

<b>Single Phase Glass Passivated Bridge Rectifiers</b>	<b>Reverse Voltage: 50V to 1000V</b> <b>Forward Current: 0.5 Amp</b>
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**Features**

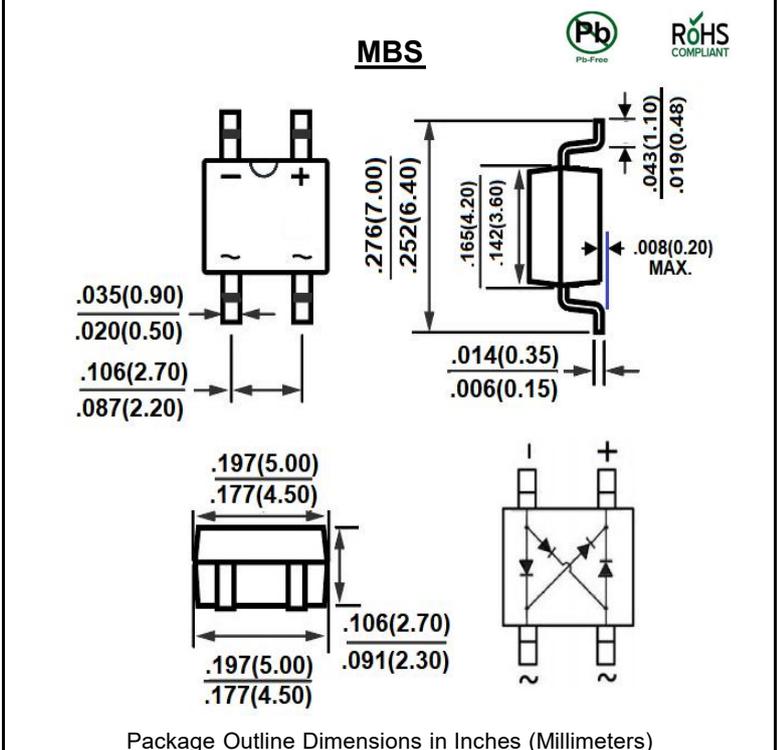
- Glass passivated chip junction
- Ideal for automated placement
- Low leakage current
- High forward surge capability
- Moisture sensitivity level: level 1, per J-STD-020

**Mechanical Data**

- **Package:** MBS  
Molding compound meets UL 94 V-0 flammability rating
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Symbol marking on body

**Typical Applications**

Suitable for AC to DC bridge full wave rectification for SMPS, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.



**Maximum Ratings and Electrical Characteristics** (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions	SYM.	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Device marking code		MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Output Rectified Current (see Fig. 1)	On glass-epoxy P.C.B (Note 1)	I <sub>O(AV)</sub>	0.5						A
	On aluminum substrate (Note 2)		0.8						
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	IFSM	35						A	
Operating junction range	T <sub>J</sub>	-55 to +150						°C	
Storage temperature range	T <sub>STG</sub>	-55 to +150						°C	

**Thermal Characteristics** (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions	SYM.	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum Thermal Resistance per Leg, Junction To Lead (Note 1)	R <sub>θJL</sub>	20						°C/W	
Maximum Thermal Resistance per Leg, Junction To Ambient (Note 1)	R <sub>θJA</sub>	80						°C/W	

**Electrical Characteristics** (Ta=25°C Unless otherwise specified)

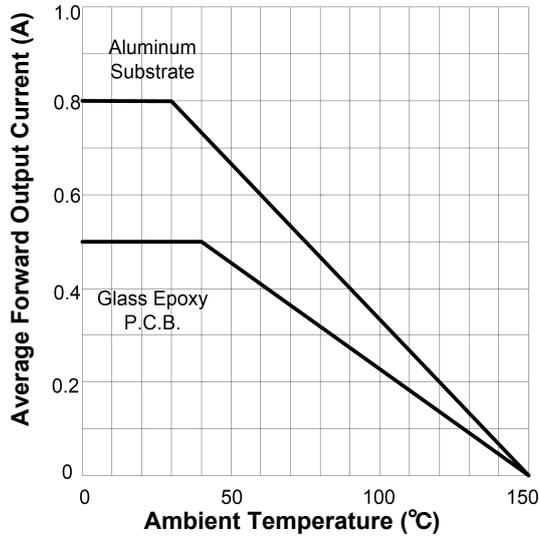
Parameter&Test Conditions	SYM.	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum Instantaneous Forward Voltage per diode	IF= 0.4A V <sub>FM</sub>	1.00						V	
Maximum DC reverse current at rated DC blocking voltage per diode	TA = 25°C	I <sub>R</sub>	5						μA
	TA = 125°C		100						

