

## 1A Surface Mount Glass Passivated Bridge Rectifier

### Features

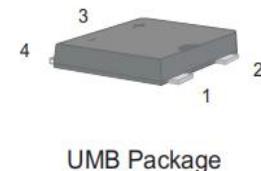
- Glass Passivated Chip Junction
- Reverse Voltage -100 to 1000V
- Average Rectified Output Current -1A
- High Surge Current Capability
- Designed for Surface Mount Application

### Marking

| Type number | Marking code |
|-------------|--------------|
| LUM1B       | UM1B         |
| LUM2B       | UM2B         |
| LUM4B       | UM4B         |
| LUM6B       | UM6B         |
| LUM8B       | UM8B         |
| LUM10B      | 10U10        |

### PINNING

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



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

| Parameter   | Symbol                            | LUM<br>1B              | LUM<br>2B | LUM<br>4B | LUM<br>6B | LUM<br>8B | LUM<br>10B | Units            |
|---|-----------------------------------|------------------------|-----------|-----------|-----------|-----------|------------|------------------|
| Maximum Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>                  | 100                    | 200       | 400       | 600       | 800       | 1000       | V                |
| Maximum RMS Voltage   | V <sub>RMS</sub>                  | 70                     | 140       | 280       | 420       | 560       | 700        | V                |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                   | 100                    | 200       | 400       | 600       | 800       | 1000       | V                |
| Average Rectified Output Current@Fig.1  | I <sub>O</sub>                    |                        |           | 1.0       |           |           |            | A                |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimpose on Rated Load(JEDEC Method) | I <sub>FSM</sub>                  |                        |           | 35        |           |           |            | A                |
| Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimpose on Rated Load(JEDEC Method) | I <sub>FSM</sub>                  |                        |           | 70        |           |           |            | A                |
| I <sup>2</sup> t Rating for fusing(3ms≤t≤8.3ms)   | I <sup>2</sup> t                  |                        |           | 5.1       |           |           |            | A <sup>2</sup> S |
| Maximum Forward Voltage at 1A   | V <sub>F</sub>                    |                        |           | 1.1       |           |           |            | V                |
| Maximum DC Reverse Current  | I <sub>R</sub>                    | T <sub>A</sub> = 25°C  |           | 5         |           |           |            | µA               |
| at Rated DC Blocking Voltage  |                                   | T <sub>A</sub> = 125°C |           | 100       |           |           |            | µA               |
| Typical Junction Capacitance <sup>(1)</sup>   | C <sub>J</sub>                    |                        |           | 7         |           |           |            | pF               |
| Typical Thermal Resistance <sup>(2)</sup>   | R <sub>θJA</sub>                  |                        |           | 40        |           |           |            | °C/W             |
|   | R <sub>θJC</sub>                  |                        |           | 15        |           |           |            |                  |
|   | R <sub>θJL</sub>                  |                        |           | 25        |           |           |            |                  |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub> |                        |           | -55~+150  |           |           |            | °C               |

