



Micro Commercial Components
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MD160S08M5
MD160S12M5
MD160S16M5
MD160S18M5

Features

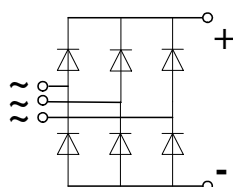
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Blocking Voltage: 800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Applications

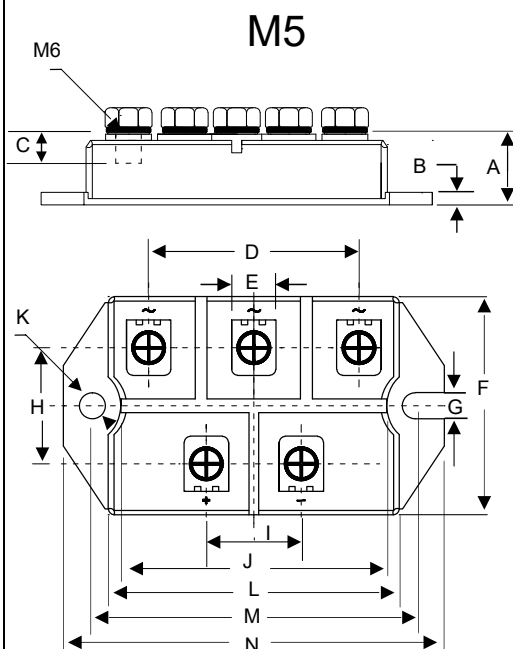
- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers



Circuit



160 Amp
GLASS PASSIVATED
THREE PHASE
RECTIFIER BRIDGE
800~1800 Volts



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.650	0.689	16.50	17.50	
B	0.098	0.138	2.50	3.50	
C	0.256	0.295	6.50	7.50	
D	2.028	2.067	51.50	52.50	
E	0.453	0.492	11.50	12.50	
F	2.106	2.146	53.50	54.50	
G	0.236	0.276	6.00	7.00	
H	1.043	1.083	26.50	27.50	
I	0.965	1.004	24.50	25.50	
J	2.579	2.618	65.50	66.50	
K	0.256		6.50		Φ
L	2.815	2.854	71.50	72.50	
M	3.130	3.169	79.50	80.50	
N	3.681	3.720	93.50	94.50	

Module Type

TYPE	VRRM	VRSM
MD160S08M5	800V	900V
MD160S12M5	1200V	1300V
MD160S16M5	1600V	1700V
MD160S18M5	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_D	Three phase, full wave $T_c=100^\circ\text{C}$	160	A
I_{FSM}	$t=10\text{ms}$ $T_{vj}=45^\circ\text{C}$	1800	A
i^2t	$t=10\text{ms}$ $T_{vj}=45^\circ\text{C}$	16200	A^2s
V_{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}		-40 to +150	$^\circ\text{C}$
T_{stg}		-40 to +125	$^\circ\text{C}$
M_t	To terminals(M6)	$5\pm 15\%$	Nm
M_s	To heatsink(M6)	$5\pm 15\%$	Nm
Weight	Module (Approximately)	194	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per diode	0.65	$^\circ\text{C/W}$
$R_{th(c-s)}$	Module	0.03	$^\circ\text{C/W}$

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	$T=25^\circ\text{C}$ $I_F=300\text{A}$	—	1.50	1.75	V
I_{RD}	$T_{vj}=25^\circ\text{C}$ $V_{RD}=V_{RRM}$ $T_{vj}=150^\circ\text{C}$ $V_{RD}=V_{RRM}$	—	—	0.5 6	mA mA

