



Glass Passivated Single Phase Rectifier Bridge

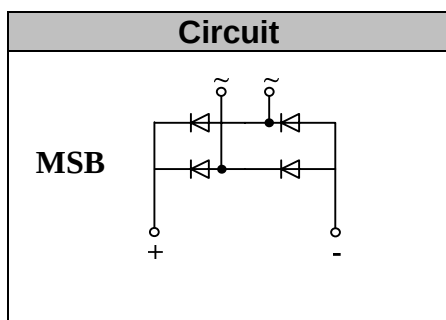
V_{RRM} / V_{DRM} 800 to 1800V
 I_{FAV} / I_{TAV} 50Amp

Features

- Blocking voltage: 800 to 1600V
- High surge currents
- Glass passivated chip

Applications

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



Module Type

TYPE	V_{RRM} / V_{DRM}	V_{RSM}
MSB52-08	800V	900V
MSB52-12	1200V	1300V
MSB52-16	1600V	1700V
MSB52-18	1800V	1900V

◆Diode

Maximum Ratings

Symbol	Item	Conditions	Values	Units
I_D	Output Current(D.C.)	$T_c=100^\circ\text{C}$	50	A
I_{FSM}	Surge forward current	$t=10\text{ms } T_{vj}=25^\circ\text{C}$	600	A
i^2t	Circuit Fusing Consideration	$t=10\text{ms } T_{vj}=25^\circ\text{C}$	1800	A^2s
Visol	Isolation Breakdown Voltage(R.M.S)	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$
T_{stg}	Storage Temperature		-40 to +125	$^\circ\text{C}$
M_t	Mounting Torque	To terminals(M5)	5±15%	Nm
M_s		To heatsink(M5)	5±15%	Nm
Weight		Module (Approximately)	130	g

Thermal Characteristics

Symbol	Item	Conditions	Values	Units
$R_{th(j-c)}$	Moudle(Typ.)	Junction to Case(TOTAL)	0.35	$^\circ\text{C/W}$
$R_{th(c-s)}$	Moudle(approximately)	Case to Heatsink	0.07	$^\circ\text{C/W}$

Electrical Characteristics

Symbol	Item	Conditions	Values	Units
V_{FM}	Forward Voltage Drop, max.	$T=25^\circ\text{C } I_F=150\text{A}$	1.8	V
I_{RRM}	Repetitive Peak Reverse Current, max.	$T_{vj}=25^\circ\text{C } V_{RD}=V_{RRM}$ $T_{vj}=150^\circ\text{C } V_{RD}=V_{RRM}$	0.3 5	mA mA

