



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# MB05M THRU MB10M

## Features

- Glass Passivated Diode Construction
- High Surge Overload Rating:35A peak
- Saves Space on Printed Circuit Board
- High Temperature Soldering Guaranteed: 260°C/10 Second
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026

## Maximum Ratings

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB05M	MB05M	50V	35V	50V
MB1M	MB1M	100V	70V	100V
MB2M	MB2M	200V	140V	200V
MB4M	MB4M	400V	280V	400V
MB6M	MB6M	600V	420V	600V
MB8M	MB8M	800V	560V	800V
MB10M	MB10M	1000V	700V	1000V

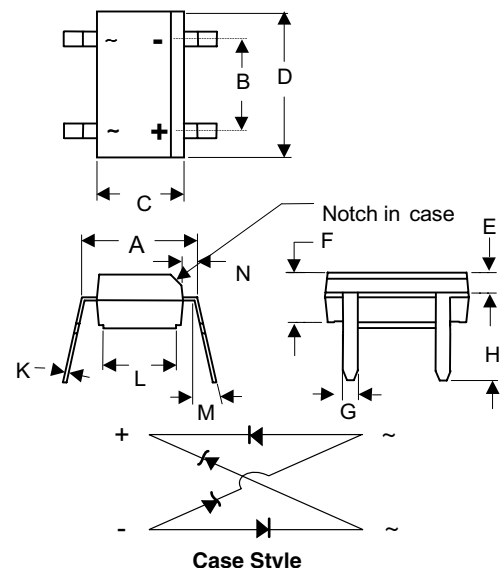
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	0.5 A <sup>(1)</sup> 0.8 A <sup>(2)</sup>	See Fig.1
Peak Forward Surge Current	$I_{FSM}$	35A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.0V	$I_{FM} = 0.4A$ ; $T_A = 25^\circ C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu A$ 100 $\mu A$	$T_A = 25^\circ C$ $T_A = 125^\circ C$
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JA}$ $R_{\theta JL}$	85 $^\circ C/W$ <sup>(1)</sup> 70 $^\circ C/W$ <sup>(2)</sup> 20 $^\circ C/W$ <sup>(1)</sup>	per leg
Typical Junction Capacitance	$C_J$	13pF	Measured at 1.0MHz, $V_R=4.0V$
Rating For Fusing	$I^2t$	5.0A <sup>2</sup> s	t<8.30ms
Operating Junction and Storage Temperature Range	$T_J$ $T_{STG}$	-55to+150 $^\circ C$	

- Notes:
1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7
  2. On glass epoxy P.C.B. mounted on 0.05 x 0.05"(1.3 x 1.3mm) pads
  3. On aluminum substrate P.C.B. with an area of 0.8" x 0.8"(20 x 20mm) mounted on 0.05 x 0.05"(1.3x 1.3mm) solder pad

## 0.5 Amp Single Phase Glass Passivated Bridge Rectifier 50 to 1000 Volts

### MB-1



### DIMENSIONS

DIM	INC HES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.195	.205	4.95	5.21	
B	.095	.105	2.41	2.67	
C	.144	.161	3.65	4.10	
D	.179	.190	4.55	4.83	
E	.039	.049	0.99	1.24	
F	.090	.106	2.30	2.70	
G	.017	.029	0.43	0.74	
H	.132	.203	3.35	5.16	
K	.006	.016	0.15	0.41	
L	.137	.147	3.48	3.73	
M	10°	15°	10°	15°	
N	.020	.028	0.51	0.71	

