



## Glass Passivated Rectifier Diode Modules

VRRM 2200V  
IFAV 165 A

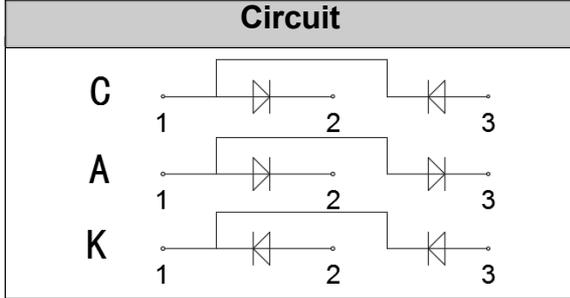
### Applications

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

### Features

- Blocking voltage:2200V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL recognized applied for file no. E230084

### Circuit



### Module Type

TYPE			VRRM	V <sub>RSM</sub>
MD165C22D2	MD165A22D2	MD165K22D2	2200V	2300V

### Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180°conduction T <sub>c</sub> =101°C	165	A
IFSM	t=10mS T <sub>vj</sub> =45°C	6000	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	180000	A <sup>2</sup> s
Visol	a.c.50HZ;r.m.s.;1min	4000	V
T <sub>vj</sub>		-40 to +150	°C
T <sub>stg</sub>		-40 to +125	°C
M <sub>t</sub>	To terminals(M6)	5±15%	Nm
M <sub>s</sub>	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	0.20	°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°CIF =300A	—	1.20	1.40	V
I <sub>RD</sub>	T <sub>vj</sub> =150°CVRD=VRRM	—	—	9	mA
r <sub>f</sub>	T <sub>J</sub> =25°C		1.25		mΩ
V <sub>fO</sub>			0.82		V



