

## Glass passivated Single Phase Bridge Rectifiers

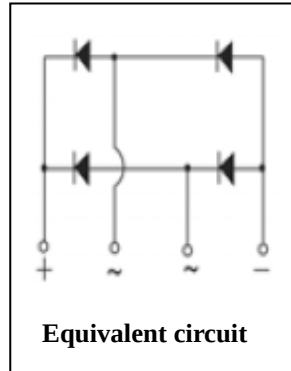
# GBL4AU thru GBL4MU

Reverse Voltage 50 to 1000V Forward Current 4 Amps



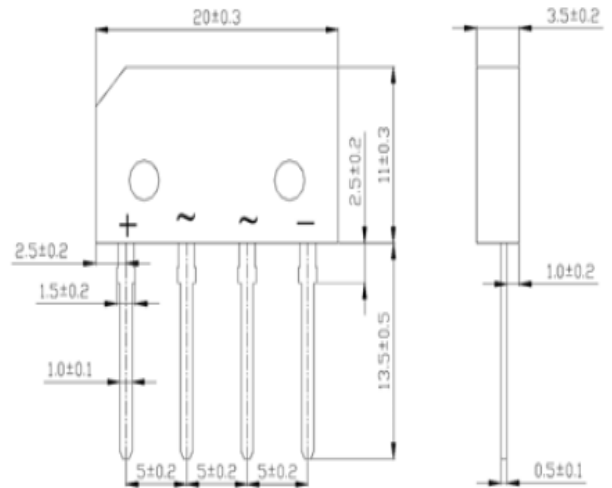
### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability
- High case dielectric strength
- Typical  $I_R$  less than  $0.1\mu A$
- UL recognized #E241476



### Mechanical Data

- Case: GBL Molded plastic body
- Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D
- High temperature soldering guaranteed :  
260°C/10 seconds, 0.375"(9.5mm) lead length, 5lbs(2.3kg) tension
- Mounting position: Any.
- Polarity : shown on front side of case, positive lead by beveled corner.
- Weight: 2.1gram, 0.074 oz.



Package outline dimensions in millimeters

### Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter                                                                                          | Symbol                | Type               |              |        |        |        |        |        | Units            |
|----------------------------------------------------------------------------------------------------|-----------------------|--------------------|--------------|--------|--------|--------|--------|--------|------------------|
|                                                                                                    |                       | GBL4AU             | GBL4BU       | GBL4DU | GBL4GU | GBL4JU | GBL4KU | GBL4MU |                  |
| Repetitive peak reverse voltage                                                                    | V <sub>RRM</sub>      | 50                 | 100          | 200    | 400    | 600    | 800    | 1000   | V                |
| Maximum RMS voltage                                                                                | V <sub>RMS</sub>      | 35                 | 70           | 140    | 280    | 420    | 560    | 700    | V                |
| Maximum DC blocking voltage                                                                        | V <sub>DC</sub>       | 50                 | 100          | 200    | 400    | 600    | 800    | 1000   | V                |
| Maximum instantaneous forward voltage drop per leg, I <sub>F</sub> =2A                             | V <sub>F</sub>        | 1                  |              |        |        |        |        |        | V                |
| Maximum average forward rectified output current at                                                | T <sub>C</sub> =50°C  | I <sub>F(AV)</sub> | 4.0 (Note 1) |        |        |        |        |        | A                |
|                                                                                                    | T <sub>A</sub> =40°C  |                    | 3.0 (Note 2) |        |        |        |        |        |                  |
| Peak forward surge current @ 8.3ms single half sine wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>      | 150                |              |        |        |        |        |        | A                |
| Rating for fusing (t<8.3ms)                                                                        | I <sup>2</sup> t      | 93                 |              |        |        |        |        |        | A <sup>2</sup> s |
| Maximum DC reverse current at rated DC blocking voltage per leg                                    | T <sub>A</sub> =25°C  | I <sub>R</sub>     | 10           |        |        |        |        |        | μA               |
|                                                                                                    | T <sub>A</sub> =150°C |                    | 500          |        |        |        |        |        |                  |
| Typical thermal resistance per leg                                                                 | R <sub>θJA</sub>      | 22 (Note 2)        |              |        |        |        |        | °C /W  |                  |
|                                                                                                    | R <sub>θJL</sub>      | 3.5 (Note 1)       |              |        |        |        |        |        |                  |
| Typical junction capacitance per Leg at 4V, 1MHz                                                   | C <sub>J</sub>        | 95                 |              |        |        | 40     |        |        | pF               |
| Storage temperature range                                                                          | T <sub>stg</sub>      | -55 ~ +150         |              |        |        |        |        |        | °C               |
| Operating junction temperature range                                                               | T <sub>J</sub>        | -55 ~ +150         |              |        |        |        |        |        | °C               |

