current Derating Curve

Package Outline Information

CASE: M9



DIM	Min (mm)	Max (mm)	Note
A	109.5	110.5	
B	92.5	93.5	
C	49.5	50.5	
D	24.5	25.5	
E	11.5	12.5	
F	5.1	5.7	∅
G	12.5	13.5	
H	24.5	25.5	
I	49.5	50.5	
J	10.5	11.5	
K	23	24	
L	27.5	28.5	
M	28.5	29.5	



Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	48	4
Outer Carton	545	295	240	40

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