



Glass Passivated Rectifier Diode Modules

V_{RRM} 800 to 1800V

I_{FAV} 100 Amp

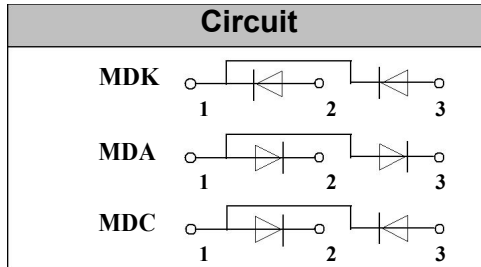
Applications

- ☑ 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

Circuit



Module Type

TYPE			V _{RRM}	V _{RSM}
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
I _{FAV}	T _c =100°C	110	A
I _{FSM}	t=10mS T _{vj} =45°C	2500	A
i ² t	t=10mS T _{vj} =45°C	31250	A ² s
V _{isol}	a.c.50Hz;r.m.s.;1min	3000	V
T _{vj}		-40 to 150	°C
T _{stg}		-40 to 125	°C
Mt	To terminals(M5)	2 . 5-4	Nm
Ms	To heatsink(M5)	2 . 5-4	Nm
Weight	Module	110	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.35	°C/W
R _{th(c-s)}	Module	0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values	Units
V _{FM}	T=25°C I _{FM} =300A	1.35	V
IRD	T _{vj} =T _{vjM} V _{RD} =V _{RRM}	≤ 5	mA

