

Rectifier Diode Module

VRRM 3800 to 4400V
IFAV 800A

Applications

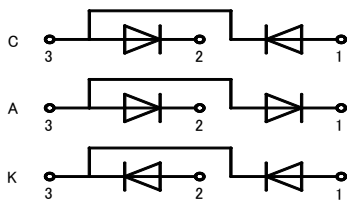
- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Features

- International standard package
- High Surge Capability
- Simple Mounting



Circuit



Blocking Characteristics

TYPE			VRRM	VRSM	Units
MD800C38D8	MD800A38D8	MD800K38D8	3800	3900	V
MD800C40D8	MD800A40D8	MD800K40D8	4000	4100	V
MD800C42D8	MD800A42D8	MD800K42D8	4200	4300	V
MD800C44D8	MD800A44D8	MD800K44D8	4400	4500	V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=85℃	800	A
IFRMS		1256	A
IFSM	t=10ms Tvj=TvjM	22000	A
i ² t	t=10ms Tvj=TvjM	2420000	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min,I _{iso} :2mA(max)	4500	V
Tvj		-40 to 150	℃
T _{stg}		-40 to 125	℃
Mt	To terminals(M12)	14±15%	Nm
Ms	To heatsink(M8)	10±15%	Nm
Weight	Module (Approximately)	3400	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	per diode	0.05	℃/W
R _{th(c-s)}	per diode	0.02	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25℃ IF =2400A			2	V
I _{RRM}	Tvj=TvjM V=VRRM			60	mA
V _{FO}	Tvj=TvjM			0.96	V
r _F	Tvj=TvjM			0.29	mΩ



