



## Glass Passivated Rectifier Diode Modules

**VRRM** 800 to 1800V  
**IFAV** 240 A

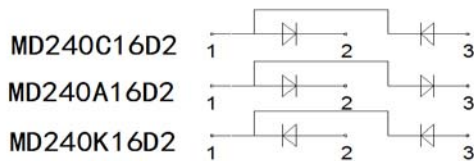
### Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

### Features

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

### Circuit



### Module Type

TYPE			VRRM	VRSM
MD240C08D2	MD240A08D2	MD240K08D2	800V	900V
MD240C12D2	MD240A12D2	MD240K12D2	1200V	1300V
MD240C16D2	MD240A16D2	MD240K16D2	1600V	1700V
MD240C18D2	MD240A18D2	MD240K18D2	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=95°C	240	A
IFSM	t=10mS Tvj =45°C	7550	A
i <sup>2</sup> t	t=10mS Tvj =45°C	285000	A <sup>2</sup> s
V <sub>isol</sub>	a.c.50HZ;r.m.s.;1min	3000	V
T <sub>vj</sub>		-40 to 150	°C
T <sub>stg</sub>		-40 to 125	°C
Mt	To terminals(M6)	5±15%	Nm
Ms	To heat sink(M6)	5±15%	Nm
Weight	Module (Approximately)	160	g

### Thermal Characteristics

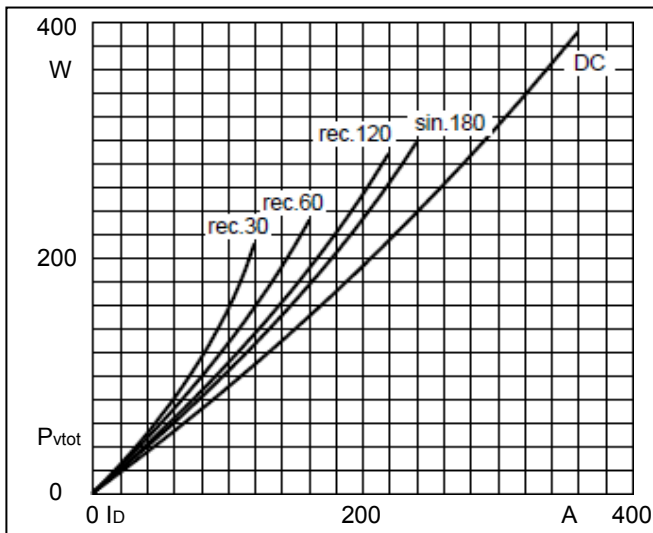
Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.16	°C/W
R <sub>th(c-s)</sub>	Module	0.05	°C/W



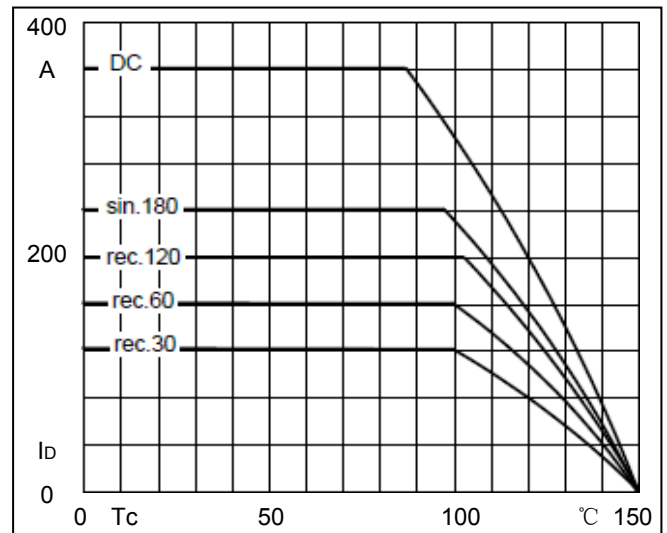
## Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =300A	—	1.15	1.25	V
I <sub>RD</sub>	T <sub>vj</sub> =150°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	9	mA
r <sub>F</sub>	T <sub>J</sub> =25°C	-	1.16	-	mΩ
	T <sub>J</sub> =150°C	-	1.17	-	mΩ
V <sub>FO</sub>	T <sub>J</sub> =25°C	-	0.79	-	V
	T <sub>J</sub> =150°C	-	0.67	-	V

