

# MB1S-MB10S

PRV : 100 - 1000 Volts

Io : 0.8 Ampere

### Features

- Glass passivated chip junctions.
- High surge overload rating : 35A peak
- Saves space on printed circuit boards.
- High temperature soldering guaranteed: 260 °C/10 seconds.
- RoHS compliant package

### Mechanical Characteristics

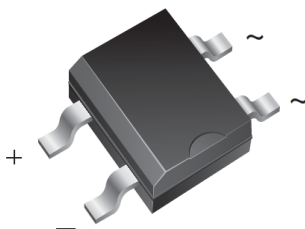
- Case : Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Terminals : Plated Lead solderable per

MIL-STD-750,Method 2026

- Polarity : Polarity symbols marked on body
- Mounting position : Any
- Weight : 0.22 gram

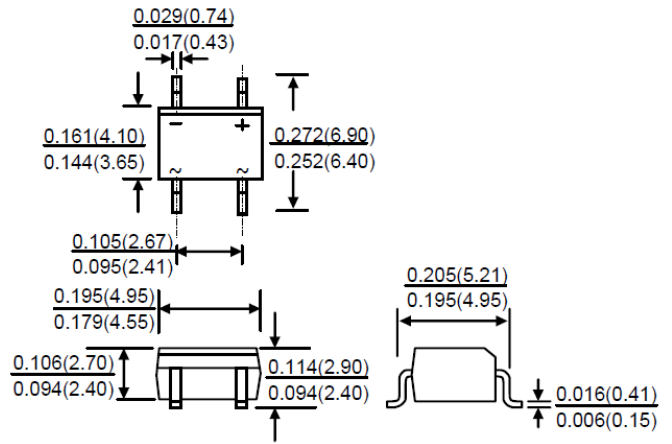
### Packing & Order Information

50/Tube ; 1,000/Box

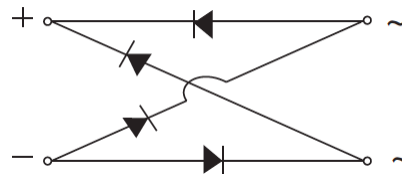


**RoHS**  
COMPLIANT

### MBS (TO-269AA)



Dimensions in inches and ( millimeters )  
Graphic symbol



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

60 Hz, resistive or inductive load.

Rating	Symbol	MB01S	MB02S	MB04S	MB06S	MB08S	MB10S	Unit
Maximum recurrent peak reverse voltage	VRRM	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	100	200	400	600	800	1000	V
Maximum Average Forward Output Rectified Current (See Fig.1)	IF(AV)	0.5 (1) (on glass-epoxy P.C.B.) 0.8 (2) (on aliminum substrate)						A
Maximum Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	IFSM	35						A

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Rating	Symbol	MB01S	MB02S	MB04S	MB06S	MB08S	MB10S	Unit
Current Squared Time at $t < 8.3$ ms.	$I^2t$			5.0				A <sup>2</sup> S
Maximum Instantaneous Forward Voltage per element at $I_F = 0.4$ A	V <sub>F</sub>			1.0				V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I <sub>R</sub>			5.0				μA
	I <sub>R(H)</sub>			100				μA
Typical Junction Capacitance per element	C <sub>j</sub>			13 <sup>(3)</sup>				pF
Typical Thermal Resistance	R <sub>θJA</sub>			85 <sup>(1)</sup>				°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>			-55 to +150				°C

### Notes :

(1) On glass epoxy P.C Board mounted on 0.5" x 0.5" (13mm x 13mm) Pads.

(2) On aluminum substrate P.C.B. with an area 0.8" x 0.8" (20mm x 20mm) mounted on 0.5" x 0.5" (13mm x 13mm) Pads.

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0VDC

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### ■ RATING AND CHARACTERISTIC CURVES ( MB1S - MB10S )

