



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



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**MD165C08D2**  
**MD165C12D2**  
**MD165C16D2**  
**MD165C18D2**

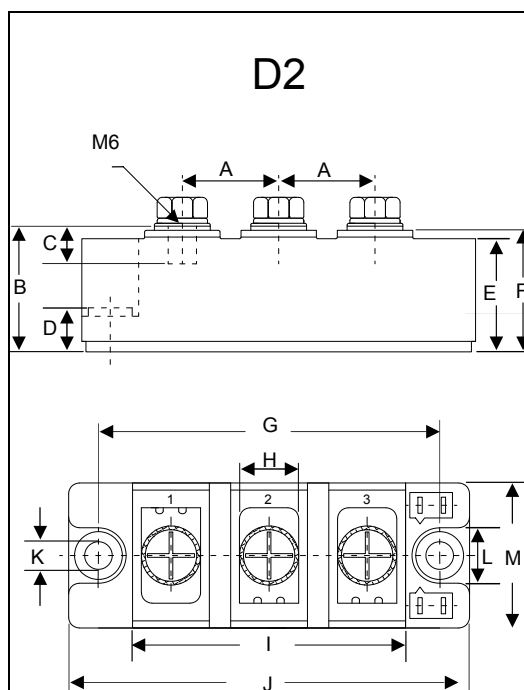
## Features

- 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

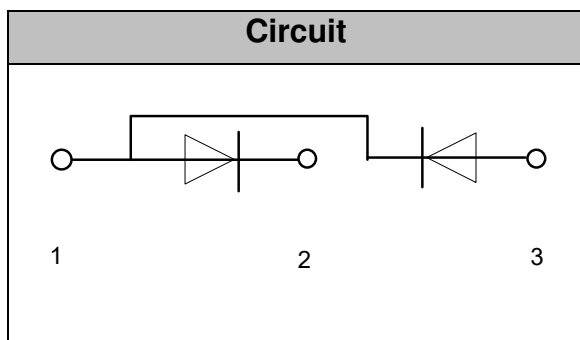
## Applications

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

**165 Amp**  
**GLASS PASSIVATED**  
**RECTIFIER DIODE**  
**MODULES**  
**800~1800 Volts**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.894	.917	22.70	23.30	
B	1.169	1.193	29.70	30.30	
C	.343	.366	8.70	9.30	
D	.323	.343	8.20	8.70	
E	1.051	1.075	26.70	27.30	
F	1.130	1.154	28.70	29.30	
G	.120	.130	79.70	80.30	
H	.500	.524	12.70	13.30	
I	2.501	2.531	63.70	64.30	
J	3.689	3.713	93.70	94.30	
K		.256		6.50	∅
L	.500	.524	12.70	13.30	
M	1.327	1.350	33.70	34.30	



### Module Type

TYPE	VRRM	VRSM
MD165C08D2	800V	900V
MD165C12D2	1200V	1300V
MD165C16D2	1600V	1700V
MD165C18D2	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
I <sub>FAV</sub>	Single phase ,half wave 180° conduction T <sub>c</sub> =101°C	165	A
I <sub>FSM</sub>	t=10mS T <sub>vj</sub> =45°C	6000	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	180000	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	°C
T <sub>stg</sub>		-40 to +125	°C
M <sub>t</sub>	To terminals(M6)	5±15%	Nm
M <sub>s</sub>	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	160	g

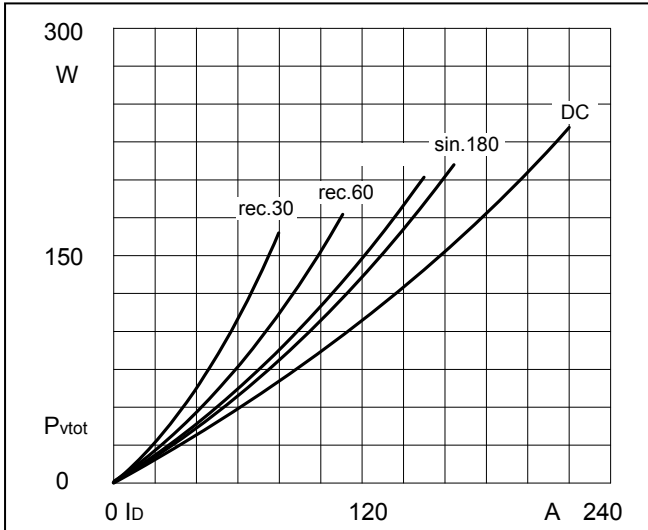
### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.21	°C/W
R <sub>th(c-s)</sub>	Module	0.05	°C/W

