

## Glass Passivated Three Phase Rectifier Bridge

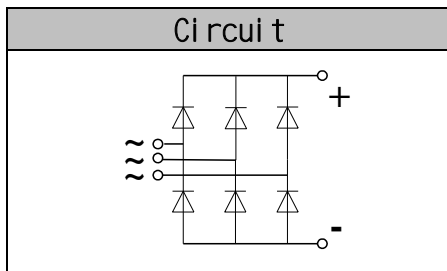
**VRRM** 800 to 1800V  
**ID** 100 A

### 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:800 to 1800V  
Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate  
Glass passivated chip  
UL recognized applied for file no. E230084



### Module Type

TYPE	VRRM	VRSM
MD100S08M4	800V	900V
MD100S12M4	1200V	1300V
MD100S16M4	1600V	1700V
MD100S18M4	1800V	1900V

### Maximum Ratings

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

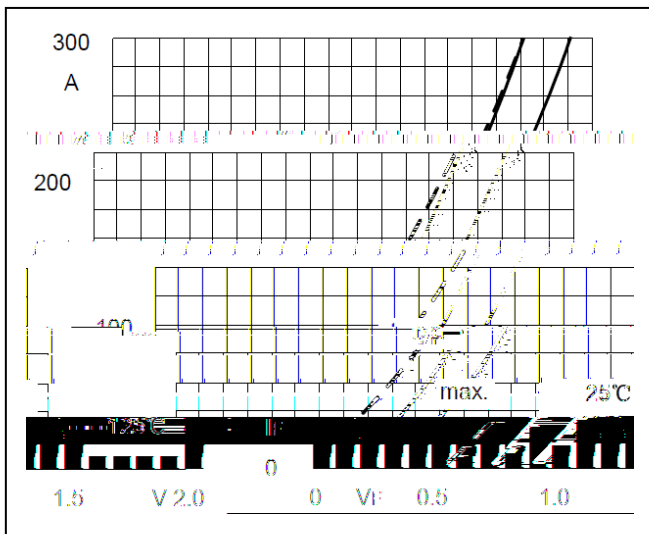
### Thermal Characteristics

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

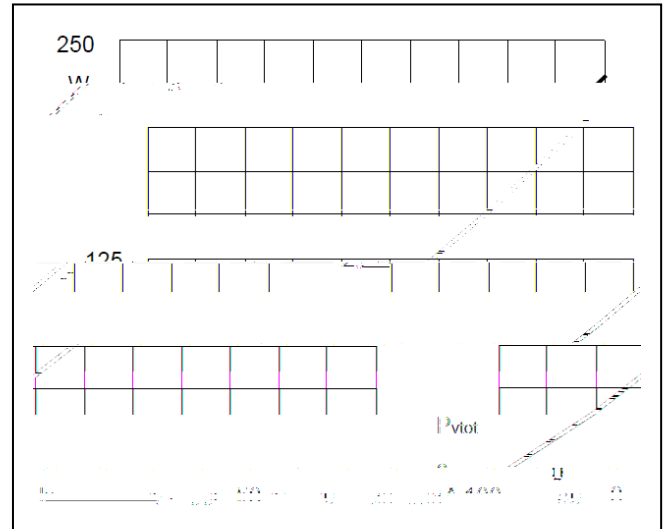
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$V_{FM}$	$T=25$ $I_F=300A$		1.70	1.90	V
$I_{RD}$	$T_{vj}=25$ $V_{RD}=V_{RRM}$			0.3	mA
	$T_{vj}=150$ $V_{RD}=V_{RRM}$			5	mA

