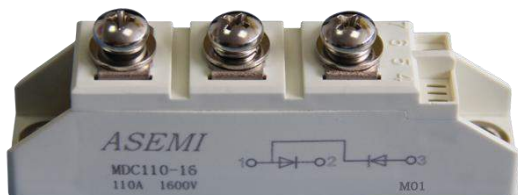


CURRENT 110 Ampere  
 VOLTAGE RANG 600 to 1800 Volts

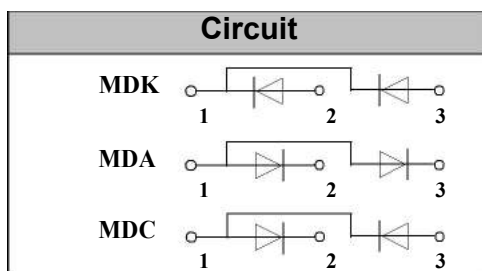
## MDK110; MDA110; MDC110



**VRRM** 800 to 1800V  
**IFAV** 100 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 ceramic isolated metal baseplate
- ☑ Glass passivated chip

### Module Type

TYPE			VRRM	V <sub>RSM</sub>
MDK110-08	MDA110-08	MDC110-08	800V	900V
MDK110-12	MDA110-12	MDC110-12	1200V	1300V
MDK110-16	MDA110-16	MDC110-16	1600V	1700V
MDK110-18	MDA110-18	MDC110-18	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	T <sub>c</sub> =100°C	110	A
IFSM	t=10mS T <sub>vj</sub> =45°C	2500	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	31250	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
M <sub>t</sub>	To terminals(M5)	2 . 5-4	Nm
M <sub>s</sub>	To heatsink(M5)	2 . 5-4	Nm
Weight	Module	110	g

### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.35	°C/W
R <sub>th(c-s)</sub>	Module	0.1	°C/W

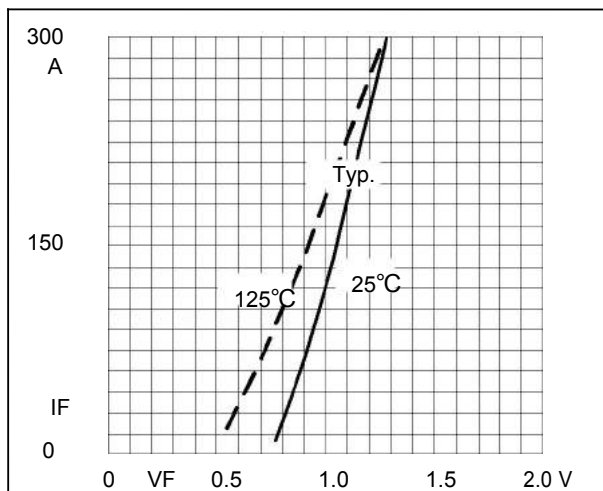
### Electrical Characteristics

Symbol	Conditions	Values	Units
VFM	T=25°C IFM =300A	1.35	V
IRD	T <sub>vj</sub> =T <sub>vjM</sub> VRD=VRRM	≤ 5	mA

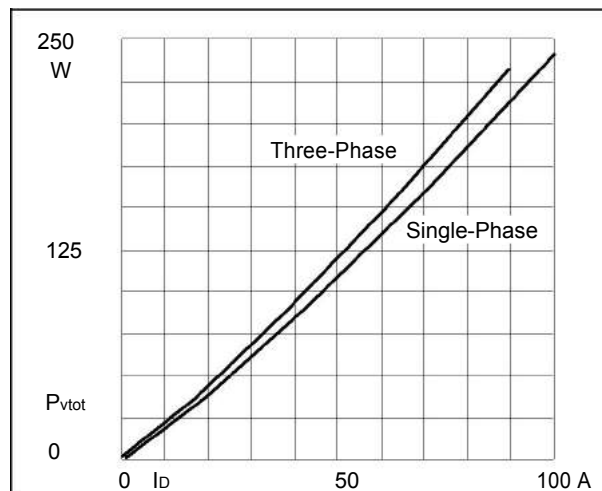
CURRENT 110 Ampere  
 VOLTAGE RANG 600 to 1800 Volts

