



Rectifier Diode Modules

V_{RRM} 800 to 1800V

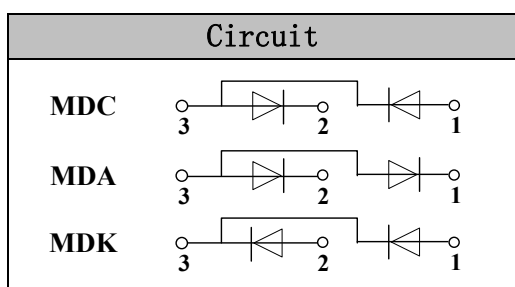
I_{FAV} 500 Amp

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



Module Type

TYPE			V _{RRM}	V _{RSM}
MDC500-08	MDA500-08	MDK500-08	800V	900V
MDC500-12	MDA500-12	MDK500-12	1200V	1300V
MDC500-16	MDA500-16	MDK500-16	1600V	1700V
MDC500-18	MDA500-18	MDK500-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	T _c =85°C	500	A
I _{FSM}	t=10mS T _{vj} =45°C	20000	A
i ² t	t=10mS T _{vj} =45°C	2000000	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	9±15%	Nm
M _s	To heatsink(M6)	5±15%	Nm
Weight	Module	2050	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Module	0.04	°C/W
R _{th(c-s)}	Module	0.015	°C/W

Electrical Characteristics

Symbol	Conditions	Values	Units
V _{FM}	T=25°C I _{FM} =1500A	1.8	V
I _{RD}	T _{vj} =T _{vjM} V _{RD} =V _{RRM}	≤25	mA

