



Micro Commercial Components
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MD165A08D2
MD165A12D2
MD165A16D2
MD165A18D2

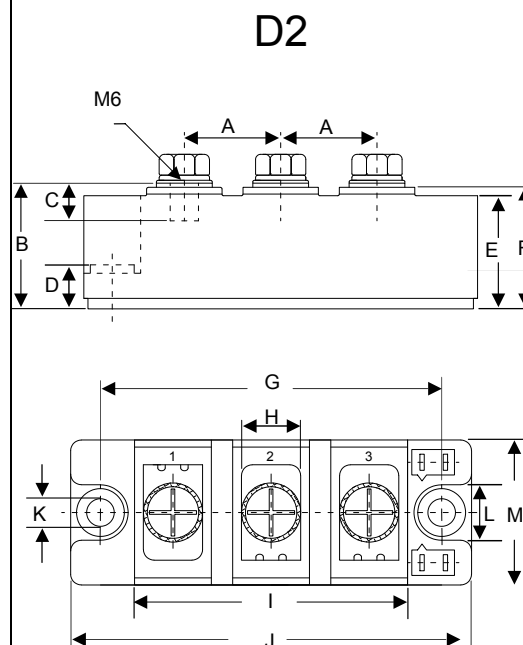
Features

- 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

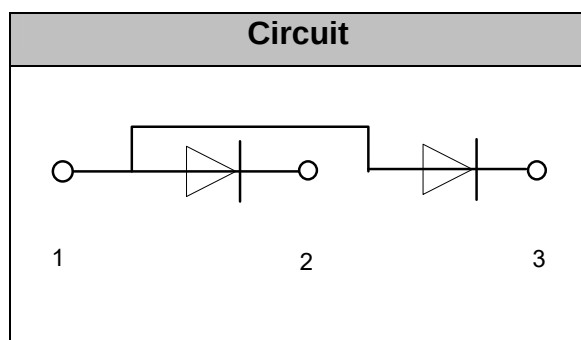
- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

165 Amp
GLASS PASSIVATED
RECTIFIER DIODE
MODULES
800~1800 Volts



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.886	0.925	22.50	23.50	
B	1.161	1.201	29.50	30.50	
C	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	
H	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	0.256		6.50		Φ
L	0.492	0.531	12.50	13.50	
M	1.319	1.358	33.50	34.50	

Circuit



Module Type

TYPE	VRRM	VRSM
MD165A08D2	800V	900V
MD165A12D2	1200V	1300V
MD165A16D2	1600V	1700V
MD165A18D2	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=101°C	165	A
IFSM	t=10mS Tvj =45°C	6000	A
i ² t	t=10mS Tvj =45°C	180000	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(M6)	5±15%	Nm
Ms	To 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	Values			Units
		Min.	Typ.	Max.	
VFM	T=25°C IF =300A	—	1.20	1.40	V
IRD	Tvj=150°C VRD=VRRM	—	—	9	mA
r _f	Tj=25°C		1.25		mΩ
V _{f0}			0.82		V

