



## Rectifier Diode Modules

**VRRM** 800 to 1800V

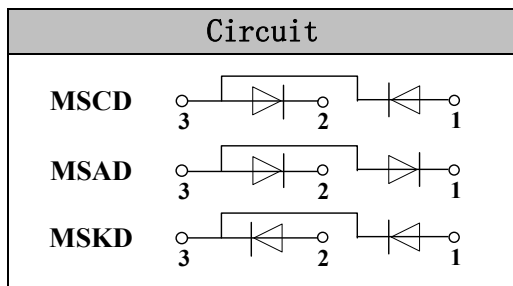
**IFAV** 500 Amp

### 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 nitride ceramic isolated metal baseplate



### Module Type

TYPE			VRRM	V <sub>RSM</sub>
MSCD500-08	MSAD500-08	MSKD500-08	800V	900V
MSCD500-12	MSAD500-12	MSKD500-12	1200V	1300V
MSCD500-16	MSAD500-16	MSKD500-16	1600V	1700V
MSCD500-18	MSAD500-18	MSKD500-18	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	T <sub>c</sub> =85°C	500	A
IFSM	t=10mS T <sub>vj</sub> =45°C	20000	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	2000000	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	9±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module	2050	g

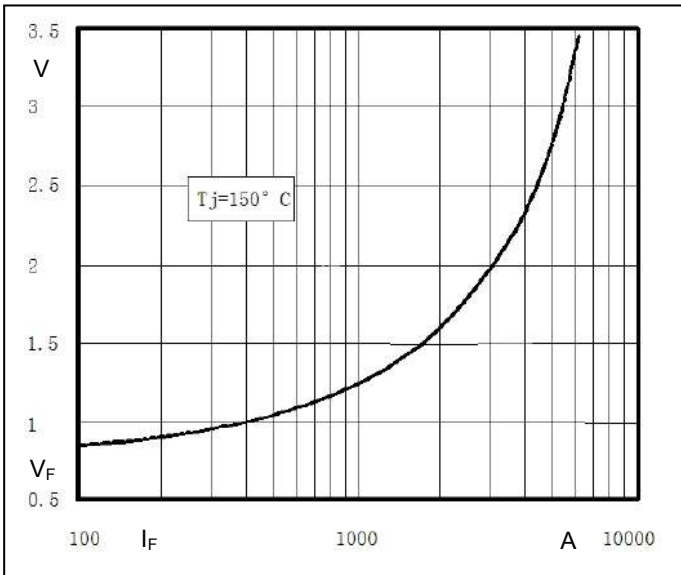
### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Module	0.04	°C/W
R <sub>th(c-s)</sub>	Module	0.015	°C/W

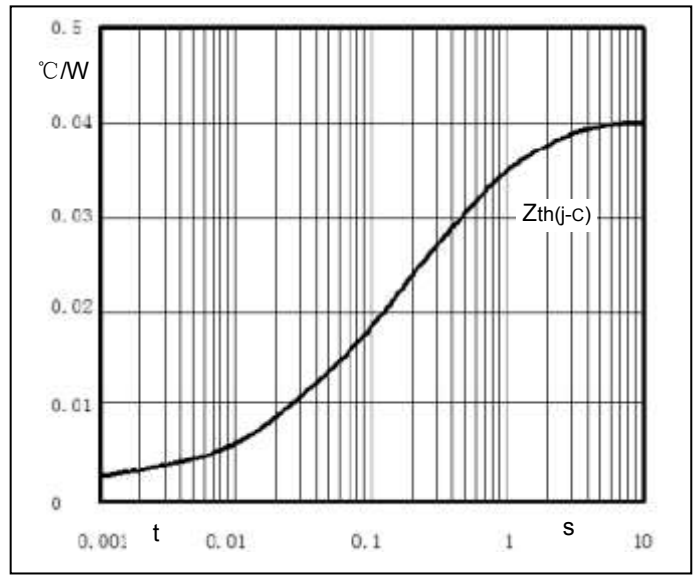
### Electrical Characteristics

Symbol	Conditions	Values	Units
V <sub>FM</sub>	T=25°C I <sub>FM</sub> =1500A	1.8	V
I <sub>RD</sub>	T <sub>vj</sub> =T <sub>vjM</sub> V <sub>RD</sub> =V <sub>RRM</sub>	≤25	mA

