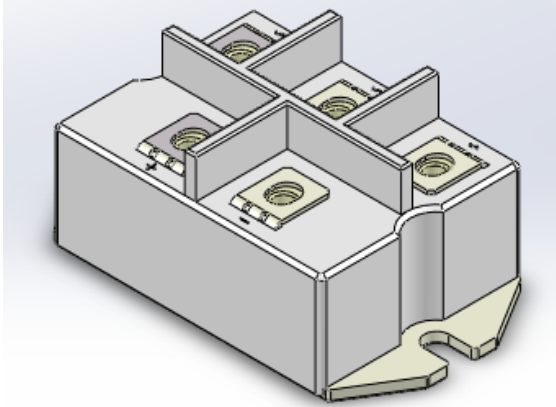




Glass Passivated Three Phase Rectifier Bridge

V_{RRM} 800 to 1800V
I_D 100 A

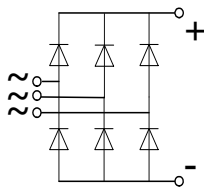
Applications

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

Circuit



Module Type

TYPE	V _{RRM}	V _{RSM}
MD100S08NM3	800V	900V
MD100S12NM3	1200V	1300V
MD100S16NM3	1600V	1700V
MD100S18NM3	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _D	Three phase, full wave T _c =100℃	100	A
I _{FSM}	t=10mS T _{vj} =45℃	920	A
i ² t	t=10mS T _{vj} =45℃	4200	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T _{vj}		-40 to +150	℃
T _{stg}		-40 to +125	℃
M _t	To terminals(M6)	5±15%	Nm
M _s	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	230	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.9	℃/W
R _{th(c-s)}	Module	0.03	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25℃ I _F =300A	—	1.70	1.90	V
I _{RD}	T _{vj} =25℃ V _{RD} =V _{RRM} T _{vj} =150℃ V _{RD} =V _{RRM}	—	—	0.3 5	mA mA



