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## MSB40A THRU MBS40M

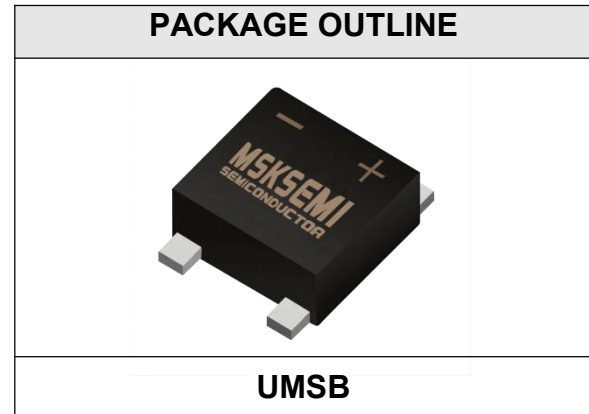
Product specification

**FEATURES**

- Glass Passivated Chip Junction
- Reverse Voltage - 50 to 1000 V
- Forward Current - 4.0 A
- High Surge Current Capability
- Designed for Surface Mount Application

**MECHANICAL DATA**

- Case: UMSB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.234g / 0.00825oz



**Maximum Ratings and Electrical characteristics**

Rating 25°C ambient temperature unless otherwise specified.

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER   | MSB40A     | MSB40B | MSB40D | MSB40G | MSB40J | MSB40K | MSB40M | UNIT             |
|---|------------|--------|--------|--------|--------|--------|--------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | 50         | 100    | 200    | 400    | 600    | 800    | 1000   | V                |
| Maximum RMS Voltage   | 35         | 70     | 140    | 280    | 420    | 560    | 700    | V                |
| Maximum DC Blocking Voltage   | 50         | 100    | 200    | 400    | 600    | 800    | 1000   | V                |
| Maximum Average Forward Rectified Current<br>at Ta=40°C (Note 1)                                      | 4.0        |        |        |        |        |        |        | A                |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 9.5        |        |        |        |        |        |        | A                |
| I <sup>2</sup> t Rating for Fusing (1ms < t < 8.3ms)  | 60         |        |        |        |        |        |        | A <sup>2</sup> S |
| Maximum Forward Voltage Drop per Bridge Element at 4.0A   | 1.1        |        |        |        |        |        |        | V                |
| Maximum DC Reverse Current Ta=25°C  | 5.0        |        |        |        |        |        |        | µA               |
| at Rated DC Blocking Voltage Ta=125°C   | 200        |        |        |        |        |        |        | µA               |
| Typical Thermal Resistance R <sub>JA</sub> (Note 2)   | 50         |        |        |        |        |        |        | °C/W             |
| Operating Temperature Range, T <sub>J</sub>   | -55 — +150 |        |        |        |        |        |        | °C               |
| Storage Temperature Range, T <sub>STG</sub>   | -55 — +150 |        |        |        |        |        |        | °C               |

NOTES: 1. Mounted on P.C. Board.