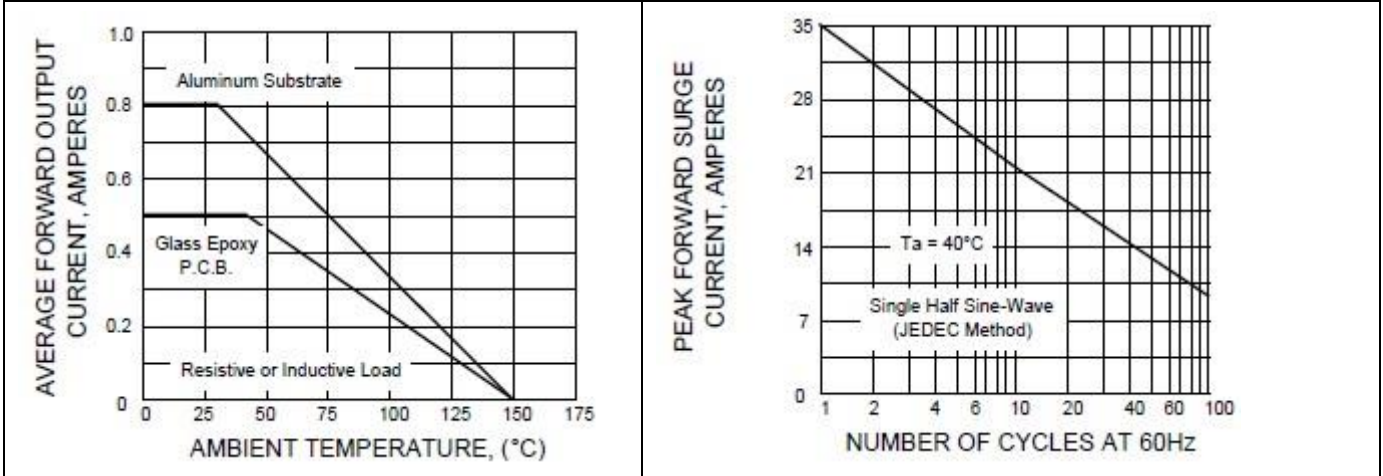


Figure 1. DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

Figure 2. MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER BRIDGE ELEMENT

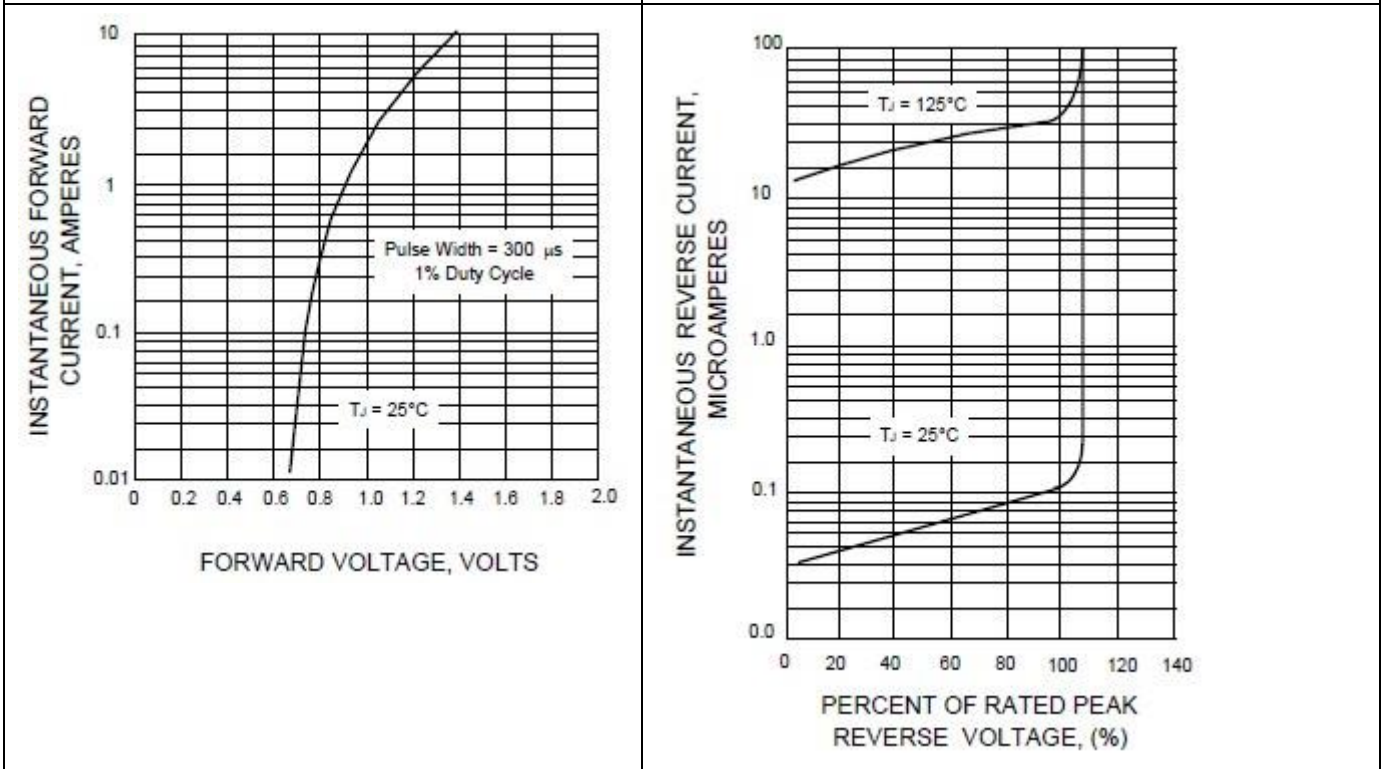


Figure 3. TYPICAL FORWARD CHARACTERISTICS

Figure 4. TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

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