



Rectifier Diode Module

VRRM 1200 to 2000V

IFAV 380A

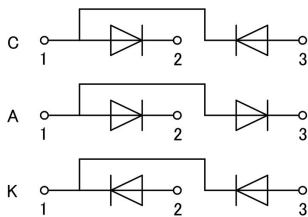
Applications

- 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
MD380C12D3	MD380A12D3	MD380K12D3	1200V	1300V	V
MD380C14D3	MD380A14D3	MD380K14D3	1400V	1500V	V
MD380C16D3	MD380A16D3	MD380K16D3	1600V	1760V	V
MD380C18D3	MD380A18D3	MD380K18D3	1800V	2000V	V
MD380C20D3	MD380A20D3	MD380K20D3	2000V	2200V	V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=100℃	380	A
IFSM	t=10ms Tvj=TVjM	9500	A
i ² t	t=10ms Tvj=TVjM	451000	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min,I _{iso} :2mA(max)	2500	V
Tvj		-40 to 150	℃
T _{stg}		-40 to 125	℃
Mt	To terminals(M8)	12±15%	Nm
Ms	To heatsink(M6)	6±15%	Nm
Weight	Module (Approximately)	690	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	per diode	0.104	℃/W
R _{th(c-s)}	per diode	0.04	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25℃ IF=1100A			1.35	V
I _{RRM}	Tvj=TVjM V=VRRM			30	mA
V _{FO}	Tvj=TVjM			0.72	V
r _F	Tvj=TVjM			0.44	mΩ



