

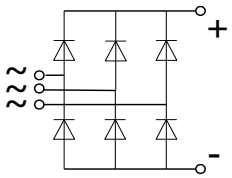
Glass Passivated Three Phase Rectifier Bridge

V_{RRM} 800 to 1800V
I_D 150 A

Applications

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

Circuit



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}
MD150S08M9	800V	900V
MD150S12M9	1200V	1300V
MD150S16M9	1600V	1700V
MD150S18M9	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_D	Three phase, full wave Tc=100℃	150	A
I_{FSM}	t=10mS Tvj =45℃	2250	A
i^2t	t=10mS Tvj =45℃	25310	A^2s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	℃
Tstg		-40 to +125	℃
Mt	To terminals(M5)	2.5~3.5	Nm
Ms	To heatsink(M5)	2.5~3.5	Nm
Weight	Module (Approximately)	330	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per Module	0.11	℃/W
Rth(j-c)	Per Diode	0.66	℃/W
Rth(c-s)	Module	0.03	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25℃ I_F =150A	—	1.1	1.3	V
r_f	T_J=150℃		1.96		mΩ
V_{fO}	T_J=150℃		0.74		V
I_{RD}	Tvj=25℃ V_{RD}=V_{RRM} Tvj=150℃ V_{RD}=V_{RRM}	—	—	0.1 2	mA mA

Performance Curves

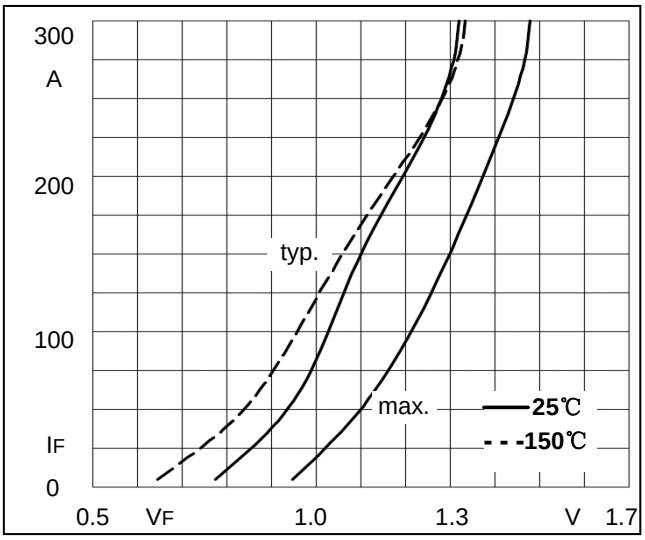


Fig1. Forward Characteristics

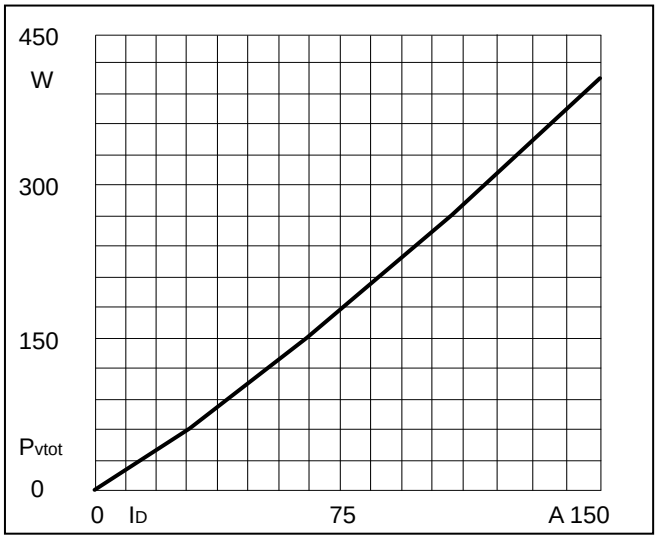


Fig2. Power dissipation

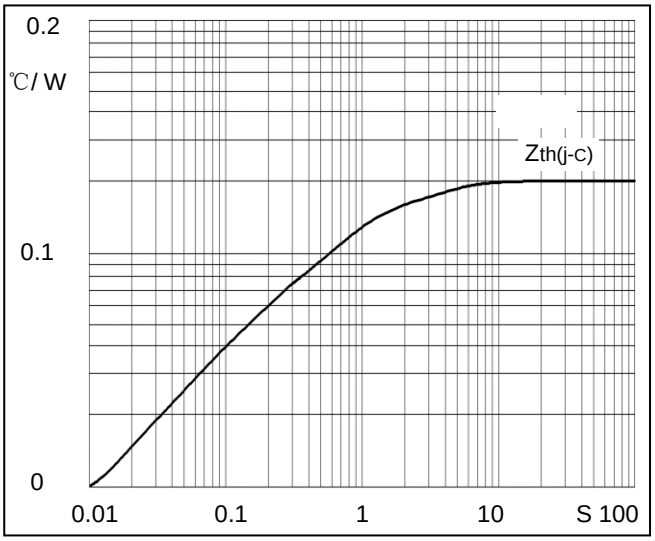


Fig3. Transient thermal impedance

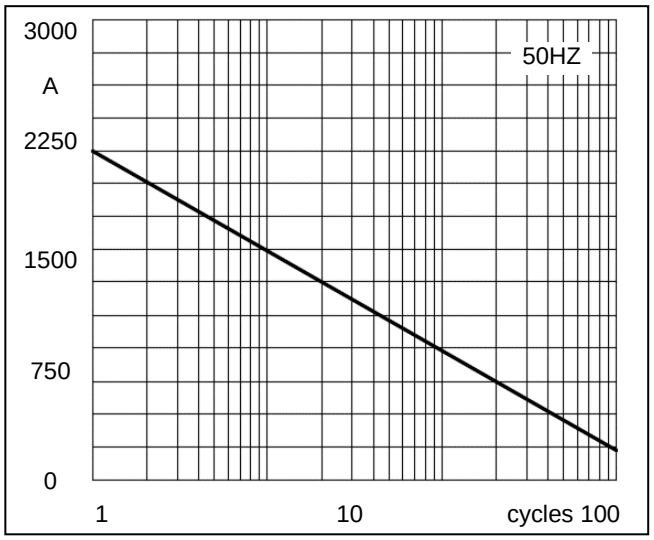


Fig4. Max Non-Repetitive Forward Surge Current

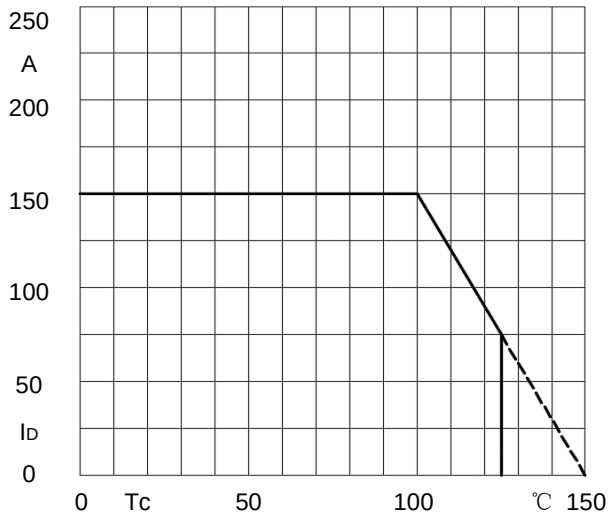


Fig5.Forward Current Derating Curve

Package Outline Information

CASE：M9

