

#### **Features**

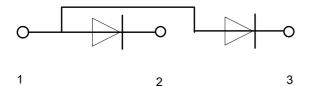
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Heat Transfer Through Aluminum Oxide DBC Ceramic Isolated Metal Baseplate
- Blocking voltage:800 to 1800V
- · Glass passivated chip

# **Applications**

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

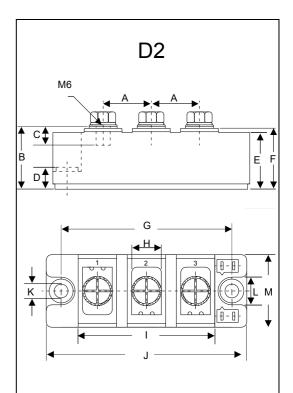
MCC Part Number	$V_{RRM}$	$V_{RSM}$
MD165A08D2	800V	900V
MD165A12D2	1200V	1300V
MD165A16D2	1600V	1700V
MD165A18D2	1800V	1900V





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

# 165 Amp GLASS PASSIVATED RECTIFIER DIODE MODULES 800 to 1800 Volts



DIMENSIONS					
DIM	INC	HES	MM		NOTE
DIIVI	MIN	MAX	MIN	MAX	NOTE
Α	0.886	0.925	22.50	23.50	
В	1.161	1.201	29.50	30.50	
С	0.335	0.374	8.50	9.50	
D	0.315	0.350	8.00	8.90	
E	1.043	1.083	26.50	27.50	
F	1.122	1.161	28.50	29.50	
G	3.130	3.169	79.50	80.50	
Н	0.492	0.531	12.50	13.50	
I	2.500	2.539	63.50	64.50	
J	3.681	3.720	93.50	94.50	
K	0.2	256	6.	50	Φ
L	0.492	0.531	12.50	13.50	
M	1.319	1.358	33.50	34.50	



**Maximum Ratings** 

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=101℃	165	А
<b>I</b> FSM	t=10mS Tvj =45℃	6000	А
i <sup>2</sup> t	t=10mS Tvj =45℃	180000	A <sup>2</sup> s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	$^{\circ}$
Tstg		-40 to +125	$^{\circ}$
Mt	T terminals(M6)	5±15%	Nm
Ms	T heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	160	g

## **Thermal Characteristics**

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.21	°C/W
Rth(c-s)	Module	0.05	°C/W

# **Electrical Characteristics**

Symbol Conditions	Conditions	Values			Unito
	Conditions	Min.	Тур.	Max.	Units
VFM	T=25℃ IF =300A	_	1.20	1.40	V
IRD	Tvj=150°C VRD=VRRM	_	_	9	mA
r <sub>f</sub>	T,=25℃		1.25		mΩ
$V_{fO}$	1J-20 C		0.82		V



### **Performance Curves**

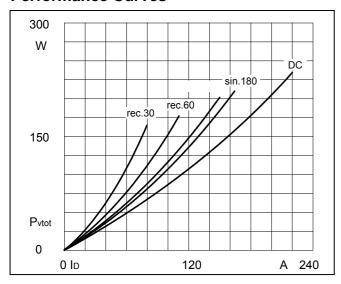


Fig1. Power dissipation

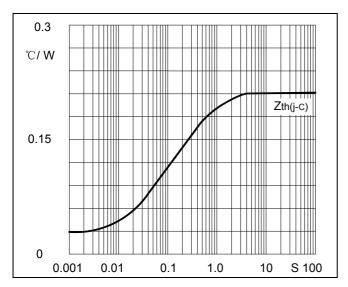


Fig3. Transient thermal impedance

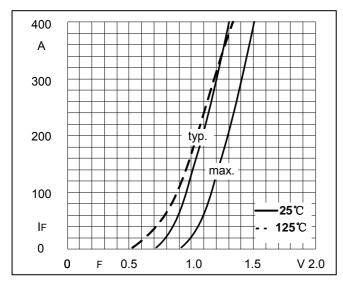
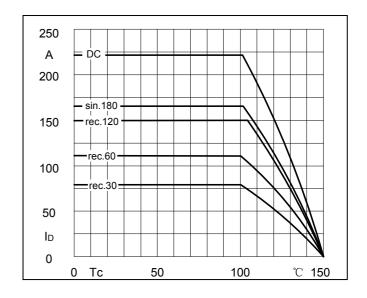


Fig5. Forward Characteristics



**Fig2.Forward Current Derating Curve** 

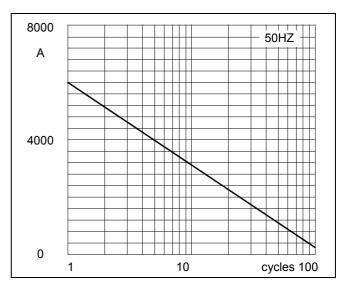


Fig4. Max Non-Repetitive Forward Surge Current



## **Ordering Information**

Device	Packing
Part Number-BP	Bulk: 8PCS/BOX ;80PCS/CTN

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