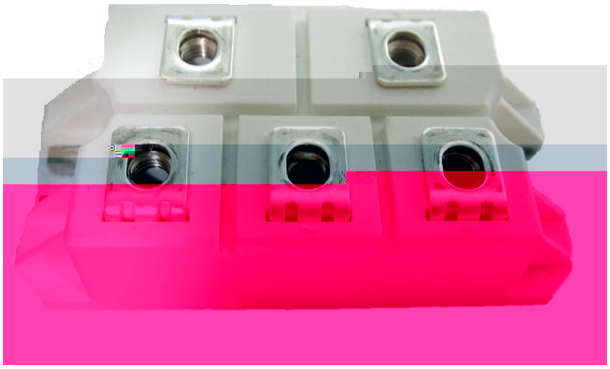
MD100S-M4



Glass Passivated Three Phase Rectifier Bridge

V_{RRM} 800 to 1800V
I_D 100 A

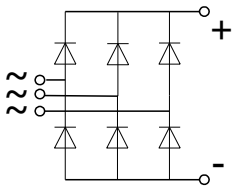
Applications

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
UL recognized applied for file no. E230084

Circuit



Module Type

TYPE	V_{RRM}	V_{RSM}
MD100S08M4	800V	900V
MD100S12M4	1200V	1300V
MD100S16M4	1600V	1700V
MD100S18M4	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_D	Three phase, full wave Tc=100℃	100	A
I_{FSM}	t=10mS Tvj =45℃	1020	A
i^2t	t=10mS Tvj =45℃	5200	A^2S
V_{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}		-40 to +150	℃
T_{stg}		-40 to +125	℃
Mt	To terminals(M5)	3±15%	Nm
Ms	To heatsink(M5)	3±15%	Nm
Weight	Module (Approximately)	146	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	1.0	℃/W
Rth(c-s)	Module (Approximately)	0.07	℃/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

