



Micro Commercial Components®

Micro Commercial Components  
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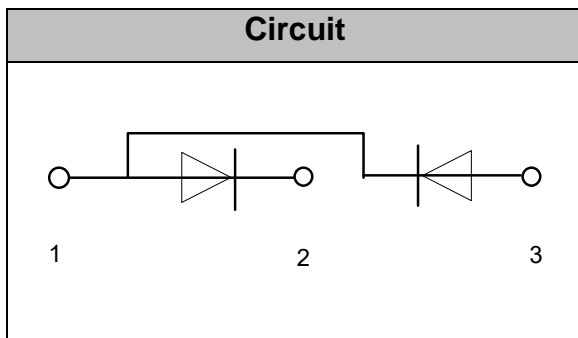
**MD36C08D1**  
**MD36C12D1**  
**MD36C16D1**  
**MD36C18D1**

## 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

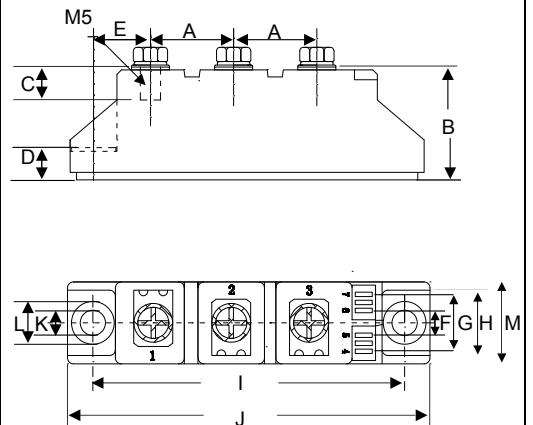
## Applications

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



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

D1



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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	

### Module Type

TYPE	VRRM	VRSM
MD36C08D1	800V	900V
MD36C12D1	1200V	1300V
MD36C16D1	1600V	1700V
MD36C18D1	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	$\text{A}^2\text{s}$
$V_{isol}$	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

