



Micro Commercial Components



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

## 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

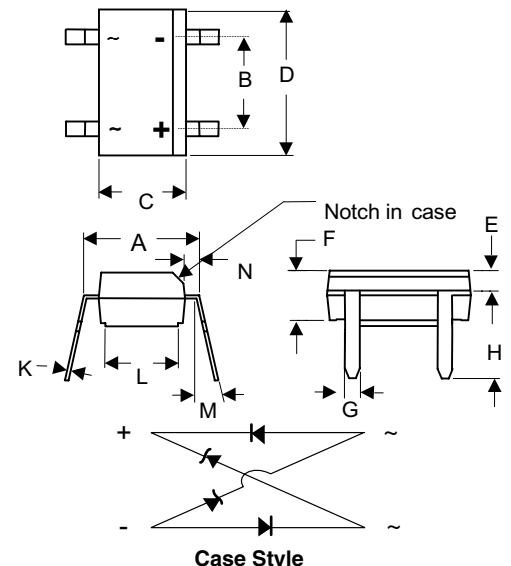
### Electrical Characteristics @ 25°C Unless Otherwise Specified

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°C/W <sup>(1)</sup> 70°C/W <sup>(2)</sup> 20°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°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" (1.3 x 1.3mm) solder pad

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

### MB-1



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

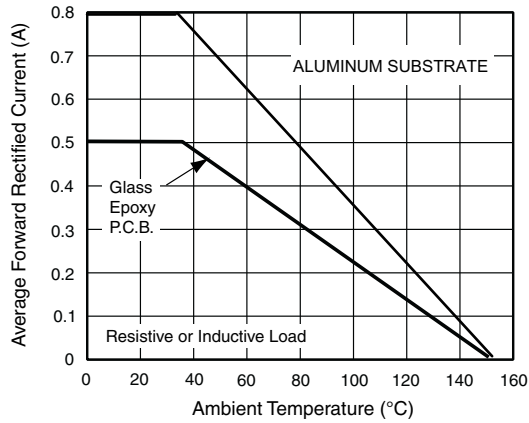


Figure 3  
Typical Forward Characteristics

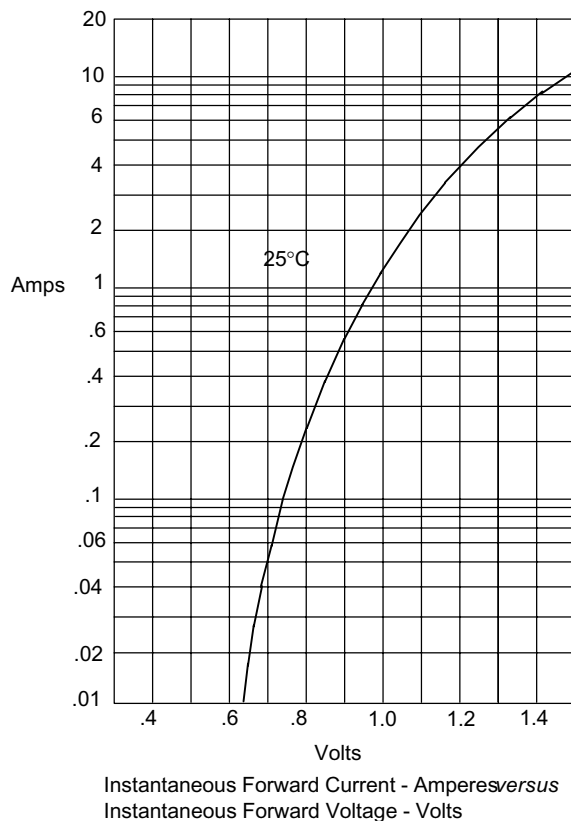
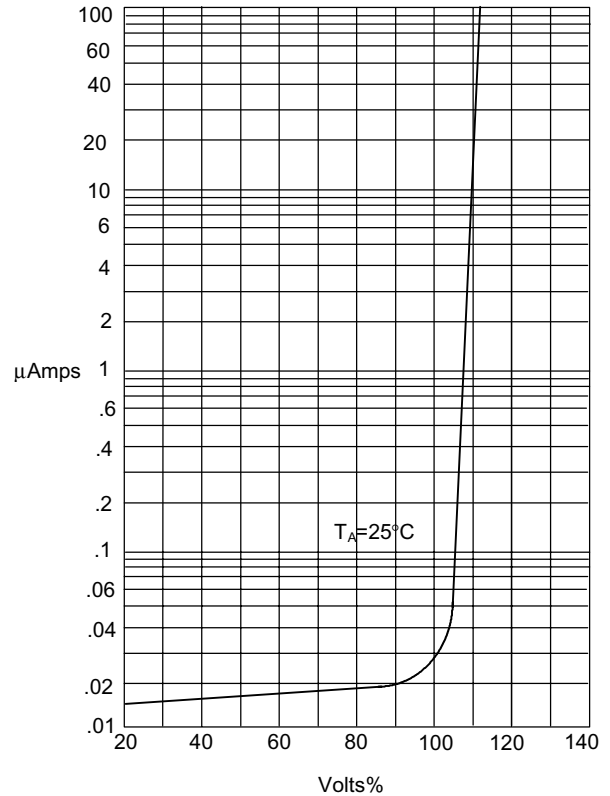
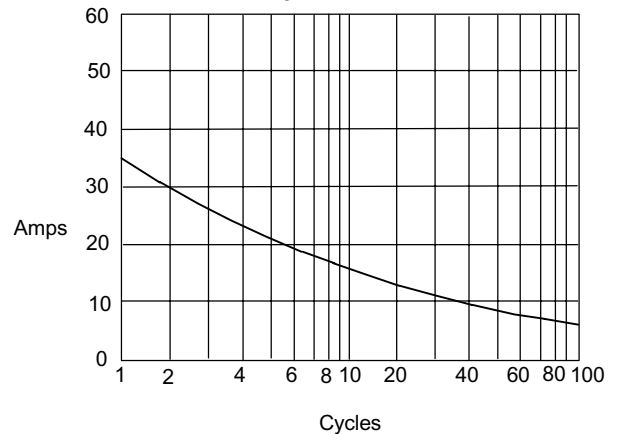


Figure 2  
Typical Reverse Characteristics



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

Figure 5  
Peak Forward Surge Current



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

## 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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