Glass Passivated Three Phase Rectifier Bridge

VRRM 800 to 1800V
ID 70 Amp

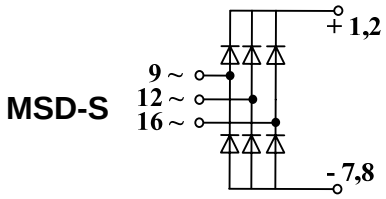
Applications

- 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 and insulation through direct copper bonded aluminum oxide ceramic(DBC)
- Glass passivated chip
- High surge currents

Circuit



Module Type

TYPE	VRRM	VRSM
MSD70S-08	800V	900V
MSD70S-12	1200V	1300V
MSD70S-16	1600V	1700V
MSD70S-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave T_S=80℃	70	A
IFSM	t=10mS Tvj =25℃	370	A
i^2t	t=10mS Tvj =25℃	685	A^2s
Visol	a.c.50HZ;r.m.s.;1min	2500	V
Tvj		-40 to +150	℃
Tstg		-40 to +125	℃
Ms	To heatsink(M4)	2	Nm
T_{solder}	Terminals,10s	260	℃
Weight	Module (Approximately)	21	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-s)	Per diode	1.62	℃/W
	Module (Approximately)	0.27	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25℃ IF =25A	—	—	1.25	V
IRD	Tvj=25℃ VRD=VRRM Tvj=150℃ VRD=VRRM	—	—	0.3 4	mA mA

