

Rectifier Diode Module



VRRM 1200 to 2000V
IFAV 500A

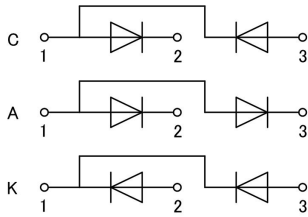
Applications

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

Features

- International standard package
- High Surge Capability
- Simple Mounting

Circuit



Blocking Characteristics

TYPE			VRRM	VRSM	Units
MD500C12D6	MD500A12D6	MD500K12D6	1200V	1300V	V
MD500C14D6	MD500A14D6	MD500K14D6	1400V	1500V	V
MD500C16D6	MD500A16D6	MD500K16D6	1600V	1760V	V
MD500C18D6	MD500A18D6	MD500K18D6	1800V	2000V	V
MD500C20D6	MD500A20D6	MD500K20D6	2000V	2200V	V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=100℃	500	A
IFSM	t=10ms Tvj=TvjM	16000	A
i ² t	t=10ms Tvj=TvjM	1280000	A ² s
Visol	a.c.50HZ;r.m.s.;1min,I _{iso} :2mA(max)	2500	V
Tvj		-40 to 150	℃
Tstg		-40 to 125	℃
Mt	To terminals(M10)	12±15%	Nm
Ms	To heatsink(M6)	6±15%	Nm
Weight	Module (Approximately)	1550	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	per diode	0.073	℃/W
Rth(c-s)	per diode	0.04	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25℃ IF=1500A			1.4	V
IRRM	Tvj=TvjM V=VRRM			20	mA
VFO	Tvj=TvjM			0.75	V
rF	Tvj=TvjM			0.3	mΩ



