

Rectifier Diode Modules



VRRM 800 to 1800V

IFAV 300 A

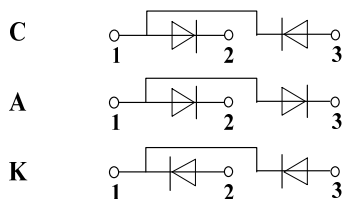
Applications

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

Features

- Blocking voltage: 800 to 1800V
- Heat transfer through aluminum oxide ceramic isolated metal baseplate

Circuit



Module Type

TYPE			VRRM	VRSM
MD300C08D3	MD300A08D3	MD300K08D3	800V	900V
MD300C12D3	MD300A12D3	MD300K12D3	1200V	1300V
MD300C16D3	MD300A16D3	MD300K16D3	1600V	1700V
MD300C18D3	MD300A18D3	MD300K18D3	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=85°C	300	A
IFSM	t=10mS Tvj =45°C	11000	A
i ² t	t=10mS Tvj =45°C	605000	A ² s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to 150	°C
Tstg		-40 to 125	°C
Mt	To terminals(M8)	9±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	865	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.08	°C/W
Rth(c-s)	Module	0.05	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25°C IF =900A	—	—	1.8	V
IRD	Tvj=Tvjm VRD=VRRM	—	—	15	mA

