



Micro Commercial Components



Micro Commercial Components  
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 USA  
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**MD130S08M5**  
**MD130S12M5**  
**MD130S16M5**  
**MD130S18M5**

## Features

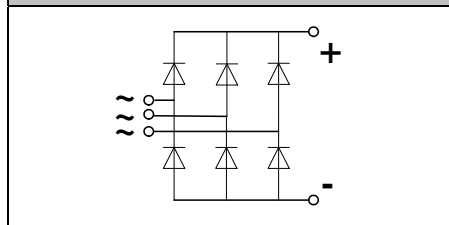
- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- Blocking Voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

## Applications

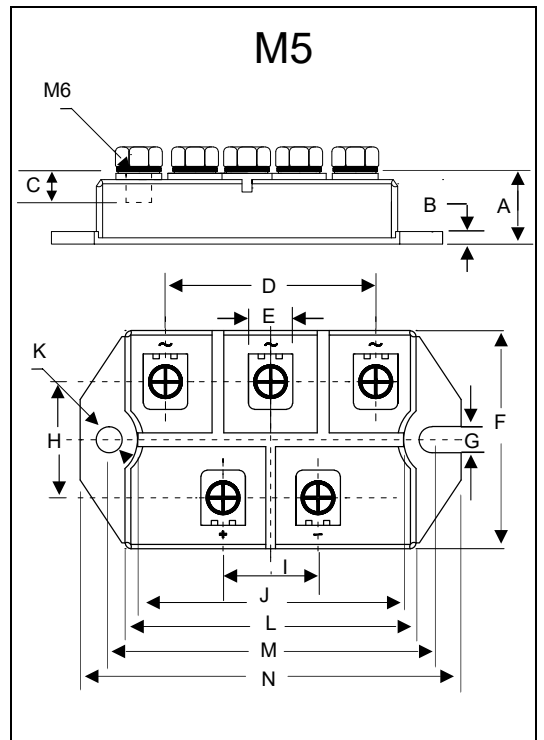
- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers



Circuit



**130 Amp**  
**GLASS PASSIVATED**  
**THREE PHASE**  
**RECTIFIER BRIDGE**  
**800~1800 Volts**



DIMENSIONS

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
MD130S08M5	800V	900V
MD130S12M5	1200V	1300V
MD130S16M5	1600V	1700V
MD130S18M5	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
I <sub>D</sub>	Three phase, full wave T <sub>c</sub> =100°C	130	A
I <sub>FSM</sub>	t=10mS T <sub>vj</sub> =45°C	1200	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	7200	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	194	g

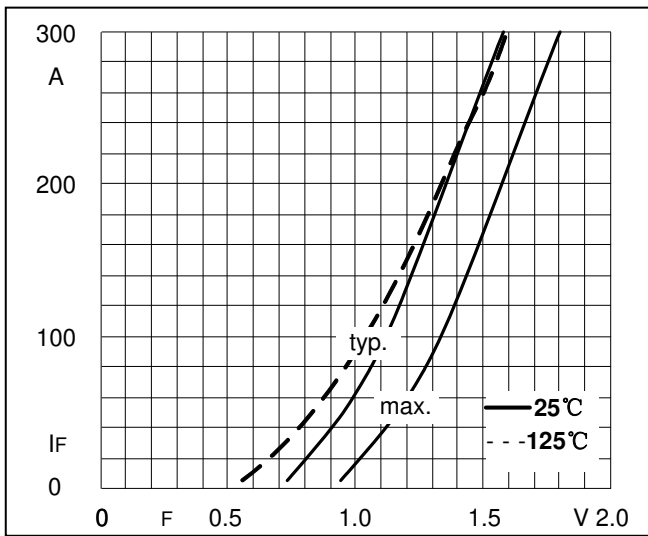
### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.9	°C/W
R <sub>th(c-s)</sub>	Module (Approximately)	0.03	°C/W