Performance Curves

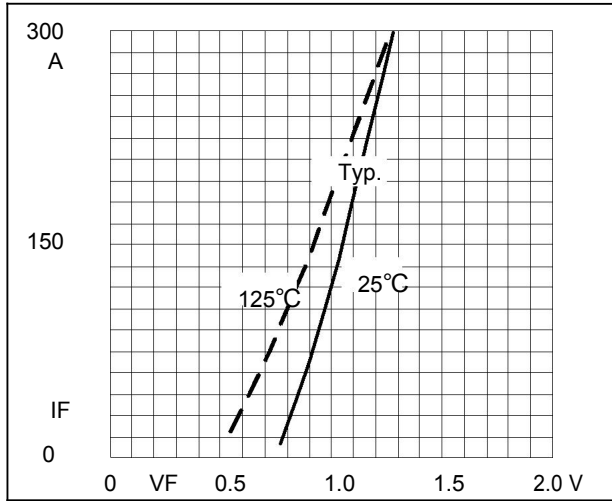


Fig1. Forward Characteristics

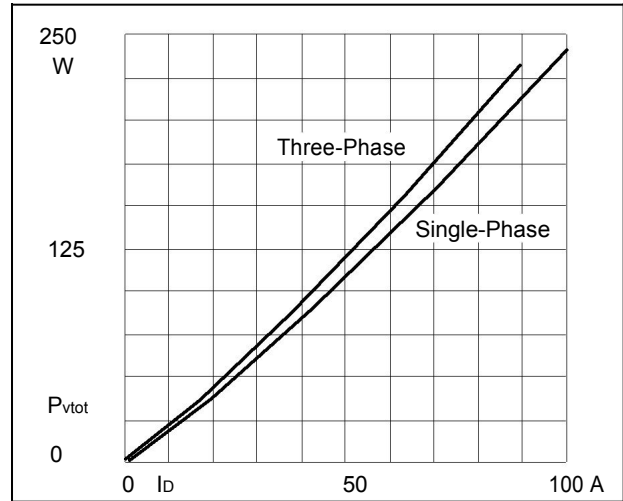


Fig2. Power dissipation

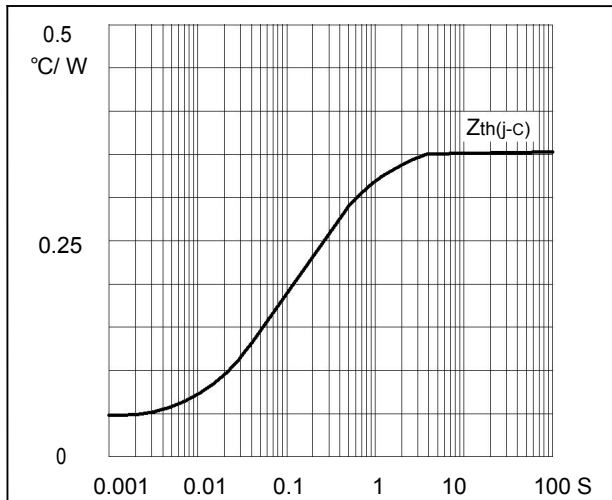


Fig3. Transient thermal impedance

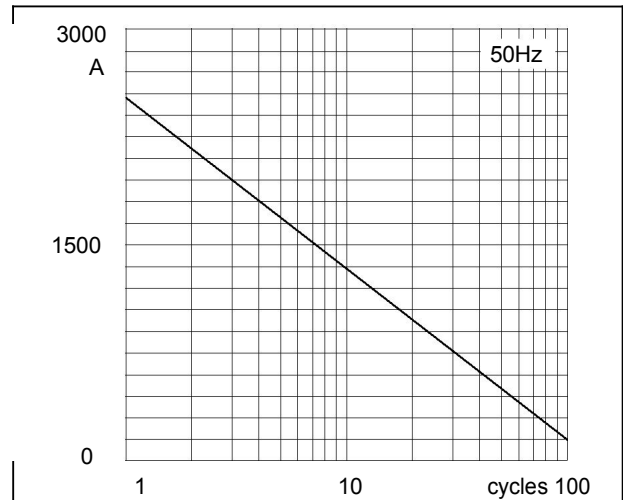


Fig4. Max Non-Repetitive Forward Surge Current

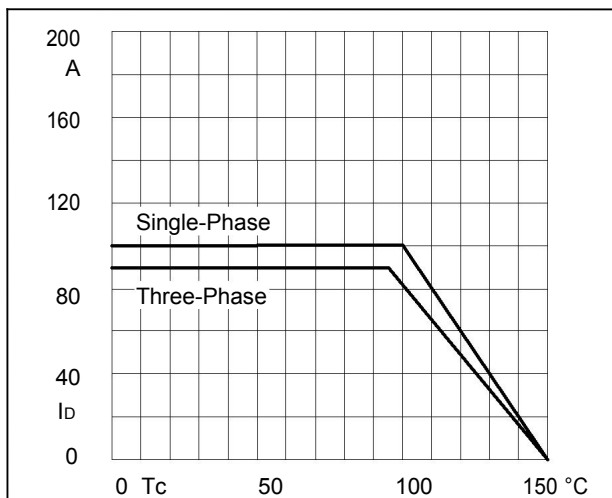
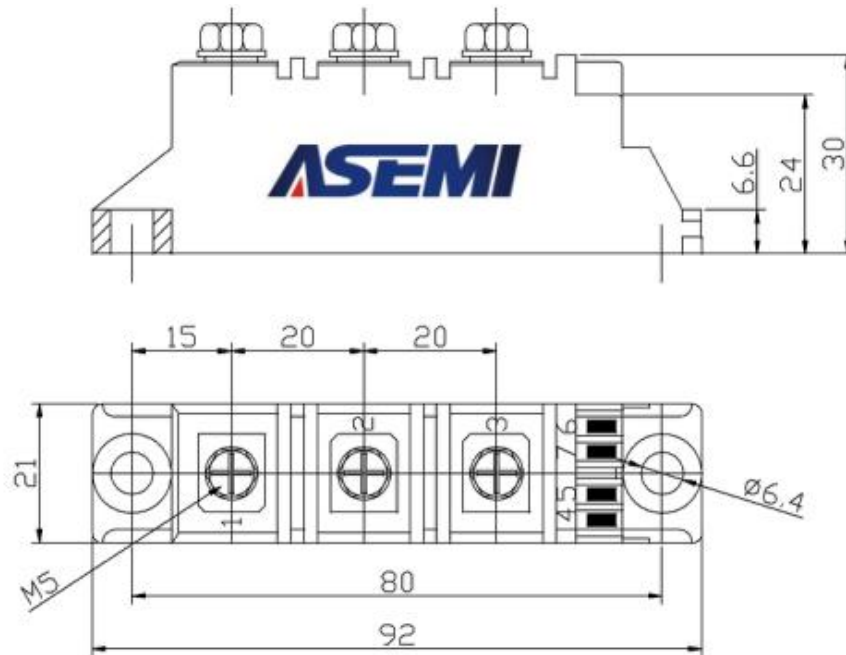


Fig5. Forward Current Derating Curve

CASE-D1



Dimensions in mm