

# GBJ25005 THRU GBJ2510

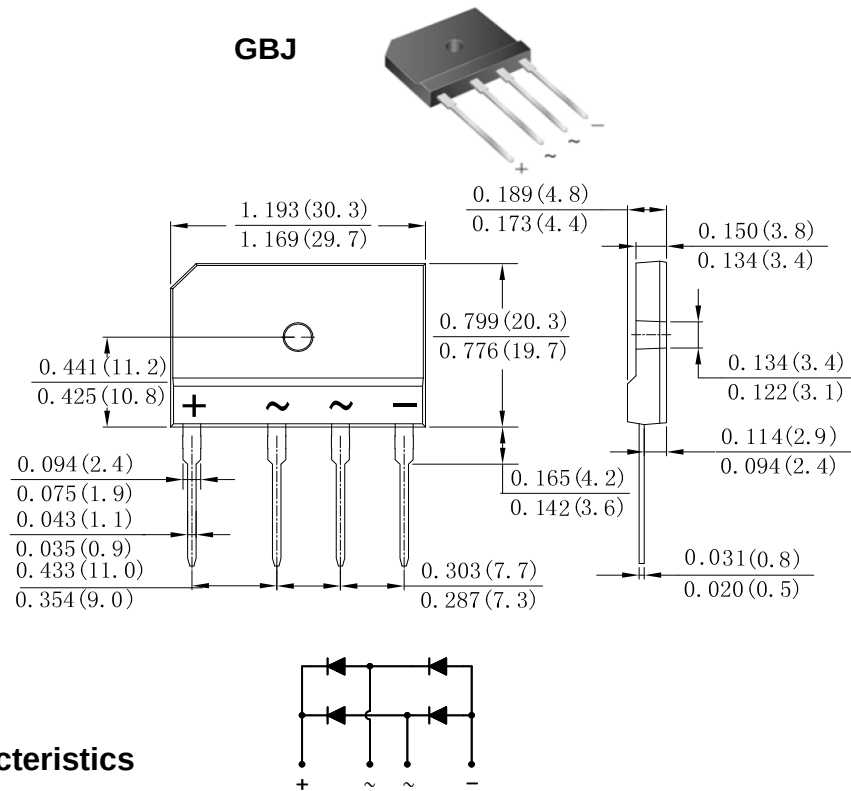
## Single Phase 25.0 AMP Glass Passivated Bridge Rectifier

### Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

### Mechanical Data

- Case: Molded plastic, GBJ
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number



### 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, derate current by 20%.

Package Outline Dimensions in Inches (Millimeters)

| TYPE NUMBER                                                                                                           | SYMBOL                            | GBJ 25005  | GBJ 2501 | GBJ 2502 | GBJ 2504 | GBJ 2506 | GBJ 2508 | GBJ 2510 | UNITS            |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------|----------|----------|----------|----------|----------|----------|------------------|
| Peak Repetitive Reverse Voltage                                                                                       | V <sub>RRM</sub>                  | 50         | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| Working Peak Reverse Voltage                                                                                          | V <sub>RWM</sub>                  |            |          |          |          |          |          |          |                  |
| DC Blocking Voltage                                                                                                   | V <sub>DC</sub>                   |            |          |          |          |          |          |          |                  |
| RMS Reverse Voltage                                                                                                   | V <sub>RMS</sub>                  | 35         | 70       | 140      | 280      | 420      | 560      | 700      | V                |
| Average Rectified Output Current (Note 1)@T <sub>C</sub> =100℃                                                        | IF(AV)                            | 25.0       |          |          |          |          |          |          | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | I <sub>FSM</sub>                  | 350        |          |          |          |          |          |          | A                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                        | I <sup>2</sup> t                  | 508        |          |          |          |          |          |          | A <sup>2</sup> s |
| Forward Voltage per element<br>@IF=12.5A<br>@IF=25A                                                                   | V <sub>FM</sub>                   | 1.0<br>1.1 |          |          |          |          |          |          | V                |
| Peak Reverse Current @T <sub>J</sub> =25 ℃<br>At Rated DC Blocking Voltage @T <sub>J</sub> =125 ℃                     | I <sub>R</sub>                    | 5.0<br>200 |          |          |          |          |          |          | uA               |
| Dielectric Strength                                                                                                   | V <sub>ids</sub>                  | 2500       |          |          |          |          |          |          | V                |
| Typical Junction Capacitance (Note 2)                                                                                 | C <sub>J</sub>                    | 110        |          |          |          |          |          |          | pF               |
| Between junction and ambient, Without heatsink                                                                        | R <sub>θJA</sub>                  | 22         |          |          |          |          |          |          | ℃/W              |
| Between junction and case, With heatsink                                                                              | R <sub>θJC</sub>                  | 1.0        |          |          |          |          |          |          |                  |
| Operating and Storage Temperature Range                                                                               | T <sub>J</sub> , T <sub>STG</sub> | -55to+150  |          |          |          |          |          |          | ℃                |

Note: 1. Unit case mounted on aluminum plate heatsink

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C..