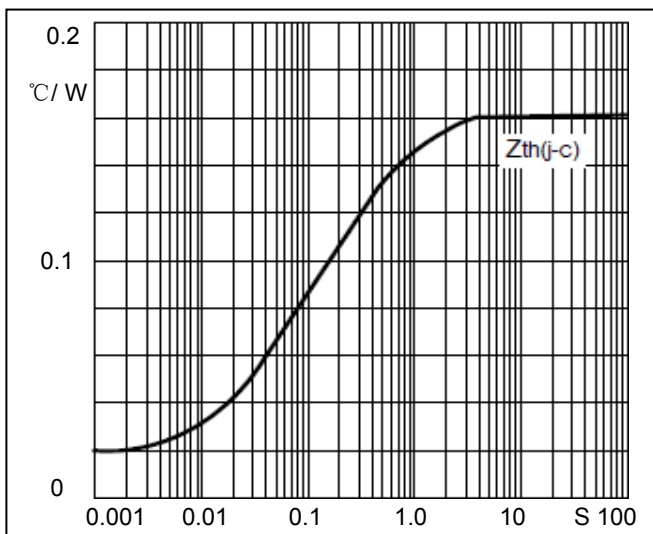
## Performance Curves



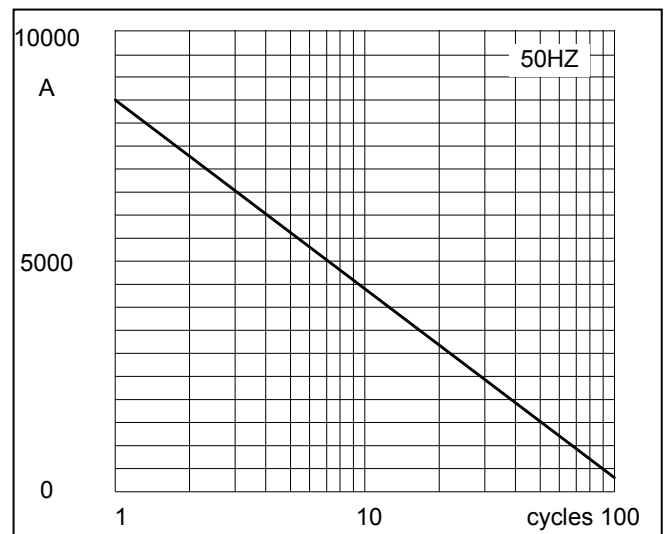
**Fig1. Power dissipation**



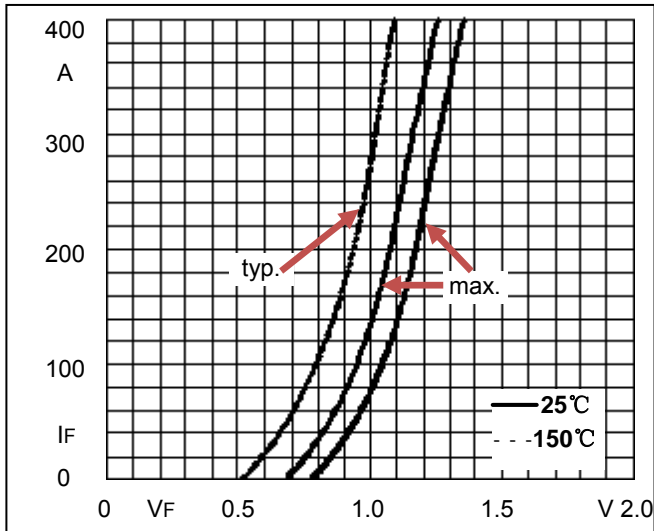
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



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



**Fig5. Forward Characteristics**

## Package Outline Information