Notes:

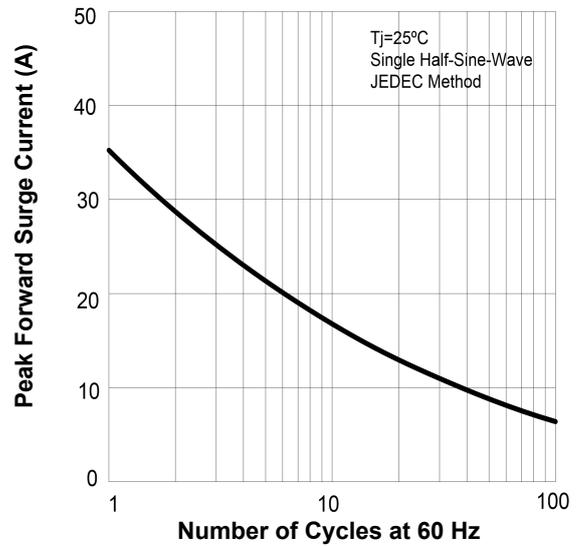
1. Units mounted on glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads.
2. Units mounted on aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad.

**Rating and Characteristic Curves**

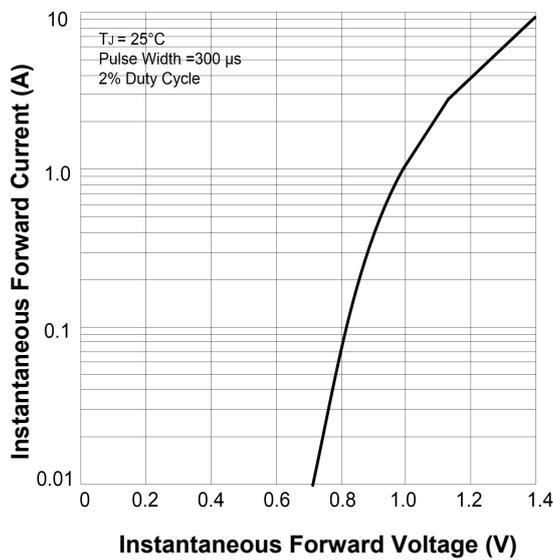
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED**



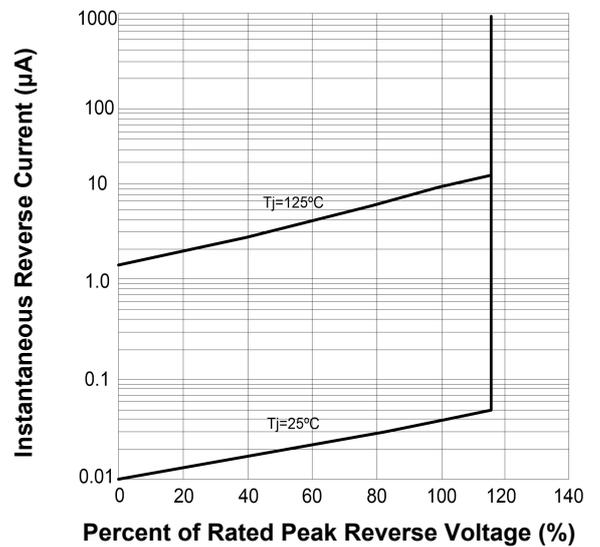
**FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT Per Diode**



**FIG. 3- TYPICAL FORWARD VOLTAGE**

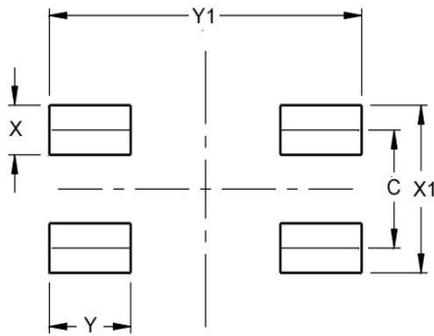


**FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



The curve above is for reference only.

**Recommended Pad Layout**



SYMBOL	Unit(mm)	Unit(inch)
C	2.5	0.098
X	1.2	0.047
X1	3.55	0.140
Y	1.88	0.074
Y1	7.2	0.283

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