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

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

## Typical Characteristics

Fig.1 Average Rectified Output Current Derating Curve

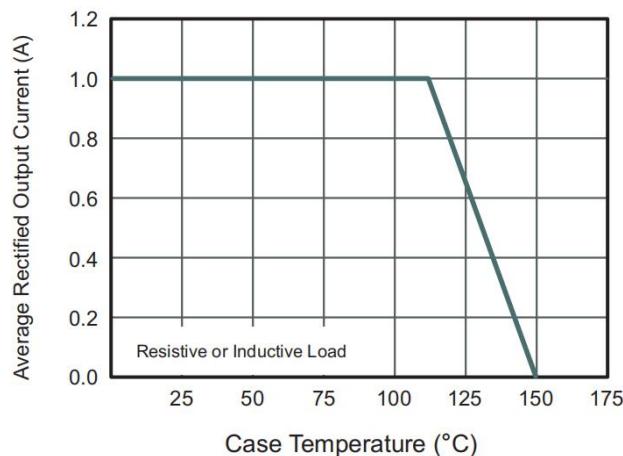


Fig.3 Typical Forward Characteristic

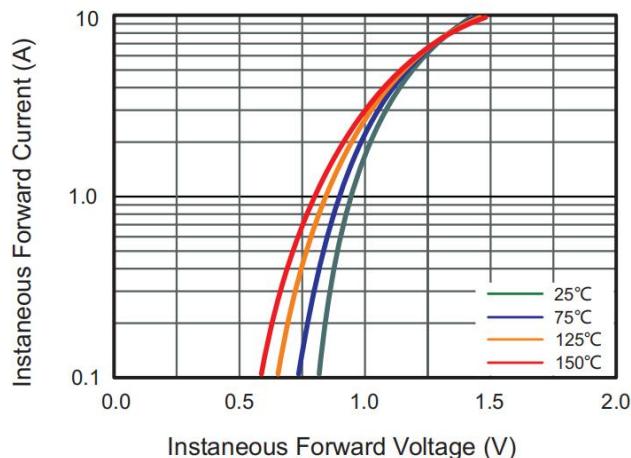


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

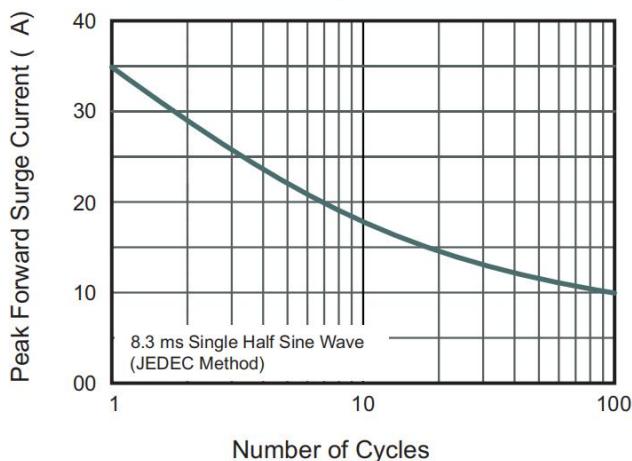


Fig.2 Typical Instantaneous Reverse Characteristics

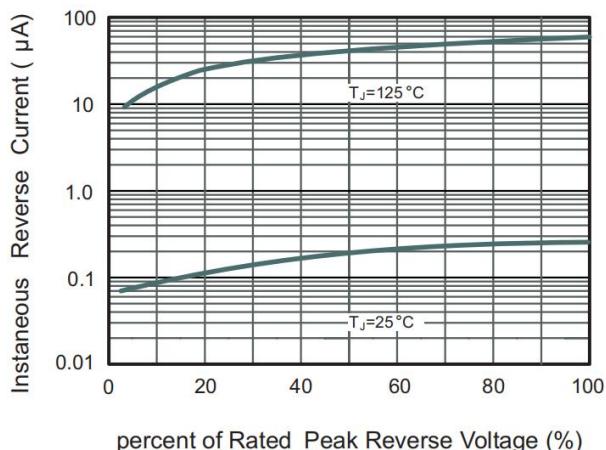
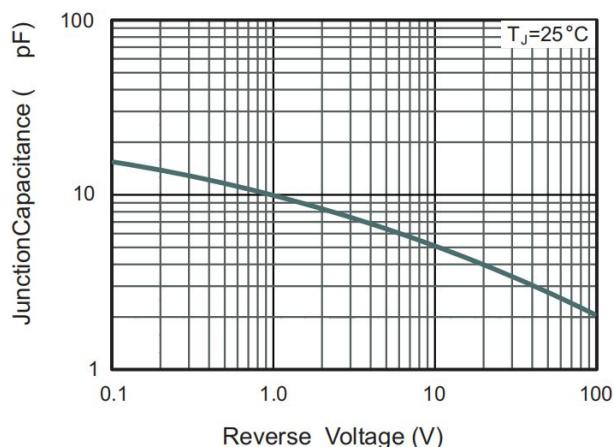


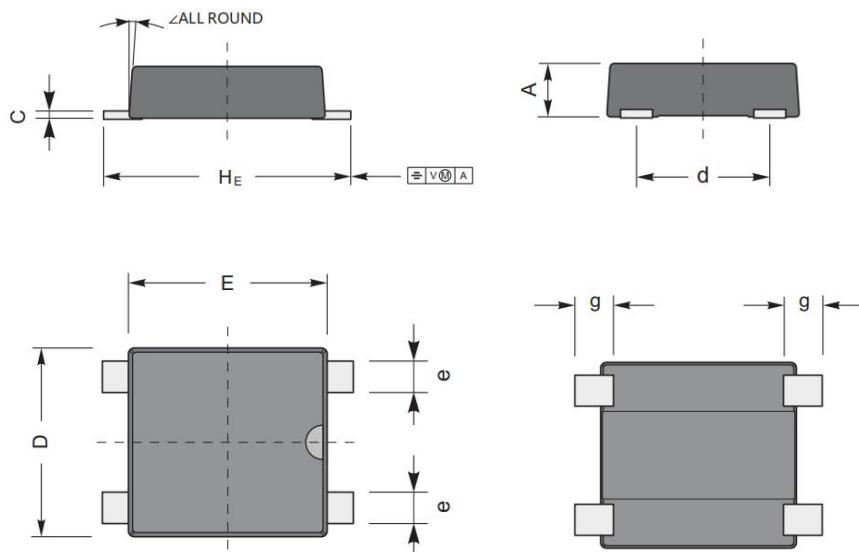
Fig.4 Typical Junction Capacitance



## Package Information

### UMB

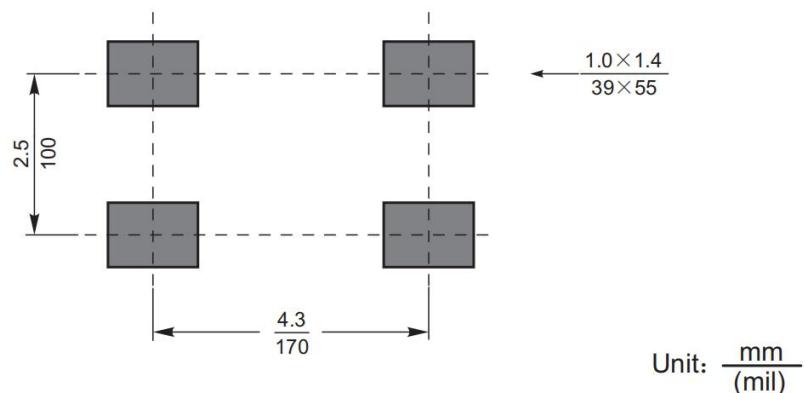
#### Dimensions in mm



UMB mechanical data

| UNIT |     | A   | C    | D   | E   | H <sub>E</sub> | g    | d   | e    | ∠  |
|------|-----|-----|------|-----|-----|----------------|------|-----|------|----|
| mm   | max | 1.2 | 0.20 | 3.8 | 4.0 | 5.1            | 0.82 | 2.7 | 0.70 | 7° |
|      | min | 1.0 | 0.12 | 3.4 | 3.6 | 4.6            | 0.51 | 2.3 | 0.51 |    |
| mil  | max | 47  | 7.9  | 150 | 157 | 201            | 32   | 106 | 28   | 7° |
|      | min | 39  | 4.7  | 134 | 142 | 181            | 20   | 91  | 20   |    |

#### The recommended mounting pad size



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