



Micro Commercial Components
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MD36K08D1
MD36K12D1
MD36K16D1
MD36K18D1

Features

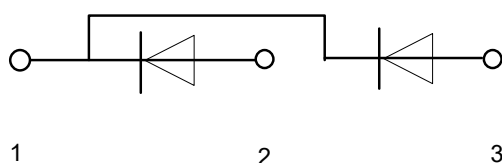
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Blocking Voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Applications

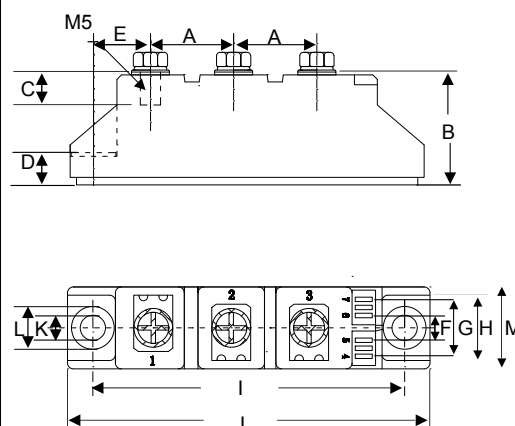
- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors



Circuit



D1



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.768	0.807	19.50	20.50	
B	1.161	1.201	29.50	30.50	
C	0.335	0.374	8.50	9.50	
D	0.315	0.354	8.00	9.00	
E	0.594	0.630	15.10	16.00	
F	0.217	0.256	5.50	6.50	
G	0.531	0.571	13.50	14.50	
H	0.650	0.689	16.50	17.50	
I	3.130	3.169	79.50	80.50	
J	3.642	3.681	92.50	93.50	
K	0.256		6.50		Φ
L	0.413	0.453	10.50	11.50	
M	0.807	0.846	20.50	21.50	

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Revision: A

1 of 4

2015/12/05

Module Type

TYPE	VRRM	VRSM
MD36K08D1	800V	900V
MD36K12D1	1200V	1300V
MD36K16D1	1600V	1700V
MD36K18D1	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Single phase ,half wave 180° conduction $T_c=104^{\circ}\text{C}$	36	A
I_{FSM}	$t=10\text{mS}$ $T_{vj}=45^{\circ}\text{C}$	650	A
i^2t	$t=10\text{mS}$ $T_{vj}=45^{\circ}\text{C}$	2100	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	$^{\circ}\text{C}$
Mt	To terminals(M5)	$3\pm 15\%$	Nm
Ms	To heatsink(M6)	$5\pm 15\%$	Nm
Weight	Module (Approximately)	100	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per diode	1.0	$^{\circ}\text{C/W}$
$R_{th(c-s)}$	Module	0.1	$^{\circ}\text{C/W}$

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	$T=25^{\circ}\text{C}$ $I_F=100\text{A}$	—	1.25	1.40	V
I_{RD}	$T_{vj}=150^{\circ}\text{C}$ $V_{RD}=V_{RRM}$	—	—	5	mA