### Performance Curves

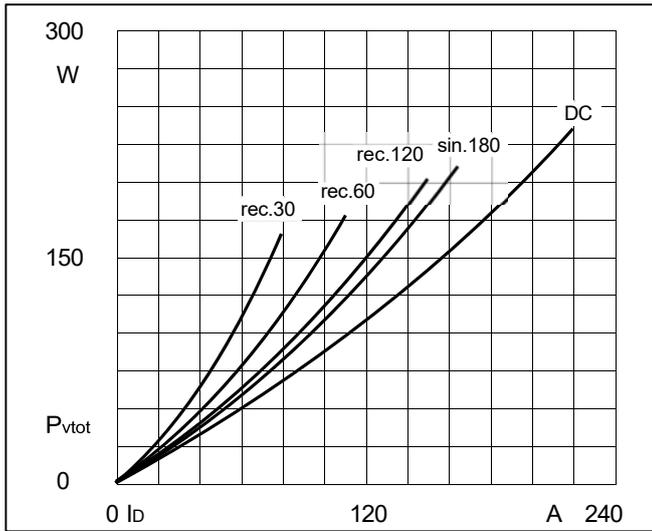


Fig1. Power dissipation

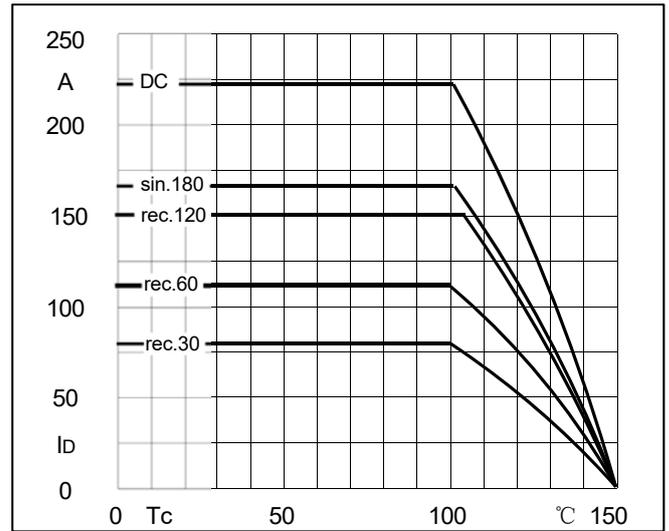


Fig2. Forward Current Derating Curve

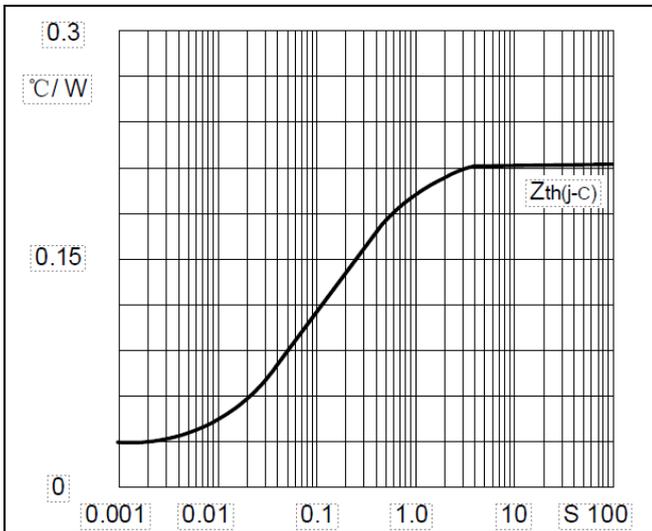


Fig3. Transient thermal impedance

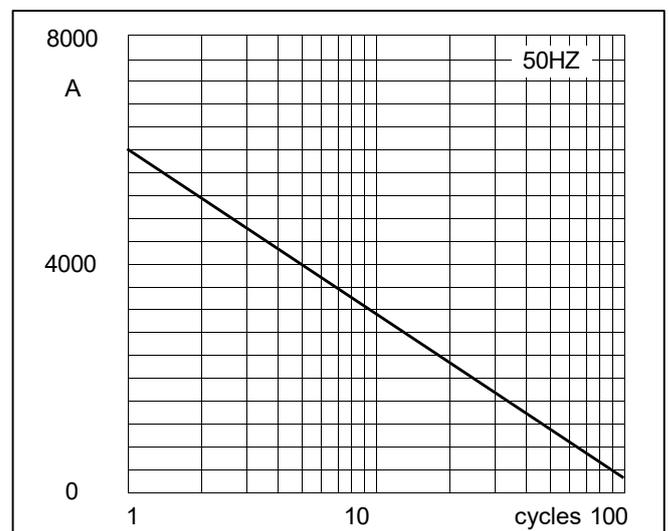


Fig4. Max Non-Repetitive Forward Surge Current

