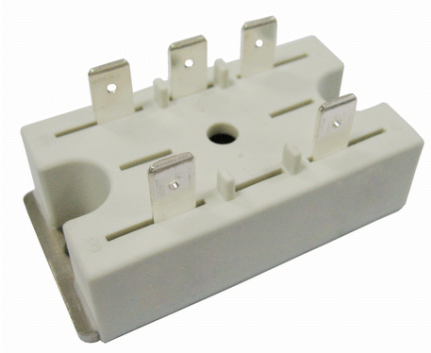


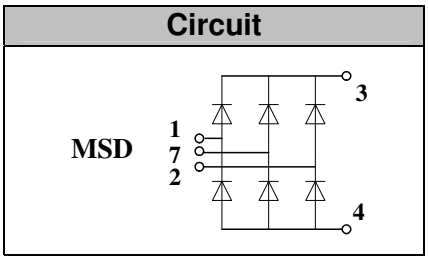
Glass Passivated Three Phase Rectifier Bridge

V_{RRM} 800 to 1800V
I_D 50 Amp

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 DCB ceramic isolated metal baseplate
- Glass passivated chip

Module Type

TYPE	V_{RRM}	V_{RSM}
MSD50-08	800V	900V
MSD50-12	1200V	1300V
MSD50-16	1600V	1700V
MSD50-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
ID	Tc=85℃	50	A
IFSM	t=10mS Tvj =45℃	420	A
i^2t	t=10mS Tvj =45℃	880	A^2s
Visol	a.c.50Hz;r.m.s.;1min	3000	V
Tvj		-40 to 150	℃
Tstg		-40 to 125	℃
Ms	To heatsink(M5)	3±5%	Nm
Weight	Module	78	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	1.5	℃/W
Rth(c-s)	Module	0.2	℃/W

Electrical Characteristics

Symbol	Conditions	Values	Units
VFM	T=25℃ IFM =100A	1.5	V
IRD	Tvj =25℃ VRD=VRRM Tvj =150℃ VRD=VRRM	≤0.2 ≤3	mA mA

