



Micro Commercial Components

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

MB05S THRU MB10S

Features

- Glass Passivated Diode Construction
- High Temperature Soldering Guaranteed: 260°C/10 Second
- Saves Space On Printed Circuit Board

Mechanical Data

- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Terminals: Plated leads Solderable per MIL-STD-750, Method 2026
- Moisture Sensitivity: Level 1 per J-STD-020C

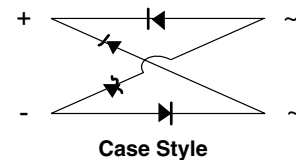
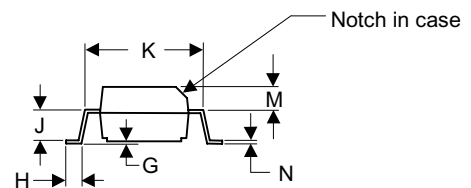
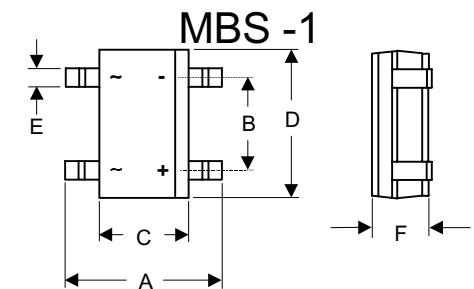
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB05S	MB05S	50V	35V	50V
MB1S	MB1S	100V	70V	100V
MB2S	MB2S	200V	140V	200V
MB4S	MB4S	400V	280V	400V
MB6S	MB6S	600V	420V	600V
MB8S	MB8S	800V	480V	800V
MB10S	MB10S	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	0.5 A ⁽²⁾ 0.8 A ⁽³⁾	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	5uA 100uA	$T_A = 25^\circ C$ $T_A = 125^\circ C$
Typical Thermal Resistance	R_{thJA} R_{thJA} R_{thJL}	85°C/W ⁽²⁾ 70°C/W ⁽³⁾ 20°C/W ⁽²⁾	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	

- 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



DIM	DIMENSIONS				NOTE
	INC HES		MM		
	MIN	MAX	MIN	MAX	
A	.252	.275	6.40	7.00	
B	.095	.106	2.41	2.70	
C	.150	.165	3.80	4.20	
D	.179	.195	4.55	4.95	
E	.019	.031	0.50	0.80	
F	.090	.106	2.30	2.70	
G	.004	.008	0.10	0.20	
H	.027	.043	0.70	1.10	
J	.058	.062	1.47	1.57	
K	.195	.205	4.95	5.21	
M	.039	.049	0.99	1.24	
N	.006	.016	0.15	0.41	