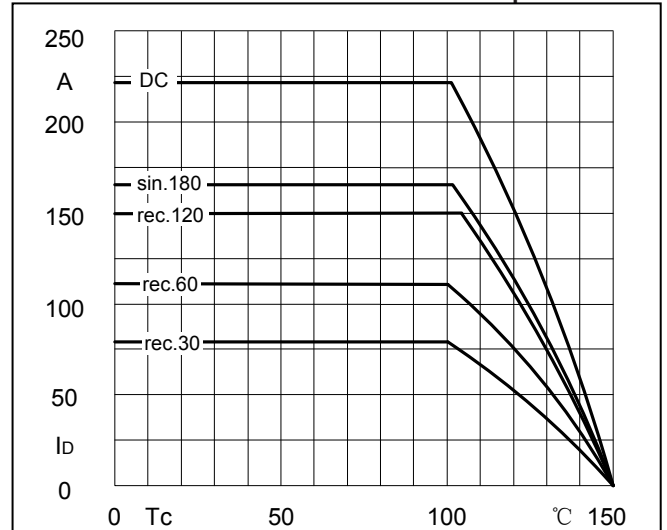
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =300A	—	1.20	1.40	V
I <sub>RD</sub>	T <sub>vj</sub> =150°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	9	mA
r <sub>f</sub>	T <sub>j</sub> =25°C		1.25		mΩ
V <sub>f0</sub>			0.82		V

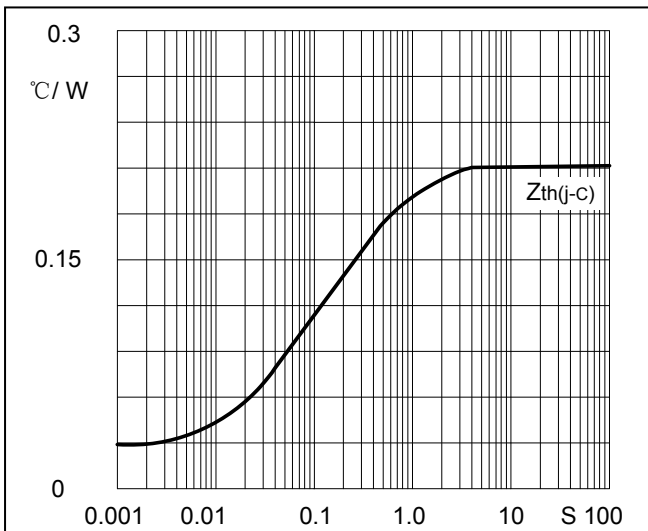
**Performance Curves**



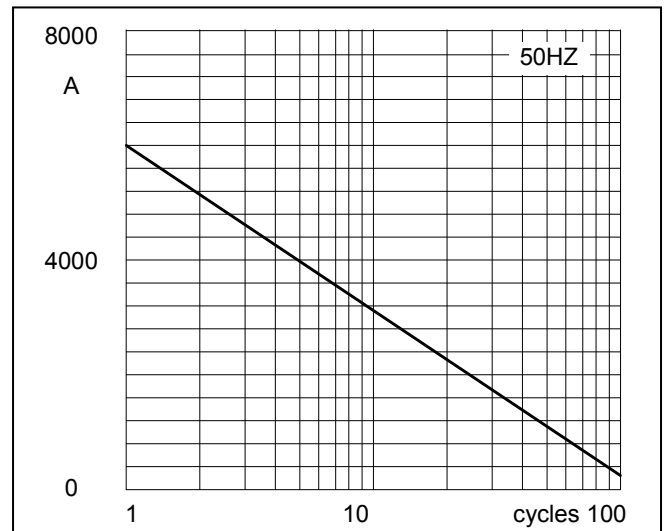
**Fig1. Power dissipation**



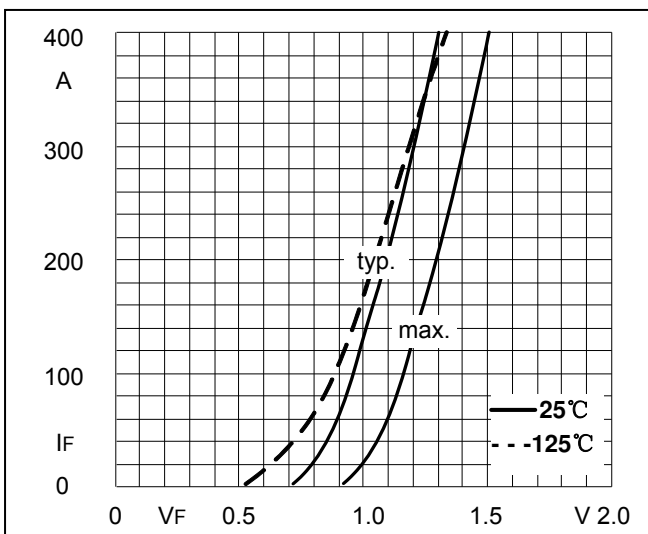
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Characteristics**



Micro Commercial Components

## Ordering Information :

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

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