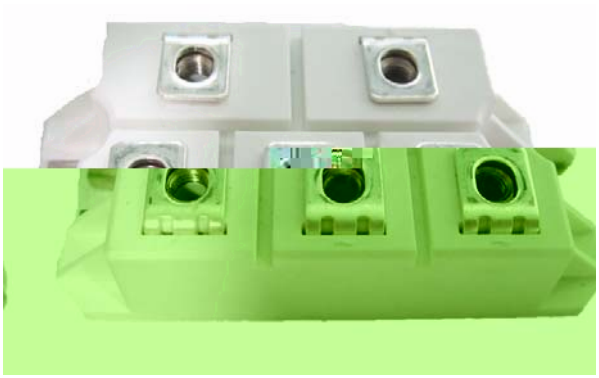
MD50S-M4

RoHS COMPLIANT



Glass Passivated Three Phase Rectifier Bridge

VRRM 800 to 2400V
ID 50 A

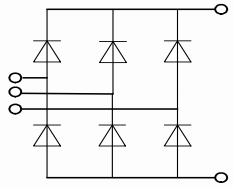
Applications

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 2400V
Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
Glass passivated chip

Circuit



Module Type

TYPE	VRRM	VRSM
MD50S08M4	800V	900V
MD50S12M4	1200V	1300V
MD50S16M4	1600V	1700V
MD50S18M4	1800V	1900V
MD50S20M4	2000V	2100V
MD50S22M4	2200V	2300V
MD50S24M4	2400V	2500V

Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave Tc=110	50	A
IFSM	t=10mS Tvj =45	460	A
i^2t	t=10mS Tvj =45	1050	A^2s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +125	
Tstg		-40 to +125	
Mt	To terminals(M5)	5±15%	Nm
Ms	To heatsink(M5)	5±15%	Nm
Weight	Module (Approximately)	146	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	1.45	/W
Rth(c-s)	Module	0.07	/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25 I_F =150A		1.45	1.7	V
I_{RD}	T_{vj}=25 $V_{RD}=V_{RRM}$ T_{vj}=150 $V_{RD}=V_{RRM}$			0.3 5	mA mA