Performance Curves

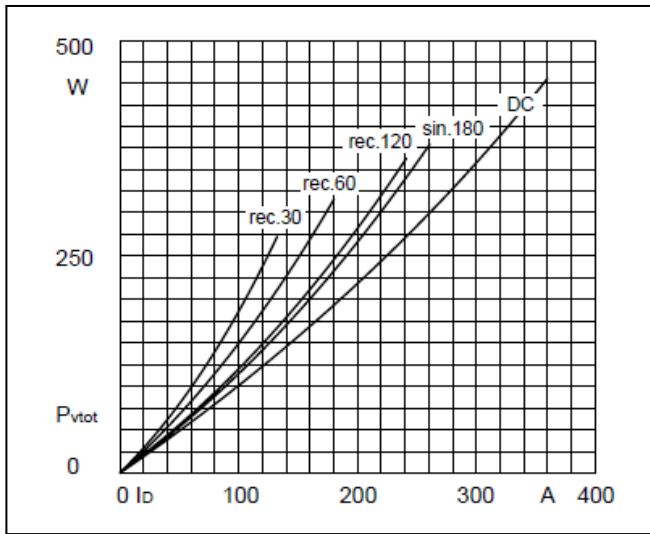


Fig1. Power dissipation

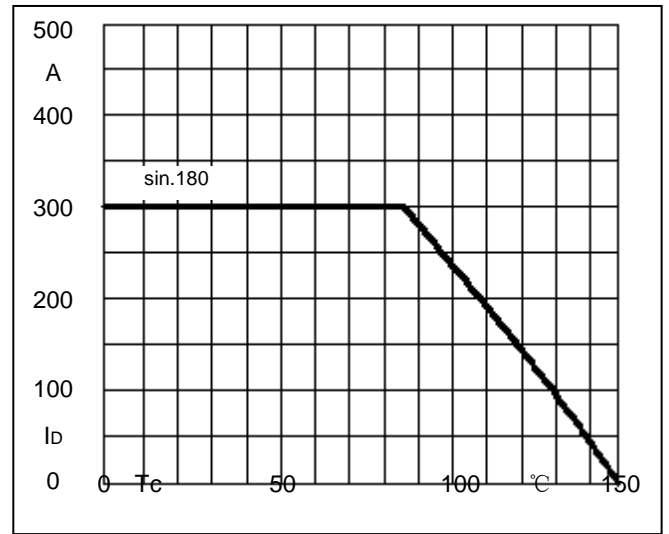


Fig2. Forward Current Derating Curve

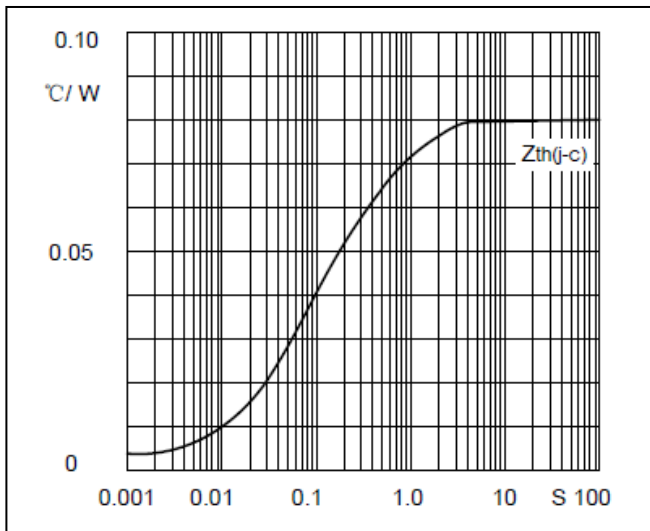


Fig3. Transient thermal impedance

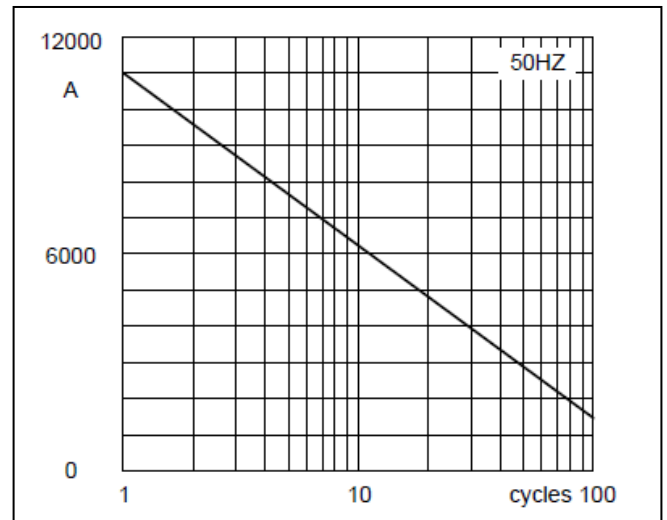


Fig4. Max Non-Repetitive Forward Surge Current

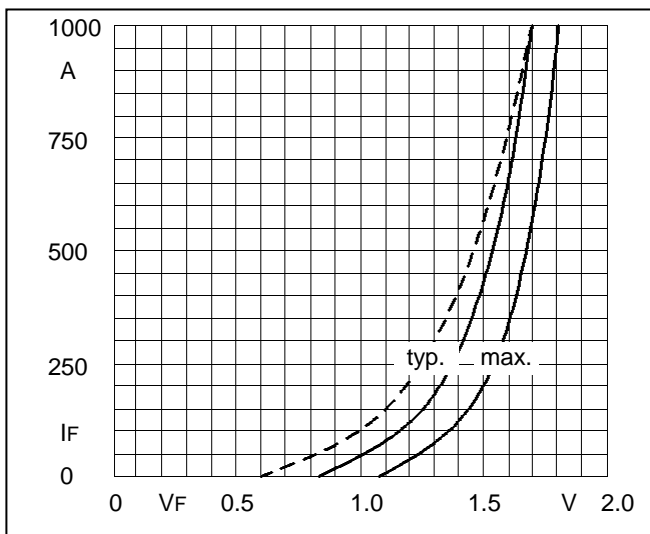
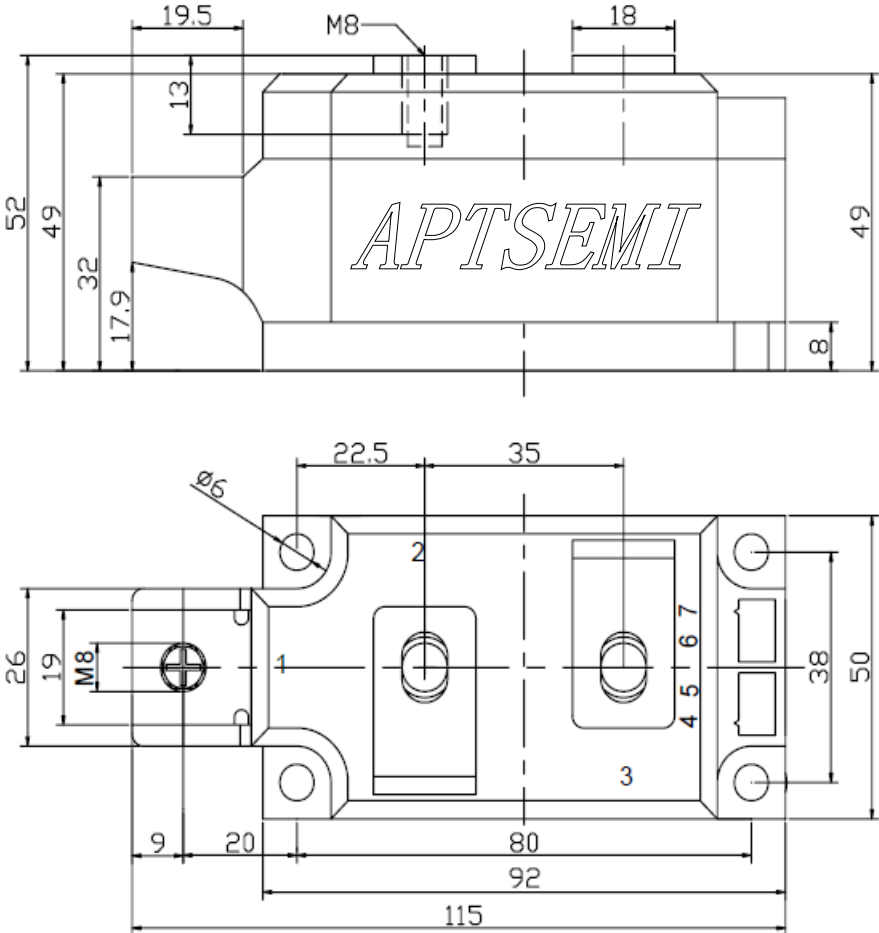


Fig5. Forward Characteristics

Package Outline Information

CASE: D3



Dimensions in mm