2. Thermal Resistance Junction to Ambient.

**RATING AND CHARACTERISTIC CURVES (MSB40A THRU MBS40M)**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

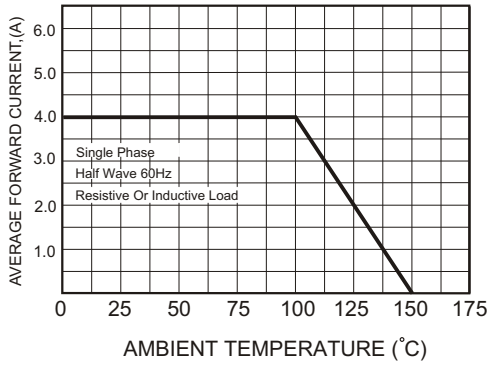


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

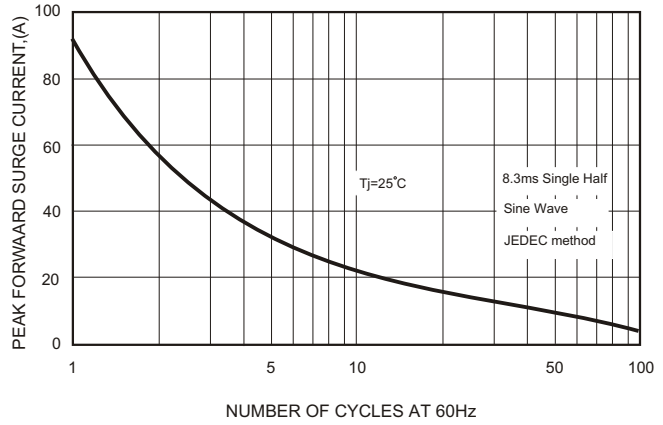


FIG.3-TYPICAL FORWARD CHARACTERISTICS

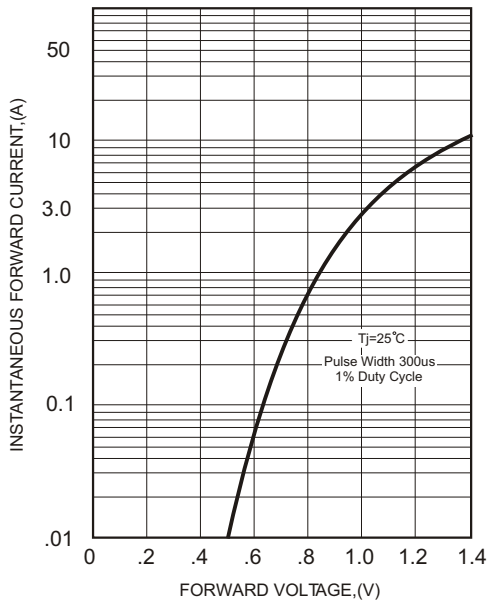
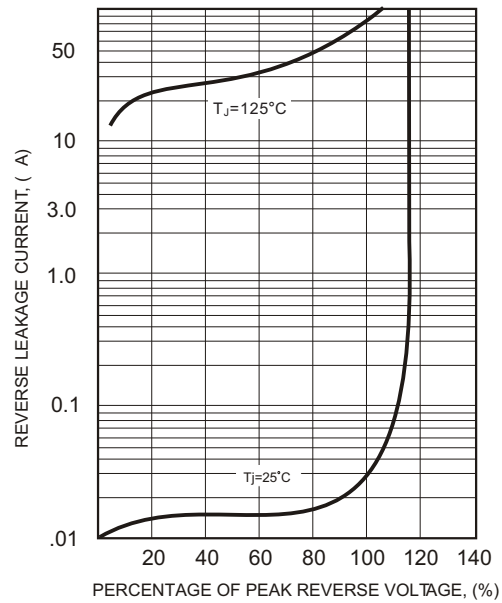
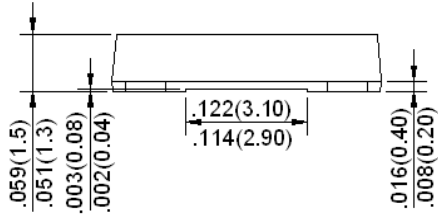
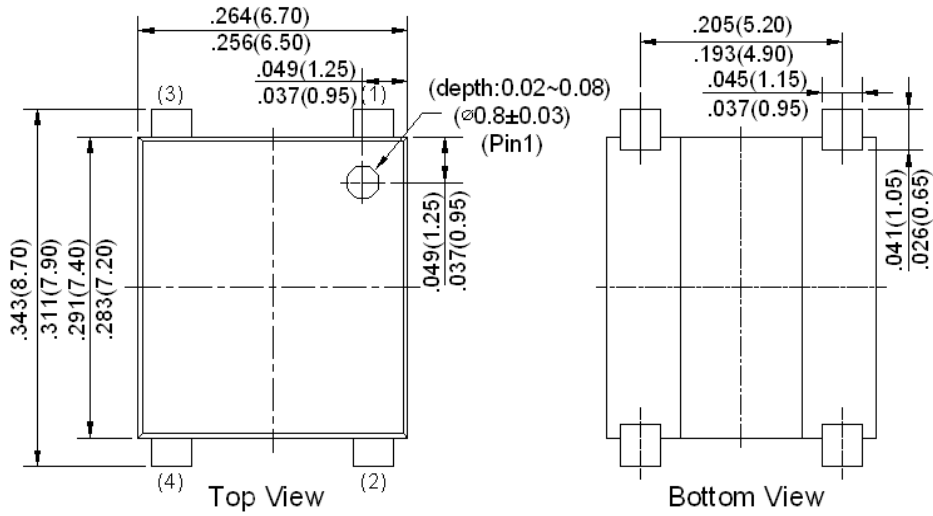


FIG.4-TYPICAL REVERSE CHARACTERISTICS

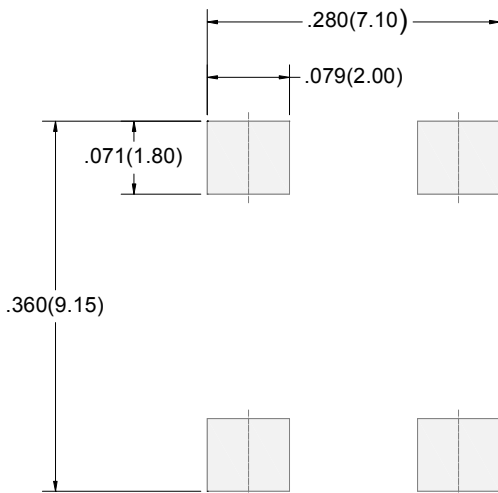


**UMSB Package Outline Dimensions**



Dimensions in inches and (millimeters)

**UMSB Suggested Pad Layout**



- Note:**
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05$ mm.
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

| P/N                | PKG  | QTY  |
|--------------------|------|------|
| MSB40A THRU MBS40M | UMSB | 3000 |

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