



Micro Commercial Components
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MD120A08D1
MD120A12D1
MD120A16D1
MD120A18D1

Features

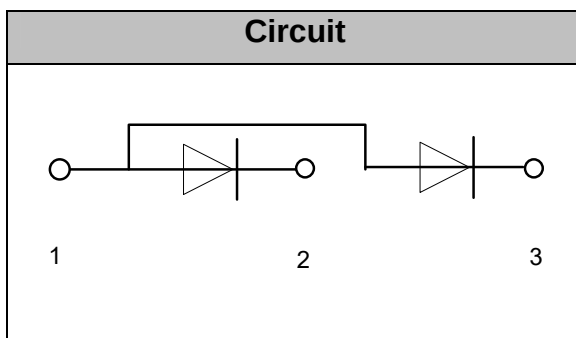
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Blocking Voltage: 800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Applications

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

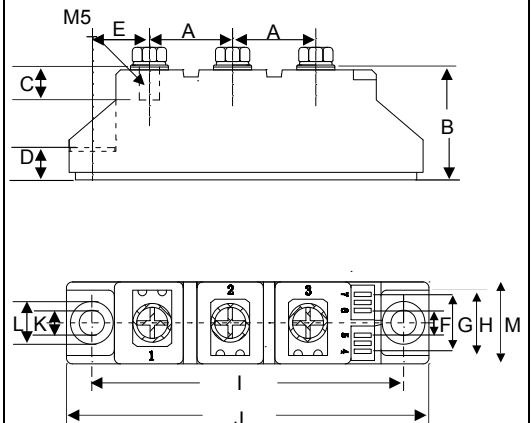


Circuit



120 Amp
GLASS PASSIVATED
RECTIFIER DIODE
MODULES
800~1800 Volts

D1



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.776	.799	19.70	20.30	
B	1.169	1.193	29.70	30.30	
C	.343	.366	8.70	9.30	
D	.323	.346	8.20	8.80	
E	.602	.622	15.30	15.80	
F	.224	.248	5.70	6.30	
G	.539	.563	13.70	14.30	
H	.657	.681	16.70	17.30	
I	3.138	3.161	79.70	80.30	
J	3.650	3.673	92.70	93.30	
K	.256		6.50		Ø
L	.421	.445	10.70	11.30	
M	.815	.839	20.70	21.30	

Module Type

TYPE	VRRM	VRSM
MD120A08D1	800V	900V
MD120A12D1	1200V	1300V
MD120A16D1	1600V	1700V
MD120A18D1	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=106°C	120	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	T terminals(M5)	3±15%	Nm
Ms	T heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	100	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	—	1.20	1.35	V
IRD	Tvj=150°C VRD=VRRM	—	—	6	m

