



Glass Passivated Rectifier Diode Modules

VRRM 800 to 1800V

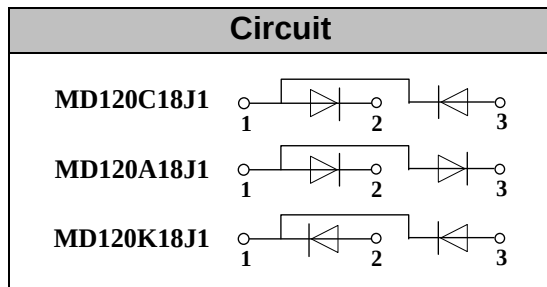
IFAV 120 Amp

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 DBC ceramic isolated metal baseplate
- Glass passivated chip



Module Type

TYPE			VRRM	VRSM
MD120C08J1	MD120A08J1	MD120K08J1	800V	900V
MD120C12J1	MD120A12J1	MD120K12J1	1200V	1300V
MD120C16J1	MD120A16J1	MD120K16J1	1600V	1700V
MD120C18J1	MD120A18J1	MD120K18J1	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=106°C	120	A
IF(RMS)	Single phase ,half wave 180° conduction Tc=97°C	180	A
IFSM	t=10mS Tvj =45°C	2800	A
i ² t	t=10mS Tvj =45°C	39200	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(M5)	3±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module	140	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.26	°C/W
Rth(c-s)	Module	0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25°C IF =300A	—	1.28	1.52	V
IRD	Tvj=150°C VRD=VRRM	—	—	6	mA

