Micro Commercial Components

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MB05S THRU MB10S

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

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
- UL Recognized File # E165989

Mechanical Data

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Moisture Sensitivity: Level 3 per J-STD-020C

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB05S	MB05S	50V	35V	50V
MB1S	MB1S	100V	70V	100V
MB2S	MB2S	200V	140V	200V
MB4S	MB4S	400V	280V	400V
MB6S	MB6S	600V	420V	600V
MB8S	MB8S	800V	480V	800V
MB10S	MB10S	1000V	700V	1000V

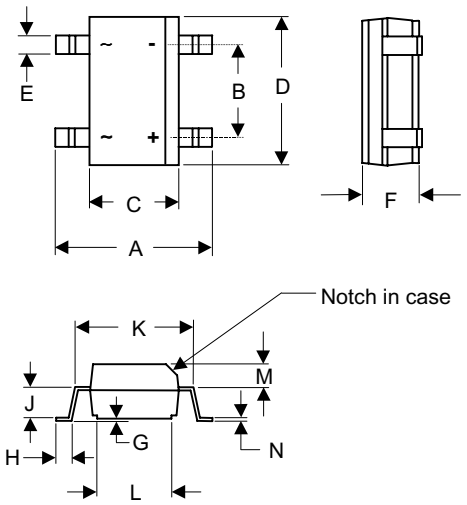
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	0.5 A(1) 0.8 A(2)	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°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5σA 100σA	T_A = 25°C T_A = 125°C
Typical Thermal Resistance	$R_{\chi JA}$ $R_{\chi JA}$ $R_{\chi JL}$	85°C/W(1) 70°C/W(2) 20°C/W(1)	per leg
Typical Junction Capacitance	C_J	13pF	Measured at 1.0MHz, V_R=4.0V
Rating For Fusing	I^2t	5.0A^{2}s	t<8.30ms
Operating Junction and Storage Temperature Range	T_J T_{STG}	-55to+150°C	

(1) On glass epoxy P.C.B. mounted on 0.05 x 0.05"(1.3 x 1.3mm)pads

(2) 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

MBS -1



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.252	.272	6.40	6.90	
B	.095	.105	2.41	2.67	
C	.144	.161	3.65	4.10	
D	.179	.195	4.55	4.95	
E	.017	.029	0.43	0.74	
F	.090	.106	2.30	2.70	
G	.004	.008	0.10	0.20	
H	.019	.038	0.48	0.96	
J	.058	.062	1.47	1.57	
K	.195	.205	4.95	5.21	
L	.110	.114	2.80	2.90	
M	.039	.049	0.99	1.24	
N	.006	.016	0.15	0.41	