## Rating and Characteristic Curves

Fig. 1 Forward Current Derating Curve

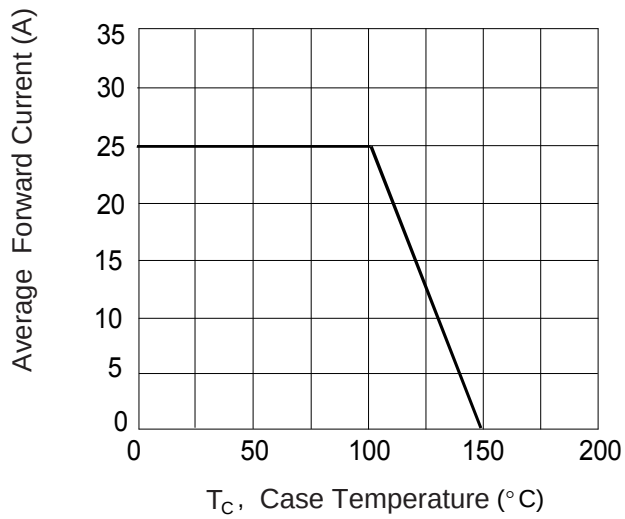


Fig. 2 Typ. Forward Characteristics

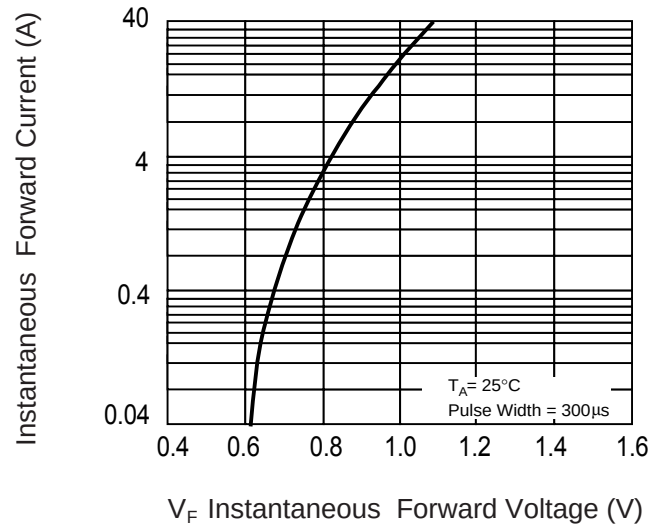


Fig.3 Maximum Peak Forward Surge Current

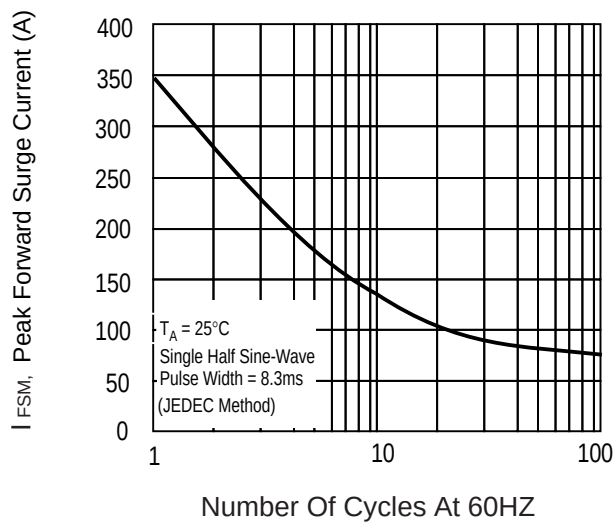


Fig.4 Typical Junction Capacitance

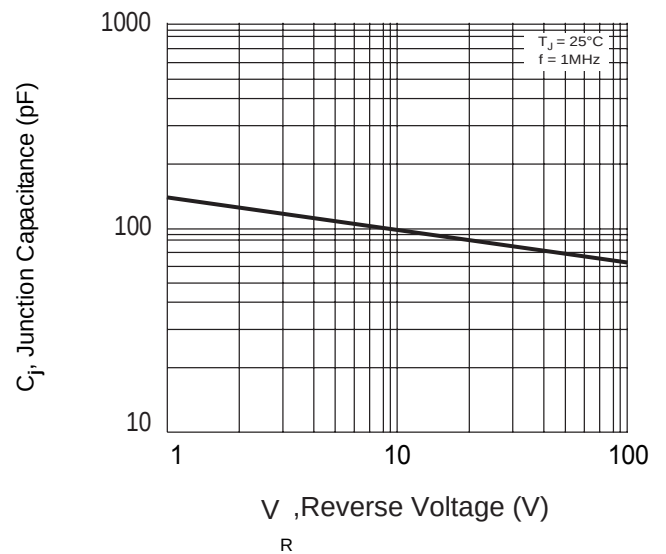


Fig.5 Typical Reverse Characteristics