Performance Curves

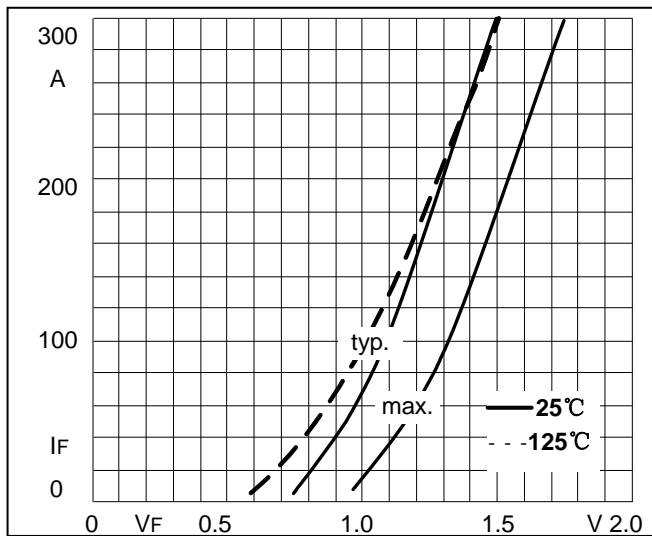


Fig1. Forward Characteristics

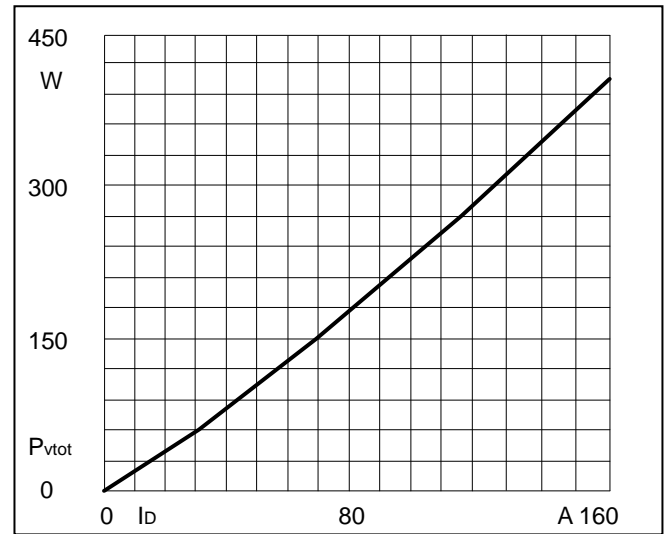


Fig2. Power dissipation

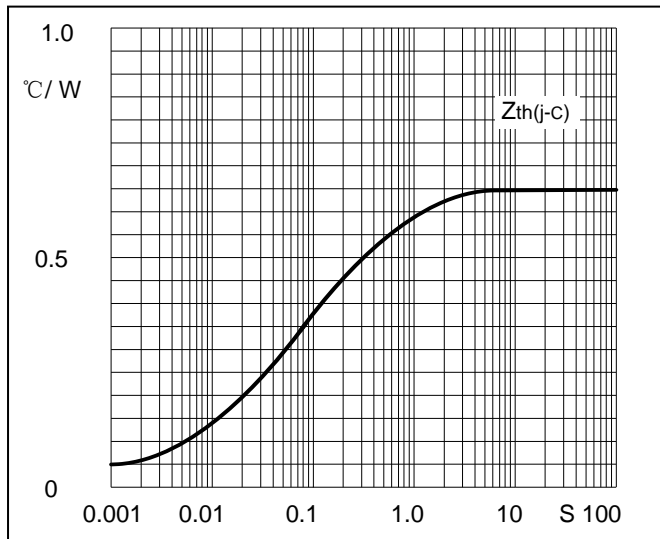


Fig3. Transient thermal impedance

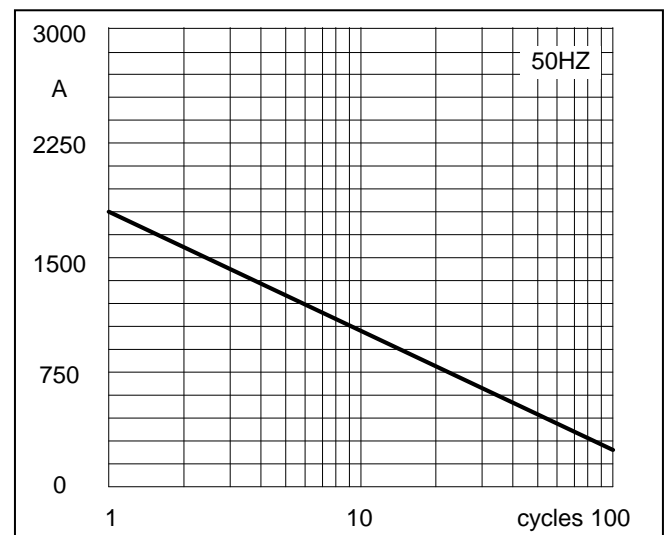


Fig4. Max Non-Repetitive Forward Surge Current

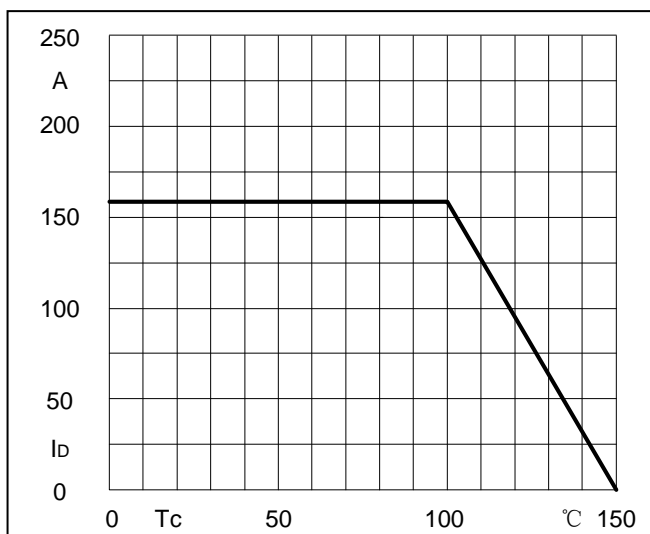


Fig5. Forward Current Derating Curve

Ordering Information :

Device	Packing
Part Number-BP	Bulk: 6PCS/BOX ;60PCS/CTN

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