Performance Curves

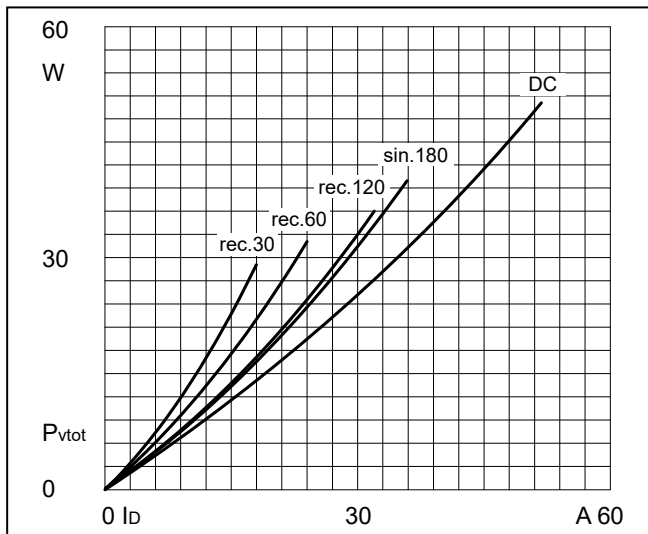


Fig1. Power dissipation

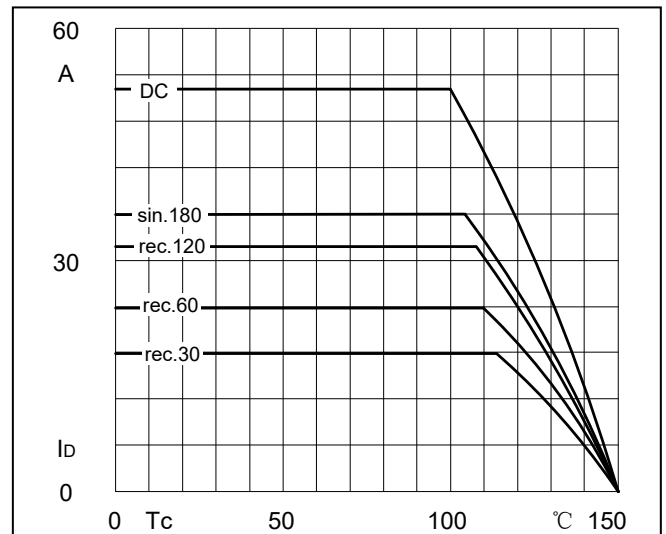


Fig2. Forward Current Derating Curve

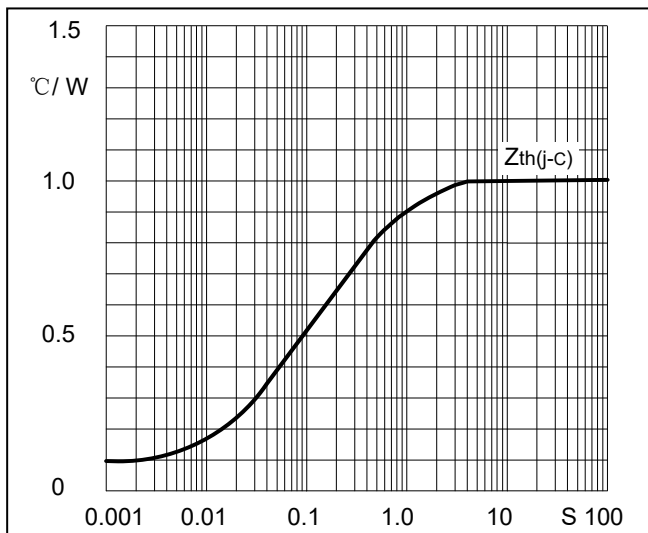


Fig3. Transient thermal impedance

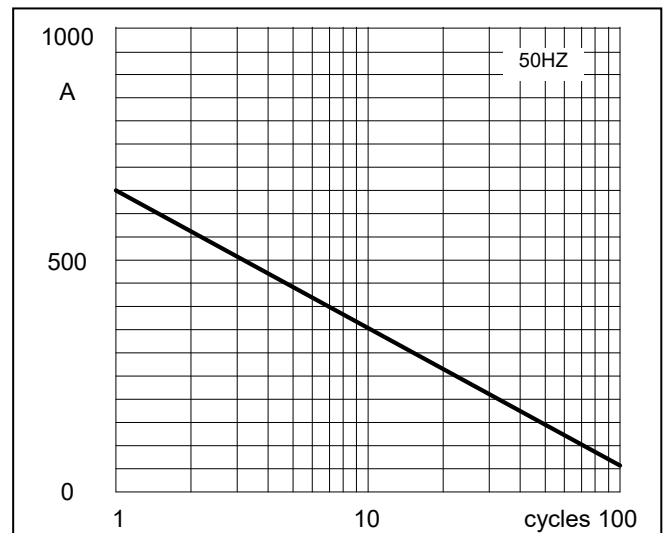


Fig4. Max Non-Repetitive Forward Surge Current

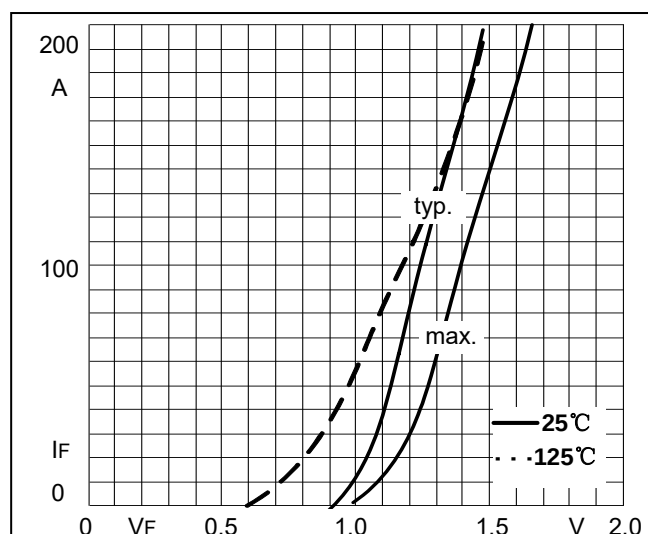


Fig5. Forward Characteristics

Ordering Information :

Device	Packing
Part Number-BP	Bulk: 10PCS/BOX ;100PCS/CTN

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