Mounting Pad Layout

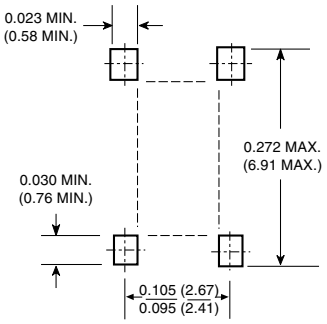


Figure 1. Derating Curve for Output Rectified Current

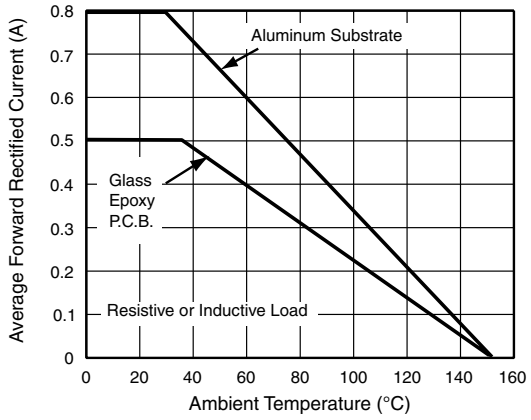
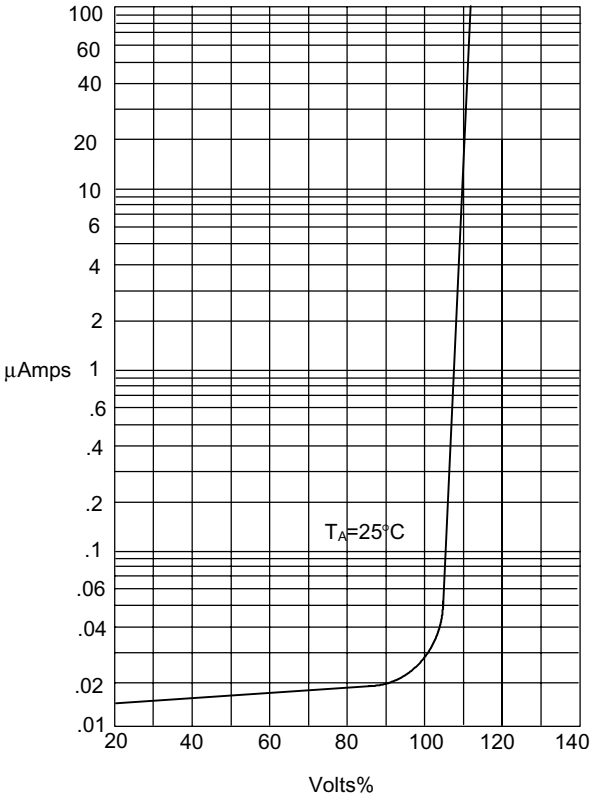
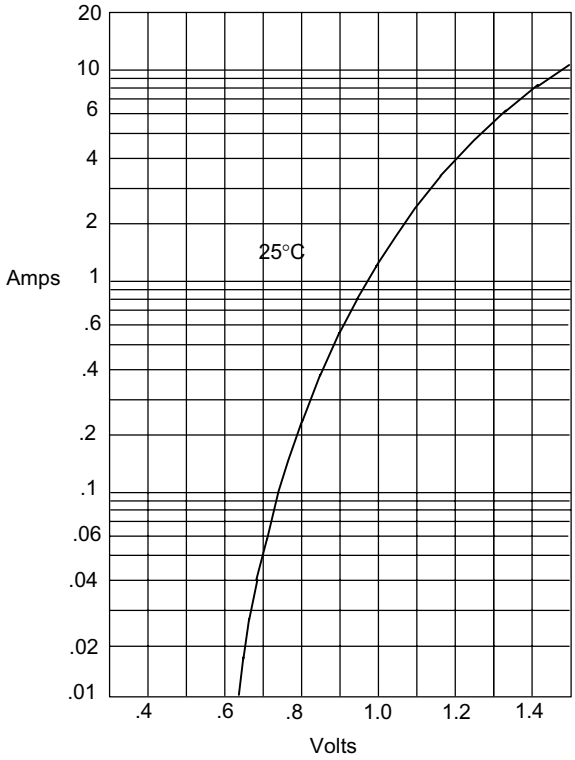


Figure 2
Typical Reverse Characteristics



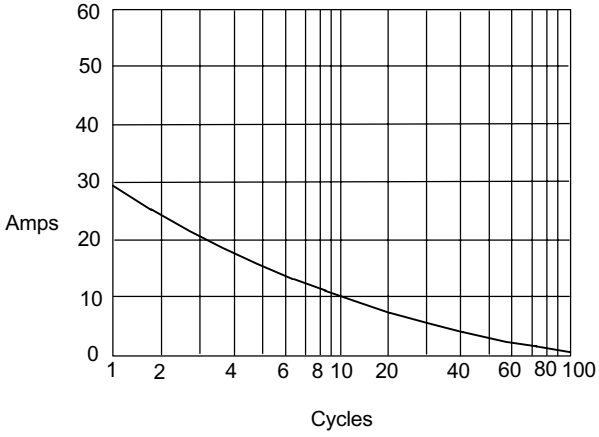
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts%

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 50Hz - Cycles

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