

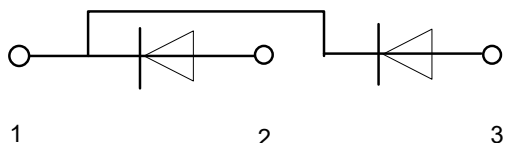
## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Heat Transfer Through Aluminum Oxide DBC Ceramic Isolated Metal Baseplate
- Blocking voltage:1600V
- Glass passivated chip

## Applications

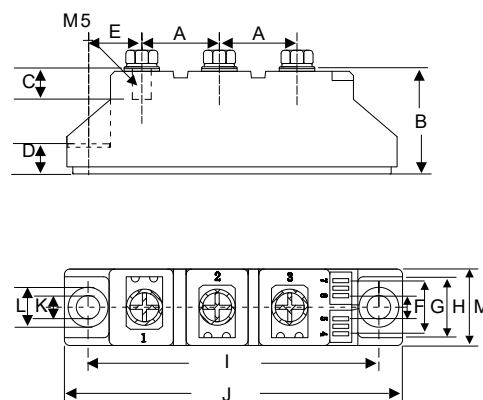
- Non-Controllable Rectifiers for AC/AC Converters
- Line Rectifiers for Transistorized AC Motor Controllers
- Field Supply for DC Motors

MCC Part Number	$V_{RRM}$	$V_{RSM}$
MD120K16D1	1600V	1700V



# 120 Amp GLASS PASSIVATED RECTIFIER DIODE MODULES 1600 Volts

D1



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.768	0.807	19.50	20.50	
B	1.161	1.201	29.50	30.50	
C	0.335	0.374	8.50	9.50	
D	0.315	0.354	8.00	9.00	
E	0.571	0.610	14.50	15.50	
F	0.217	0.256	5.50	6.50	
G	0.531	0.571	13.50	14.50	
H	0.650	0.689	16.50	17.50	
I	3.130	3.169	79.50	80.50	
J	3.642	3.681	92.50	93.50	
K	0.256		6.50		Φ
L	0.413	0.453	10.50	11.50	
M	0.807	0.846	20.50	21.50	

Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=106℃	120	A
IFSM	t=10mS Tvj =45℃	2800	A
i <sup>2</sup> t	t=10mS Tvj =45℃	39200	A <sup>2</sup> s
V <sub>isol</sub>	a.c.50HZ;r.m.s.;1min	3000	V
T <sub>vj</sub>		-40 to +150	℃
T <sub>stg</sub>		-40 to +125	℃
Mt	To terminals(M5)	3 ± 15%	Nm
Ms	To heatsink(M6)	5 ± 15%	Nm
Weight	Module (Approximately)	100	g

## Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.26	℃/W
R <sub>th(c-s)</sub>	Module	0.1	℃/W

## Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25℃ IF =300A	—	1.20	1.35	V
I <sub>RD</sub>	Tvj=150℃ VRD=VRRM	—	—	6	mA

