



Rectifier Diode Modules

V_{RRM} 800 to 1800V

I_{FAV} 300 Amp

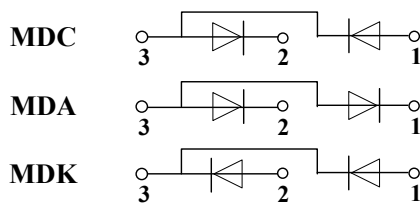
Applications

- 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

Circuit



Module Type

TYPE			V _{RRM}	V _{RSM}
MDC300-08	MDA300-08	MDK300-08	800V	900V
MDC300-12	MDA300-12	MDK300-12	1200V	1300V
MDC300-16	MDA300-16	MDK300-16	1600V	1700V
MDC300-18	MDA300-18	MDK300-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	T _c =85°C	300	A
I _{FSM}	t=10mS T _{vj} =45°C	11000	A
i ² t	t=10mS T _{vj} =45°C	605000	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
M _t	To terminals(M8)	9±15%	Nm
M _s	To heatsink(M6)	5±15%	Nm
Weight	Module	865	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Module	0.08	°C/W
R _{th(c-s)}	Module	0.05	°C/W

Electrical Characteristics

Symbol	Conditions	Values	Units
V _{FM}	T=25°C I _{FM} =900A	1.8	V
I _{RD}	T _{vj} =T _{vjM} V _{RD} =V _{RRM}	≤15	mA