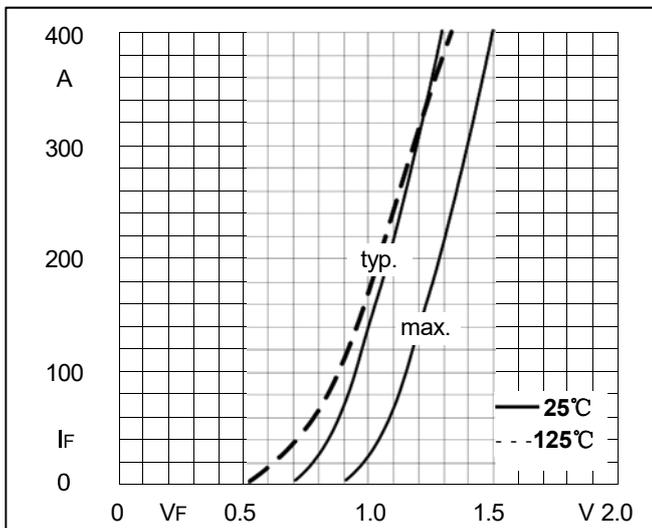
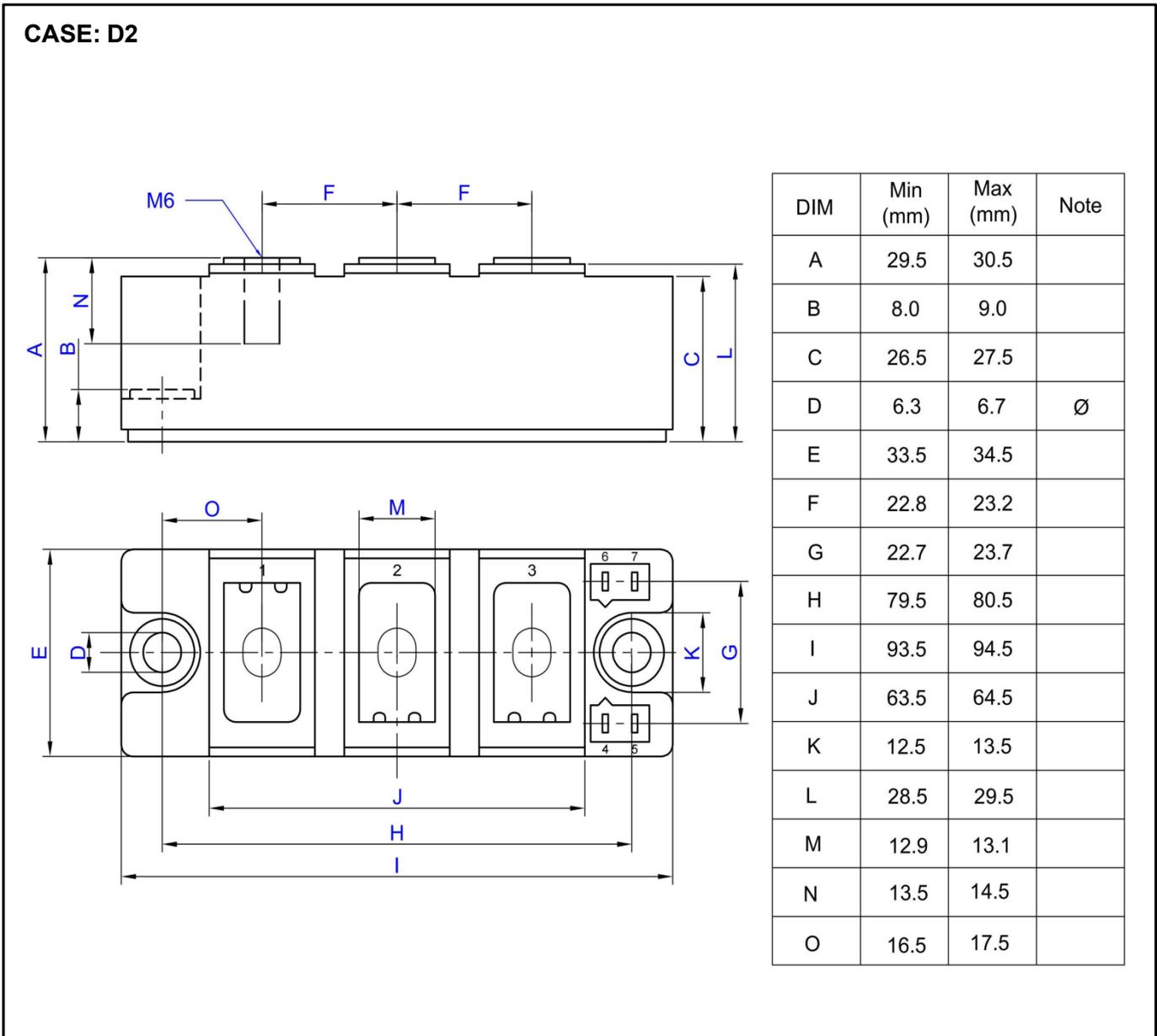


Fig5. Forward Characteristics



## Package Outline Information



## Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	48	8
Outer Carton	545	295	240	80



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