

	<b>E502650</b>
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**Features**

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance(Note2): 20°C/W Junction to Lead
- Typical Thermal Resistance(Note3): 70°C/W Junction to Ambient
- Typical Thermal Resistance(Note2): 85°C/W Junction to Ambient

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	560V	800V
MB10S	MB10S	1000V	700V	1000V

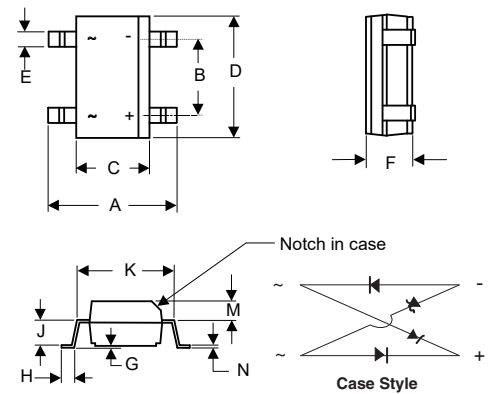
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	0.5A <sup>(2)</sup> 0.8A <sup>(3)</sup>	See Fig.1
Peak Forward Surge Current	$I_{FSM}$	35A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	1.0V	$I_{FM} = 0.4A$ ; $T_J = 25^\circ C$
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	5μA 100μA	$T_J = 25^\circ C$ $T_J = 125^\circ C$
Typical Junction Capacitance	$C_J$	13pF(Typ) 35pF(Max)	Measured at 1.0MHz, $V_R=4.0V$
I <sup>2</sup> t Rating for Fusing	$I^2t$	5.0A <sup>2</sup> S	t < 8.3ms

- Note: 1. High Temperature Solder Exemption Applied, See EU Directive Annex Notes 7a.  
 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

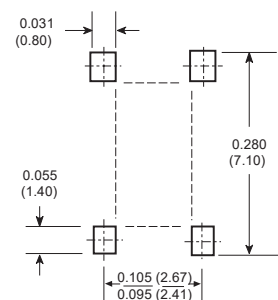
**0.5 Amp  
Single Phase Glass  
Passivated Bridge  
Rectifier  
50 to 1000 Volts**

**MBS-1**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.252	0.276	6.40	7.00	
B	0.095	0.106	2.41	2.70	
C	0.142	0.165	3.60	4.20	
D	0.179	0.195	4.55	4.95	
E	0.019	0.031	0.50	0.80	
F	0.090	0.106	2.30	2.70	
G	0.002	0.008	0.05	0.20	
H	0.027	0.043	0.70	1.10	
J	0.058	0.062	1.47	1.57	
K	0.195	0.205	4.95	5.21	
M	0.039	0.049	0.99	1.24	
N	0.006	0.016	0.15	0.41	