Performance Curves

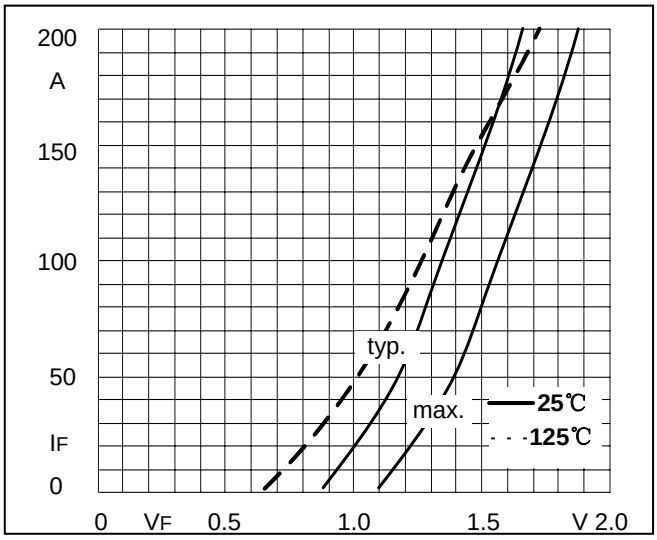


Fig1. Forward Characteristics

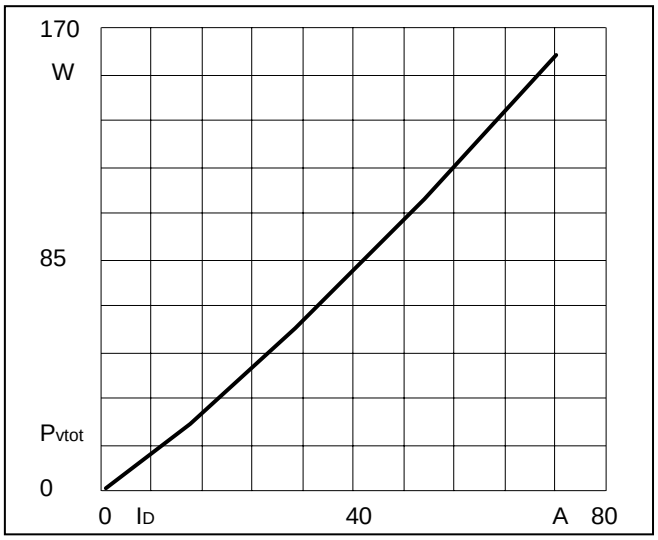


Fig2. Power dissipation

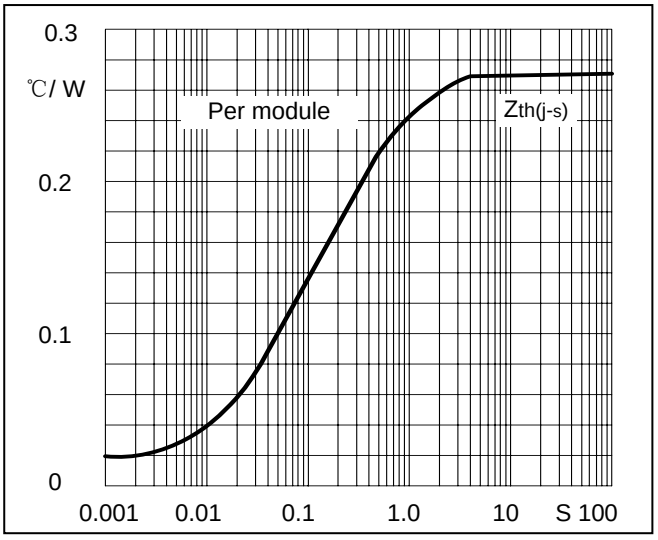


Fig3. Transient thermal impedance

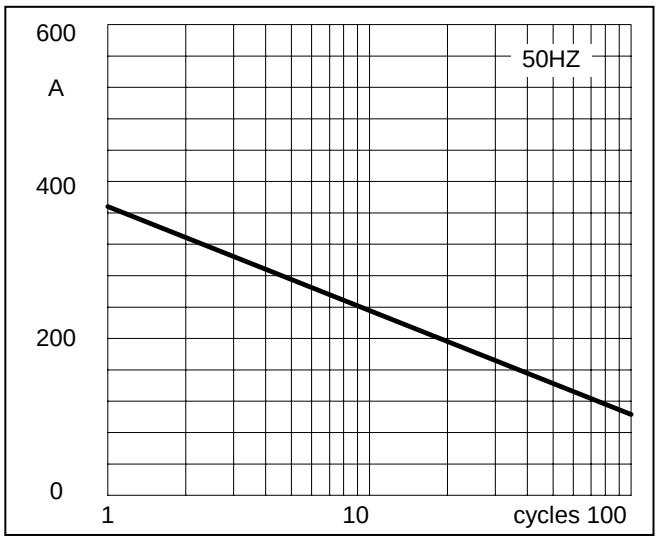


Fig4. Max Non-Repetitive Forward Surge Current

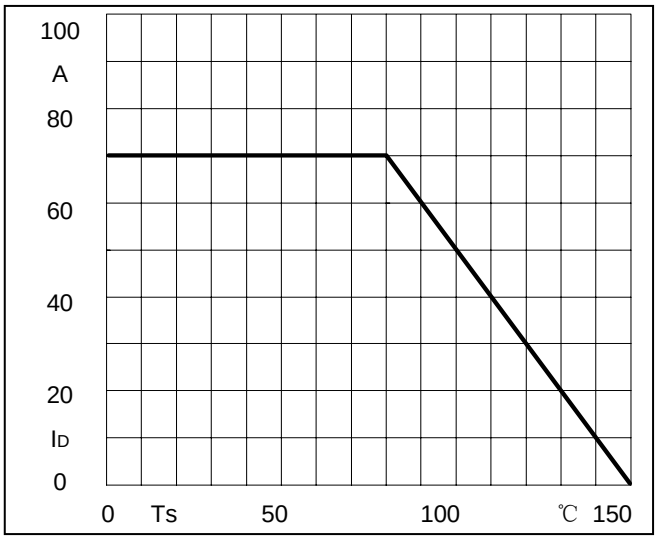
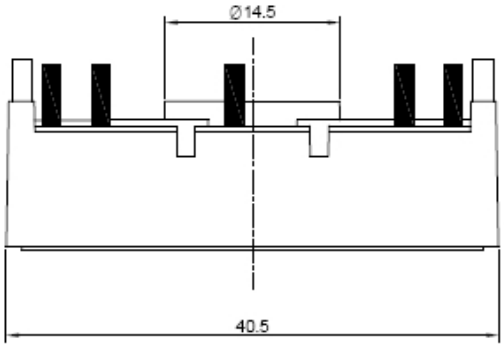
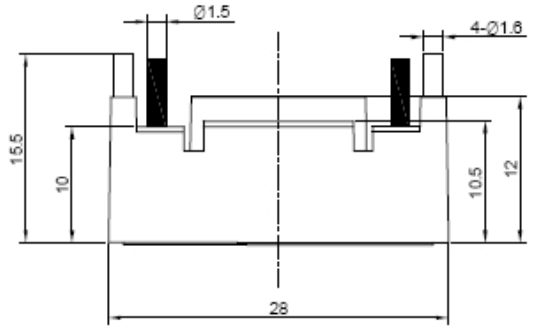


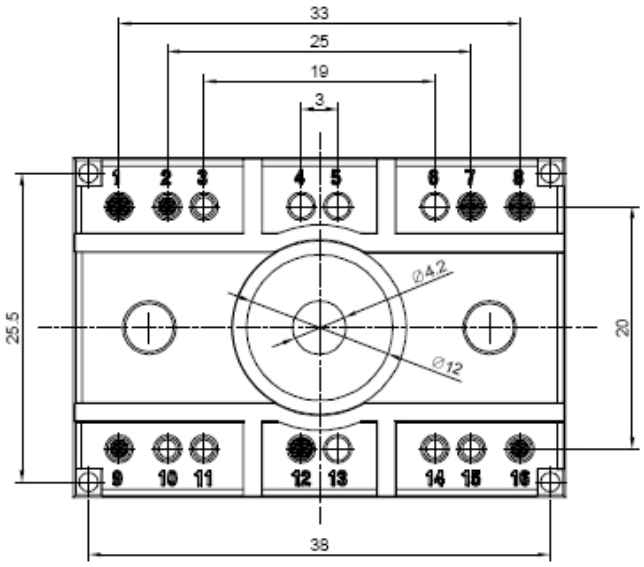
Fig5.Forward Current Derating Curve

Package Outline Information

CASE：MS2







Dimensions in mm