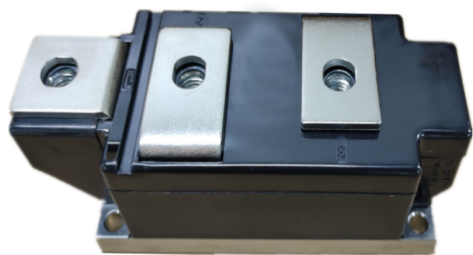


Rectifier Diode Module



V_{RRM} 5000V

I_{FAV} 450A

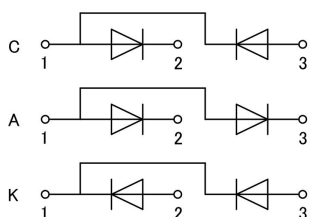
Applications

- 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			V _{RRM}	V _{RSM}	Units
MD450C50D6	MD450A50D6	MD450K50D6	5000	5100	V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	Single phase ,half wave 180° conduction T _c =100°C	450	A
I _{FSM}	t=10ms T _{vj} =T _{vjM}	13000	A
i ² t	t=10ms T _{vj} =T _{vjM}	845000	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min,I _{iso} :2mA(max)	4000	V
T _{vj}		-40 to 150	°C
T _{stg}		-40 to 125	°C
M _t	To terminals(M10)	12±15%	Nm
M _s	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	°C/W
R _{th(c-s)}	per diode	0.02	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C I _F =1200A			1.9	V
I _{RRM}	T _{vj} =T _{vjM} V=V _{RRM}			30	mA
V _{FO}	T _{vj} =T _{vjM}			0.84	V
r _F	T _{vj} =T _{vjM}			0.6	mΩ