**Suggested Solder Pad Layout**



**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

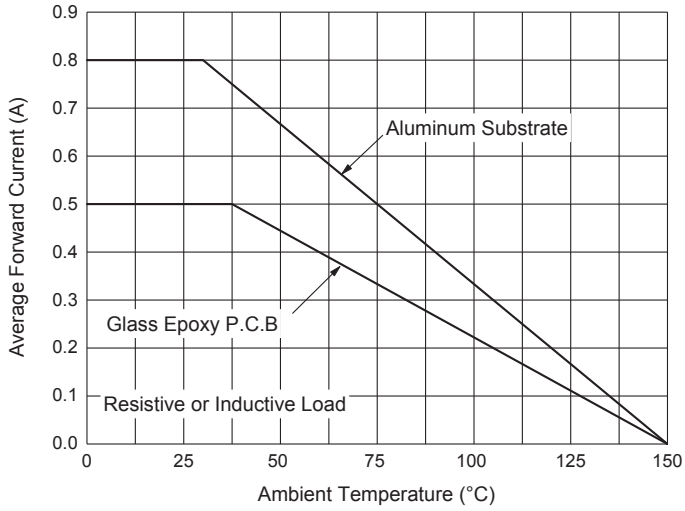


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

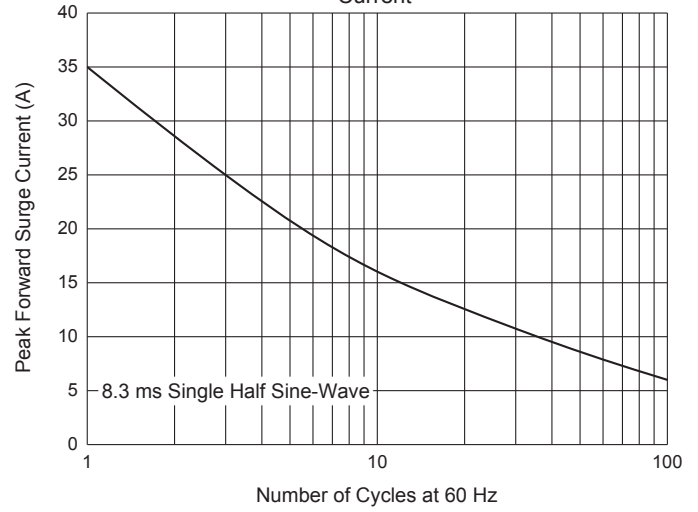


Fig. 3 - Typical Instantaneous Forward Characteristics

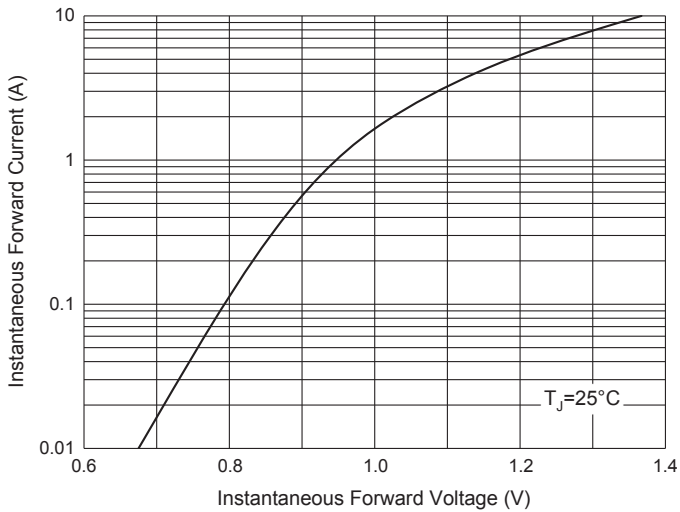
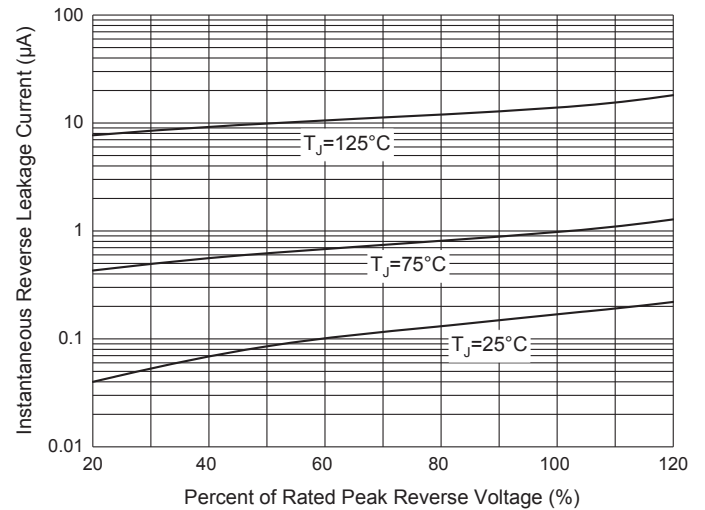


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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