Performance Curves

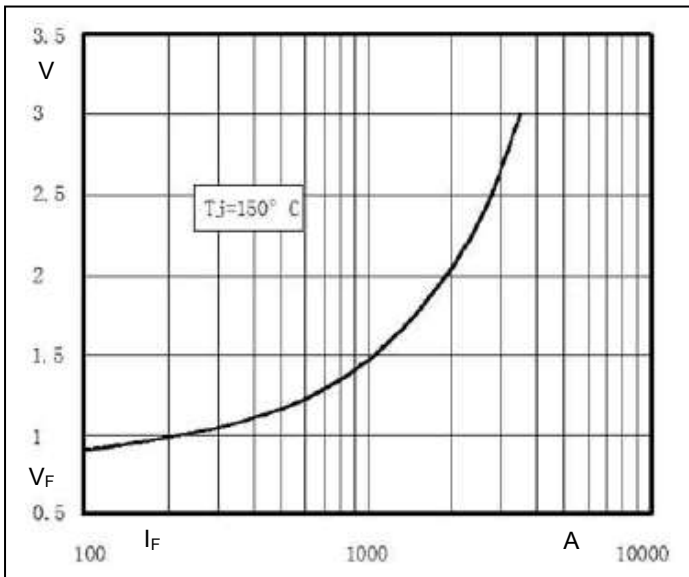


Fig1. Forward Characteristics

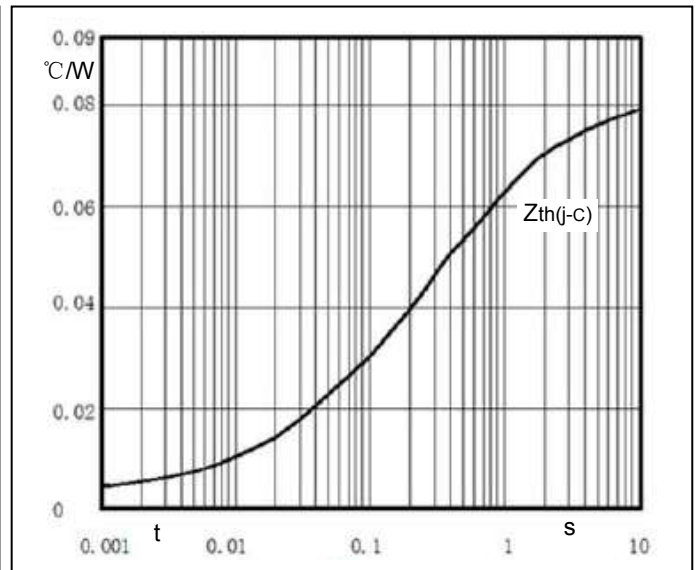


Fig2. Transient thermal impedance

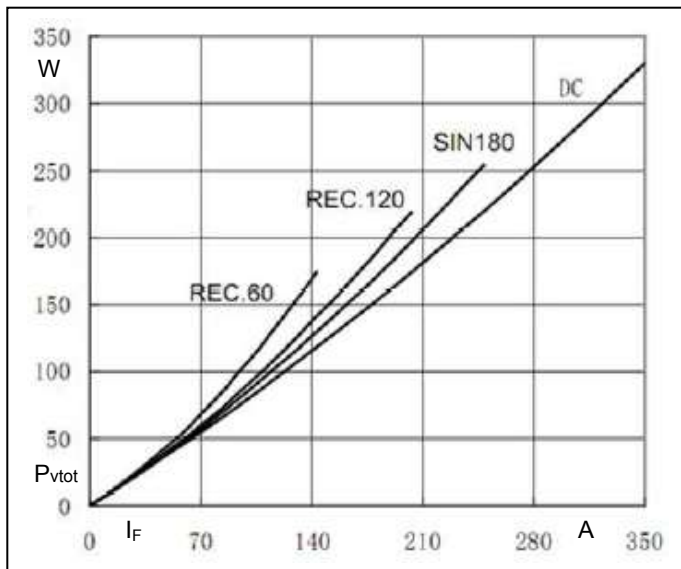


Fig3. Power dissipation

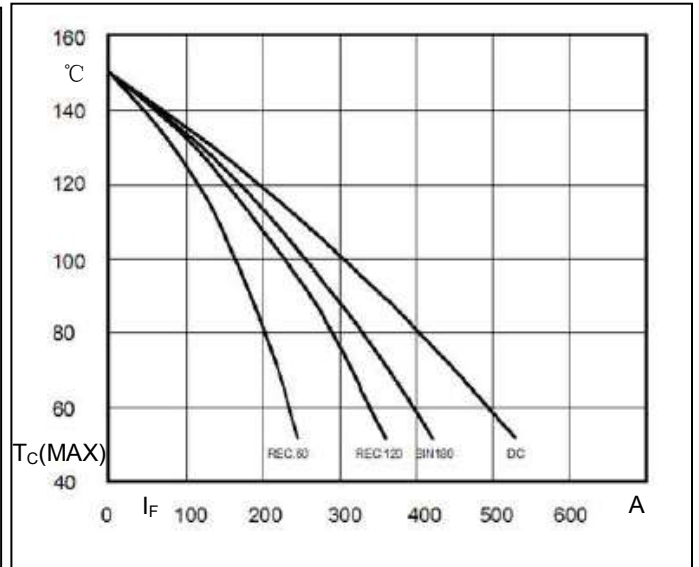


Fig4. case temperature vs. forward current

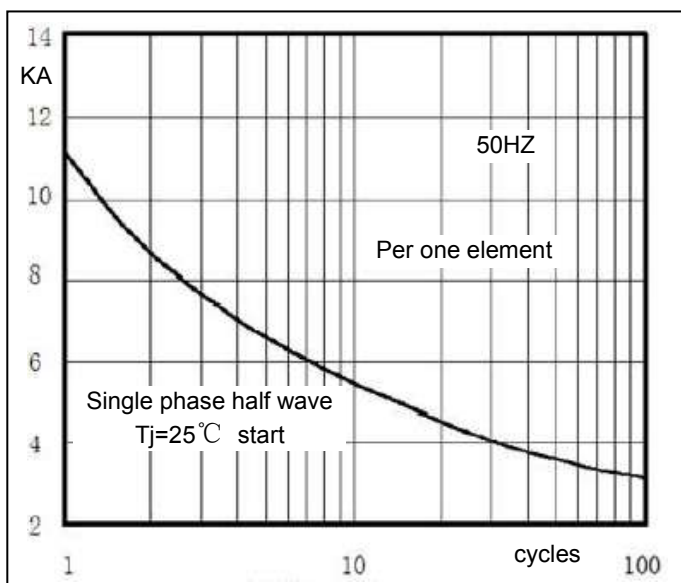
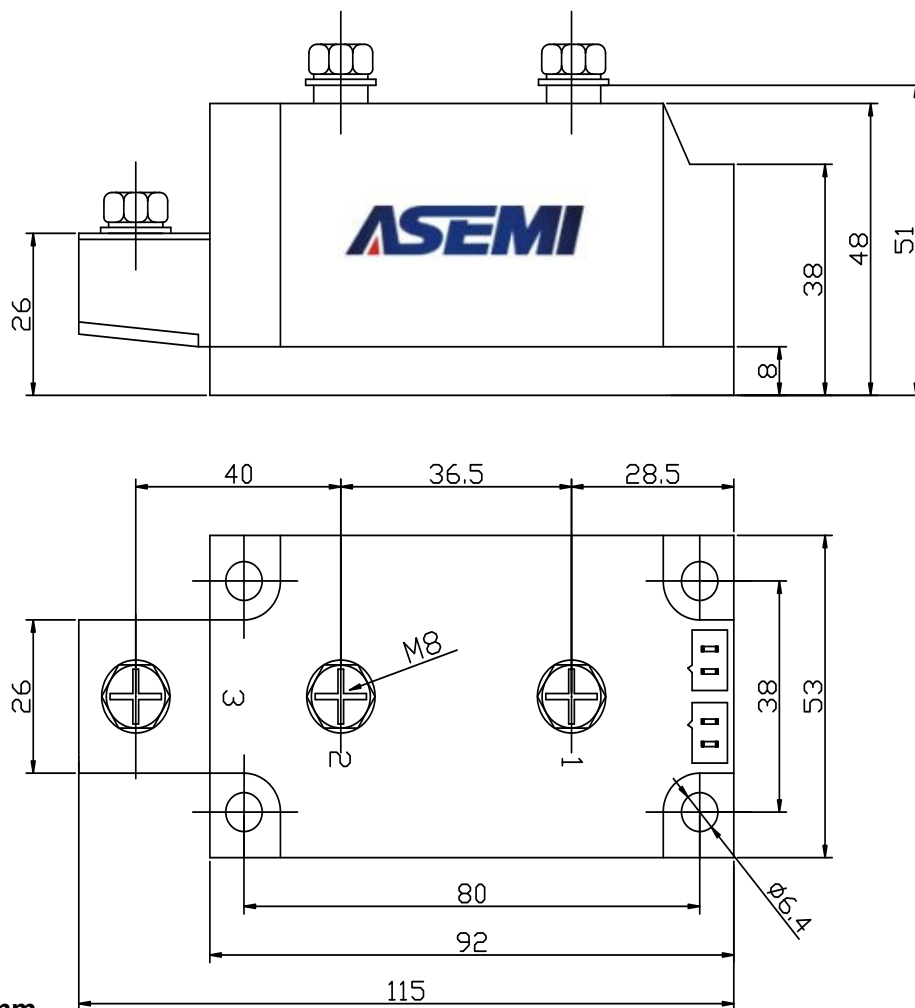


Fig5. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: D3



Dimensions in mm