Performance Curves

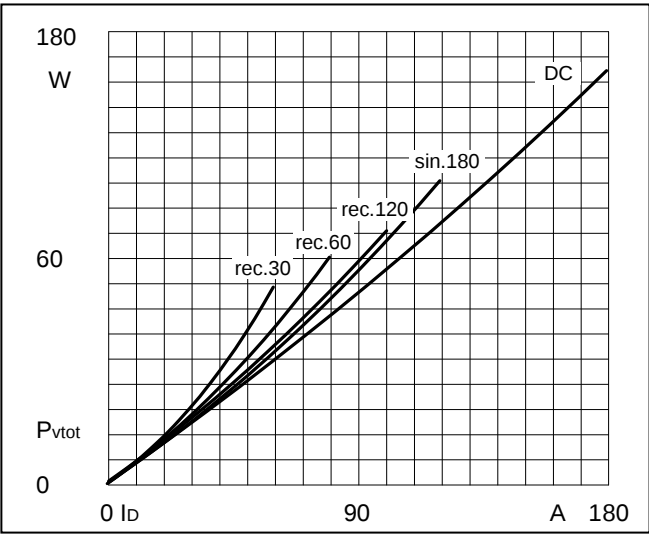


Fig1. Power dissipation

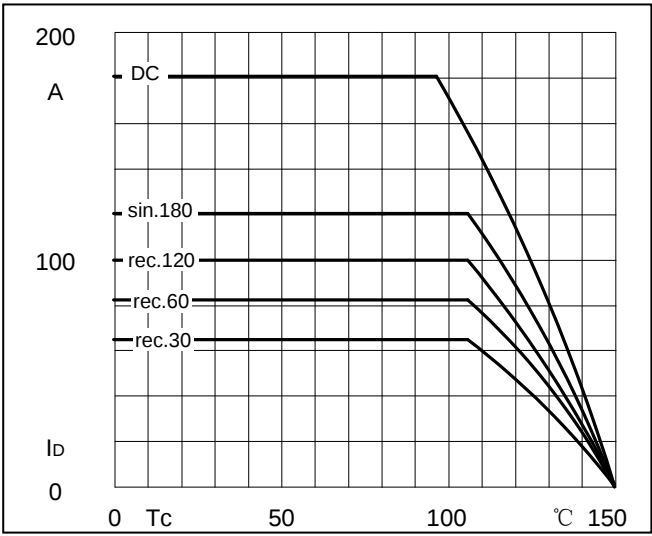


Fig2.Forward Current Derating Curve

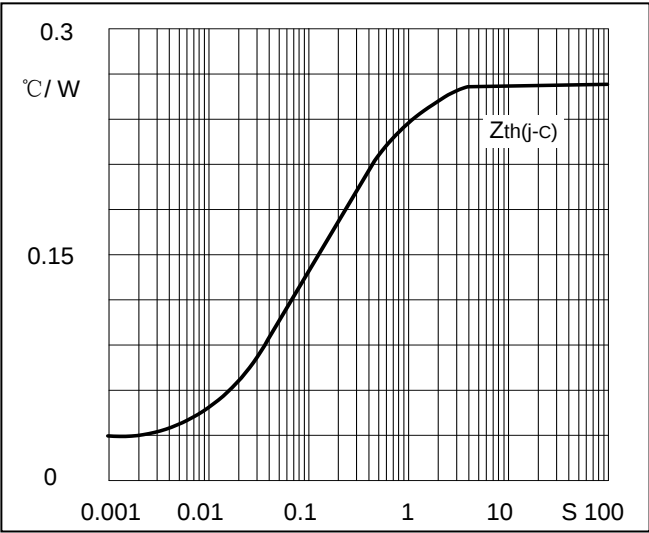


Fig3. Transient thermal impedance

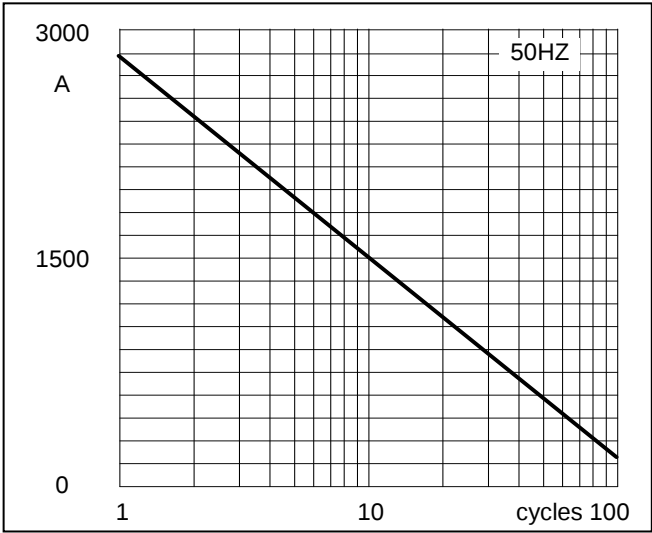


Fig4. Max Non-Repetitive Forward Surge Current

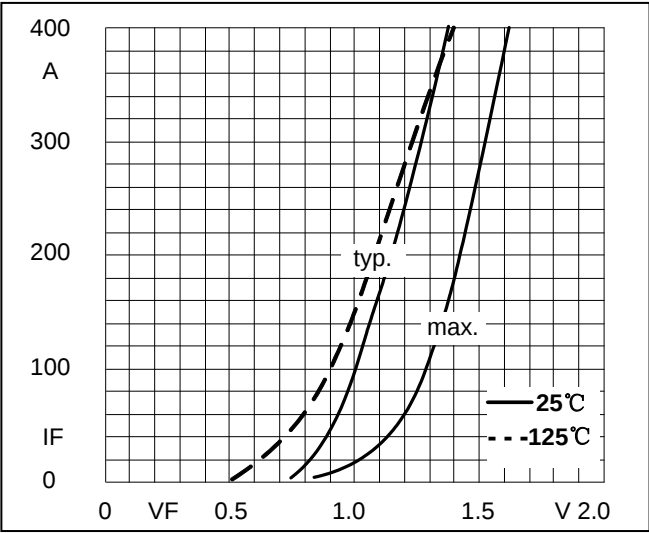
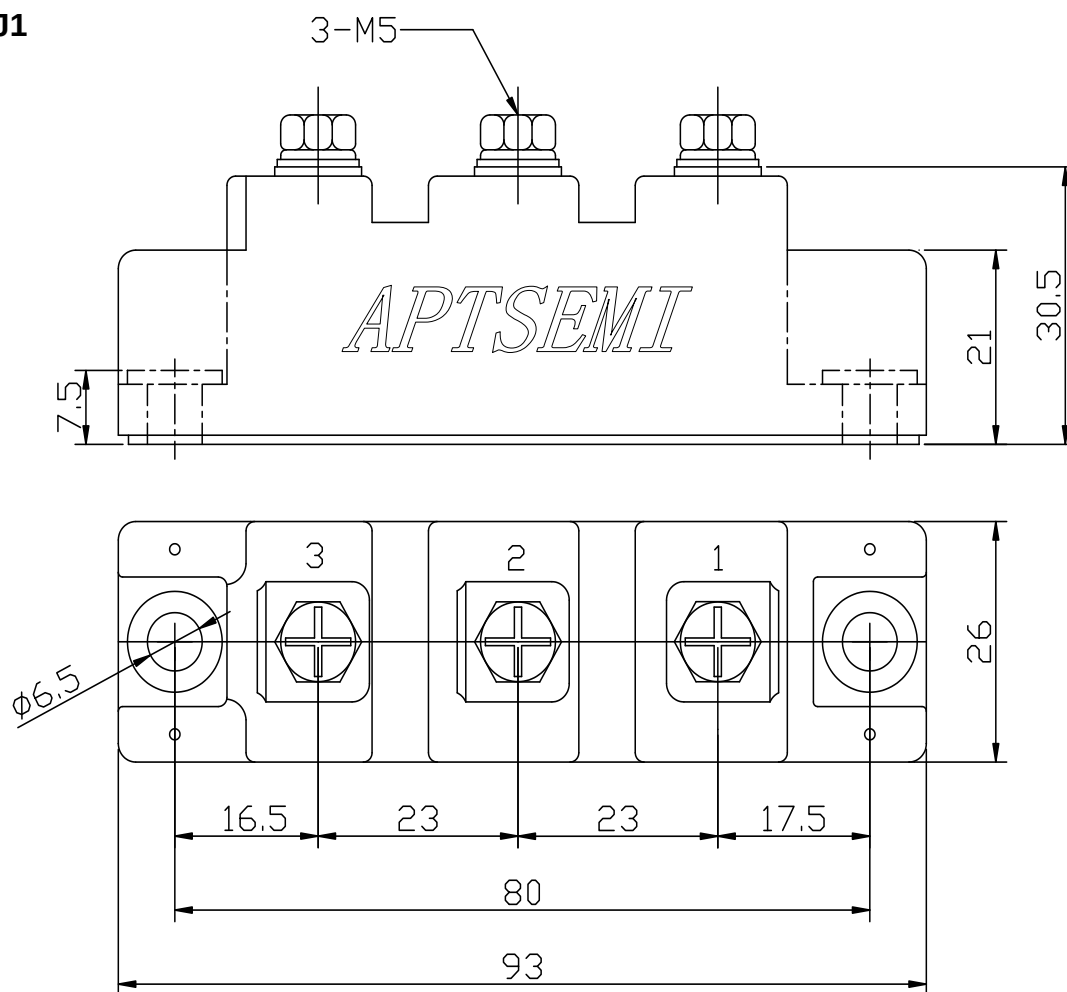


Fig5. Forward Characteristics

Package Outline Information

CASE: J1



Dimensions in mm

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