



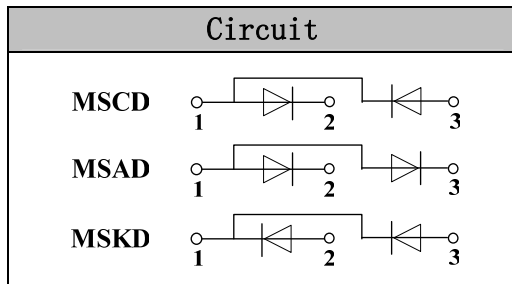
## Glass Passivated Rectifier Diode Modules

**VRRM** 800 to 1800V

**IFAV** 165 Amp

### 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 DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL E243882 approved

### Module Type

TYPE			VRRM	VRSM
MSCD165-08	MSAD165-08	MSKD165-08	800V	900V
MSCD165-12	MSAD165-12	MSKD165-12	1200V	1300V
MSCD165-16	MSAD165-16	MSKD165-16	1600V	1700V
MSCD165-18	MSAD165-18	MSKD165-18	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=101°C	165	A
IF(RMS)	Single phase ,half wave 180° conduction Tc=101°C	220	A
IFSM	t=10mS Tvj =45°C	6000	A
i <sup>2</sup> t	t=10mS Tvj =45°C	180000	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 heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	160	g

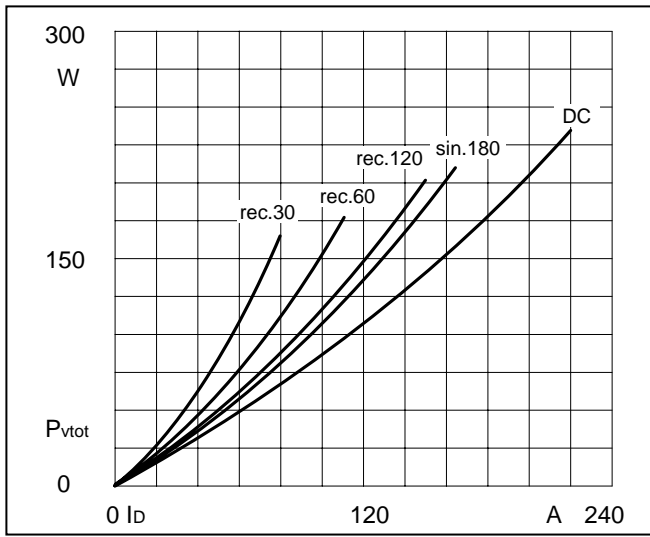
### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.21	°C/W
R <sub>th(c-s)</sub>	Module	0.05	°C/W

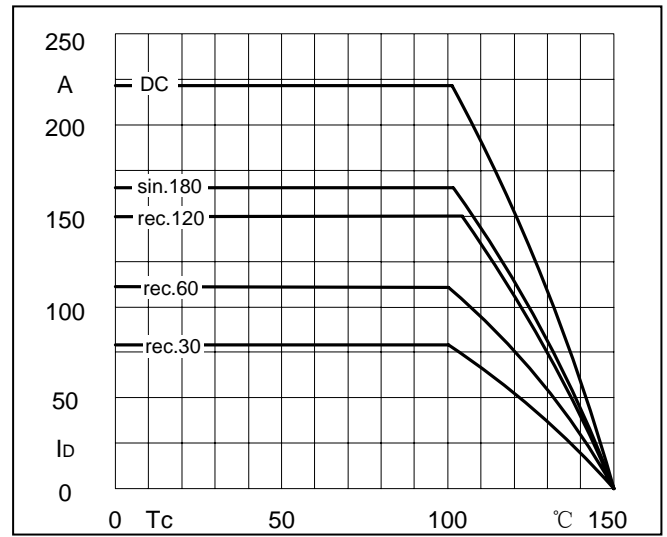
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C IF =300A	—	1.20	1.40	V
IRD	Tvj=150°C VRD=VRRM	—	—	9	mA

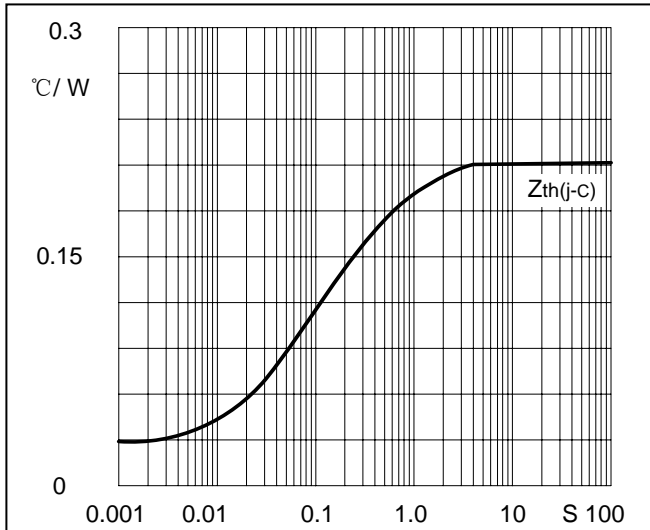
**Performance Curves**



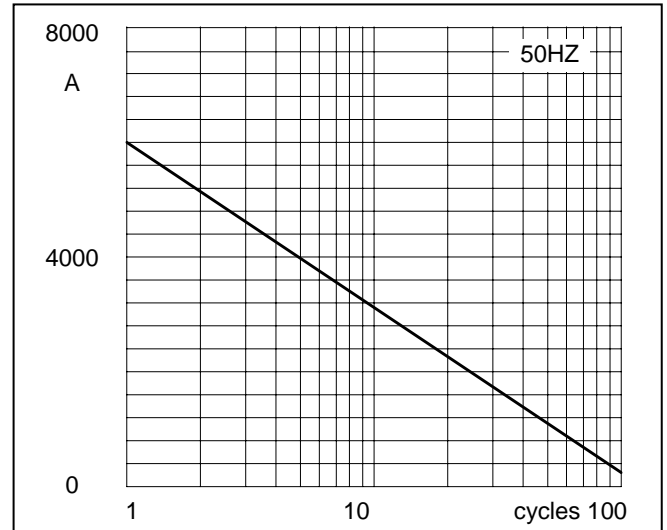
**Fig1. Power dissipation**



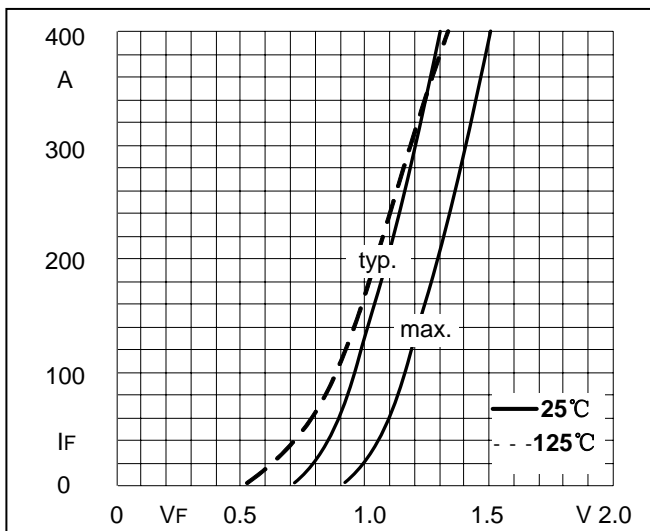
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



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



**Fig5. Forward Characteristics**

**Package Outline Information**