Performance Curves

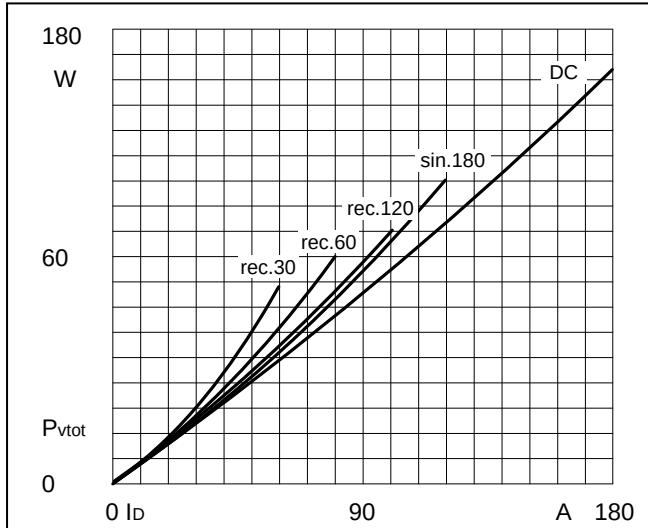


Fig1. Power dissipation

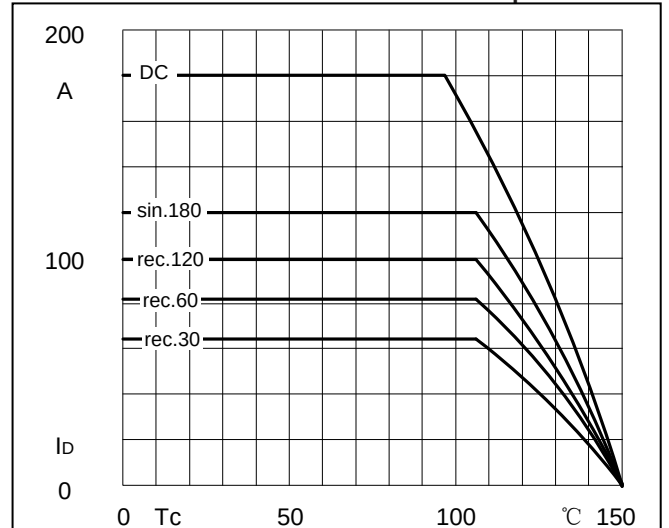


Fig2. Forward Current Derating Curve

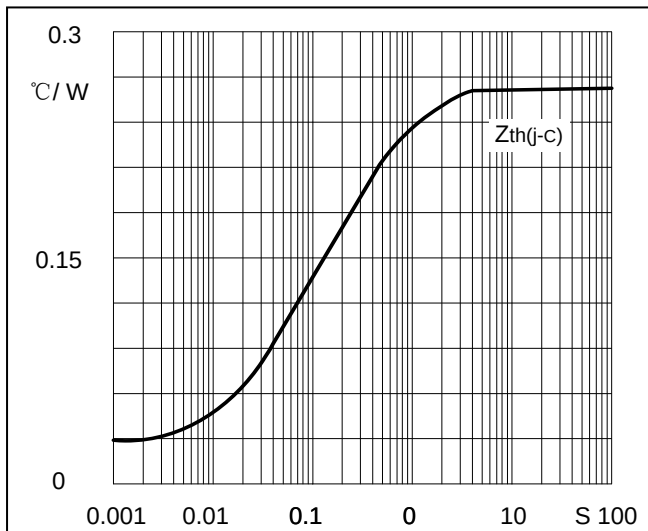


Fig3. Transient thermal impedance

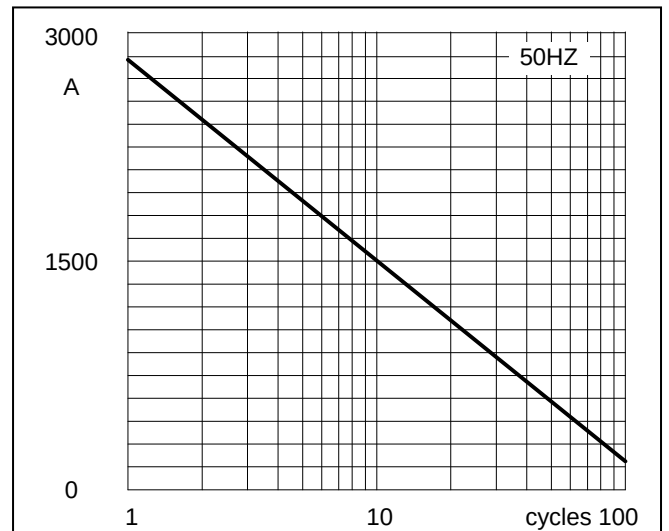


Fig4. Max Non-Repetitive Forward Surge Current

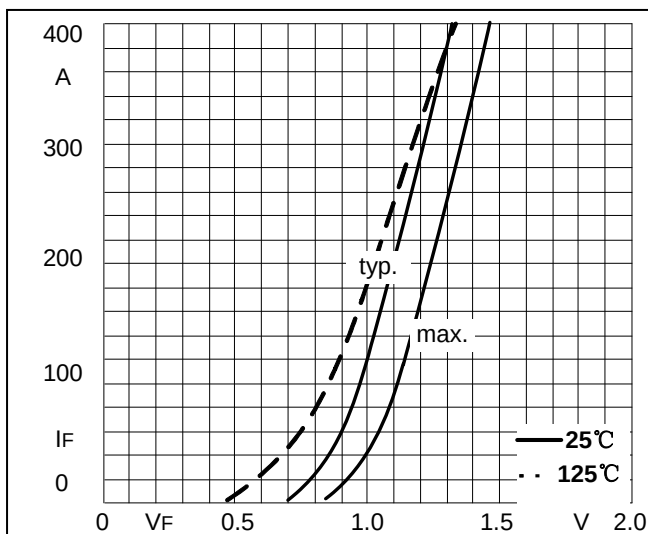


Fig5. Forward Characteristics

Ordering Information :

Device	Packing
Part Number-BP	Bulk: 10PCS/BOX ;100PCS/CTN

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