Performance Curves

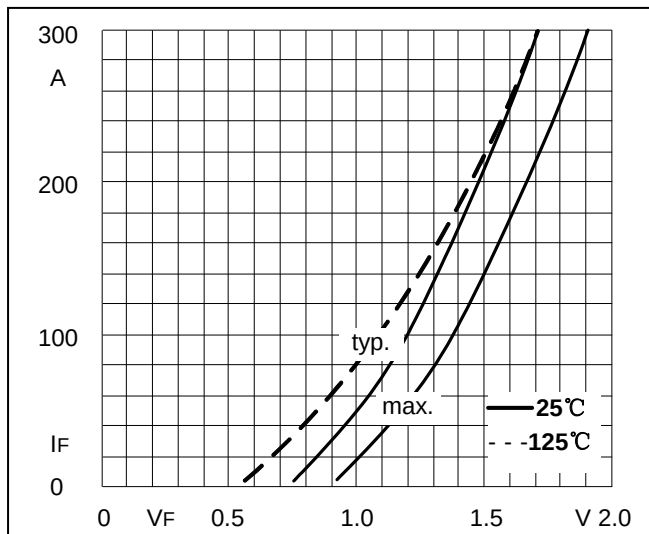


Fig1. Forward Characteristics

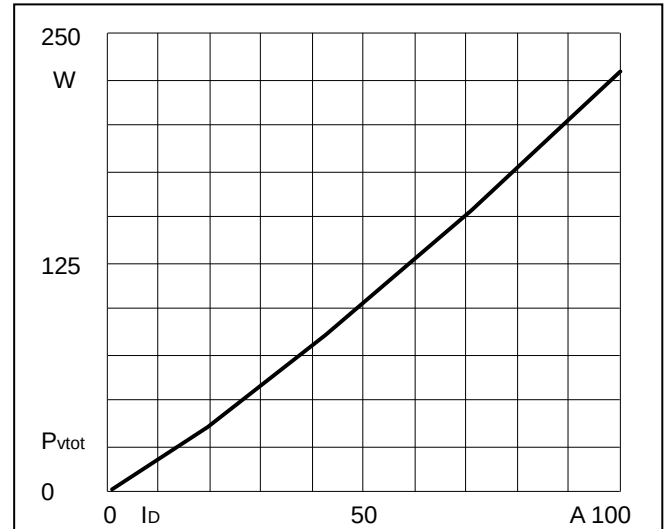


Fig2. Power dissipation

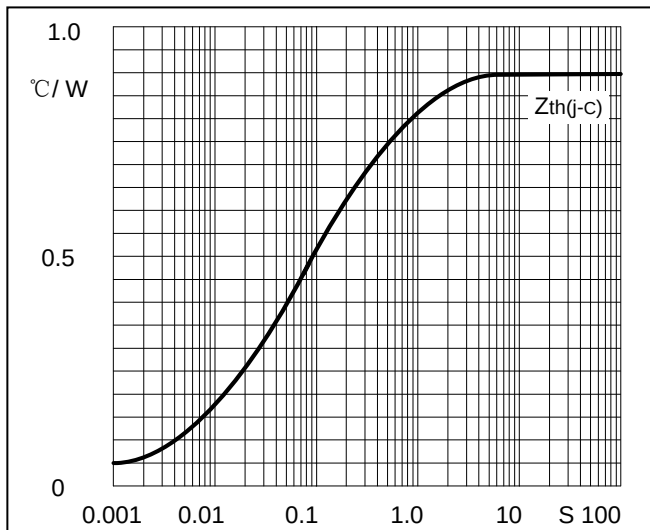


Fig3. Transient thermal impedance

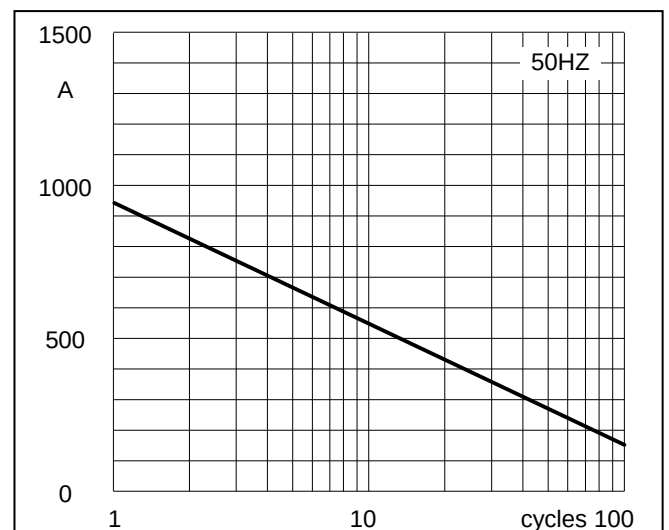


