



# THE DATASHEET OF MB12S



# MB12S thru MB110S

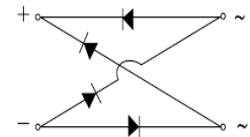
Surface Mount Schottky Bridge Rectifiers  
 Reverse Voltage 20V to 100V Forward Current 1A

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junctions
- High surge overload rating: 30A peak
- Space saving
- High temperature soldering guaranteed: 260°C/10 seconds



Package: TO-269AA (MBS)



Schematic Diagram

## Mechanical Data

- Case: Molded plastic body over passivated junctions
- Terminals: plated leads solderable per MIL-STD-750 Method 2026
- Mounting Position: Any

## Maximum Ratings & Electrical Characteristics

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

Parameter	Symbol	MB12S	MB14S	MB16S	MB18S	MB110S	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	80	100	V
Maximum RMS Voltage	$V_{RMS}$	14	28	42	56	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	80	100	V
Maximum Average Forward Output Current	$I_{F(AV)}$	1					A
Peak Forward Surge Current 8.3 MS Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30					A
Rating for Fusing ( $t \leq 8.3\text{ms}$ )	$I^2t$	3.75					A <sup>2</sup> s
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	0.5		0.7		0.85	V
Maximum DC Reverse Current at Rated DC Blocking Voltage per Leg	$I_R$	0.5					mA
		20					
Typical Junction Capacitance per at 4.0 V, 1.0 MHz	$C_J$	13					pF
Typical Thermal Resistance per Leg (Note1)	$R_{\theta JA}$	88					°C/W
	$R_{\theta JL}$	28					
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150					°C

**Notes:** 1. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2×0.2"(5.0×5.0mm) copper pad areas.

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## Ratings and Characteristics Curves