Performance Curves

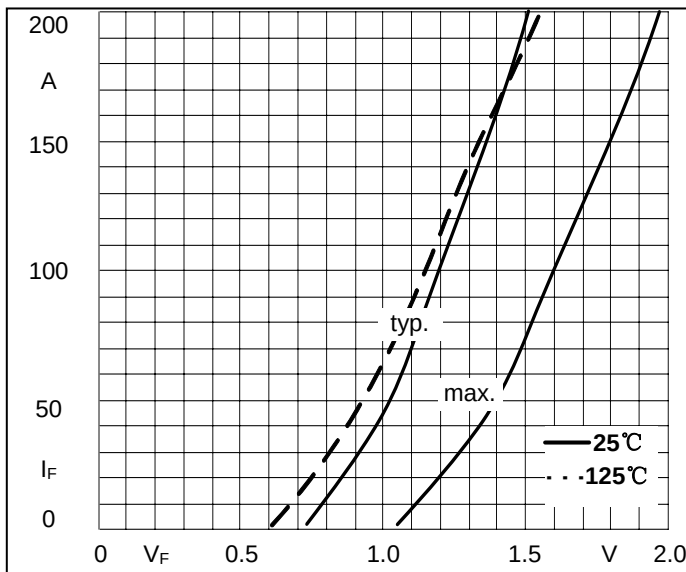


Fig1. Forward Characteristics

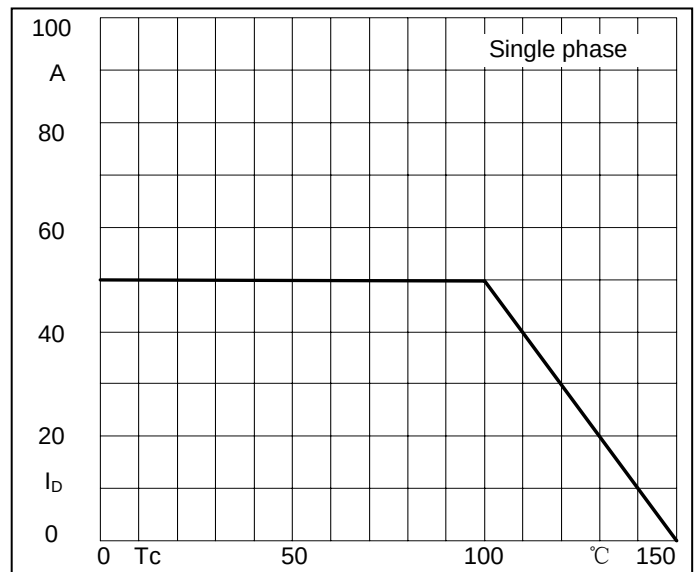


Fig2. Forward Current Derating Curve

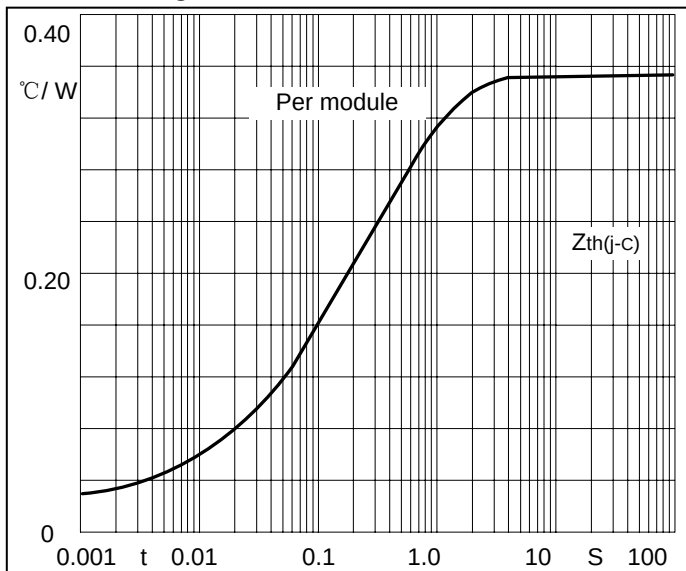


Fig3. Transient thermal impedance

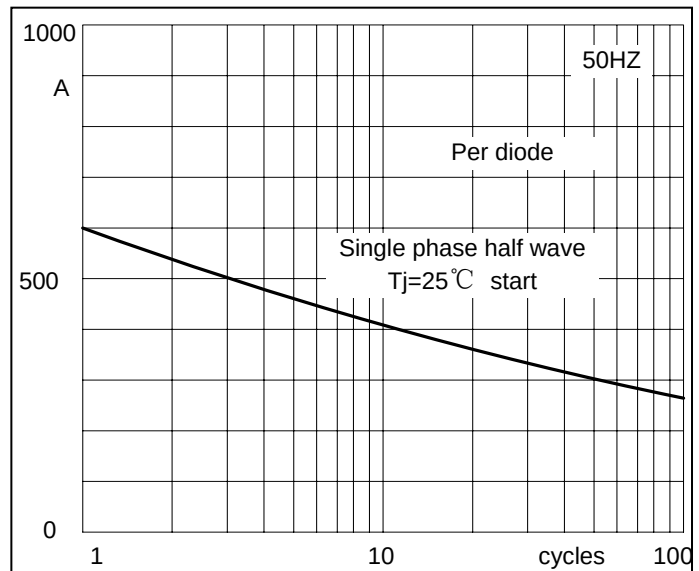
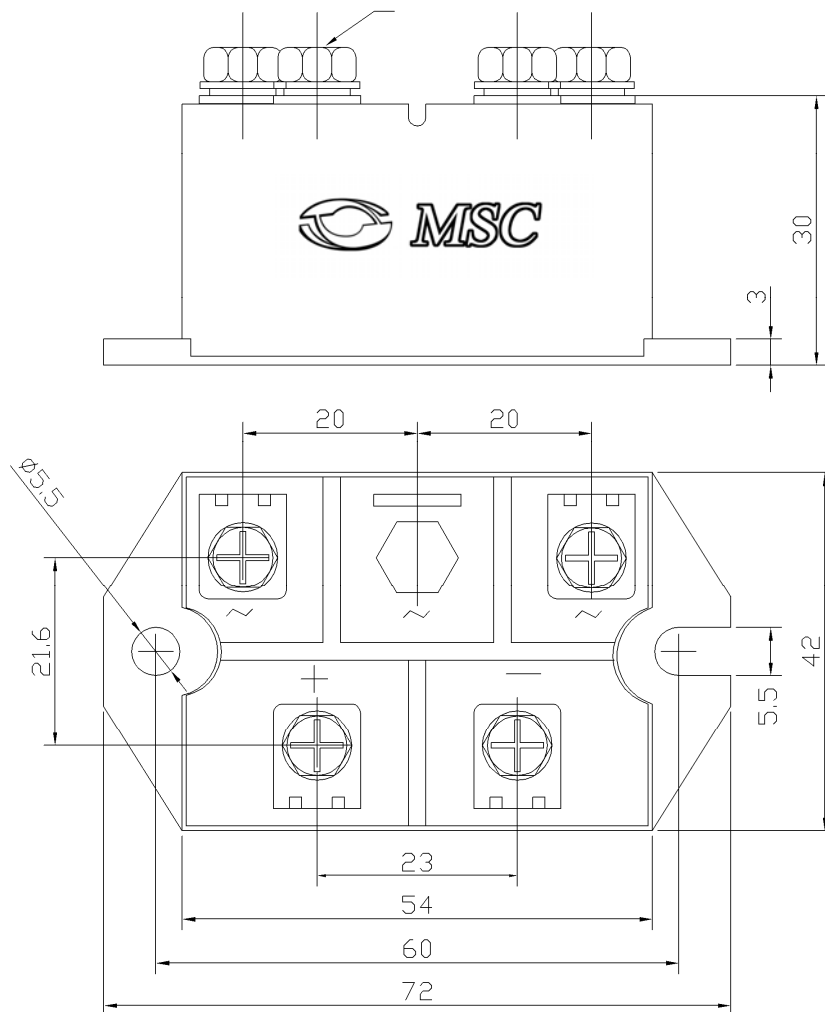


Fig4. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: B2-1



Dimensions in mm