Figure 1. Derating Curve for Output Rectified Current

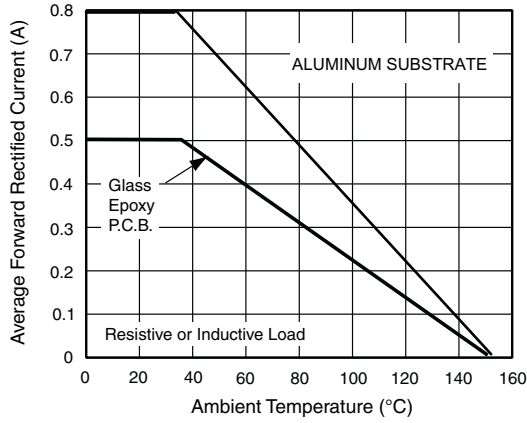
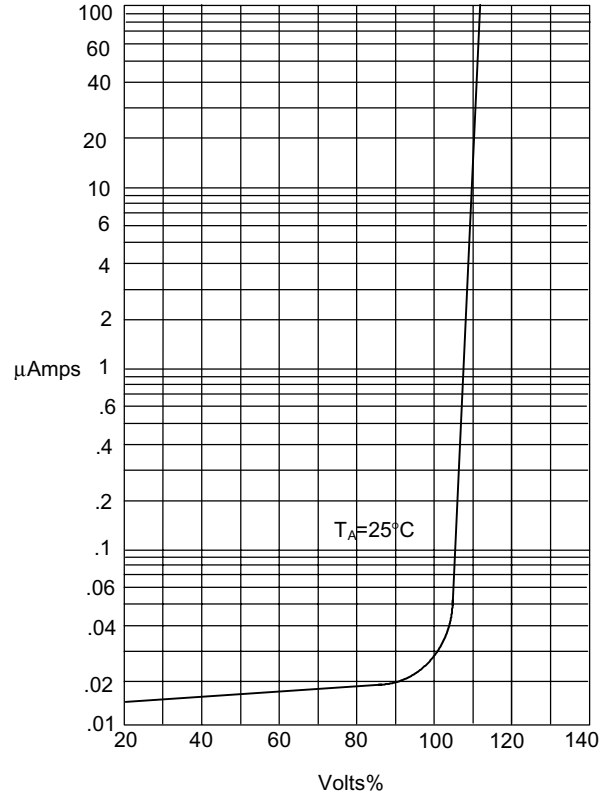
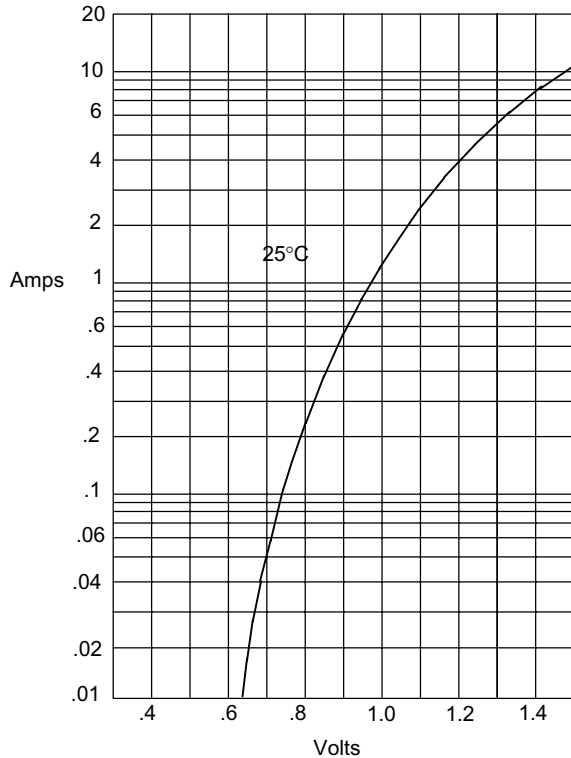


Figure 2. Typical Reverse Characteristics



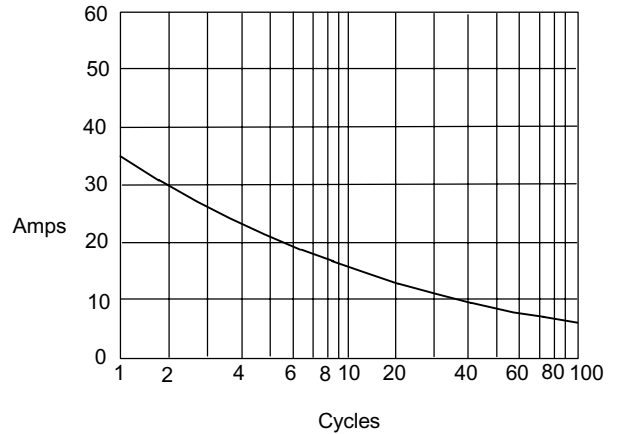
Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts%

Figure 3. Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus Instantaneous Forward Voltage - Volts

Figure 5. Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles





Micro Commercial Components

## Ordering Information

Device	Packing
(Part Number)-BP	Bulk; 5K/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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