

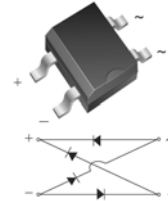


# MB2S thru MB12S

Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers  
Reverse Voltage 200 to 1200 Volts Forward Current 0.5 Ampere

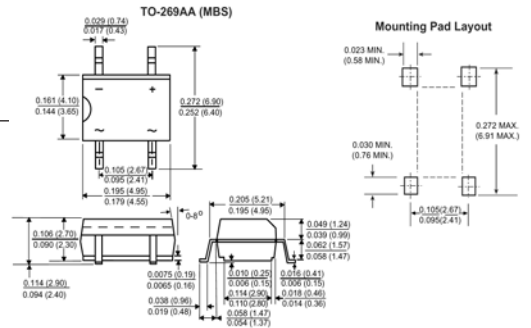
## Features

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junctions
- ◆ High surge overload rating: 35A peak
- ◆ Saves space on printed circuit boards
- ◆ High temperature soldering guaranteed: 260°C/10 seconds.



## Mechanical Data

- ◆ Case: Molded plastic body over passivated junctions
- ◆ Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- ◆ Mounting Position: Any
- ◆ Weight: 0.078 oz., 0.22 g



Package outline dimensions in inches (millimeters)

## Maximum Ratings and Electrical Characteristics

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbols	MB2S	MB4S	MB6S	MB8S	MB10S	MB12S	Units	
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	800	1000	1200	Volts	
Maximum RMS voltage	$V_{RMS}$	140	280	420	560	700	840	Volts	
Maximum DC blocking voltage	$V_{DC}$	200	400	600	800	1000	1200	Volts	
Maximum average forward output rectified current (see Fig.1) on glass-epoxy P.C.B. on aluminum substrate	$I_{F(AV)}$	0.5 <sup>(1)</sup> 0.8 <sup>(2)</sup>							Amp
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	35.0							Amps
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	5.0							A <sup>2</sup> sec
Maximum instantaneous forward voltage drop per leg at 0.4A	$V_F$	1.0							Volt
Maximum DC reverse current at rated DC blocking voltage per leg $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	$I_R$	5.0 100							$\mu\text{A}$
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JA}$ $R_{\theta JL}$	85 <sup>(1)</sup> 70 <sup>(2)</sup> 20 <sup>(1)</sup>							$^\circ\text{C/W}$
Typical junction capacitance per leg at 4.0V, 1.0MHz	$C_J$	13							pF
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

- 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

# RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

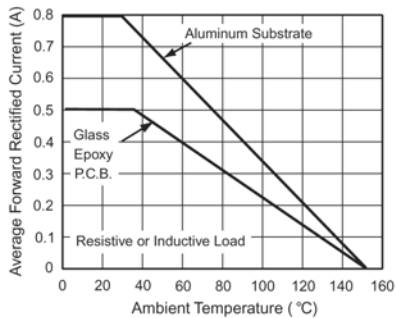


Figure 1. Derating Curve for Output Rectified Current

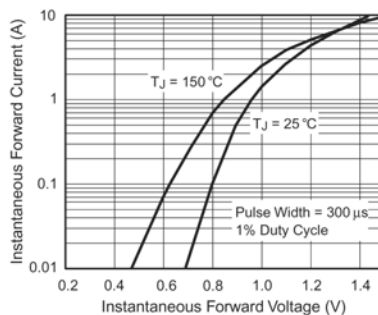


Figure 3. Typical Forward Voltage Characteristics Per Leg

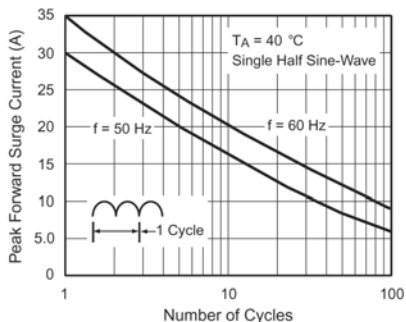


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

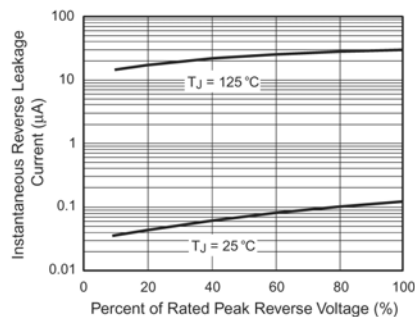


Figure 4. Typical Reverse Leakage Characteristics Per Leg

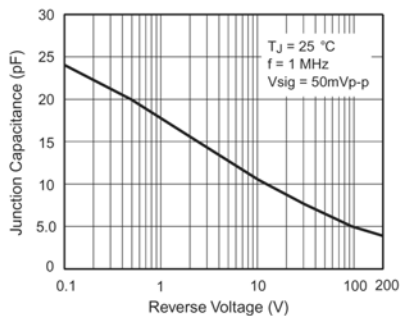


Figure 5. Typical Junction Capacitance Per Leg