Performance Curves

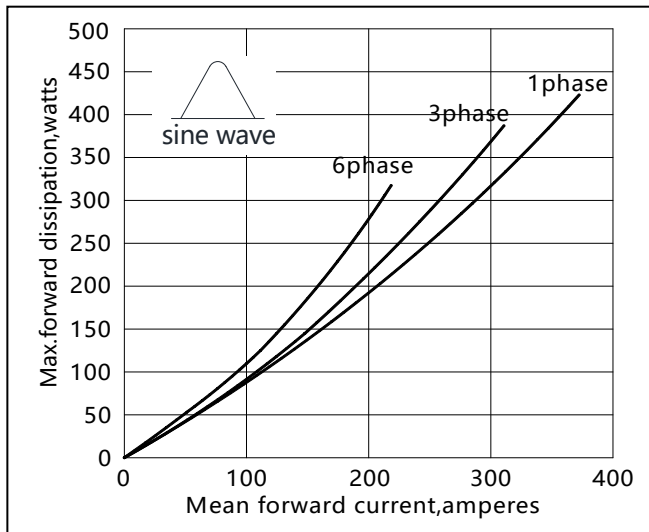


Fig1. Power dissipation

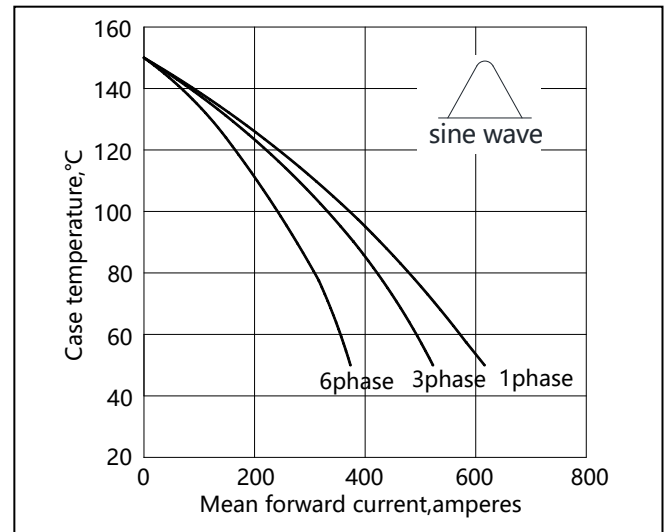


Fig2. Forward Current Derating Curve

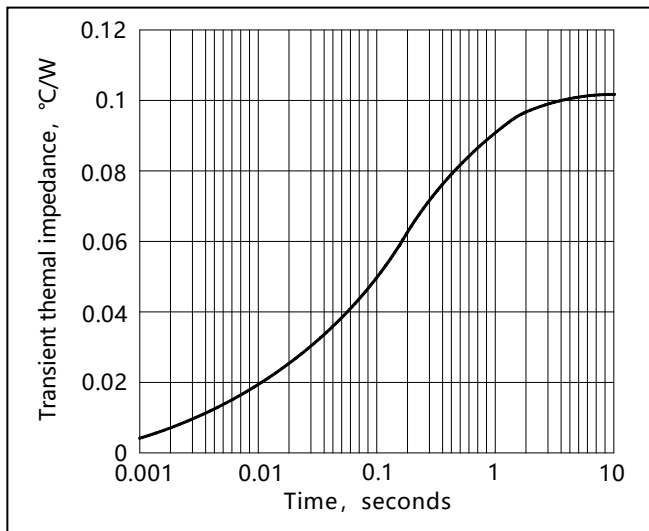


Fig3. Transient thermal impedance

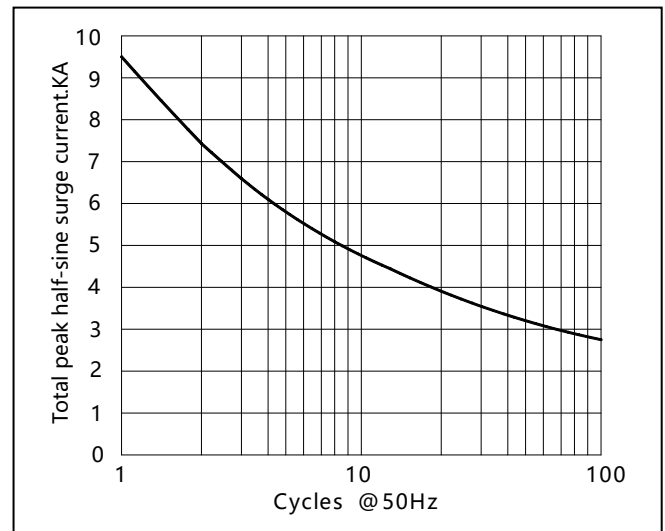


Fig4. Max Non-Repetitive Forward Surge Current

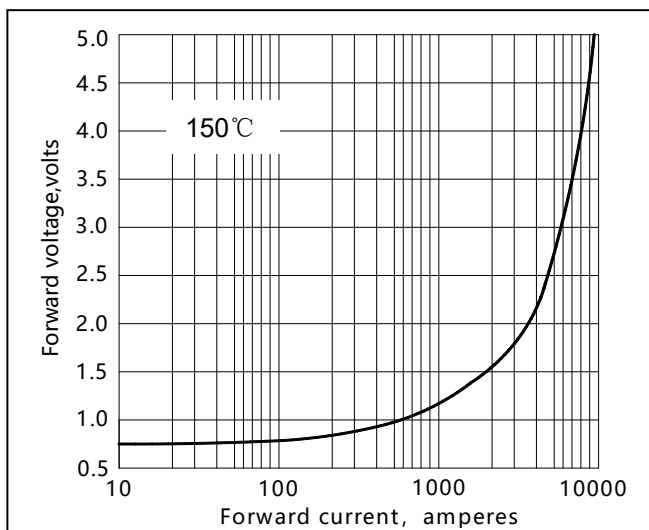
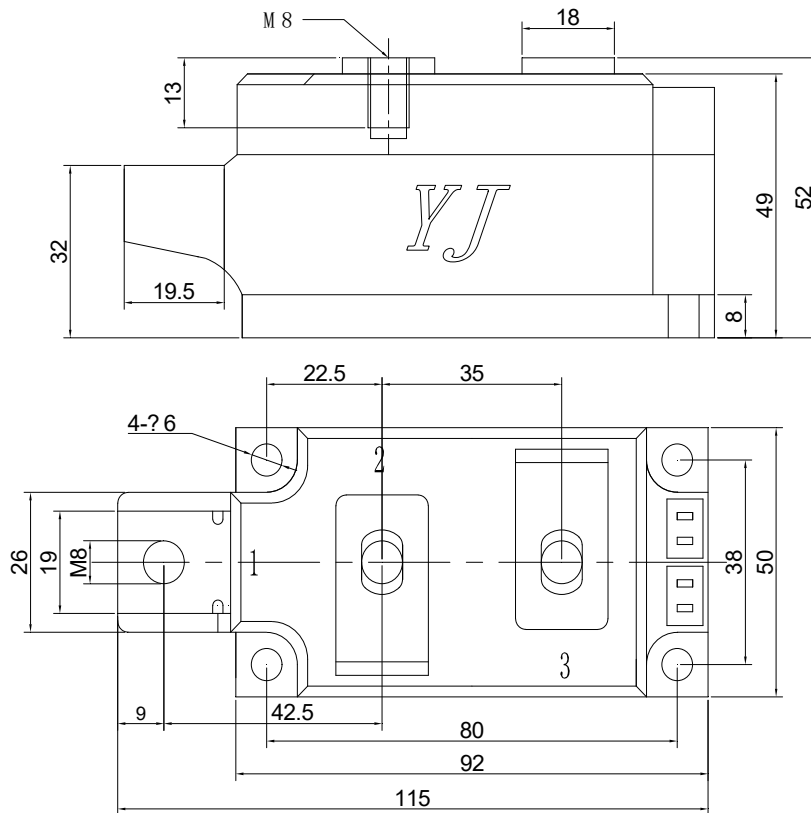


Fig5. Forward Characteristics

Package Outline Information

CASE: D3



Dimensions in mm

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