

## Silicon Bridge Rectifiers

## GBL6J - GBL6M

### Features

- Glass passivated junction
- High forward surge current capability
- Fast reverse recovery time for high efficiency
- High-temp soldering guaranteed: 260°C @ 10s.
- RoHS compliant with Halogen-free



### Mechanical Data

- Case: GBL molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Leads solderable per MIL-STD-750

### Maximum Ratings (@T<sub>A</sub> = 25°C unless otherwise specified)

| Parameter                                               | Symbol                                     | GBL6J | GBL6K | GBL6M | Unit             |
|---------------------------------------------------------|--------------------------------------------|-------|-------|-------|------------------|
| Peak Repetitive Reverse Voltage                         | V <sub>RRM</sub>                           | 600   | 800   | 1000  | V                |
| RMS Reverse Voltage                                     | V <sub>RMS</sub>                           | 420   | 560   | 700   | V                |
| DC Blocking Voltage                                     | V <sub>DC</sub>                            | 600   | 800   | 1000  | V                |
| Average Forward Output Current                          | I <sub>F(AV)</sub>                         | 6.0   |       |       | A                |
| Peak Forward Surge Current, 8.3ms Single Half-Sine-Wave | @T <sub>J</sub> = 25°C<br>I <sub>FSM</sub> | 175   |       |       | A                |
| I <sup>2</sup> t Rating for Fusing                      | @T <sub>J</sub> = 25°C<br>I <sup>2</sup> t | 127   |       |       | A <sup>2</sup> s |

### Thermal Characteristics

| Parameter                            | Symbol              | GBL6J      | GBL6K | GBL6M | Unit |
|--------------------------------------|---------------------|------------|-------|-------|------|
| Typical Thermal Resistance*1, *2     | R <sub>ΘJA</sub> *2 | 35         |       |       | °C/W |
|                                      | R <sub>ΘJC</sub> *1 | 4.2        |       |       |      |
| Operating Junction Temperature Range | T <sub>J</sub>      | -55 ~ +150 |       |       | °C   |
| Storage Temperature Range            | T <sub>STG</sub>    | -55 ~ +150 |       |       | °C   |

Note 1: Unit mounted on p.c.b. of 65mm x 50mm x 2.4mm with aluminum plate heat sink

Note 2: Unit mounted on p.c.b. without heat sink

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### Electrical Characteristics (@T<sub>A</sub> = 25°C unless otherwise specified)

| Parameter                     | Symbol         | Test Condition                  |                          | Typ. | Max. | Unit |
|-------------------------------|----------------|---------------------------------|--------------------------|------|------|------|
| Instantaneous Forward Voltage | V <sub>F</sub> | I <sub>F</sub> = 3.0A Per Diode |                          | -    | 1.0  | V    |
| Reverse Current               | I <sub>R</sub> | Rated<br>V <sub>R</sub>         | @ T <sub>A</sub> = 25°C  | -    | 5.0  | μA   |
|                               |                |                                 | @ T <sub>A</sub> = 125°C | -    | 300  |      |

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### Ratings and Characteristics Curves (@ $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