**MDK110; MDA110; MDC110**

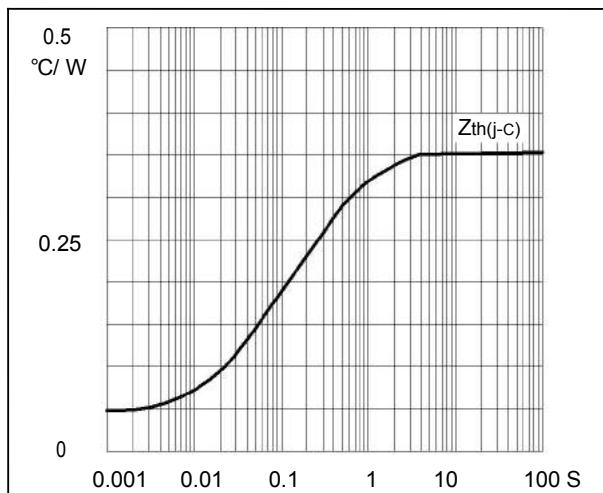
**Performance Curves**



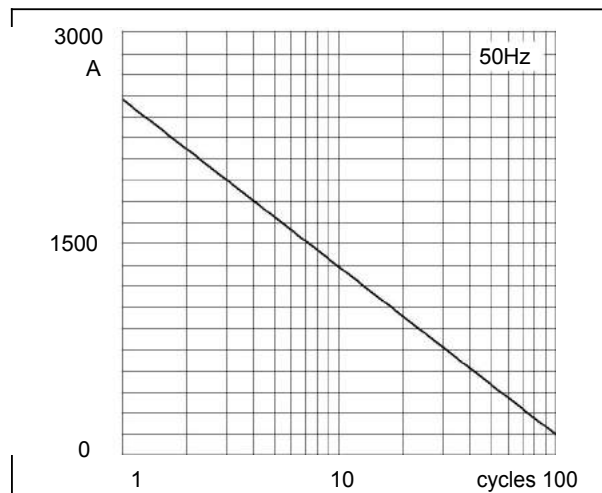
**Fig1. Forward Characteristics**



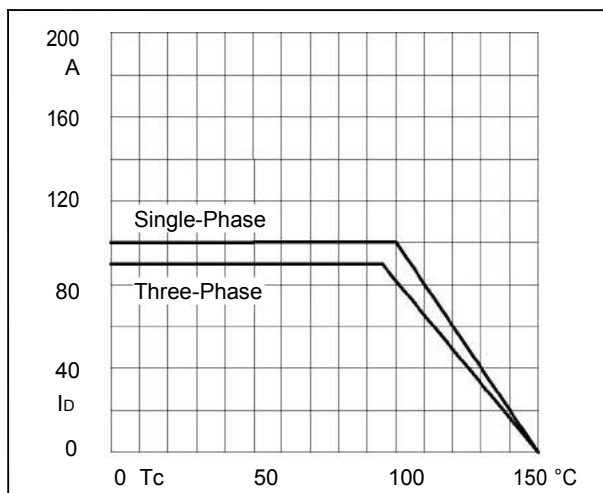
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



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



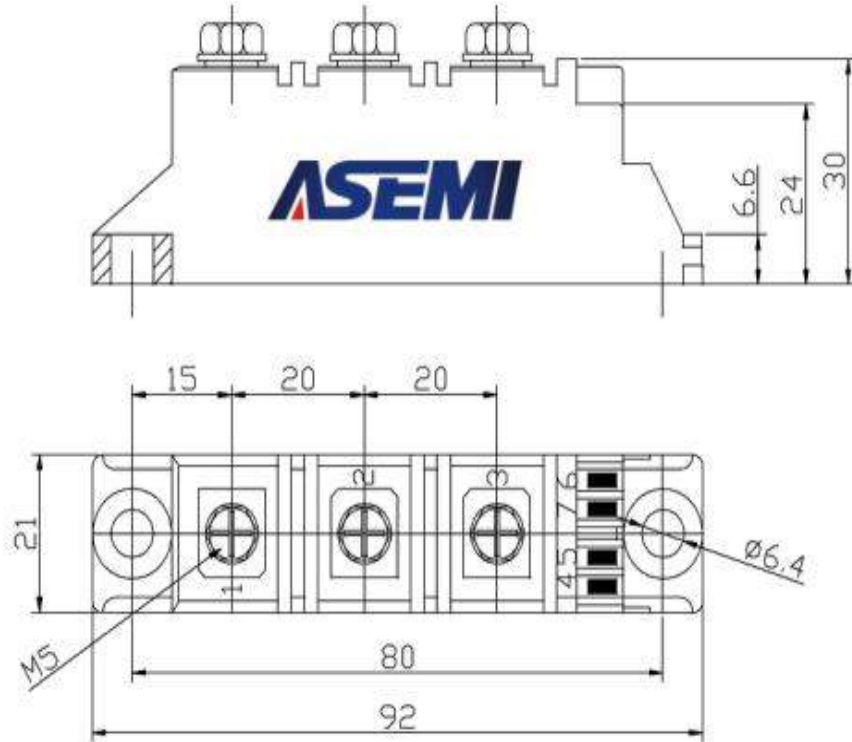
**Fig5. Forward Current Derating Curve**

CURRENT 110 Ampere  
VOLTAGE RANG 600 to 1800 Volts

**MDK110; MDA110; MDC110**

## Package Outline Information

CASE-D1



Dimensions in mm