Mounting Pad Layout

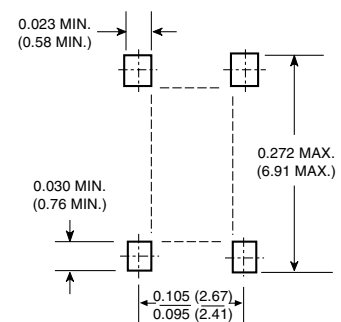


Figure 1. Derating Curve for Output Rectified Current

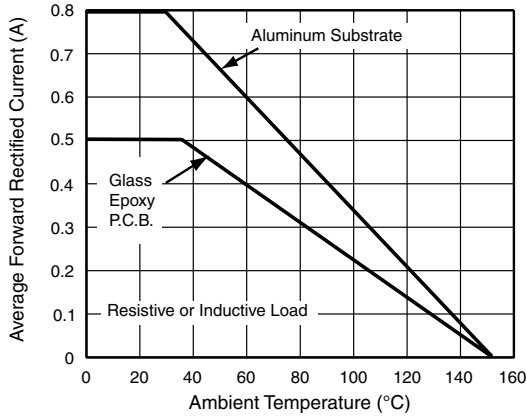
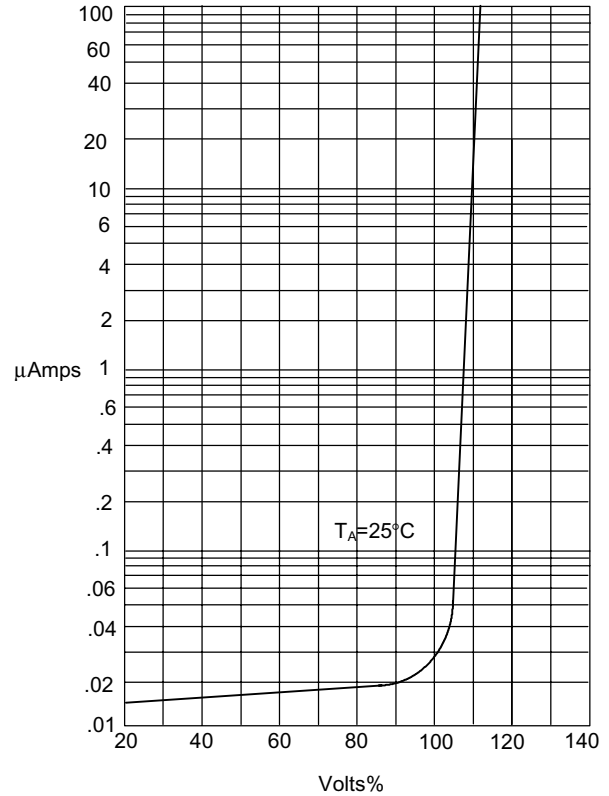
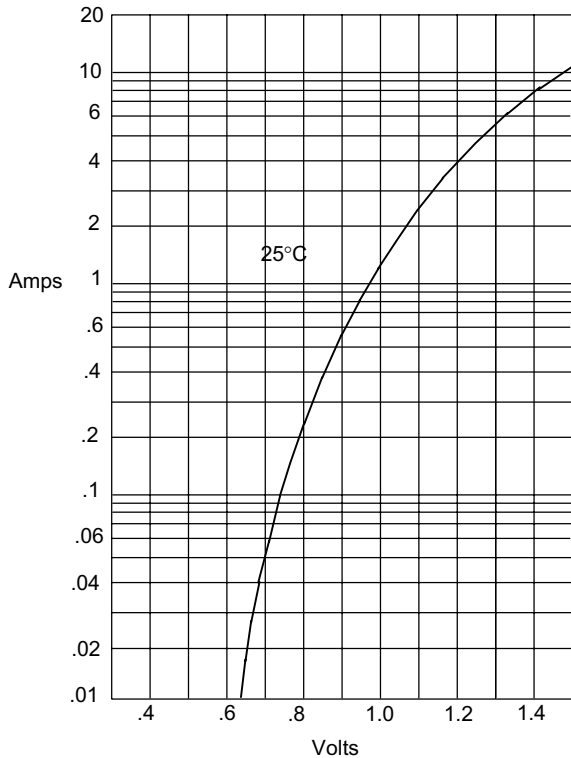


Figure 2
Typical Reverse Characteristics



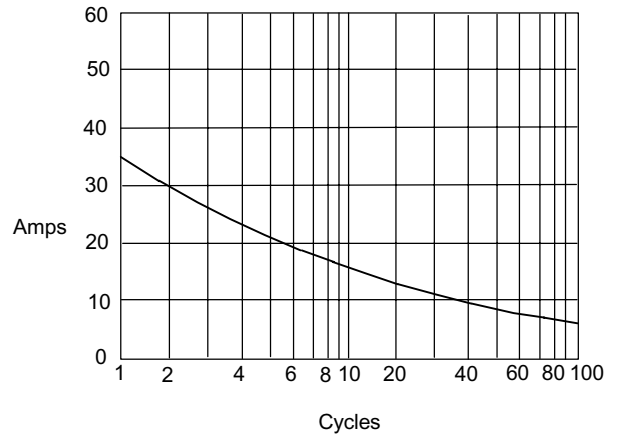
Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts%

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



Micro Commercial Components

Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. *Micro Commercial Components Corp.* does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

APPLICATIONS DISCLAIMER

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.

www.mccsemi.com