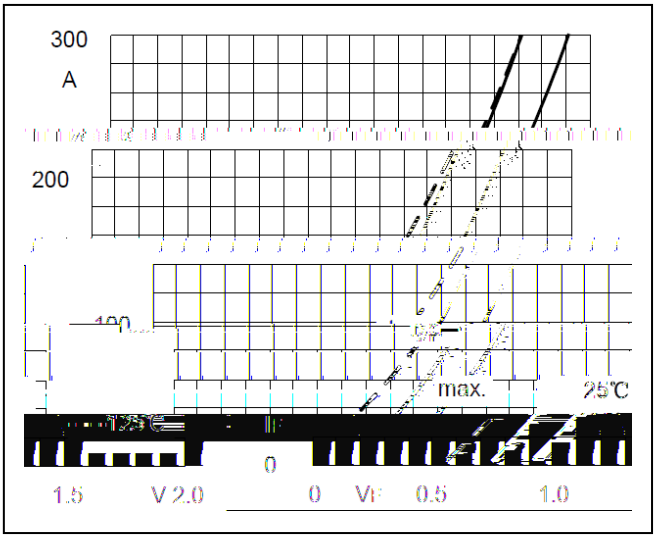


Fig1. Forward Characteristics

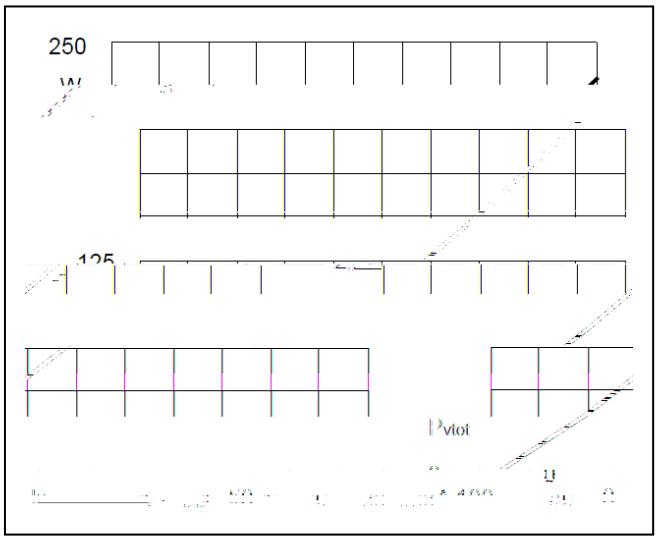


Fig2. Power dissipation

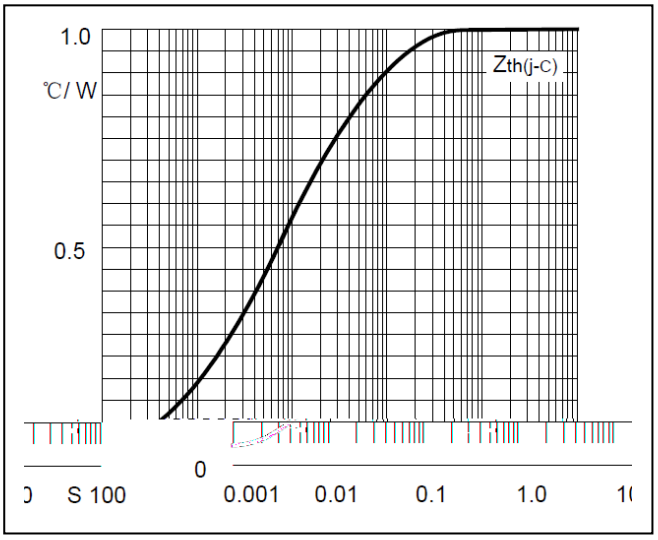


Fig3. Transient thermal impedance

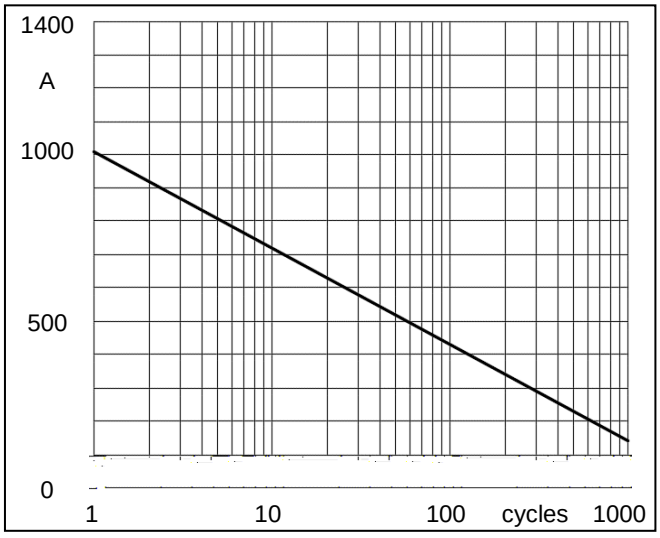


Fig4. Max Non-Repetitive Forward Surge Current

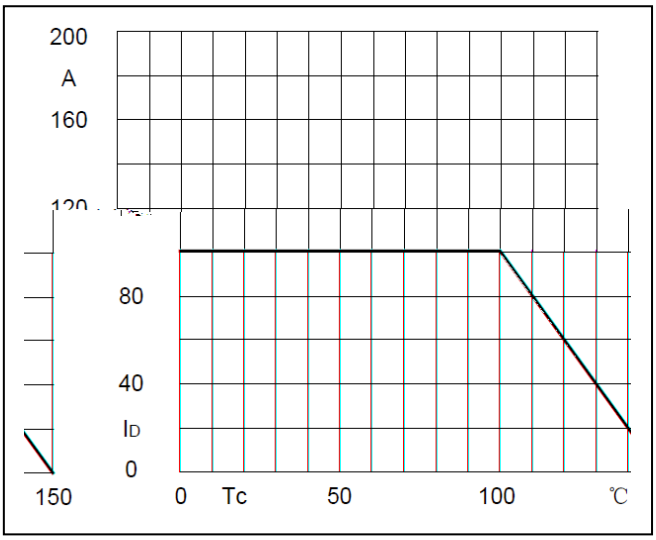
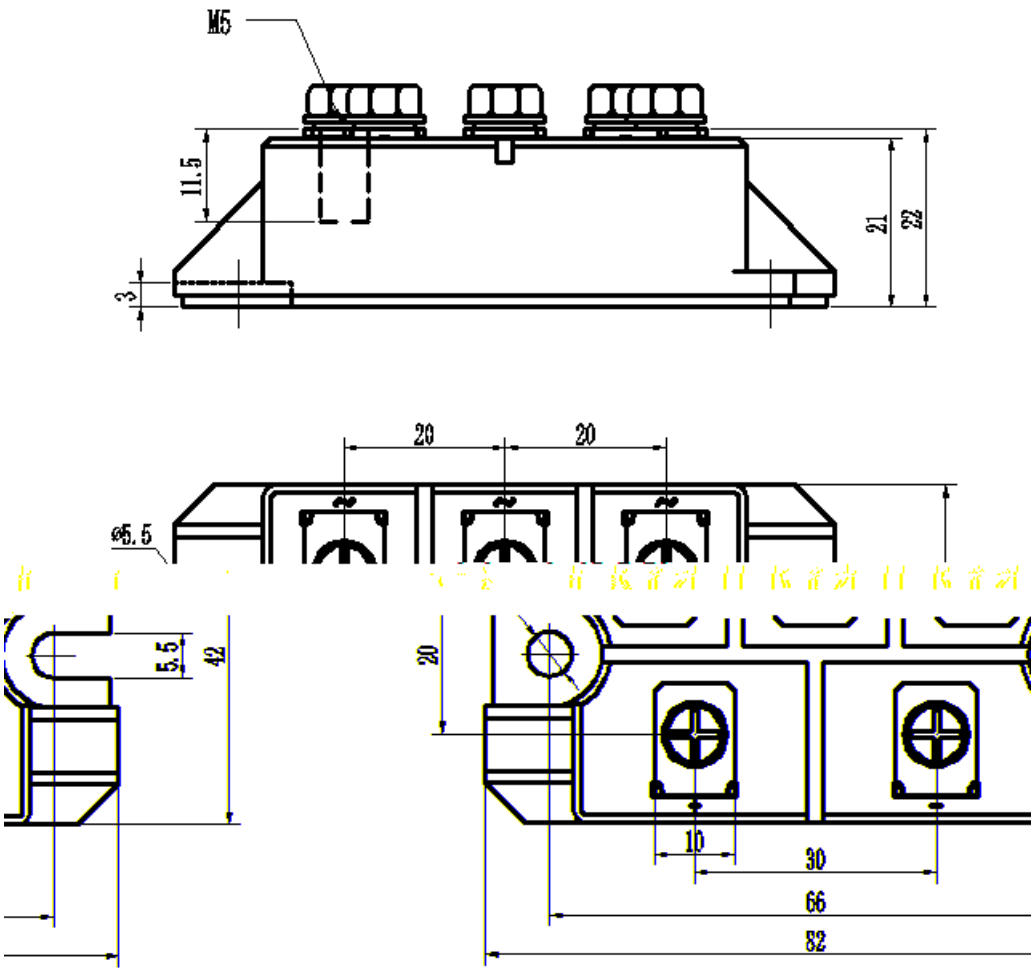


Fig5.Forward Current Derating Curve

Package Outline Information

CASE' M4



Dimensions in mm