



Glass Passivated Three Phase Rectifier Bridge

VRRM 1800-2000V

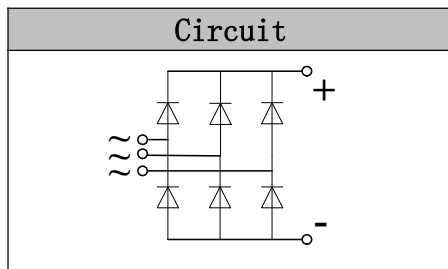
ID 100 A

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: 1800-2000V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip



Module Type

TYPE	VRRM	VRSM
MD100S18NM2	1800V	1900V
MD100S20NM2	2000V	2100V

Maximum Ratings

Symbol	Conditions	Values	Units
I_D	Three phase, full wave $T_c=100^\circ\text{C}$	100	A
I_{FSM}	$t=10\text{ms}$ $T_{vj}=45^\circ\text{C}$	750	A
i^2t	$t=10\text{ms}$ $T_{vj}=45^\circ\text{C}$	2800	A^2s
V_{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}		-40 to +150	$^\circ\text{C}$
T_{stg}		-40 to +125	$^\circ\text{C}$
M_t	To terminals(M5)	$3\pm 15\%$	Nm
M_s	To heatsink(M5)	$3\pm 15\%$	Nm
Weight	Module (Approximately)	130	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per diode	1.0	$^\circ\text{C/W}$
$R_{th(c-s)}$	Module (Approximately)	0.07	$^\circ\text{C/W}$

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	$T=25^\circ\text{C}$ $I_F=150\text{A}$	—	1.38	1.60	V
I_{RD}	$T_{vj}=25^\circ\text{C}$ $VRD=VRRM$	—	—	0.3	mA
	$T_{vj}=150^\circ\text{C}$ $VRD=VRRM$	—	—	5	mA