Performance Curves

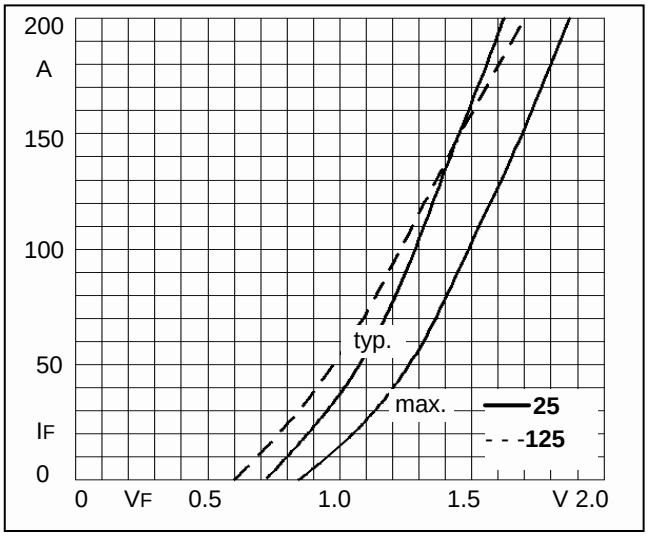


Fig1. Forward Characteristics

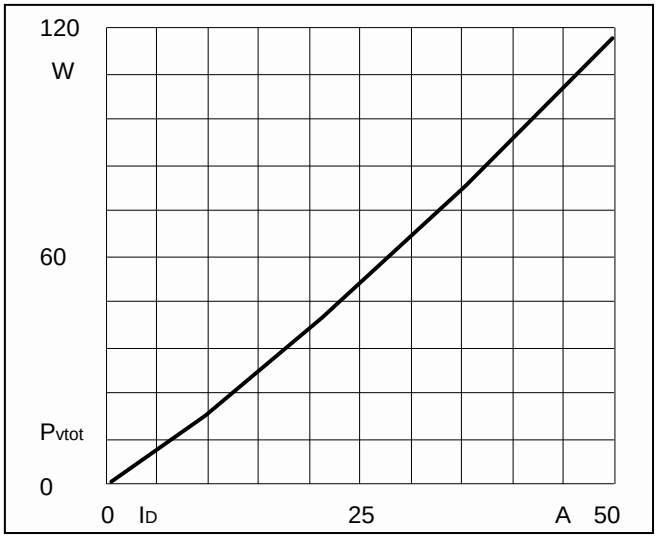


Fig2. Power dissipation

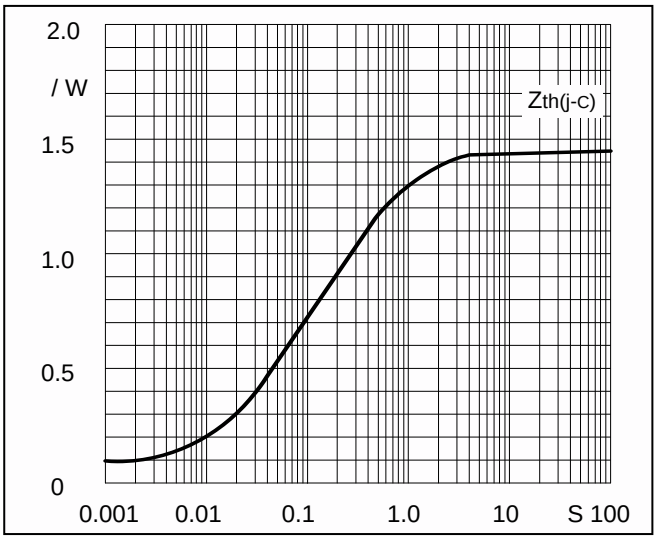


Fig3. Transient thermal impedance

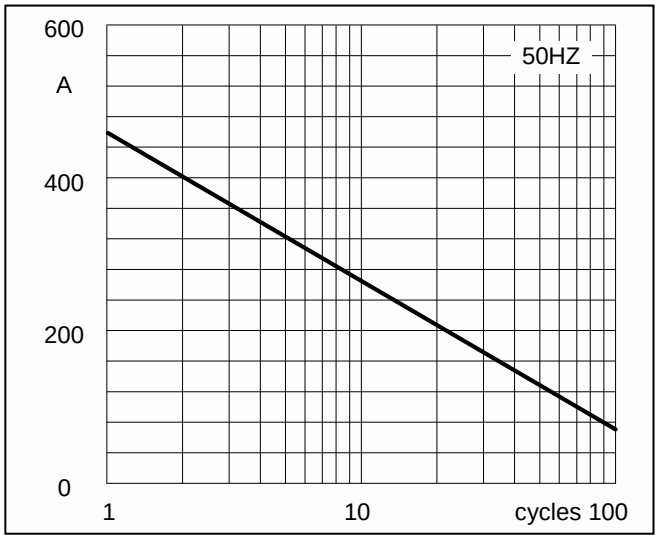


Fig4. Max Non-Repetitive Forward Surge Current

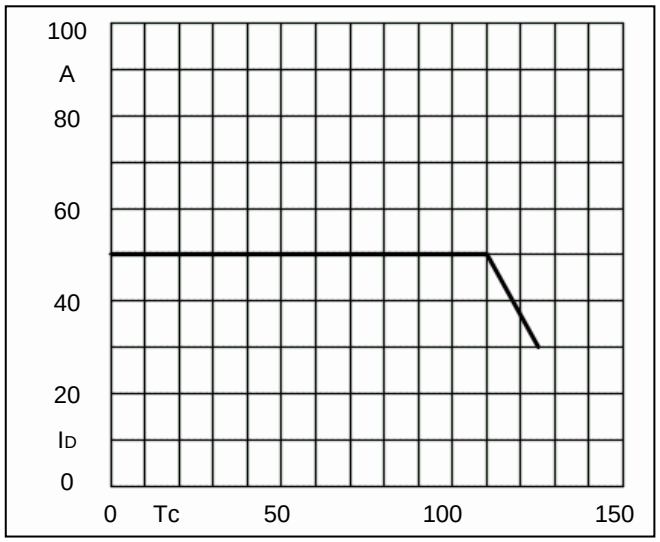
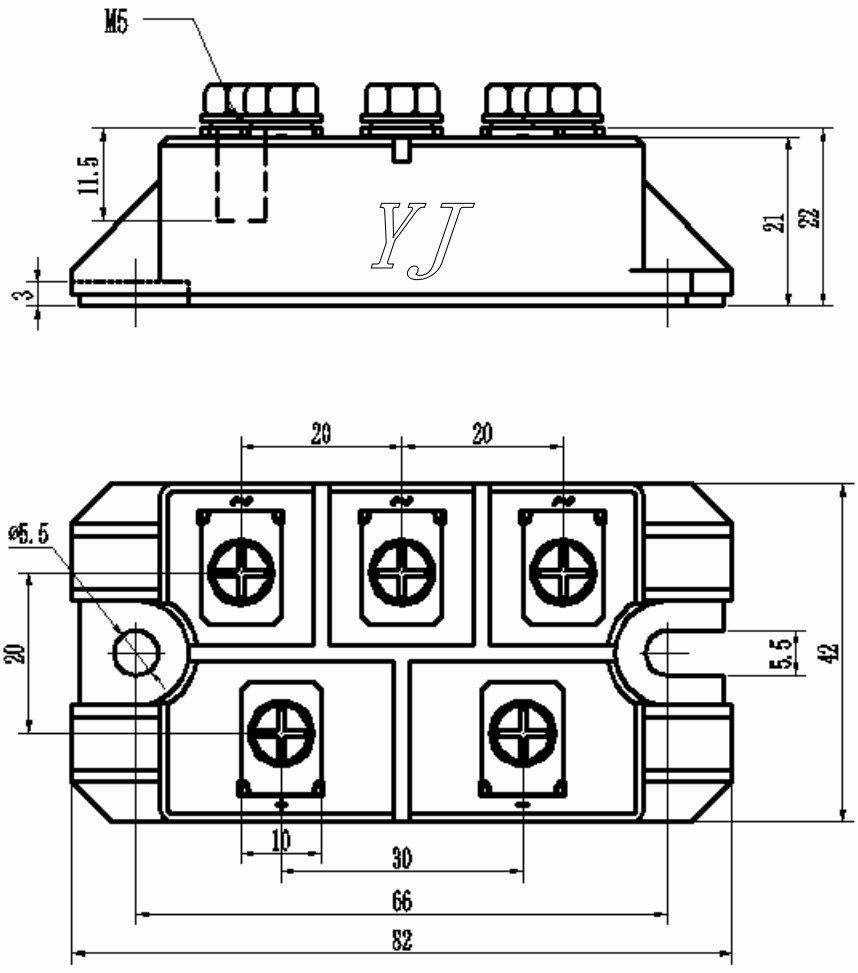


Fig5.Forward Current Derating Curve

Package Outline Information

CASE M4



Dimensions in mm