Performance Curves

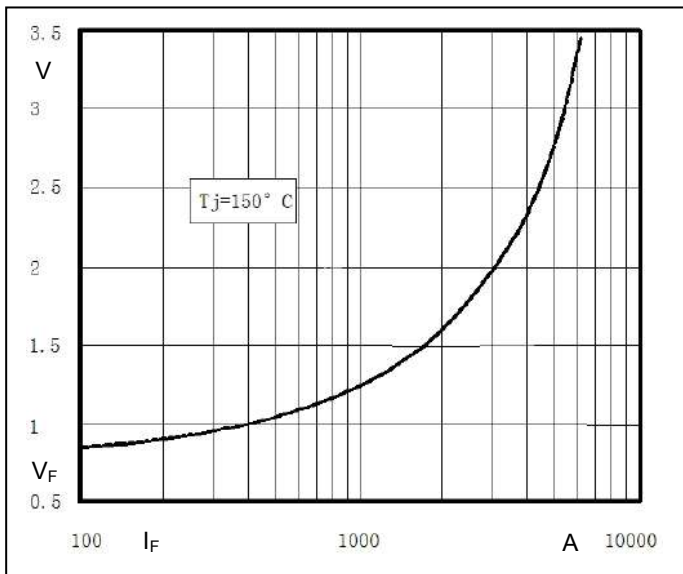


Fig1. Forward Characteristics

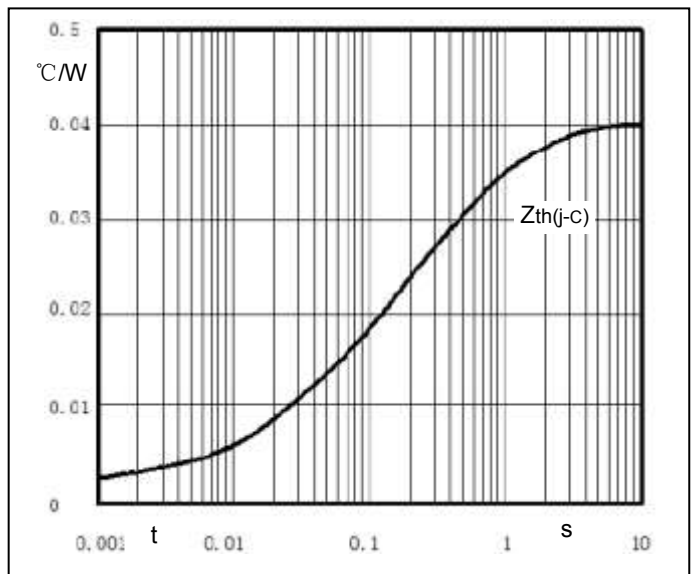


Fig2. Transient thermal impedance

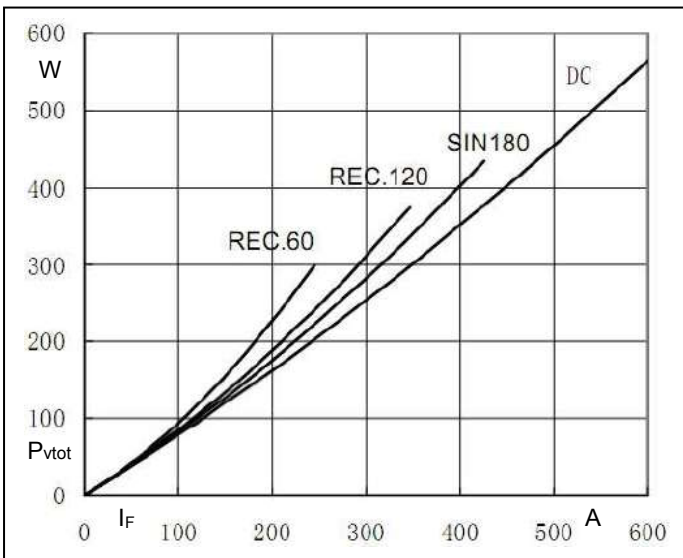


Fig3. Power dissipation

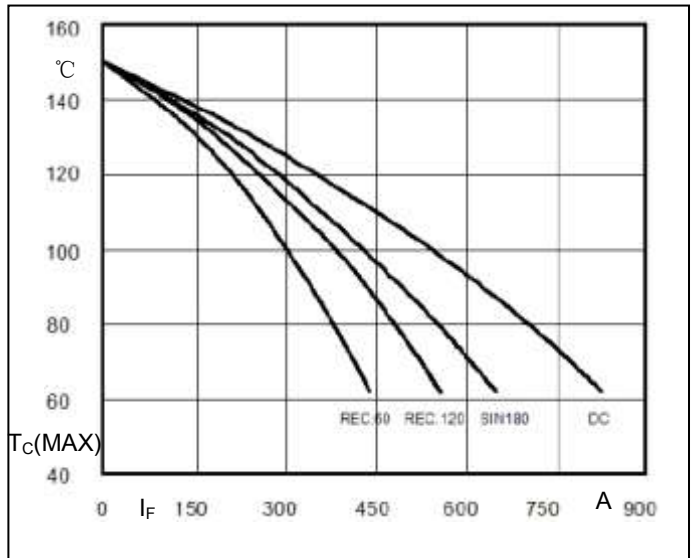


Fig4. case temperature vs. forward current

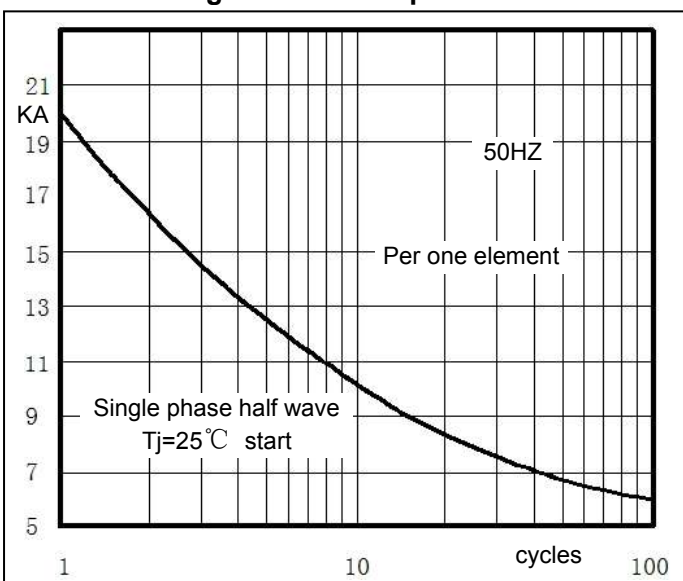
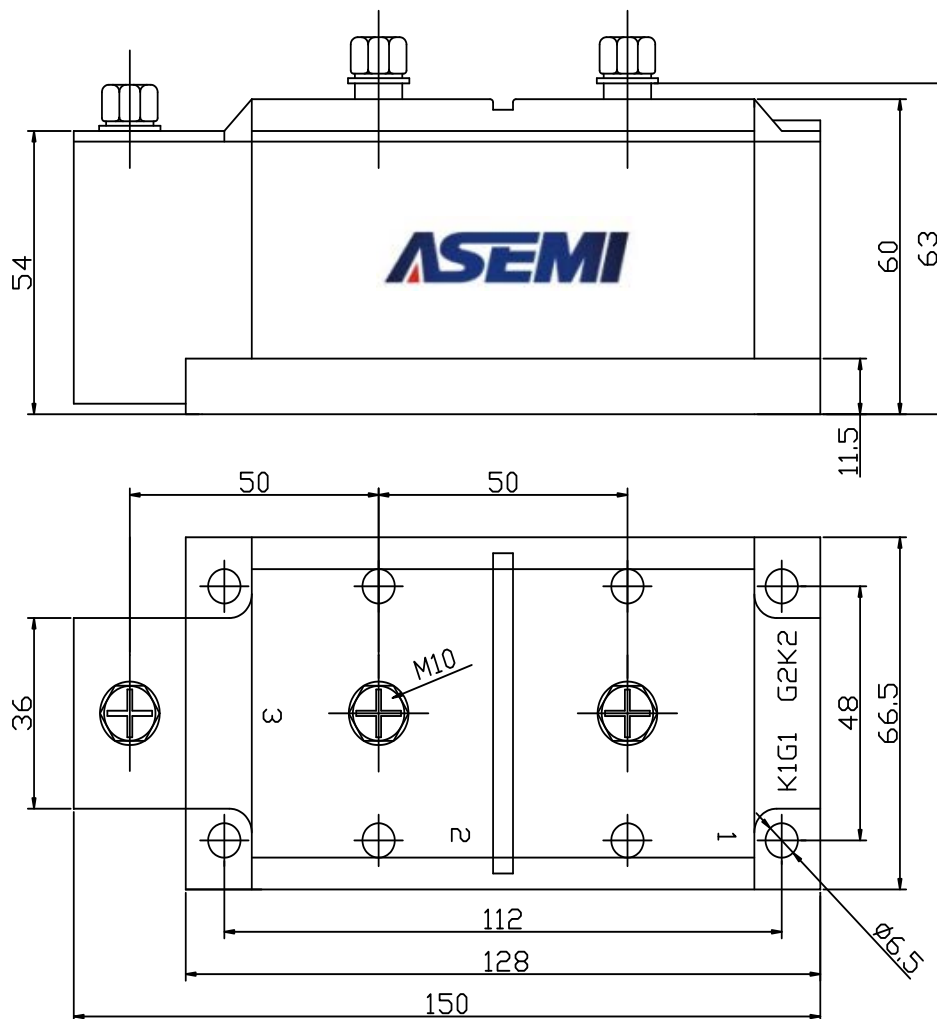


Fig5. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: D5



Dimensions in mm