Fig4. Max Non-Repetitive Forward Surge Current

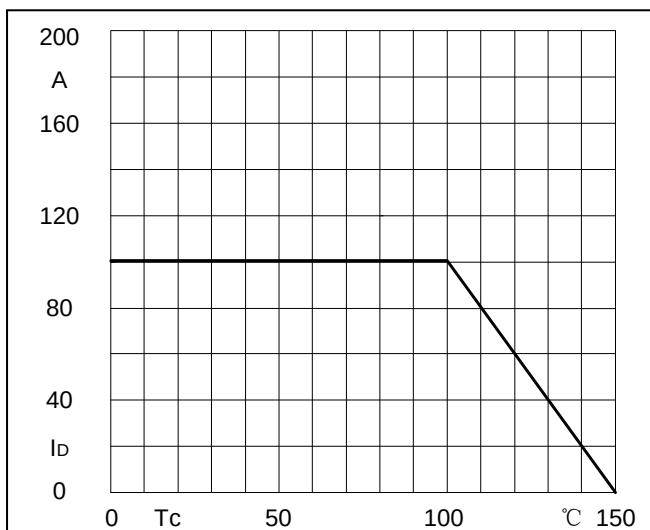
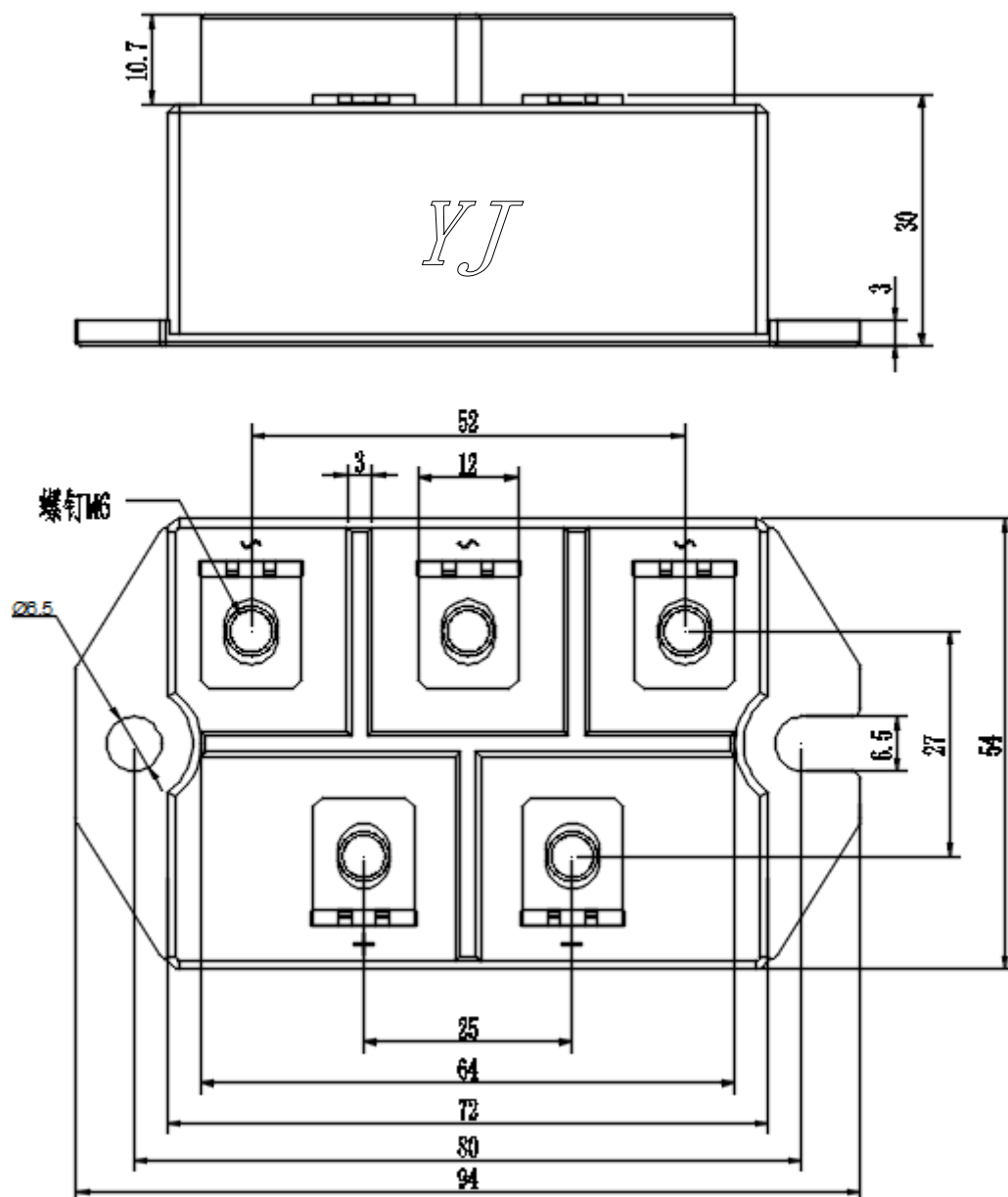


Fig5. Forward Current Derating Curve

Package Outline Information

CASE: NM3



Dimensions in mm

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