Performance Curves

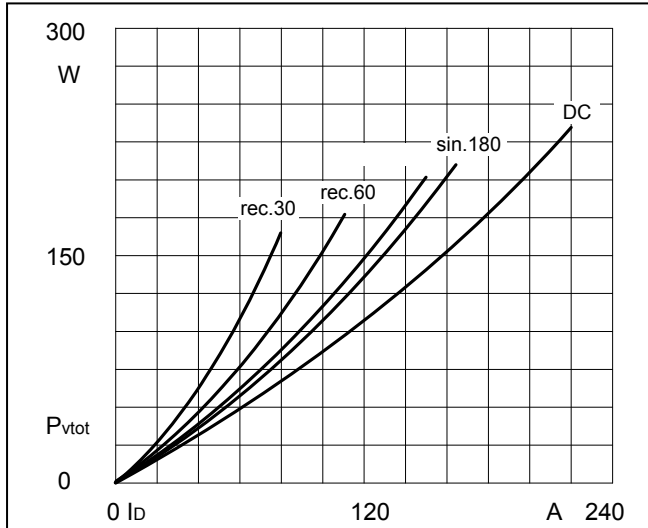


Fig1. Power dissipation

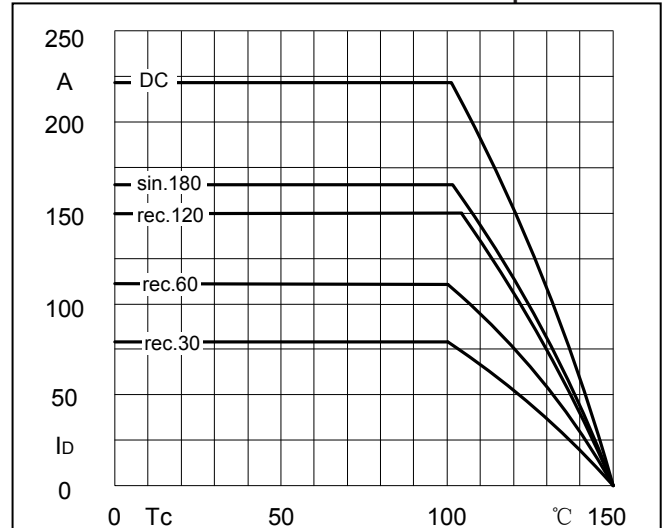


Fig2. Forward Current Derating Curve

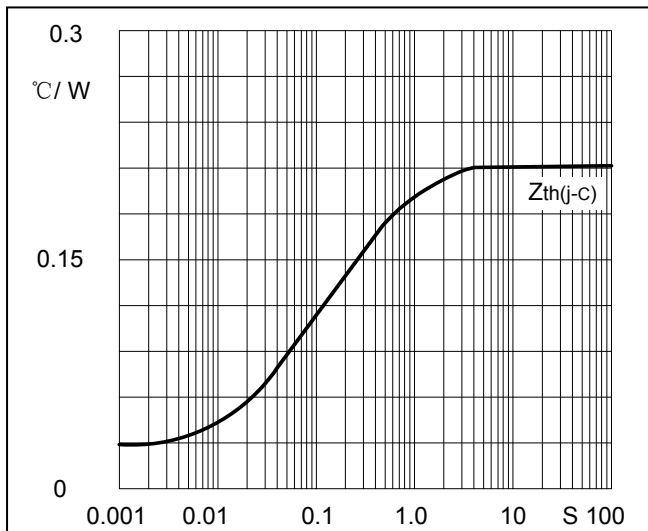


Fig3. Transient thermal impedance

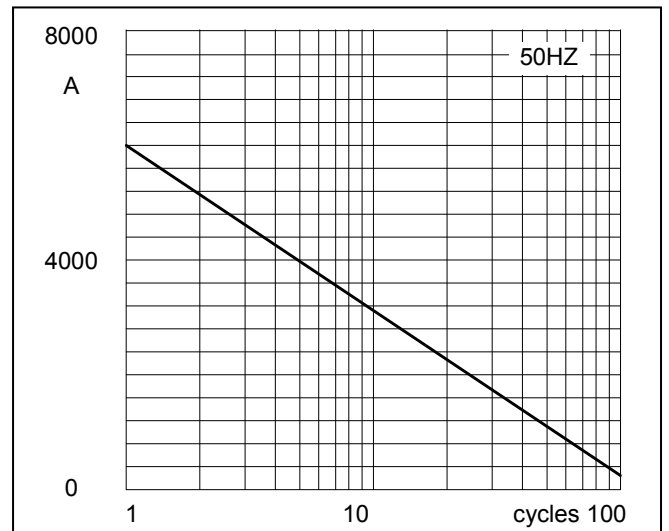


Fig4. Max Non-Repetitive Forward Surge Current

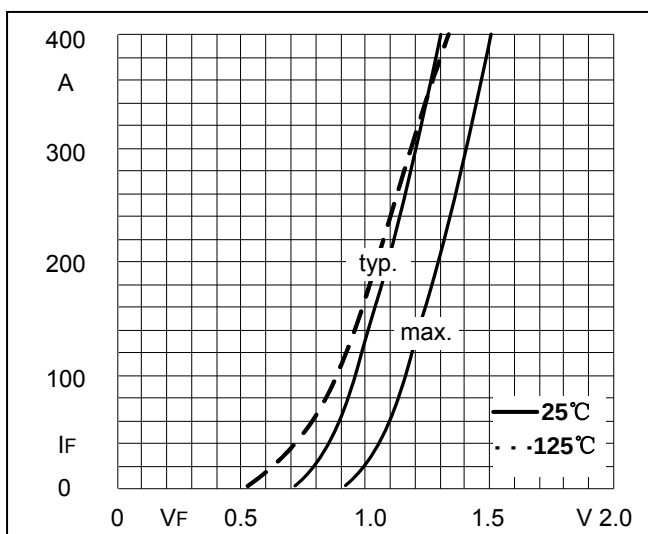


Fig5. Forward Characteristics

Ordering Information :

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

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