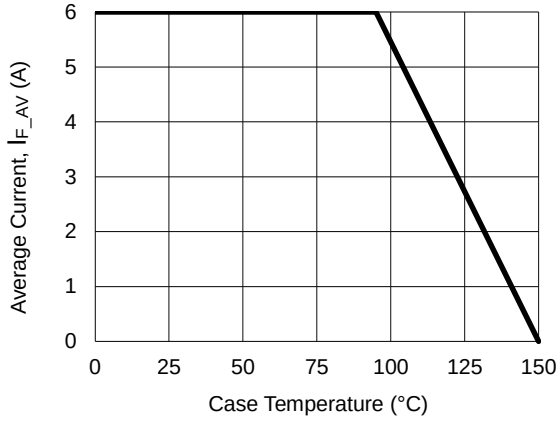


Fig.2 Surge Current Derating Curve

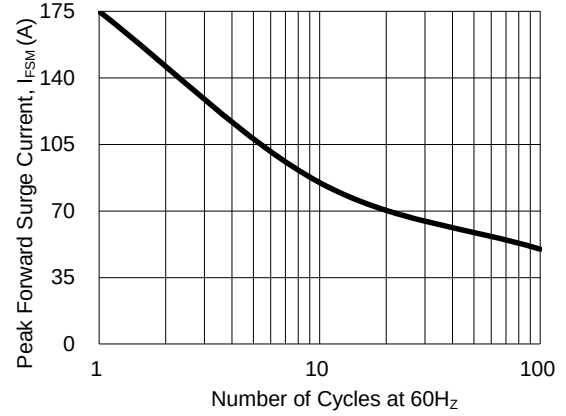


Fig.3 Typical Forward Voltage Characteristics

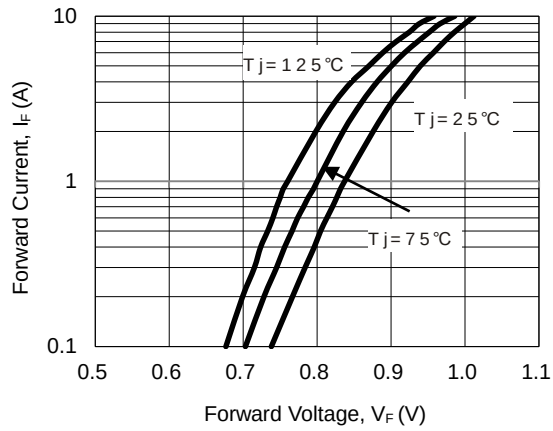
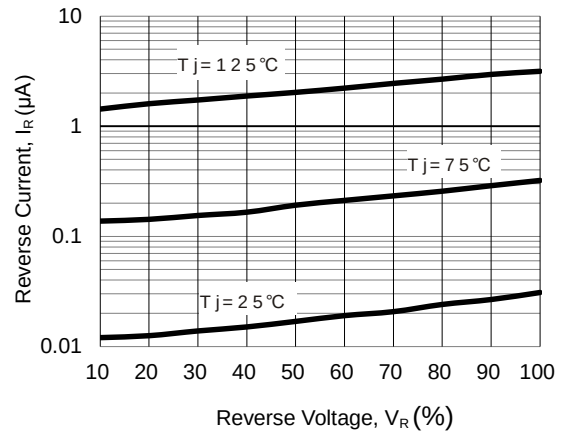


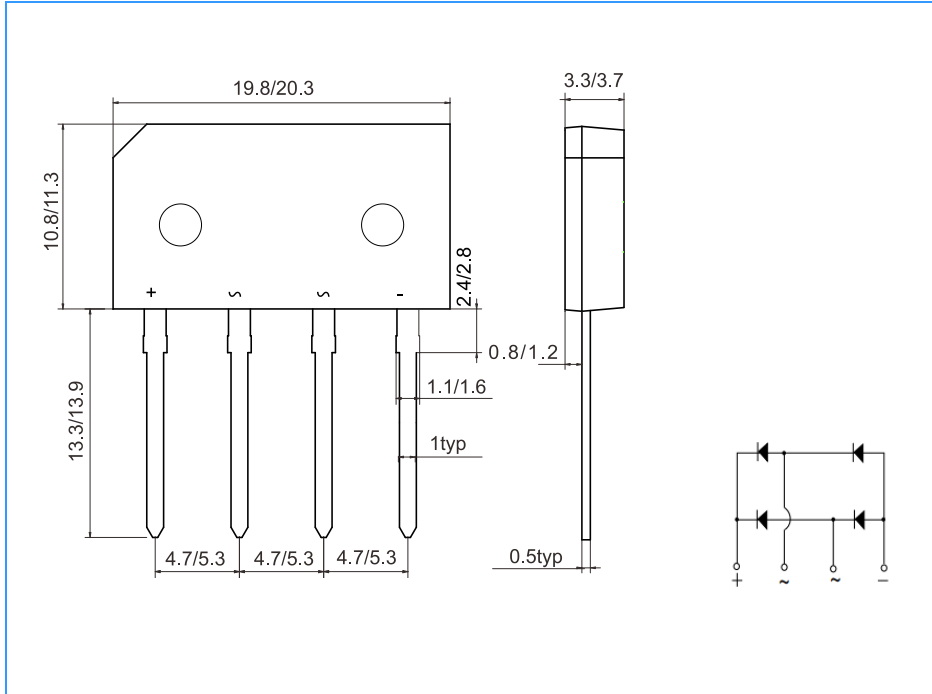
Fig.4 Typical Reverse Characteristics



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### Package Outline Dimensions (unit: mm)



### Ordering Information

| Part Number | Marking | Package |
|-------------|---------|---------|
| GBL6J       | GBL6J   | GBL     |
| GBL6K       | GBL6K   | GBL     |
| GBL6M       | GBL6M   | GBL     |