## Performance Curves

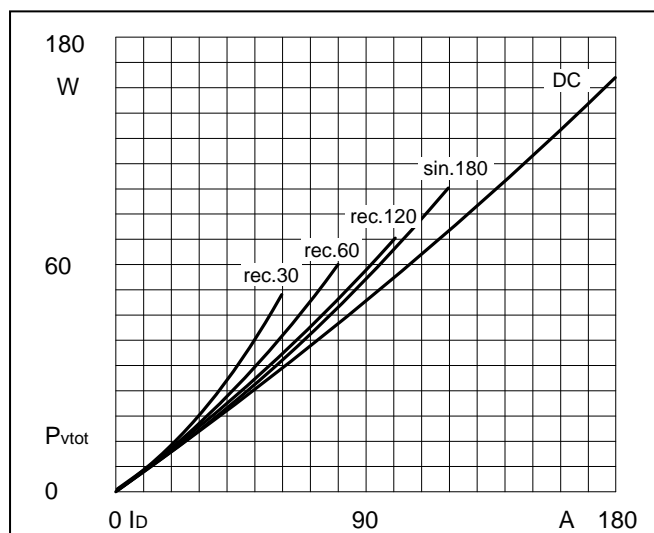


Fig1. Power dissipation

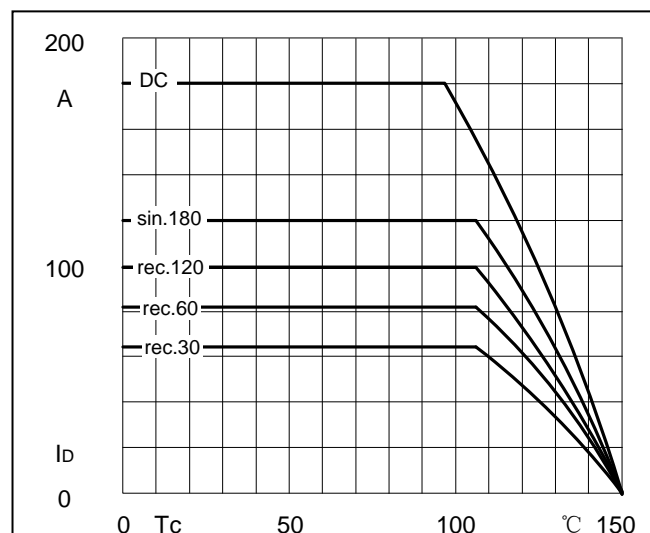


Fig2. Forward Current Derating Curve

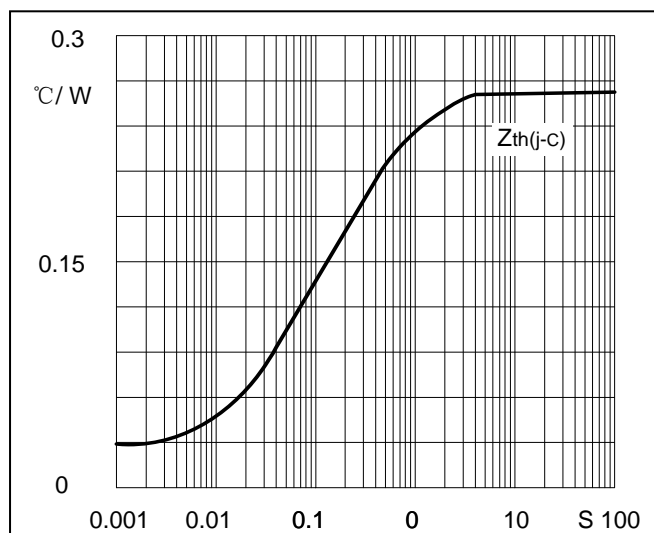


Fig3. Transient thermal impedance

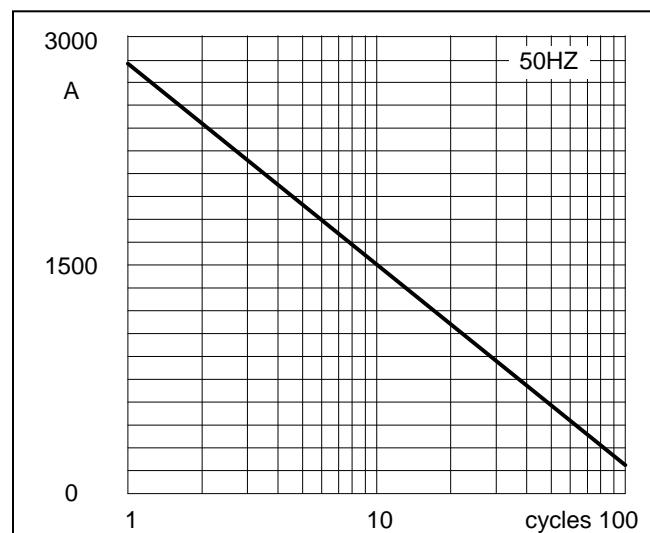


Fig4. Max Non-Repetitive Forward Surge Current

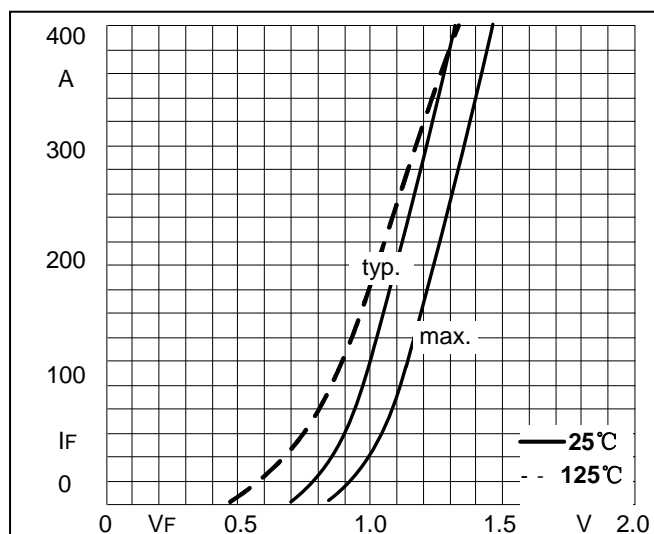


Fig5. Forward Characteristics

## Ordering Information

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

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