



# MB1S THRU MB10S

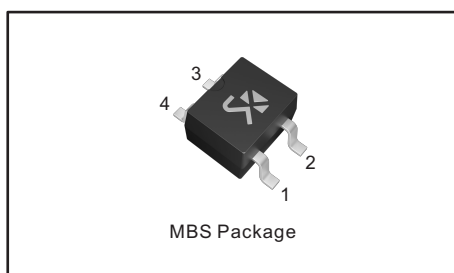
## 0.8A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

### FEATURES:

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 0.8 A
- High Surge Current Capability
- Designed for Surface Mount Application

### PINNING

| PIN | DESCRIPTION          |
|-----|----------------------|
| 1   | Input Pin ( ~ )      |
| 2   | Input Pin ( ~ )      |
| 3   | Output Anode ( + )   |
| 4   | Output Cathode ( - ) |



### MECHANICAL DATA

- Case: MBS
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 100mg /0.0035oz

### Maximum Ratings and Electrical characteristics

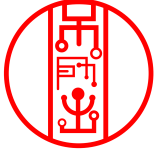
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                                   | Symbols                            | MB1S       | MB2S | MB4S | MB6S | MB8S | MB10S | Units        |
|-------------------------------------------------------------------------------------------------------------|------------------------------------|------------|------|------|------|------|-------|--------------|
| Maximum Repetitive Peak Reverse Voltage                                                                     | $V_{RRM}$                          | 100        | 200  | 400  | 600  | 800  | 1000  | V            |
| Maximum RMS voltage                                                                                         | $V_{RMS}$                          | 70         | 140  | 280  | 420  | 560  | 700   | V            |
| Maximum DC Blocking Voltage                                                                                 | $V_{DC}$                           | 100        | 200  | 400  | 600  | 800  | 1000  | V            |
| Average Rectified Output Current<br>at $T_c = 125^\circ C$                                                  | $I_O$                              | 0.8        |      |      |      |      |       | A            |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine Wave Superimposed on Rated Load<br>(JEDEC Method)     | $I_{FSM}$                          | 30         |      |      |      |      |       | A            |
| Maximum Forward Voltage<br>at 0.4 A<br>at 0.8 A                                                             | $V_F$                              | 1.0<br>1.1 |      |      |      |      |       | V            |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage<br>@ $T_A = 25^\circ C$<br>@ $T_A = 125^\circ C$ | $I_R$                              | 5<br>40    |      |      |      |      |       | $\mu A$      |
| Typical Junction Capacitance ( Note1 )                                                                      | $C_j$                              | 13         |      |      |      |      |       | pF           |
| Typical Thermal Resistance ( Note2 )                                                                        | $R_{\theta JA}$<br>$R_{\theta JC}$ | 90<br>32   |      |      |      |      |       | $^\circ C/W$ |
| Operating and Storage Temperature Range                                                                     | $T_j, T_{stg}$                     | -55 ~ +150 |      |      |      |      |       | $^\circ C$   |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" ( 3.81×3.81 cm ) copper pad.



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**Fig.1 Average Rectified Output Current Derating Curve**

