

Rectifier Diode Module



VRRM 3000 to 3600V
IFAV 450A

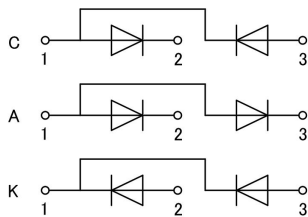
Applications

- 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	VRSRM	Units
MD450C30D6	MD450A30D6	MD450K30D6	3000	3200	V
MD450C32D6	MD450A32D6	MD450K32D6	3200	3400	V
MD450C34D6	MD450A34D6	MD450K34D6	3400	3600	V
MD450C36D6	MD450A36D6	MD450K36D6	3600	3800	V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=100℃	450	A
IFSM	t=10ms Tvj=TvjM	13000	A
i ² t	t=10ms Tvj=TvjM	845000	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min,I _{iso} :2mA(max)	5000	V
Tvj		-40 to 150	℃
T _{stg}		-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
R _{th(j-c)}	per diode	0.073	℃/W
R _{th(c-s)}	per diode	0.02	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25℃ IF=1200A			1.6	V
I _{RRM}	Tvj=TvjM V=VRRM			30	mA
V _{FO}	Tvj=TvjM			0.84	V
r _F	Tvj=TvjM			0.6	mΩ



Performance Curves

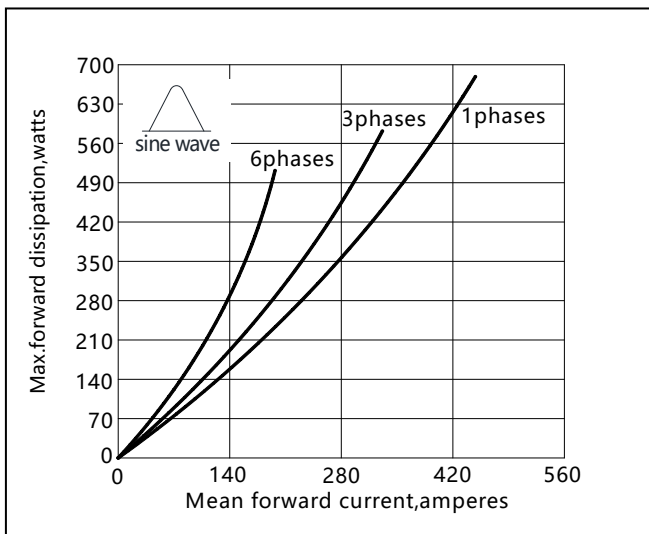


Fig1. Power dissipation

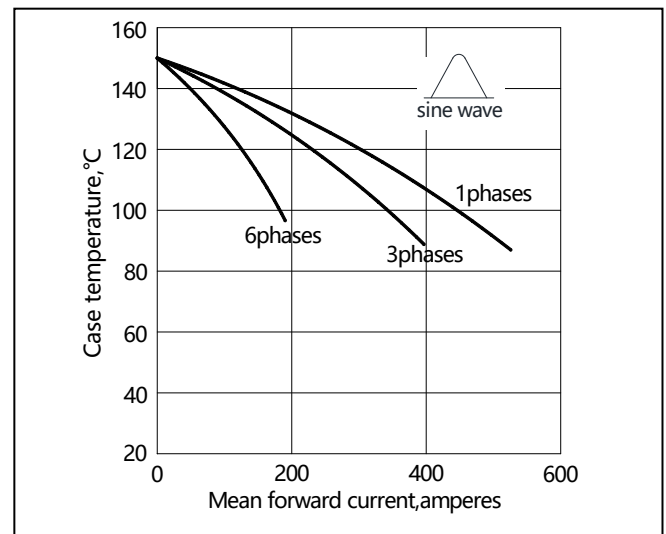


Fig2. Forward Current Derating Curve

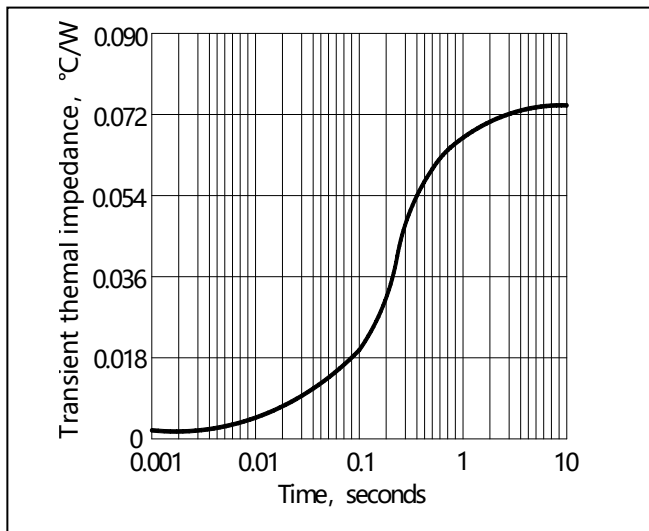


Fig3. Transient thermal impedance

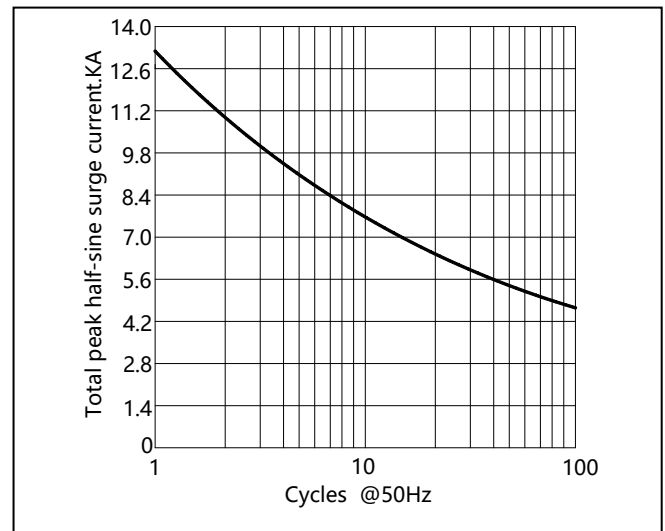


Fig4. Max Non-Repetitive Forward Surge Current

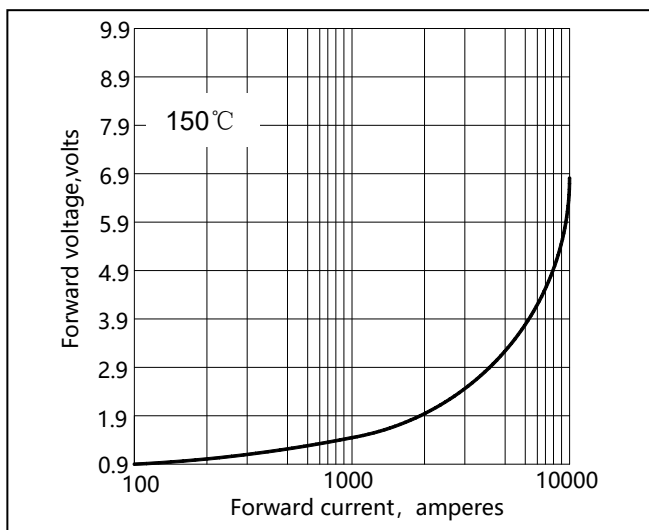
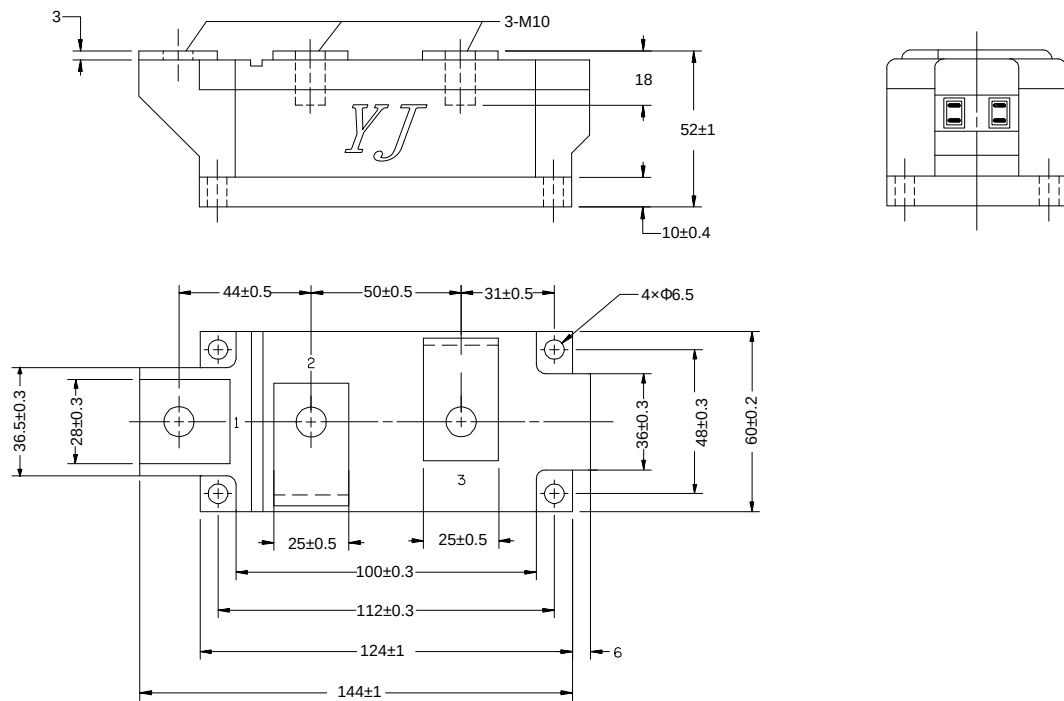


Fig5. Forward Characteristics

CASE: D6



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