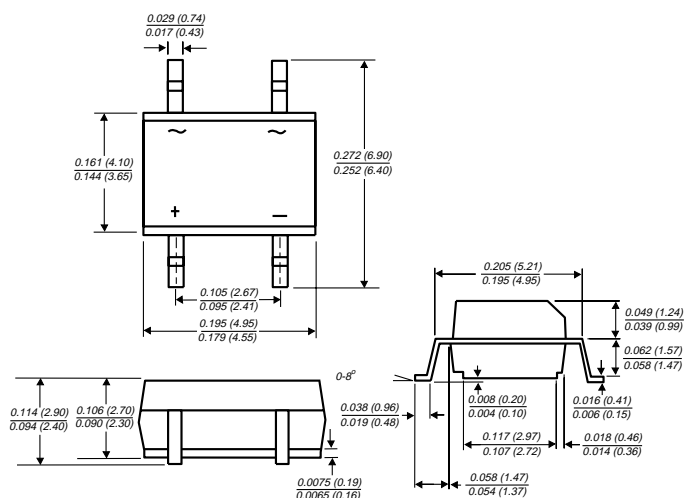


# MB2S THRU MB6S

## MINIATURE GLASS PASSIVATED SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER

**Reverse Voltage - 200 to 600 Volts    Forward Current - 0.5 Ampere**

### TO-269AA



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ This series is UL recognized under Component Index, file number E54214
- ◆ Glass passivated chip junctions
- ◆ High surge overload rating: 35A peak
- ◆ Saves space on printed circuit boards
- ◆ High temperature soldering guaranteed:  
260°C/10 seconds at 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** Molded plastic body over passivated junctions

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Polarity:** Polarity symbols marked on body

**Mounting Position:** Any

**Weight:** 0.0078 ounce, 0.22 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

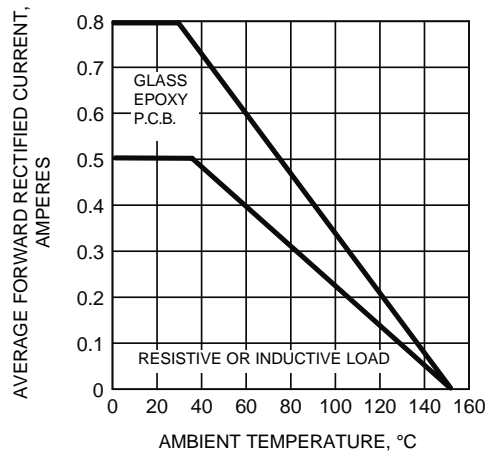
	SYMBOLS	MB2S	MB4S	MB6S	UNITS
Device marking code		2	4	6	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	400	600	Volts
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	Volts
Maximum average forward output rectified current at T <sub>A</sub> =30°C - on glass-epoxy P.C.B. (NOTE 1) - on aluminum substrate (NOTE 2)	I <sub>(AV)</sub>	0.5 0.8			Amp
Peak forward surge current 8.3msec single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	35.0			Amps
Rating for fusing (t<8.3ms)	I <sup>2</sup> t	5.0			A <sup>2</sup> sec
Maximum instantaneous forward voltage drop per leg at 0.4A	V <sub>F</sub>	1.0			Volts
Maximum DC reverse current at rated DC blocking voltage per leg T <sub>A</sub> =25°C T <sub>A</sub> =125°C	I <sub>R</sub>	5.0 100			μA
Typical junction capacitance per leg (NOTE 3)	C <sub>J</sub>	13.0			pF
Typical thermal resistance per leg (NOTE 1) (NOTE 2) (NOTE 1)	R <sub>θJA</sub> R <sub>θJA</sub> R <sub>θJL</sub>	85.0 70.0 20.0			°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150			°C

#### NOTES:

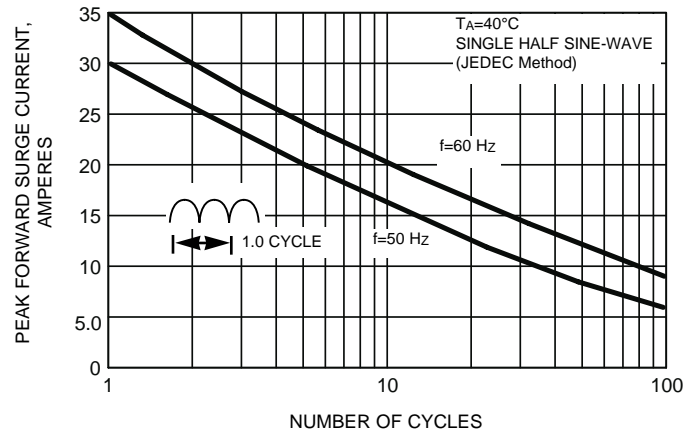
- (1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
- (2) On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

# RATINGS AND CHARACTERISTIC CURVES MB2S THRU MB6S

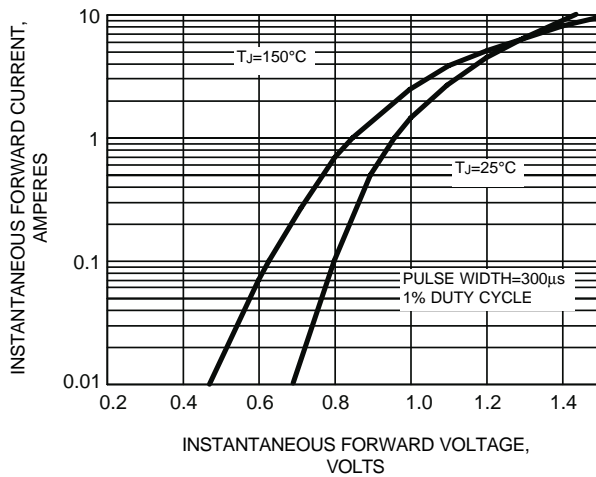
**FIG. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



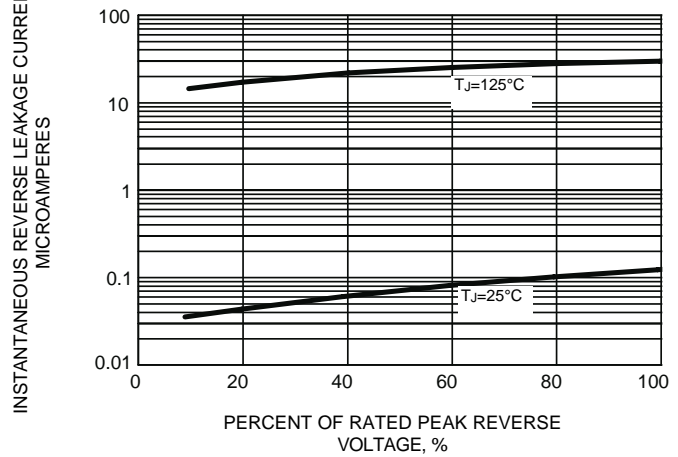
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



**FIG. 3 - TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG**



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



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG**

