Single Phase Glass Passivated Bridge Rectifiers

Reverse Voltage: 50V to 1000V
Forward Current: 0.5 Amp

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

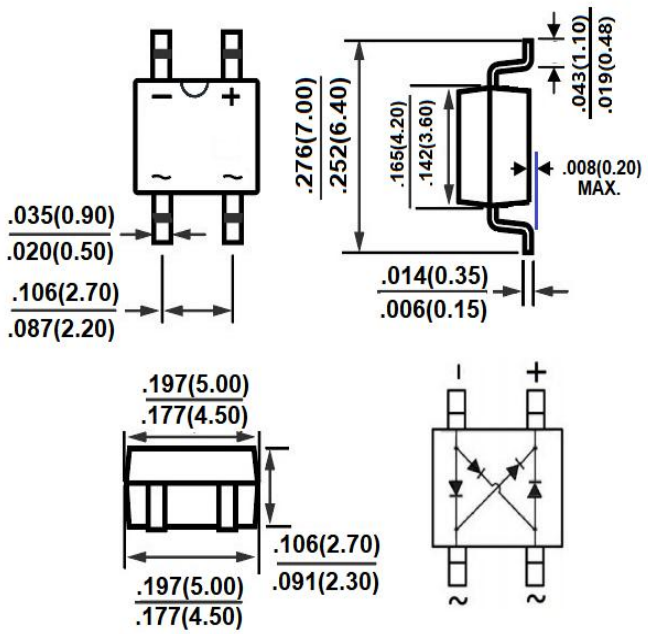
Mechanical Data

- **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.

MBS



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics (Ta=25℃ 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		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	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)	$I_{O(AV)}$	0.5							A
	On aluminum substrate (Note 2)		0.8							
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load		I_{FSM}	35							A
Operating junction range		T_j	-55 to+150							℃
Storage temperature range		T_{STG}	-55 to+150							℃

Thermal Characteristics (Ta=25℃ 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)	$R_{\theta JL}$	20							℃/W
Maximum Thermal Resistance per Leg, Junction To Ambient (Note 1)	$R_{\theta JA}$	80							℃/W

Electrical Characteristics (Ta=25℃ 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_{FM}	1.00							V
Maximum DC reverse current at rated DC blocking voltage per diode	TA = 25℃	I_R	5							μA
	TA = 125℃		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

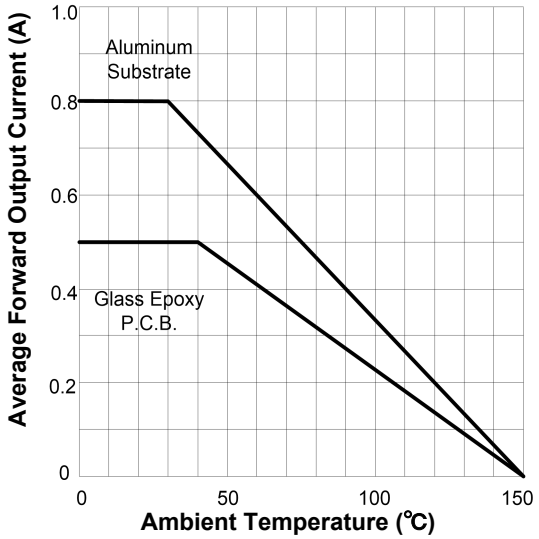


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT Per Diode

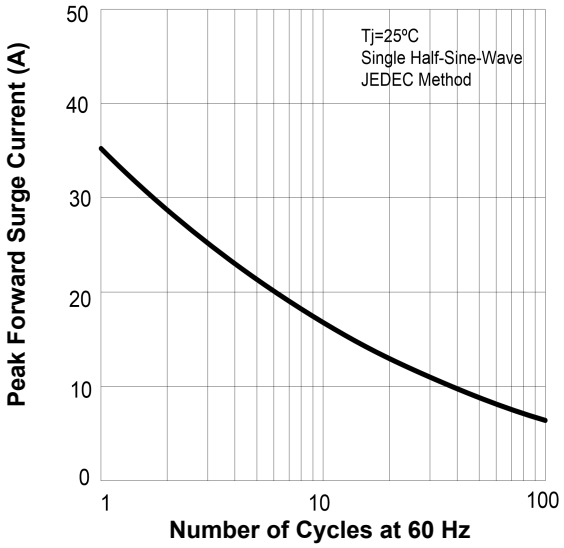


FIG. 3- TYPICAL FORWARD VOLTAGE

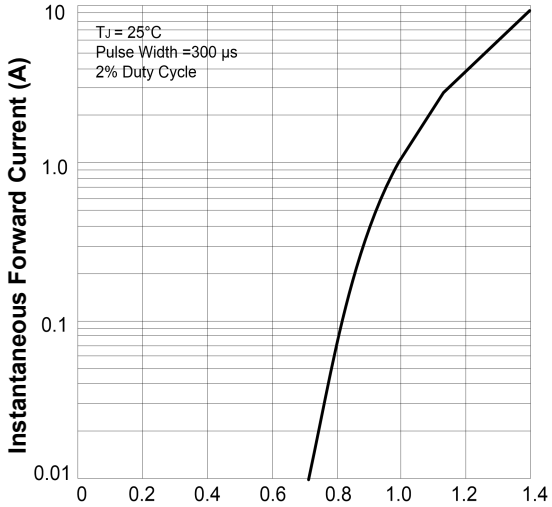
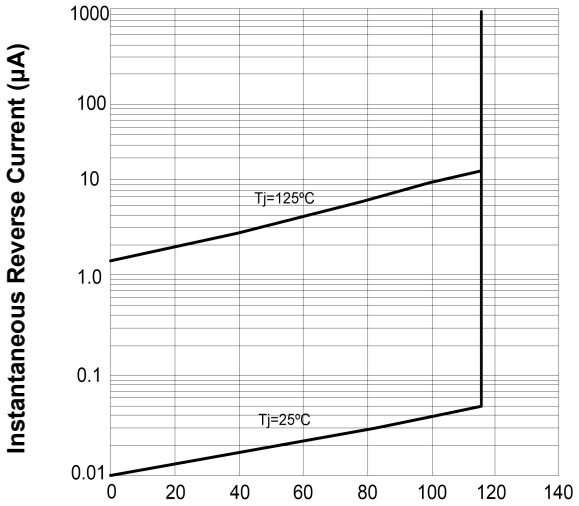
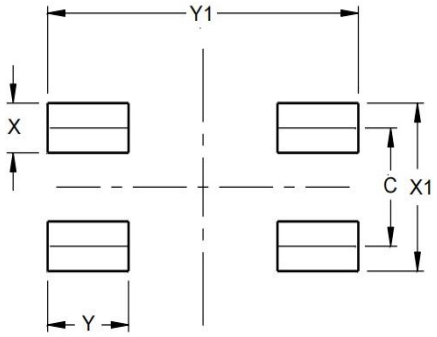


FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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

Legel Disclaimer Notice