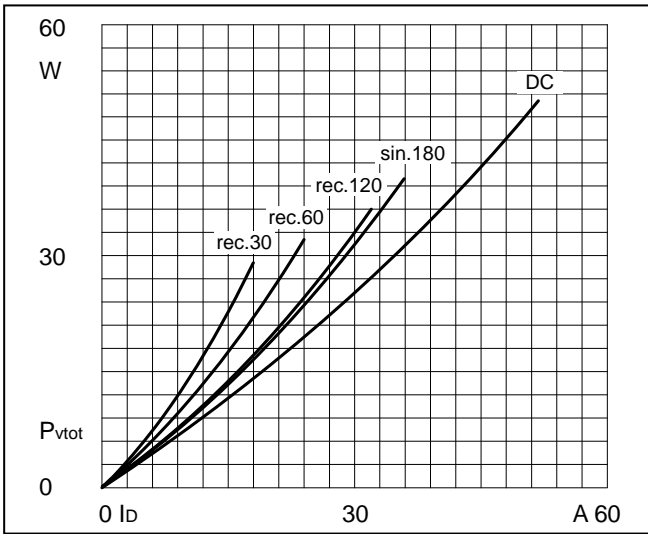
### Thermal Characteristics

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

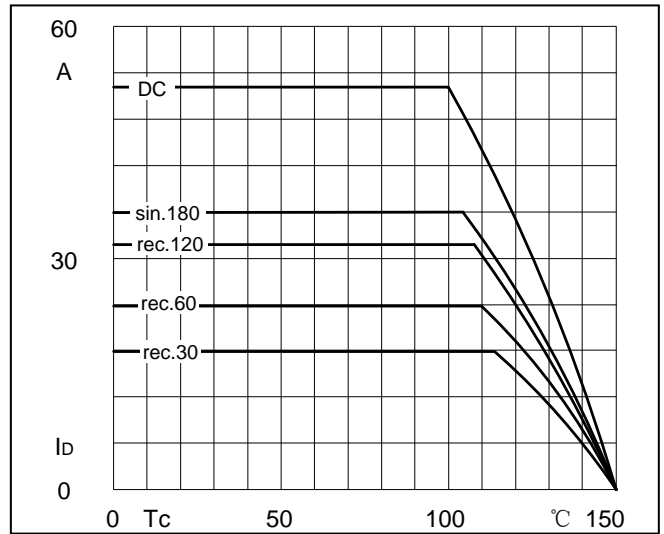
### Electrical Characteristics

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

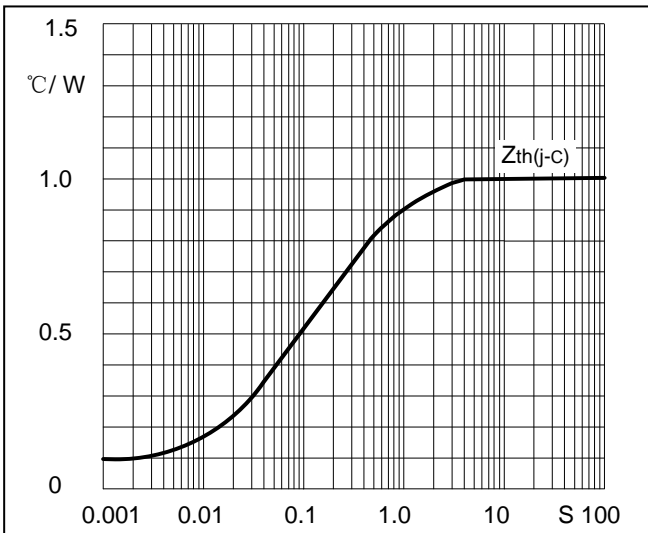
**Performance Curves**



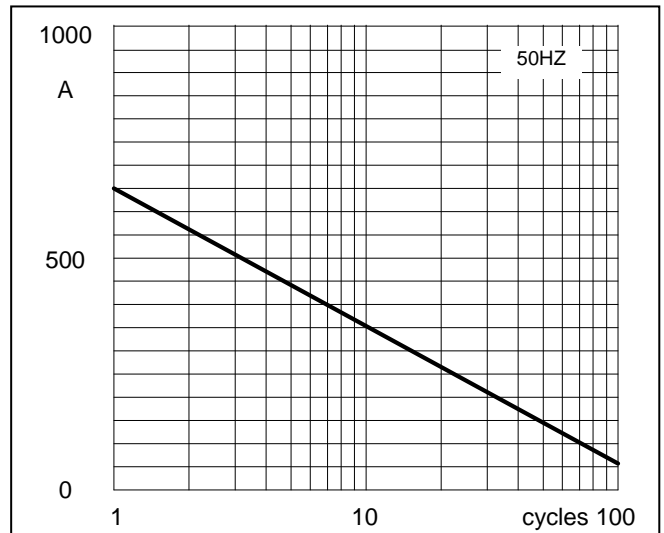
**Fig1. Power dissipation**



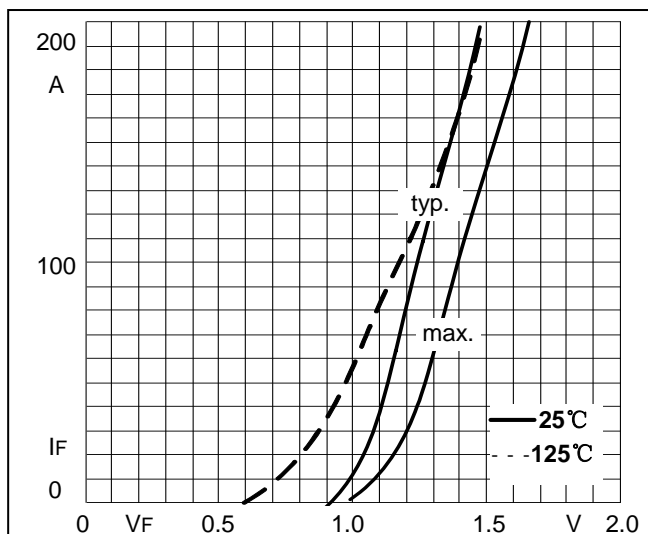
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



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



**Fig5. Forward Characteristics**



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Ordering Information :

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

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