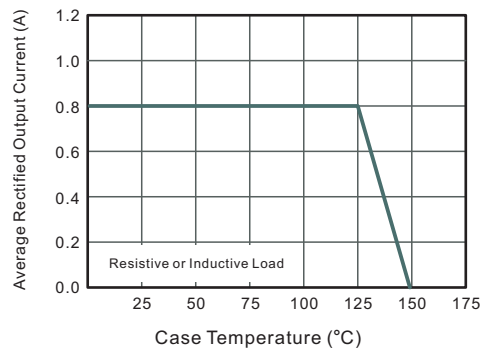


**Fig.2 Typical Reverse Characteristics**

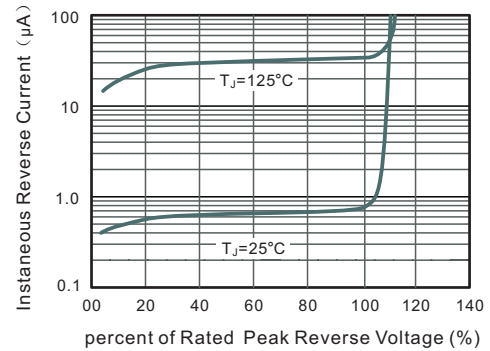


**Fig.3 Typical Instantaneous Forward Characteristics**

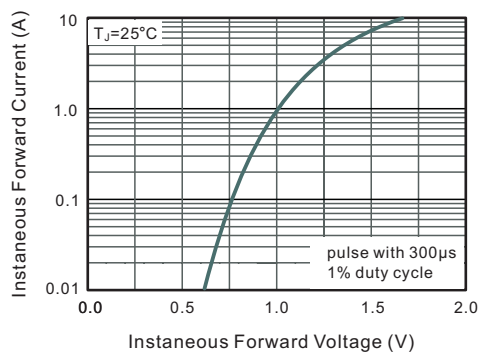


**Fig.4 Typical Junction Capacitance**

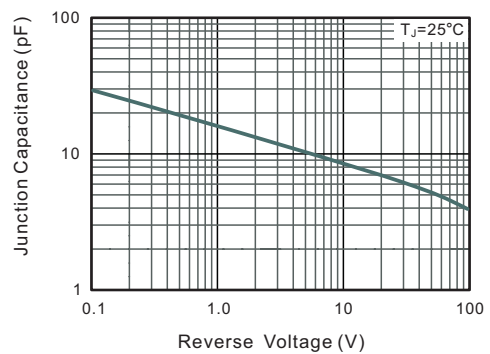
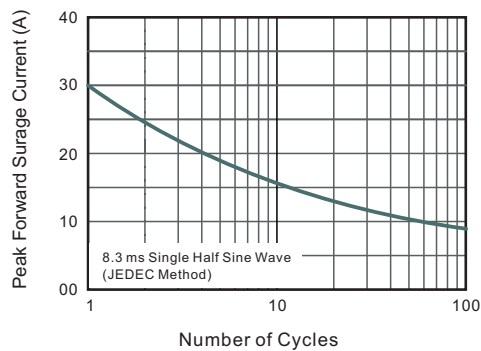
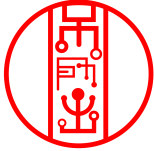


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



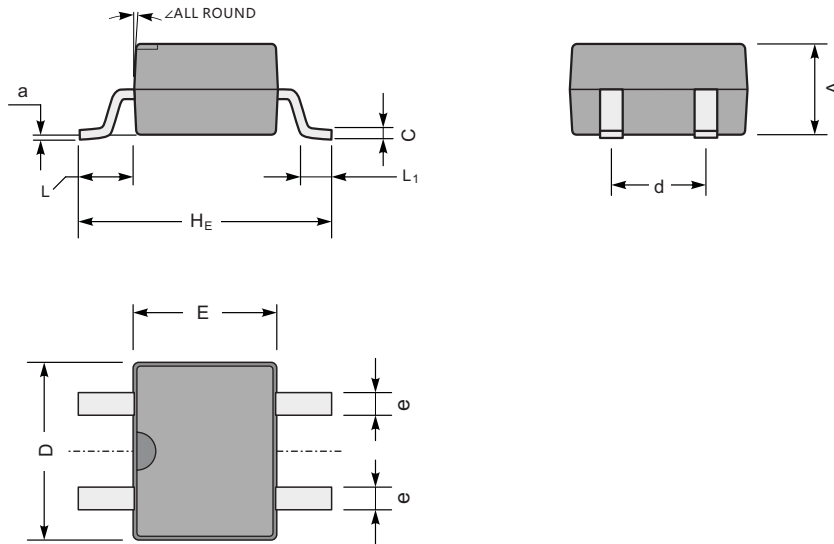


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## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

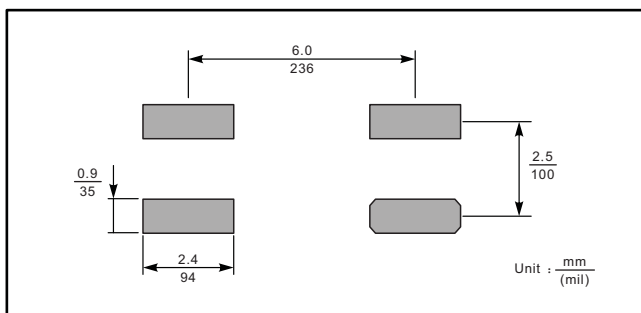
MBS



MBS mechanical data

| UNIT |     | A   | C    | D   | E   | H <sub>E</sub> | d   | e   | L   | L <sub>1</sub> | a   | ∠  |
|------|-----|-----|------|-----|-----|----------------|-----|-----|-----|----------------|-----|----|
| mm   | max | 2.6 | 0.22 | 5.0 | 4.1 | 7.0            | 2.7 | 0.7 | 1.7 | 1.1            | 0.2 | 7° |
|      | min | 2.2 | 0.15 | 4.5 | 3.6 | 6.4            | 2.3 | 0.5 | 1.3 | 0.5            | —   |    |
| mil  | max | 102 | 8.7  | 197 | 161 | 276            | 106 | 28  | 67  | 43             | 8   |    |
|      | min | 94  | 5.9  | 177 | 142 | 252            | 91  | 20  | 51  | 20             | —   |    |

## The recommended mounting pad size



## Marking

| Type number | Marking code |
|-------------|--------------|
| MB1S        | MB1S         |
| MB2S        | MB2S         |
| MB4S        | MB4S         |
| MB6S        | MB6S         |
| MB8S        | MB8S         |
| MB10S       | MB10S        |