Performance Curves

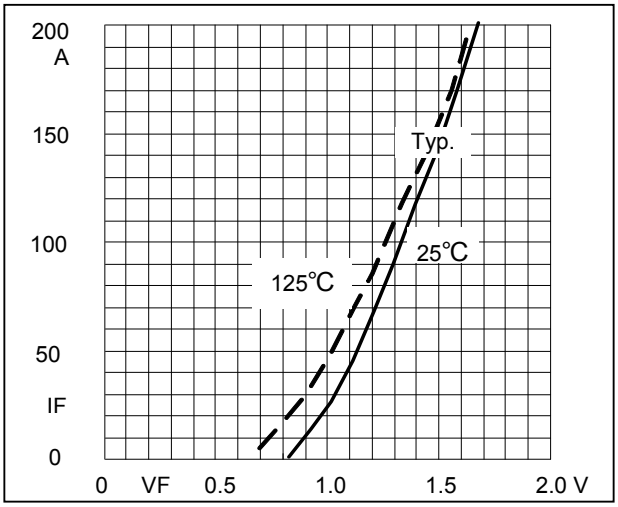


Fig1. Forward Characteristics

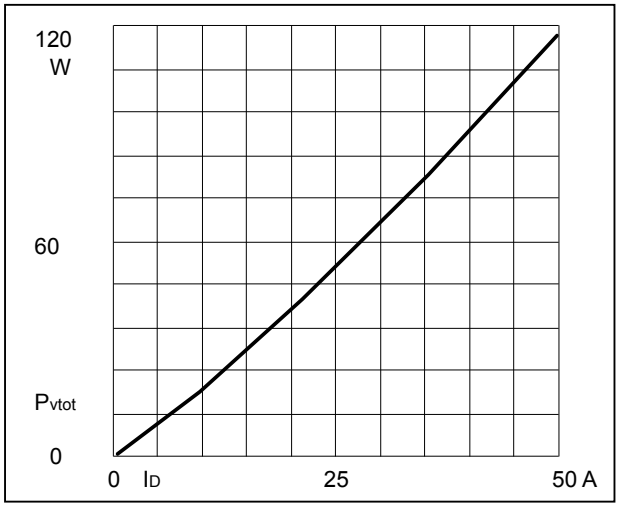


Fig2. Power dissipation

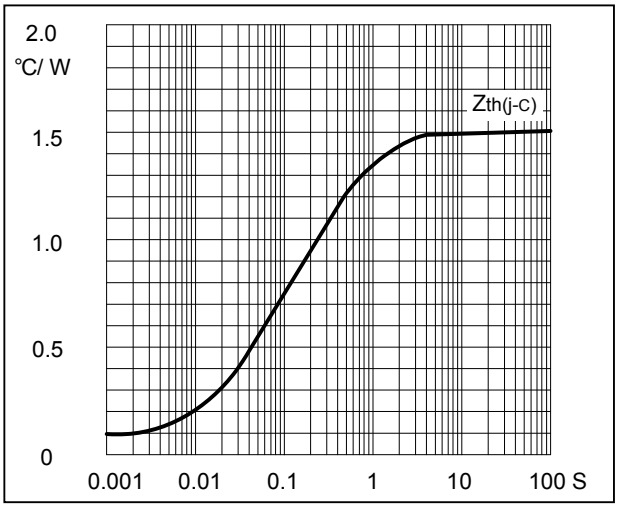


Fig3. Transient thermal impedance

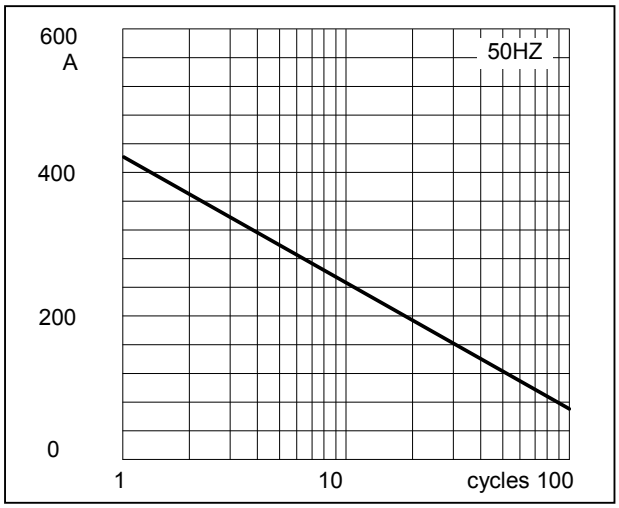


Fig4. Max Non-Repetitive Forward Surge Current

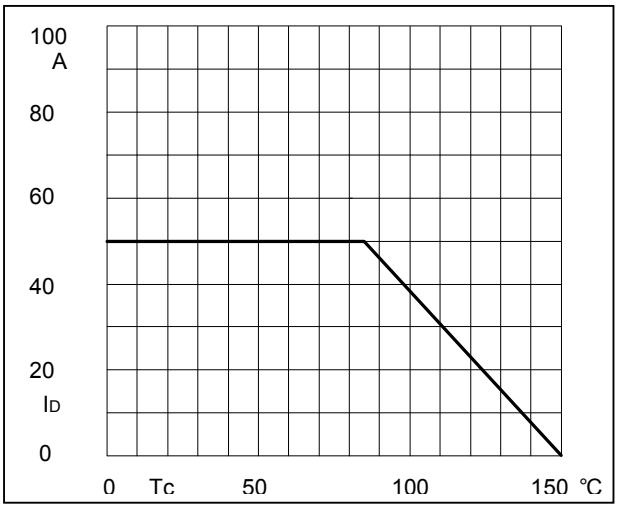
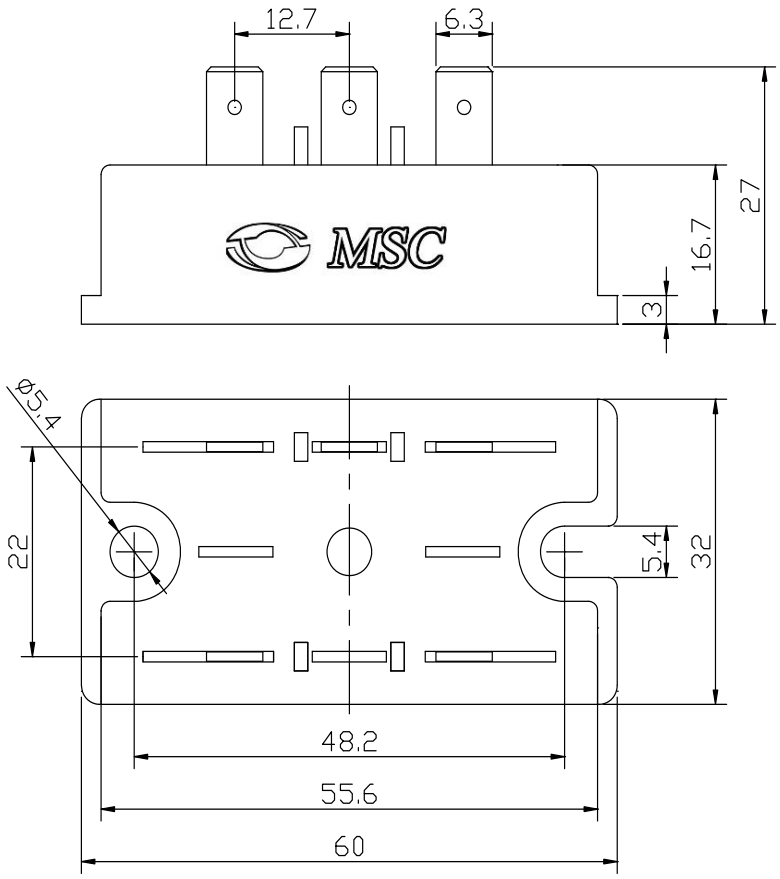


Fig5.Forward Current Derating Curve

Package Outline Information

CASE-M1



Dimensions in mm