Performance Curves

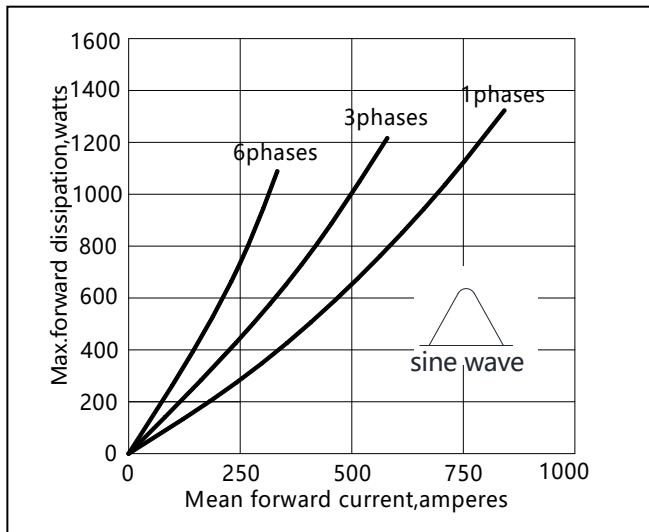


Fig1. Power dissipation

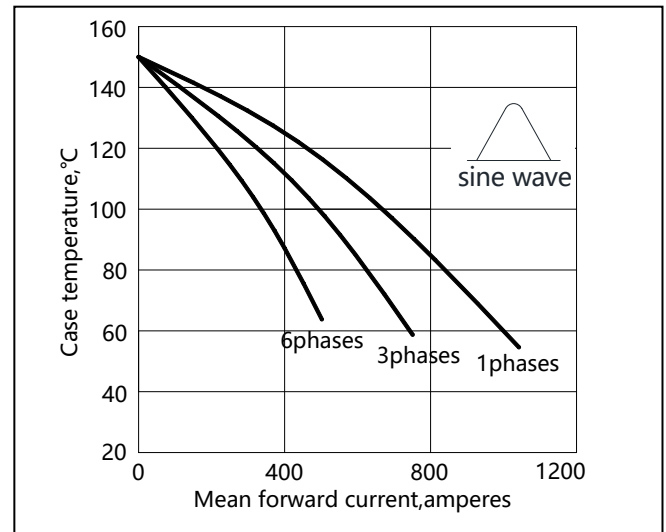


Fig2. Forward Current Derating Curve

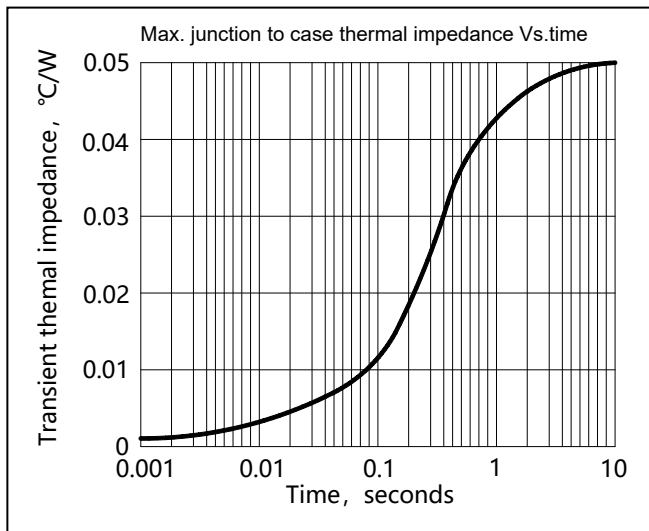


Fig3. Transient thermal impedance

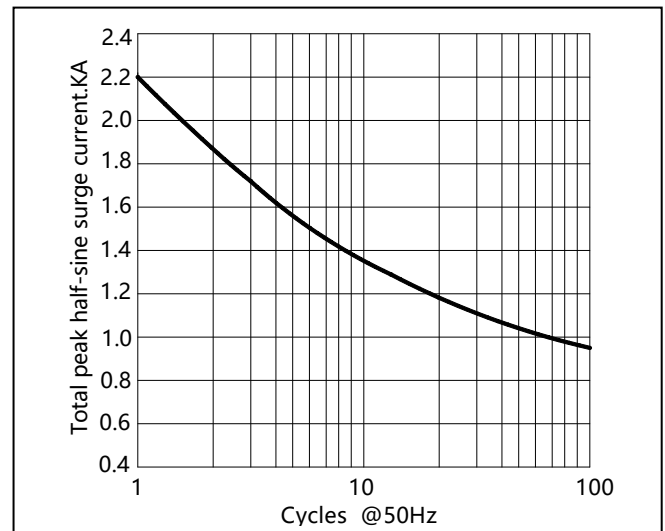


Fig4. Max Non-Repetitive Forward Surge Current

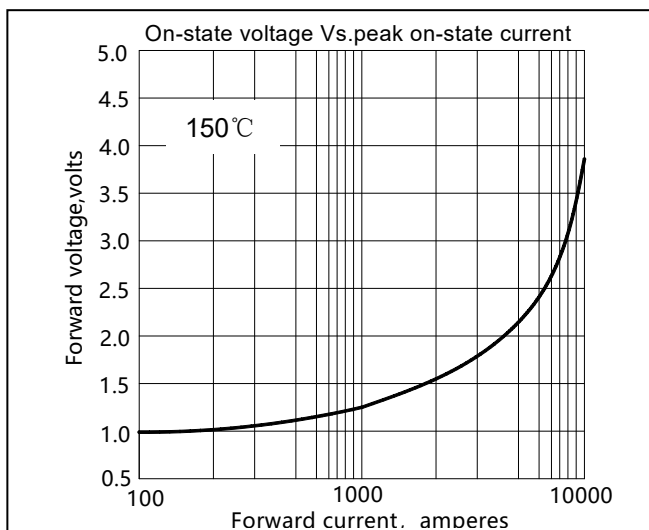
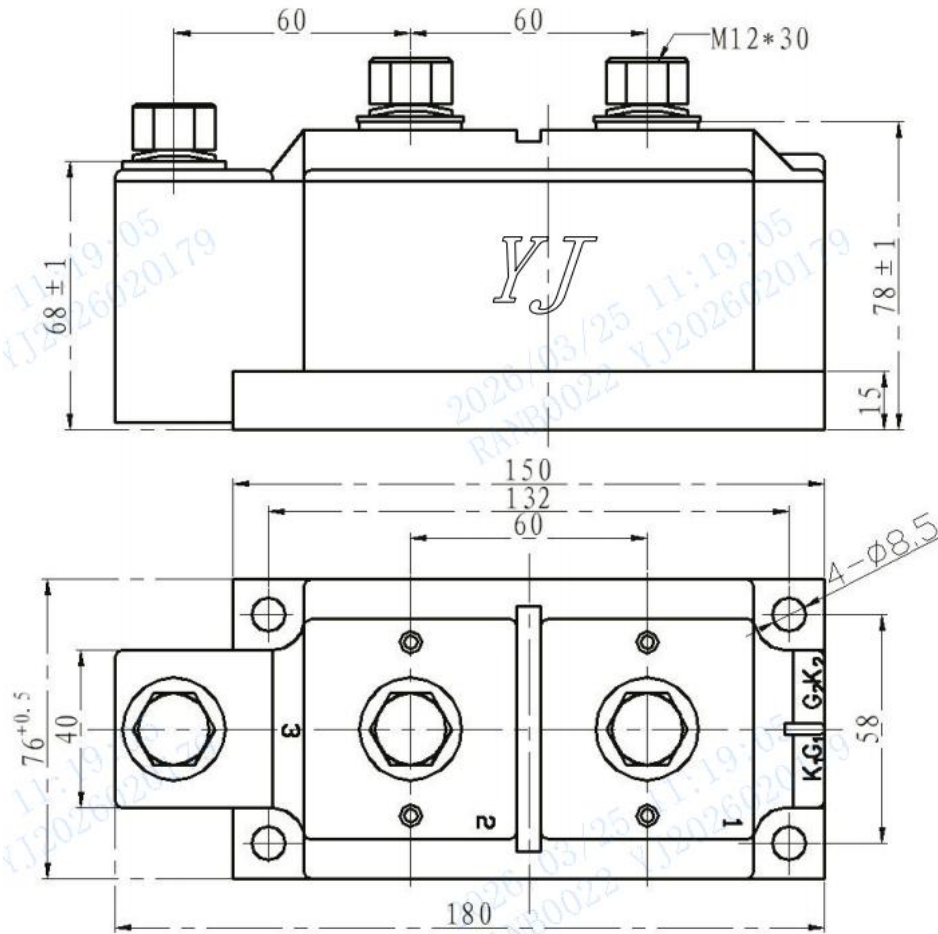


Fig5. Forward Characteristics

Package Outline Information

CASE: D8



Dimensions in mm

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



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