Performance Curves

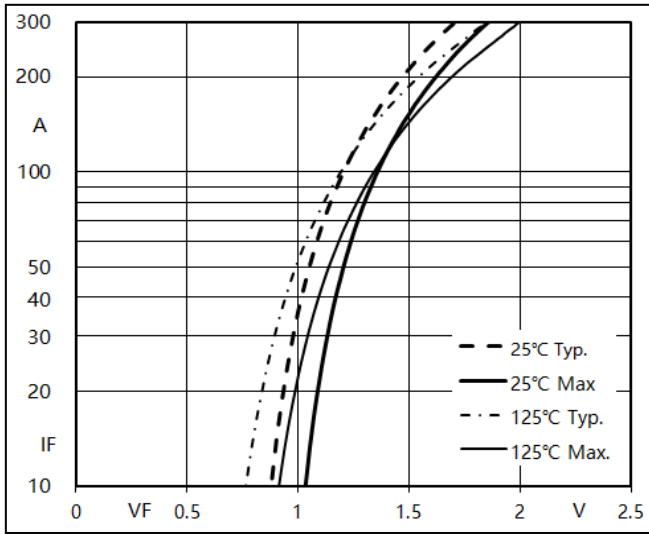


Fig1. Forward Characteristics

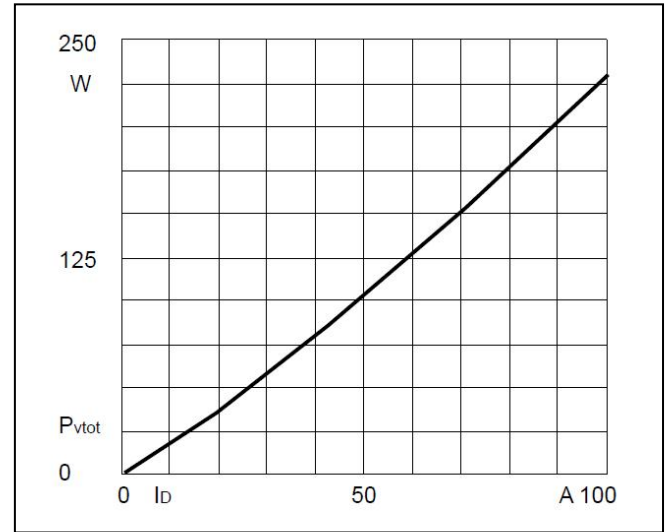


Fig2. Power dissipation

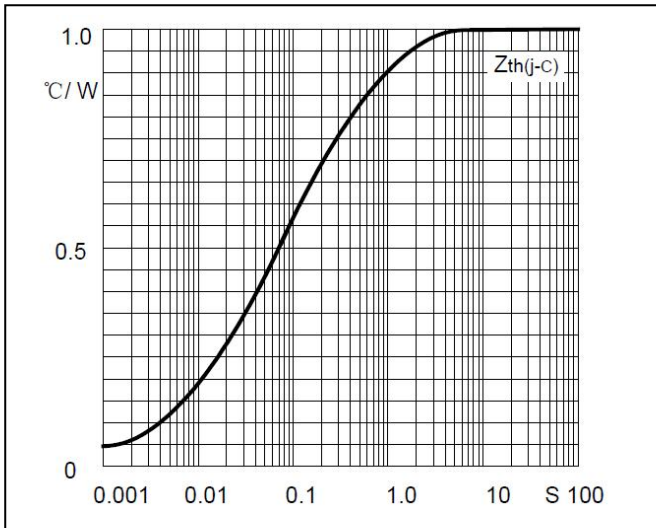


Fig3. Transient thermal impedance

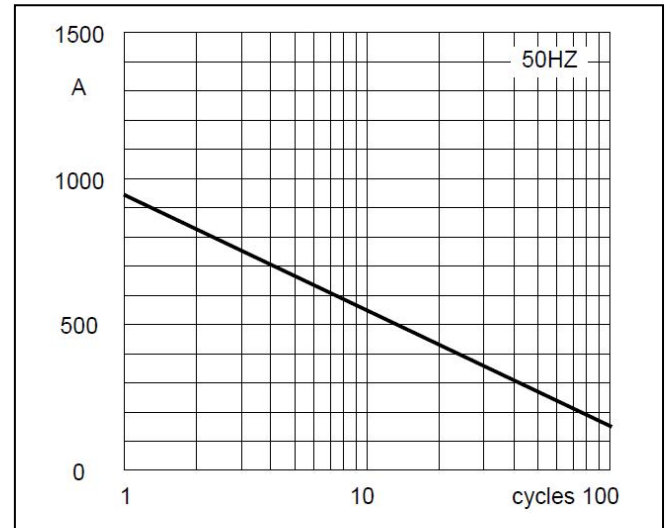


Fig4. Max Non-Repetitive Forward Surge Current

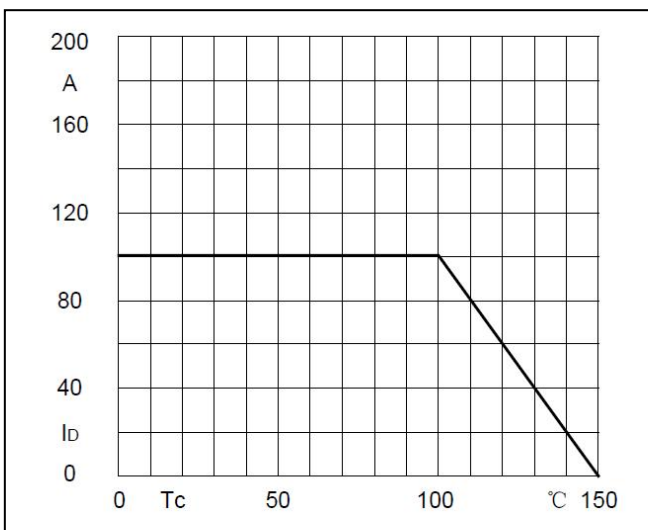
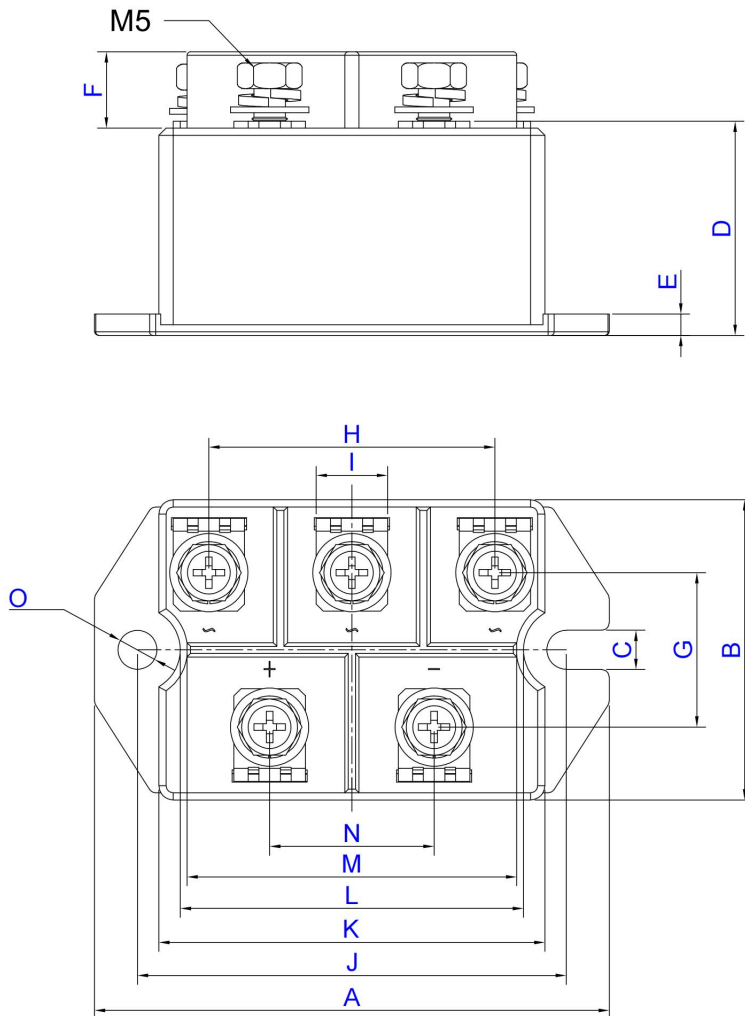


Fig5. Forward Current Derating Curve

Package Outline Information

CASE:NM2



DIM	Min (mm)	Max (mm)	Note
A	71.5	72.5	
B	41.5	42.5	
C	5	6	
D	29.5	30.5	
E	2.5	3.5	
F	10.2	11.2	
G	21.1	22.1	
H	39.5	40.5	
I	9.5	10.5	
J	59.5	60.5	
K	53.5	54.5	
L	47.5	48.5	
M	45.64	46.64	
N	22.5	23.5	
O	5	6	Ø

Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	48	8
Outer Carton	545	295	240	80



Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.21yangjie.com>, or consult your nearest Yangjie's sales office for further assistance.