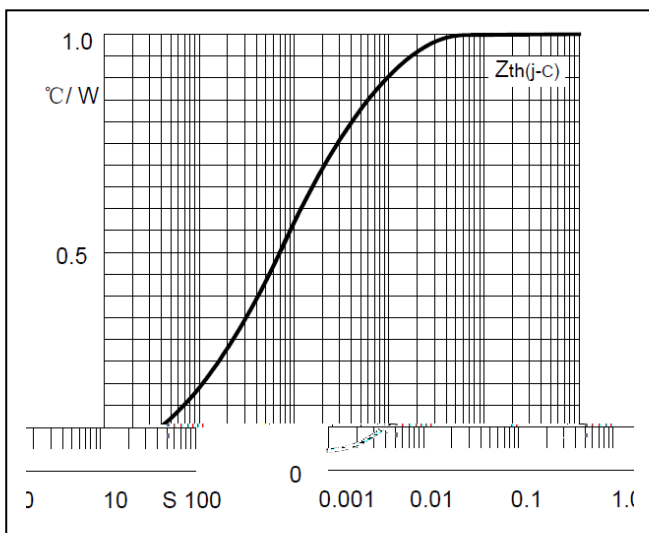
## Performance Curves



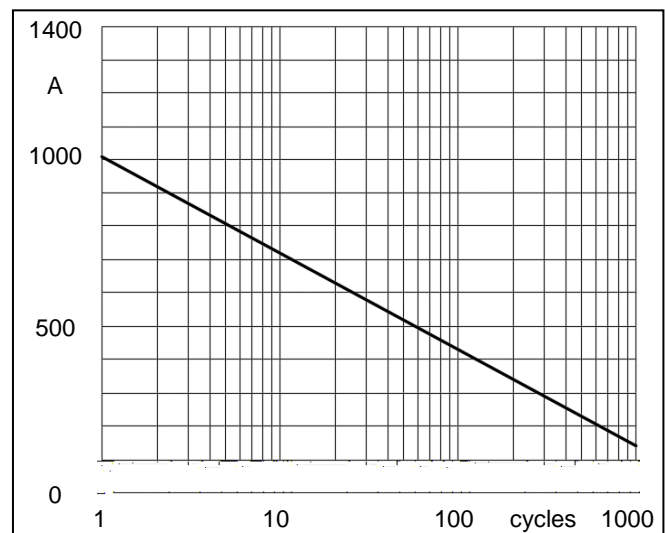
**Fig1. Forward Characteristics**



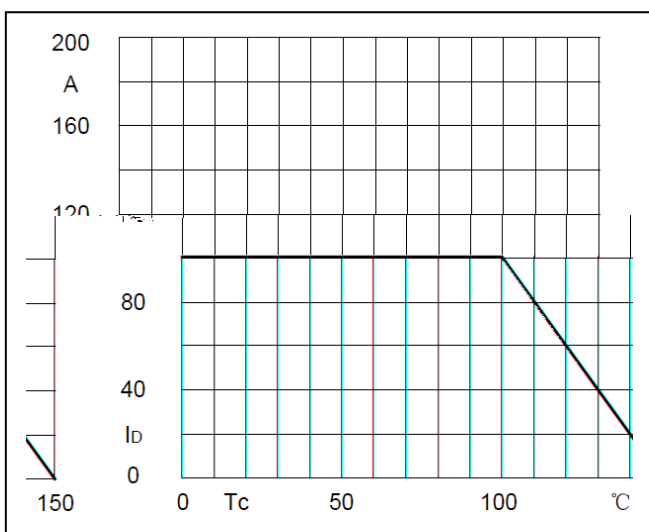
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



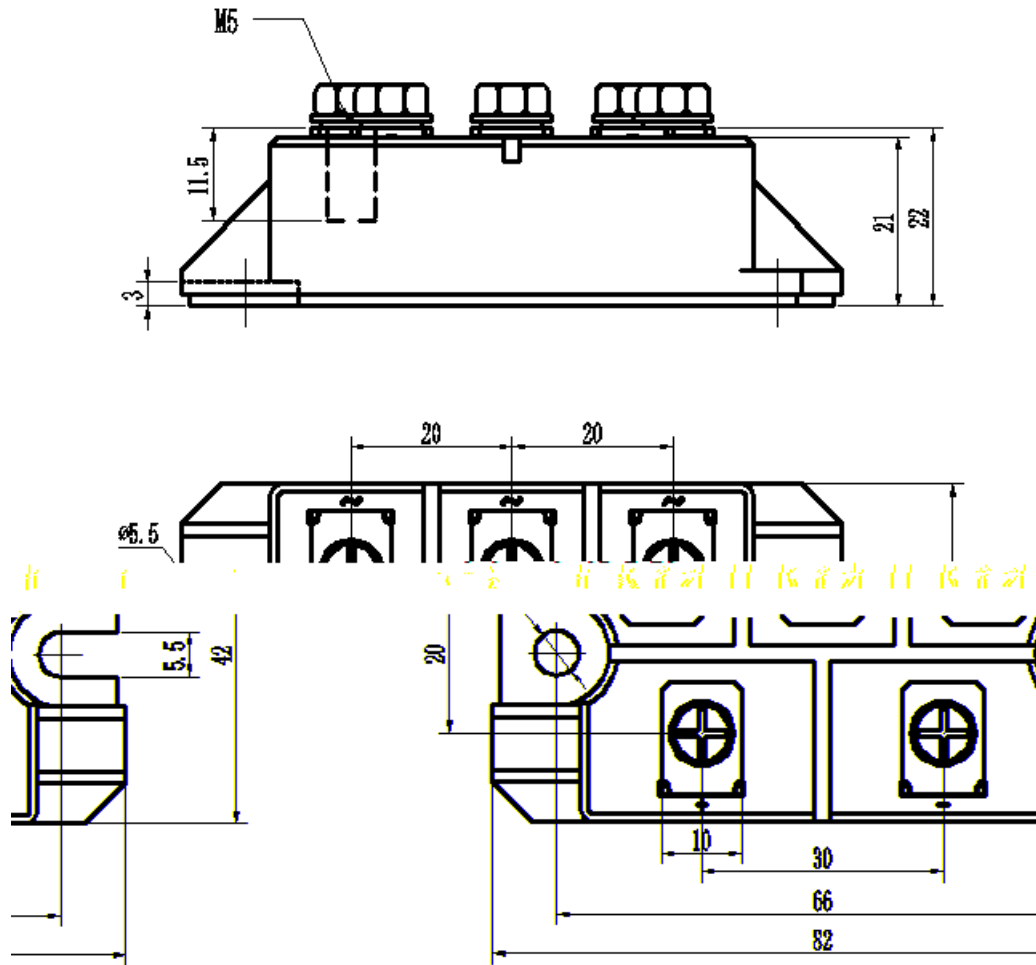
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Current Derating Curve**

## Package Outline Information

### CASE M4



Dimensions in mm