Performance Curves

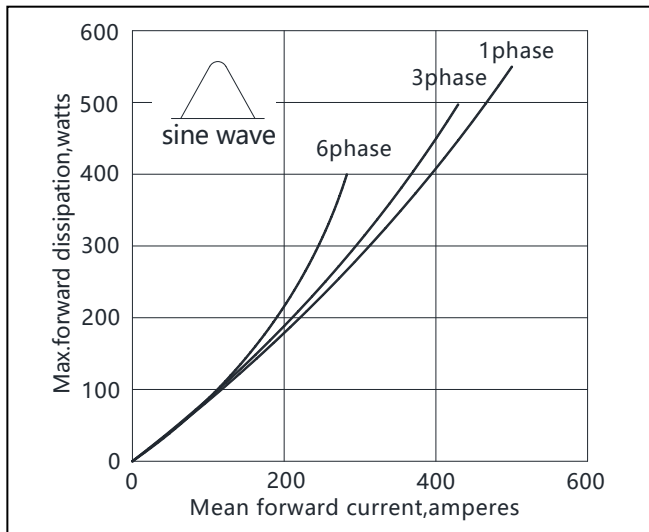


Fig1. Power dissipation

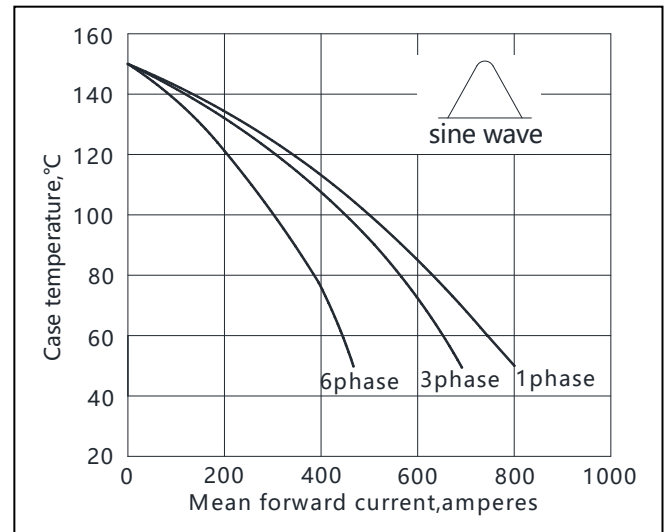


Fig2. Forward Current Derating Curve

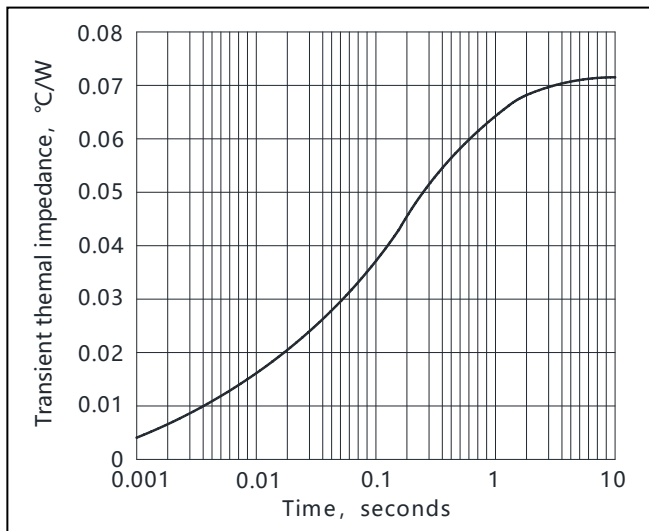


Fig3. Transient thermal impedance

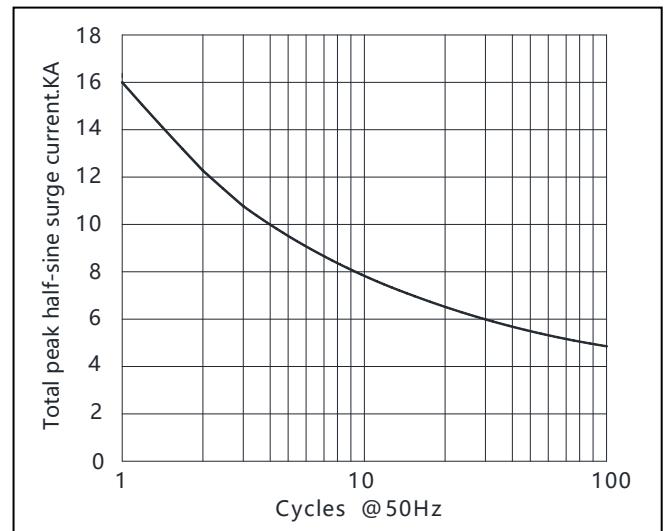


Fig4. Max Non-Repetitive Forward Surge Current

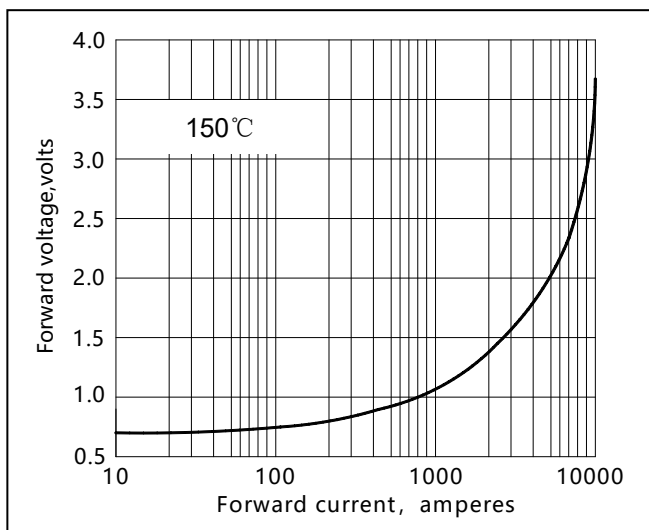
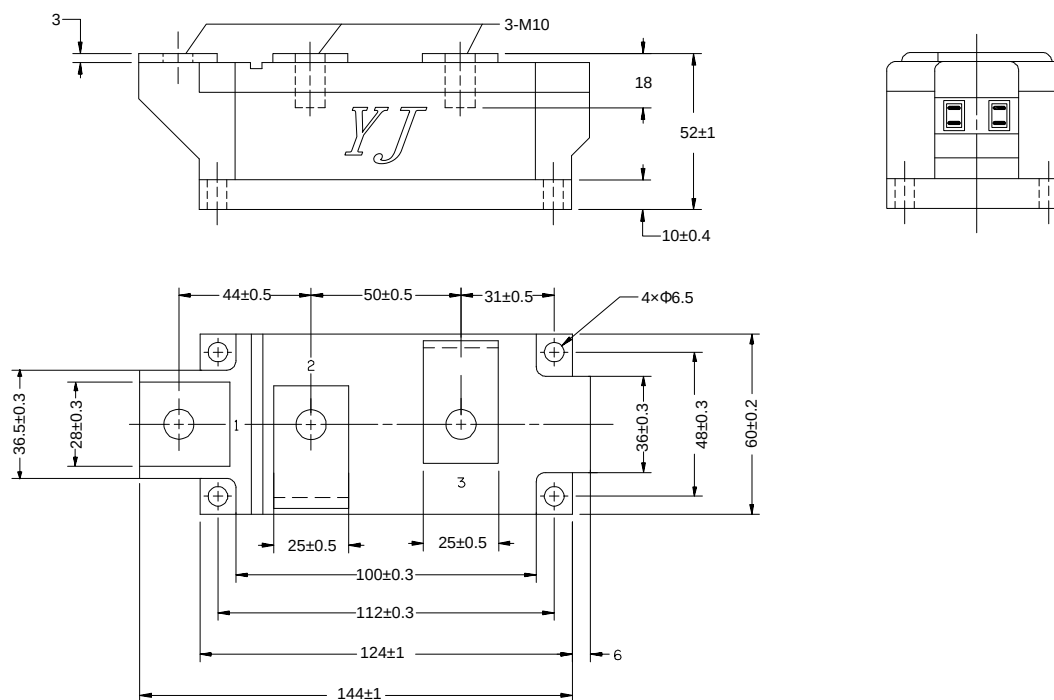


Fig5. Forward Characteristics



CASE: D6



Unmarked dimensional tolerance: $\pm 0.5\text{mm}$