Performance Curves

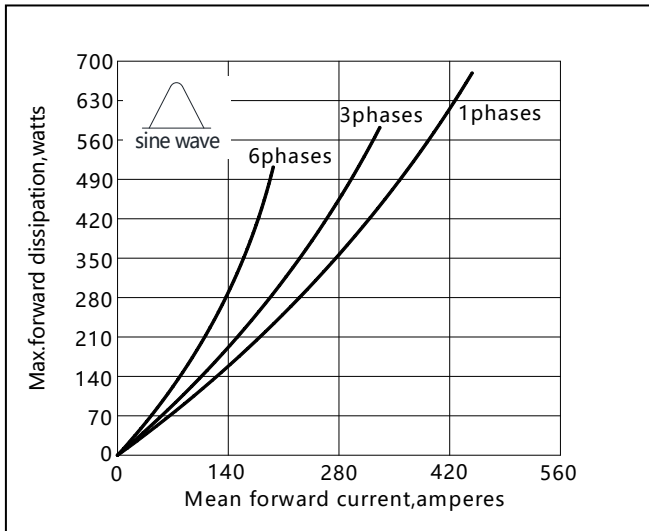


Fig1. Power dissipation

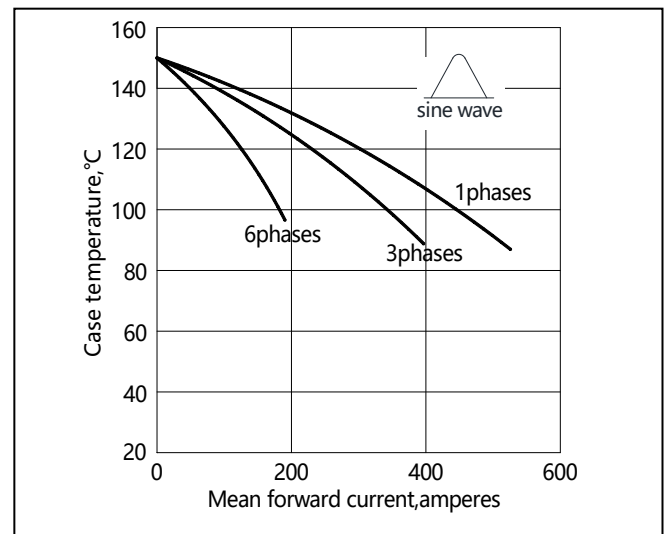


Fig2. Forward Current Derating Curve

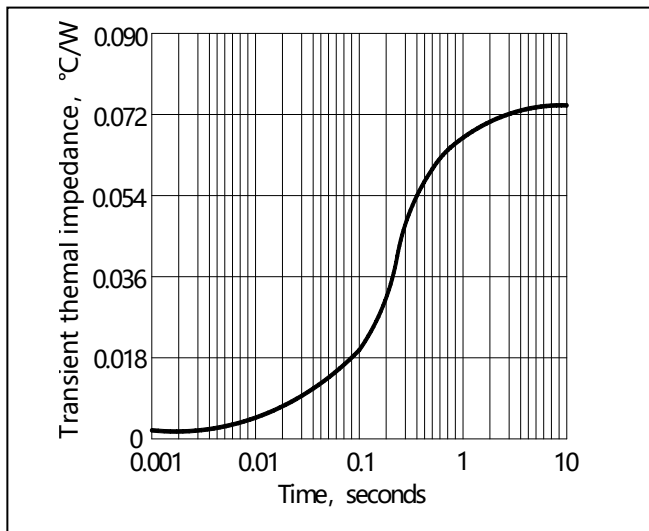


Fig3. Transient thermal impedance

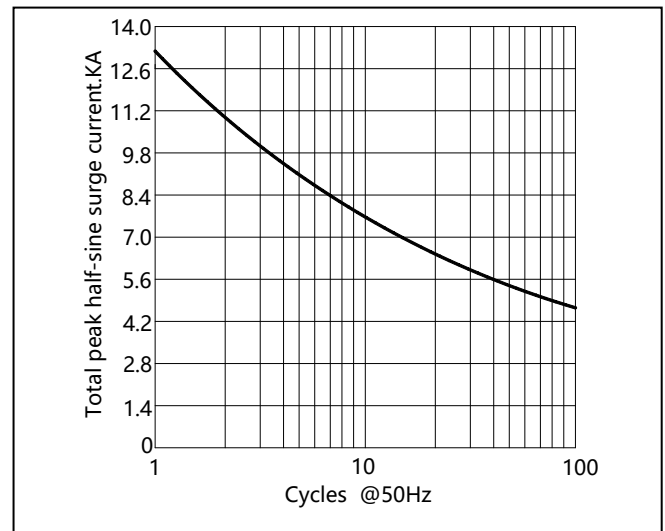


Fig4. Max Non-Repetitive Forward Surge Current

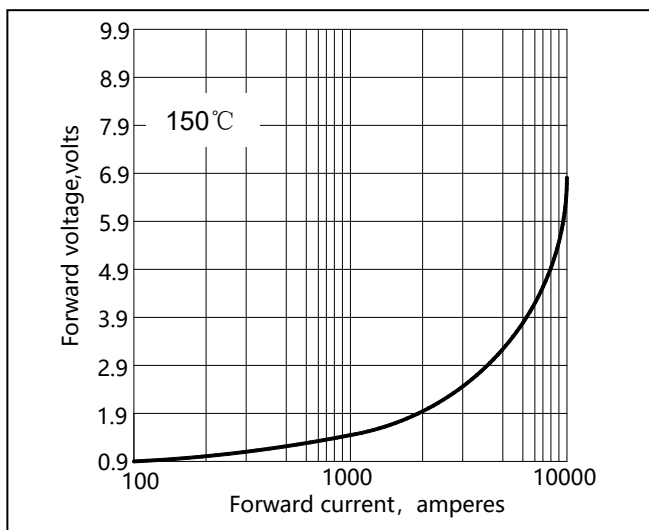
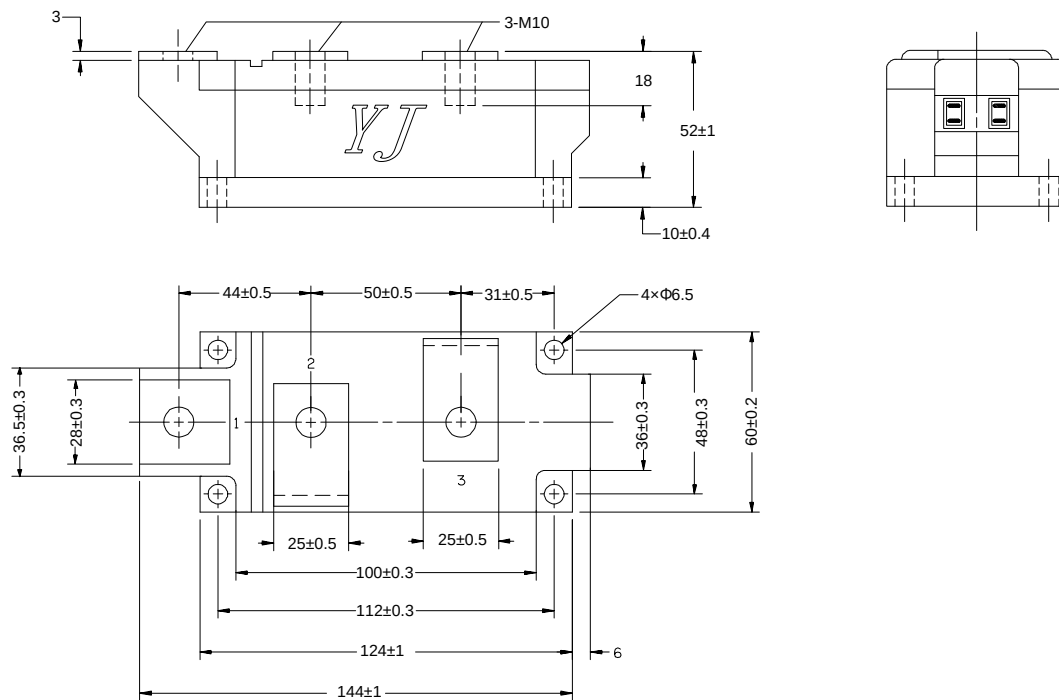


Fig5. Forward Characteristics

Package Outline Information

CASE: D6



Dimensions in mm

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