

CURRENT 165 Ampere  
VOLTAGE RANG 600 to 1800 Volts

## MDK165; MDA165; MDC165

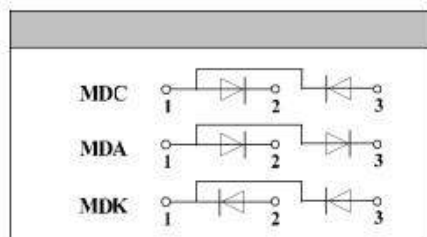


**VRRM** 800 to 1800V  
**IFAV** 165 Amp

### Applications

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

### Circuit



### Features

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

### Module Type

TYPE			VRRM	VRSM
MDK165-08	MDA165-08	MDC165-08	800V	900V
MDK165-12	MDA165-12	MDC165-12	1200V	1300V
MDK165-16	MDA165-16	MDC165-16	1600V	1700V
MDK165-18	MDA165-18	MDC165-18	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Tc=100°C	165	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
Visol	a.c.50Hz;r.m.s.;1min	3000	V
Tvj		-40 to 150	°C
Tstg		-40 to 125	°C
Mt	To terminals(M6)	5±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module	160	g

### Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.18	°C/W
Rth(c-s)	Module	0.05	°C/W

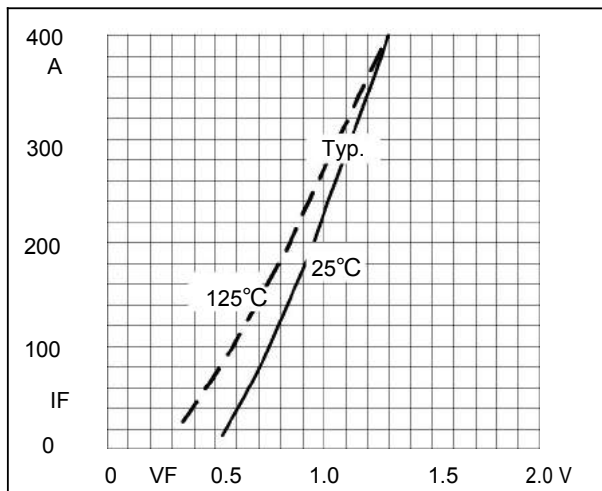
### Electrical Characteristics

Symbol	Conditions	Values	Units
VFM	T=25°C IFM =300A	1.4	V
IRD	Tvj=TvjM VRD=VRRM	≤9	mA

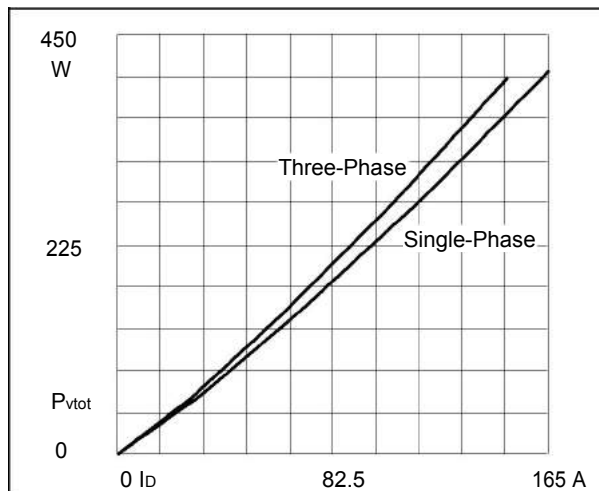
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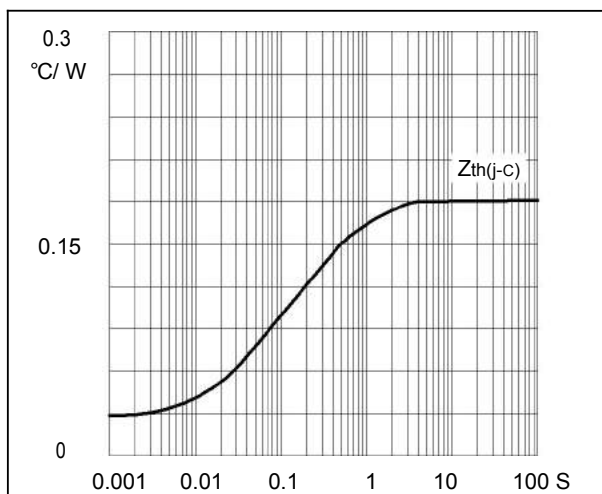
## Performance Curves