Notes : 1. Unit mounted on 3.0"×3.0"×0.11" thick (7.5 cm×7.5cm×0.3cm) Al plate

2. Unit mounted on PCB at 0.375"(9.5mm) lead length and 0.5"×0.5"(13mm×13mm) copper pads.

## Characteristic Curves

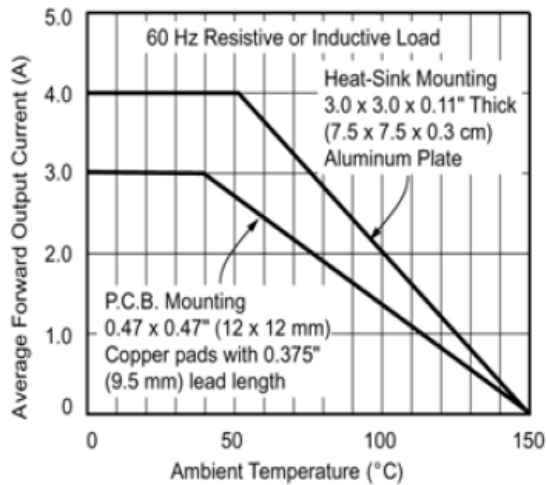


Figure 1. Derating Curves Output Rectified Current

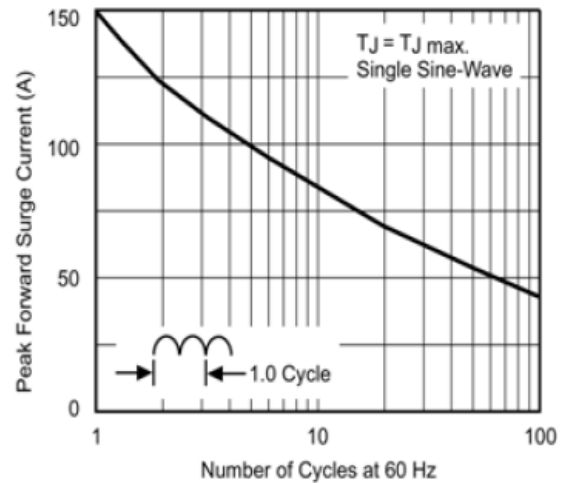


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

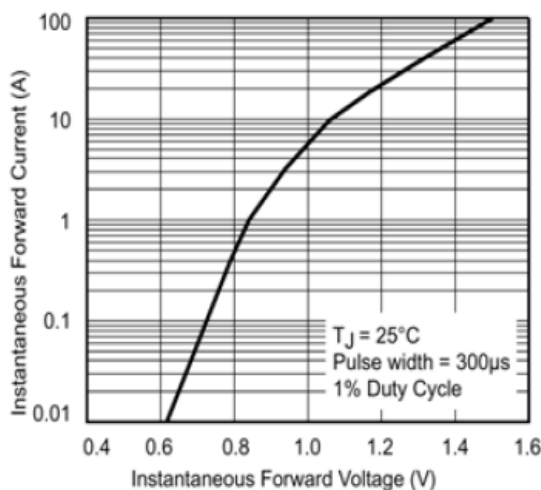


Figure 3. Typical Forward Voltage Characteristics Per Leg

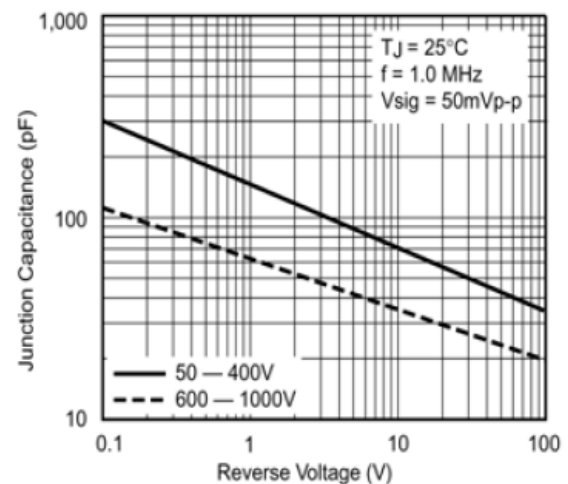


Figure 5. Typical Junction Capacitance Per Leg

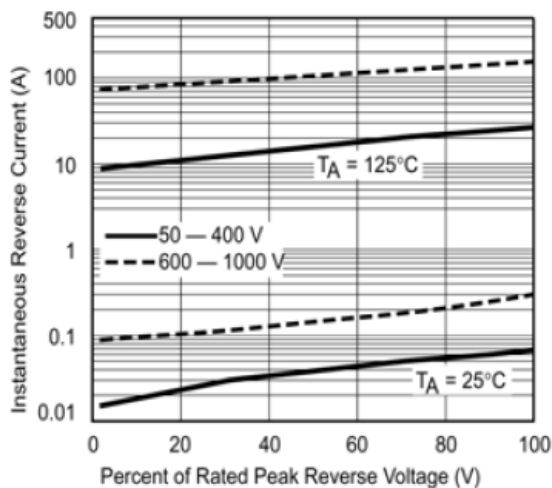


Figure 4. Typical Reverse Characteristics Per Leg

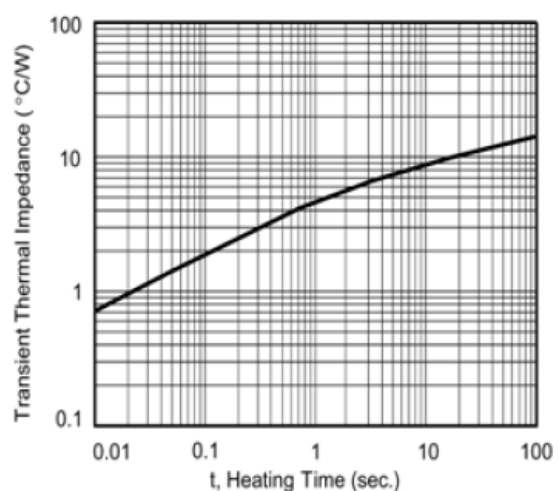


Figure 6. Typical Transient Thermal Impedance Per Leg