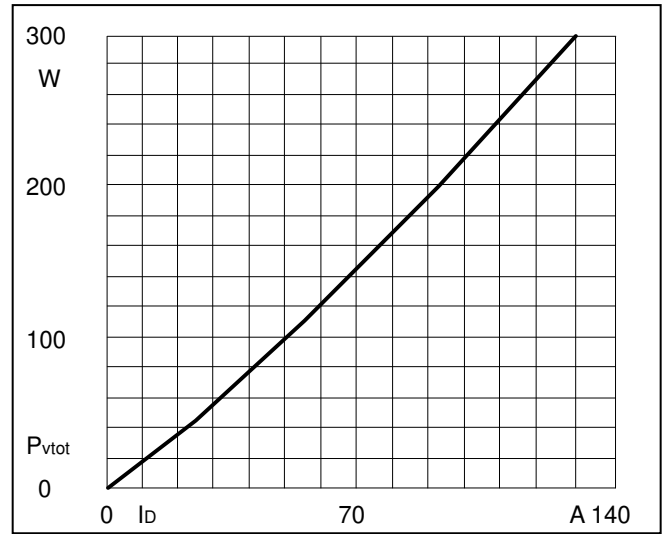
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =300A	—	1.58	1.80	V
I <sub>RD</sub>	T <sub>vj</sub> =25°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	0.3	mA
	T <sub>vj</sub> =150°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	5	mA

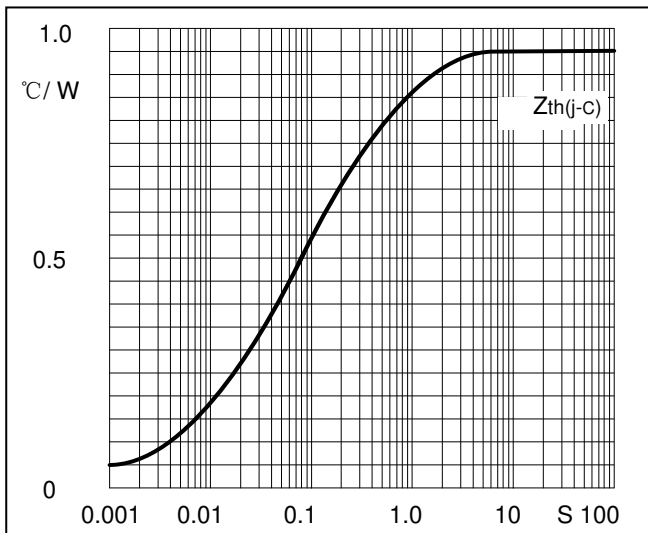
**Performance Curves**



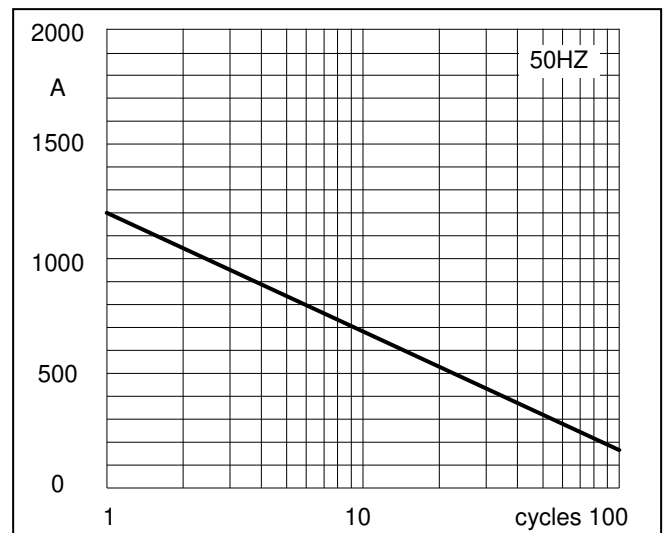
**Fig1. Forward Characteristics**



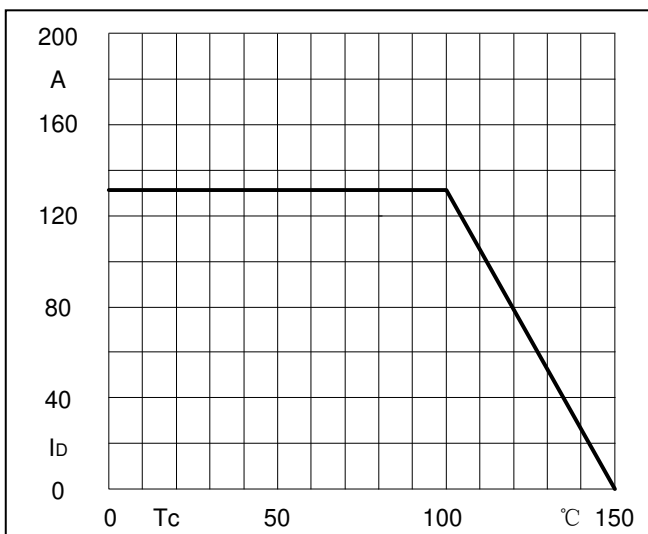
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



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



**Fig5. Forward Current Derating Curve**



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## Ordering Information :

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

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