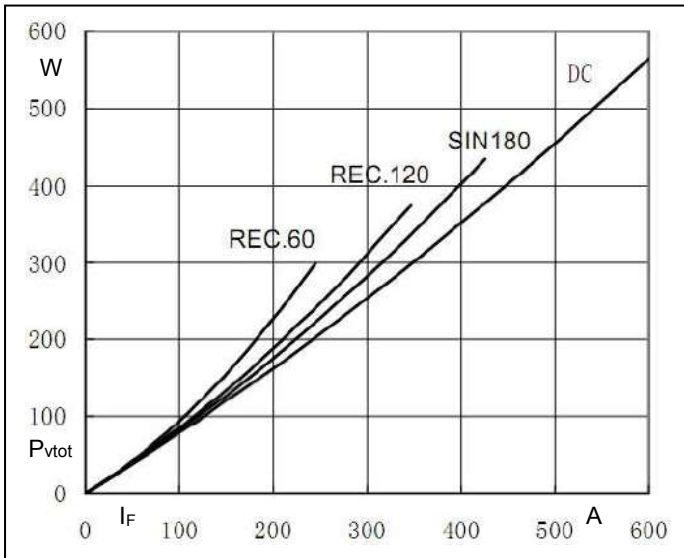
**Performance Curves**



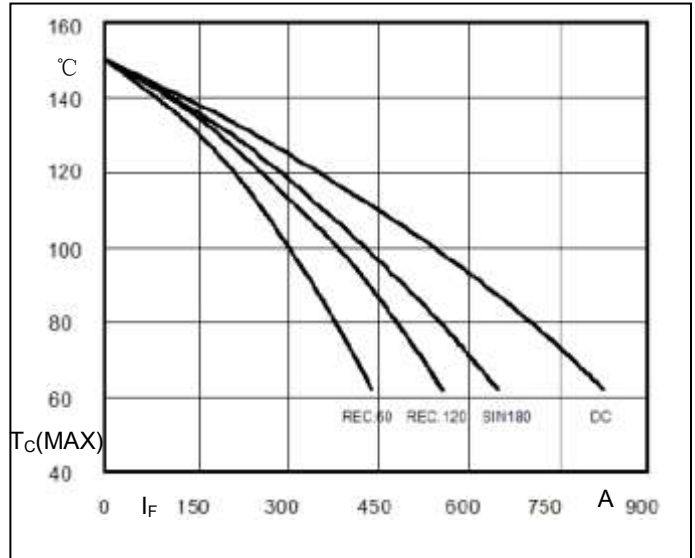
**Fig1. Forward Characteristics**



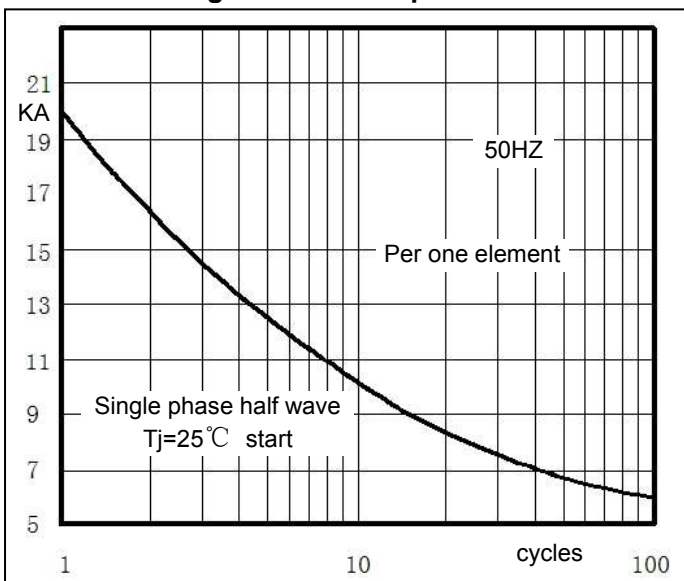
**Fig2. Transient thermal impedance**



**Fig3. Power dissipation**



**Fig4. case temperature vs. forward current**



**Fig5. Max Non-Repetitive Forward Surge Current**

**Package Outline Information**