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

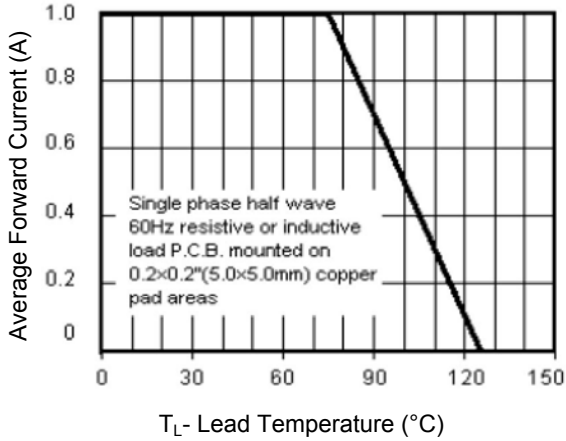


Figure 1. Forward Current Derating Curve

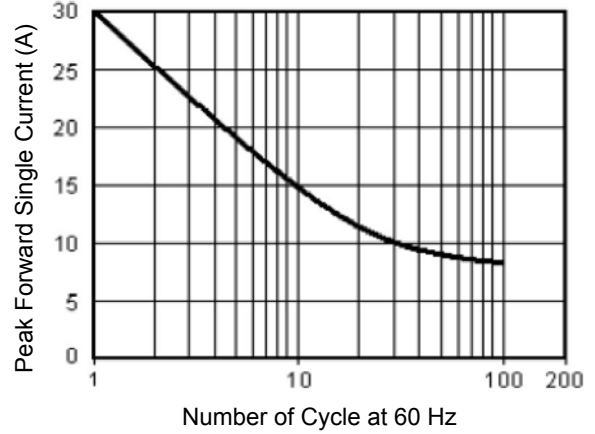


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

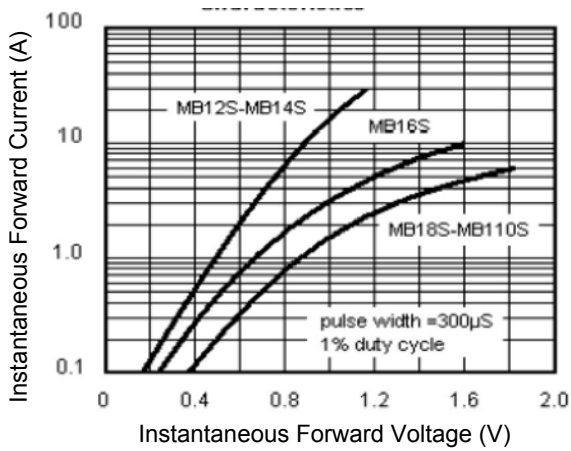


Figure 3. Typical Instantaneous Forward Characteristics

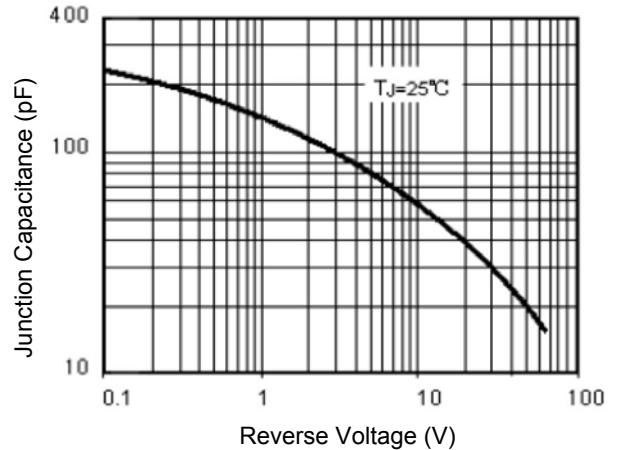


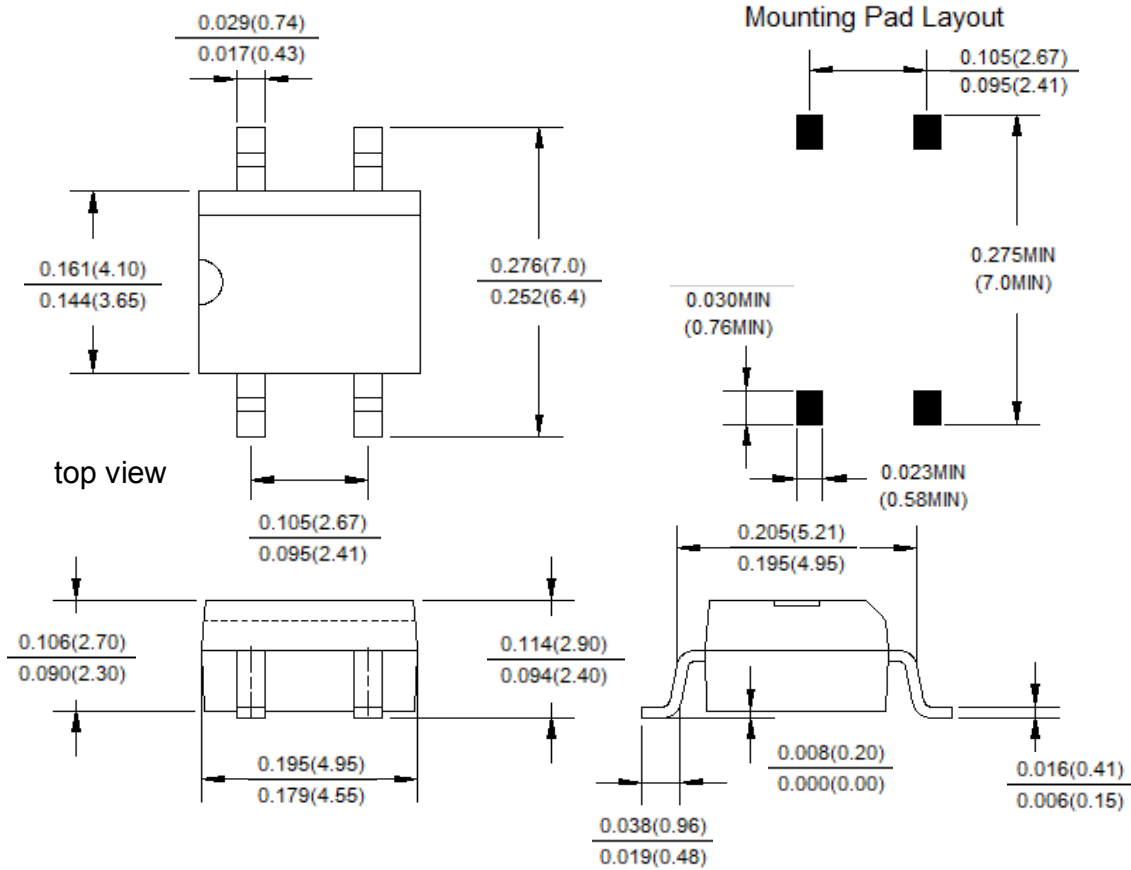
Figure 4. Typical Junction Capacitance

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## Package Outline Dimensions TO-269AA (MBS)

Unit: inches (mm)



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