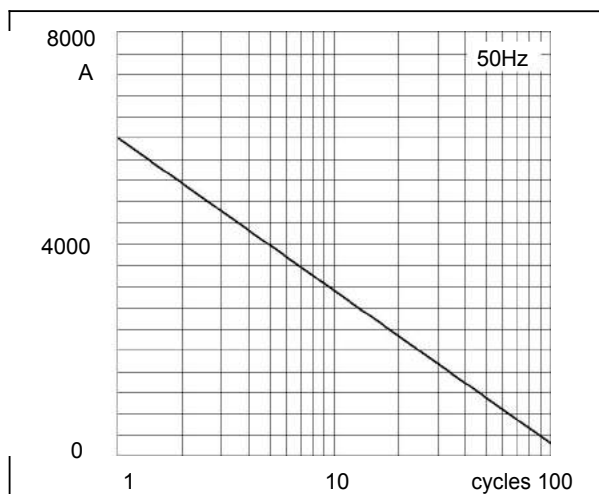
**Fig1. Forward Characteristics**



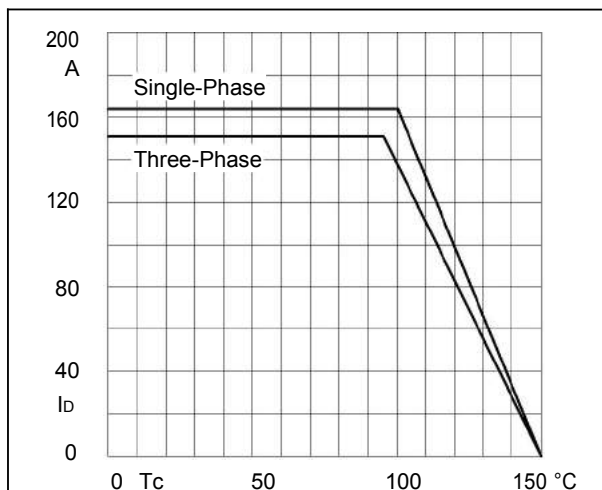
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



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



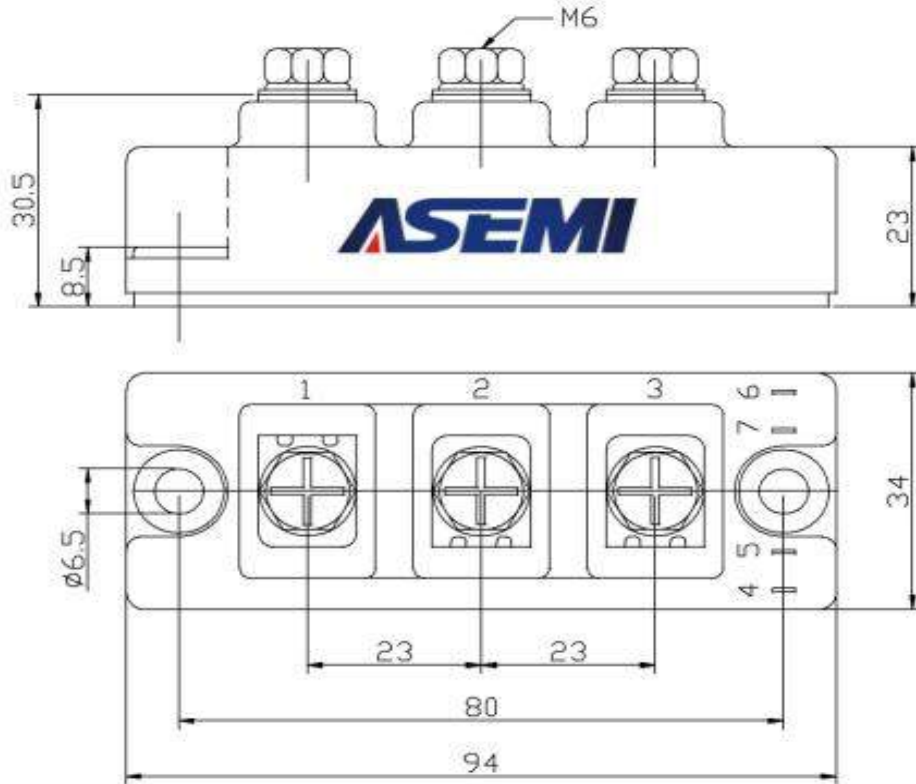
**Fig5. Forward Current Derating Curve**

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## Package Outline Information

CASE: D2



Dimensions in mm