

## GSIB405 THRU GSIB4100

### SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

Voltage: 50 to 1000V

4.0A

Current:



#### Features

Glass passivated chip junction  
Ideal for printed circuit board  
High surge current capability  
High case dielectric strength

#### Mechanical Data

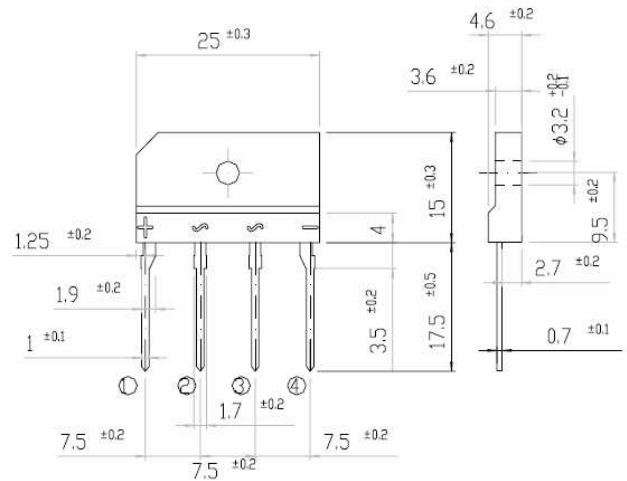
Terminal: Plated leads solderable per MIL-STD 202E,  
Method 208C

Case: UL-94 Class V-0 recognized Flame Retardant Epoxy

Polarity: Polarity symbol marked on body

Mounting position: any

#### GSIB-3S



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated,  
for capacitive load, derate current by 20%)

|                                                                                                           | Symbol                                     | GSIB4<br>05 | GSIB4<br>10 | GSIB4<br>20 | GSIB4<br>40 | GSIB4<br>60 | GSIB4<br>80 | GSIB4<br>100 | units              |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------------|
| Maximum 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 average forward Rectified output current at T <sub>c</sub> = 100°C (Note 1)<br>Ta = 25°C (Note 2) | I <sub>f(av)</sub>                         | 4.0<br>2.3  |             |             |             |             |             |              | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)                     | I <sub>fsm</sub>                           | 130         |             |             |             |             |             |              | A                  |
| Maximum instantaneous forward voltage drop per leg at 2.0A                                                | V <sub>f</sub>                             | 0.95        |             |             |             |             |             |              | V                  |
| Rating for fusing (t < 8.3ms)                                                                             | I <sup>2</sup> t                           | 60          |             |             |             |             |             |              | A <sup>2</sup> Sec |
| Maximum DC reverse current at rated DC blocking voltage per leg Ta = 25°C<br>Ta = 125°C                   | I <sub>r</sub>                             | 10.0<br>250 |             |             |             |             |             |              | μA                 |
| Maximum thermal resistance per leg (Note2)<br>(Note1)                                                     | R <sub>th(ja)</sub><br>R <sub>th(jc)</sub> | 26.0<br>5.0 |             |             |             |             |             |              | °C/W               |
| Operating junction and storage temperature range                                                          | T <sub>j</sub> , T <sub>stg</sub>          | -55 to +150 |             |             |             |             |             |              | °C                 |

Note:

1. Unit case mounted on Al plate heatsink
2. Unit case mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length
3. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

## RATINGS AND CHARACTERISTIC CURVES GSIB405 THRU GSIB4100

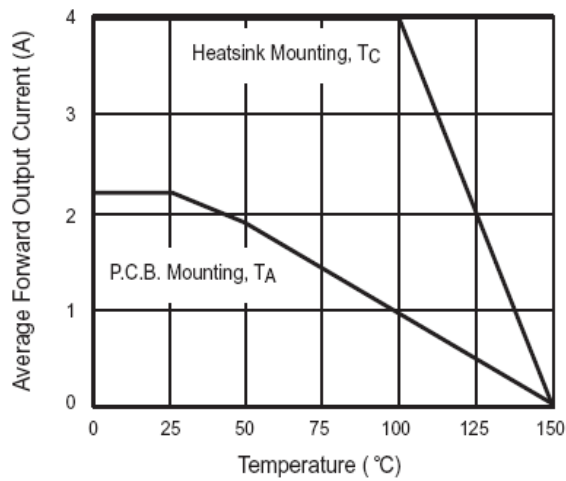


Figure 1. Derating Curve Output Rectified Current

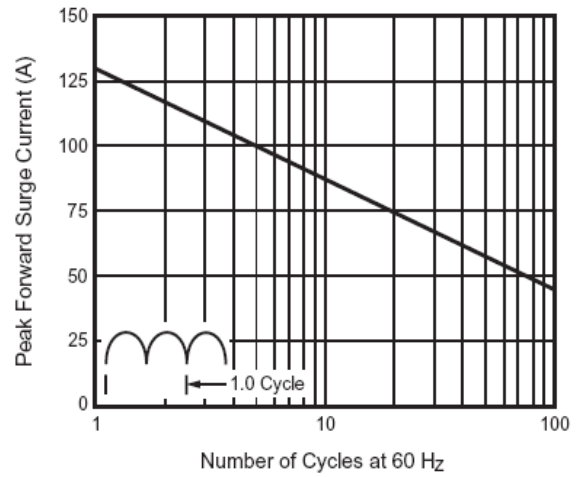


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

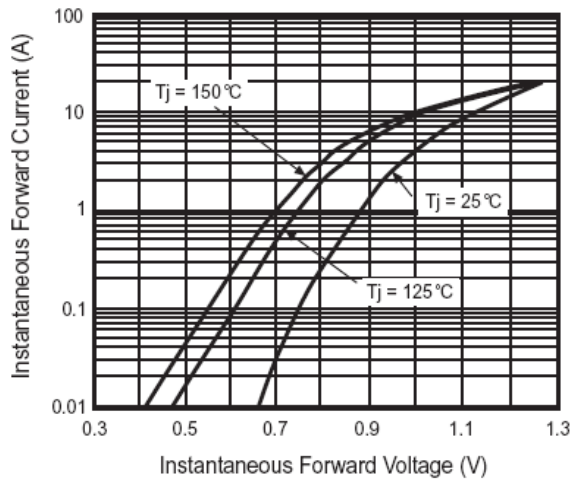


Figure 3. Typical Forward Characteristics Per Leg

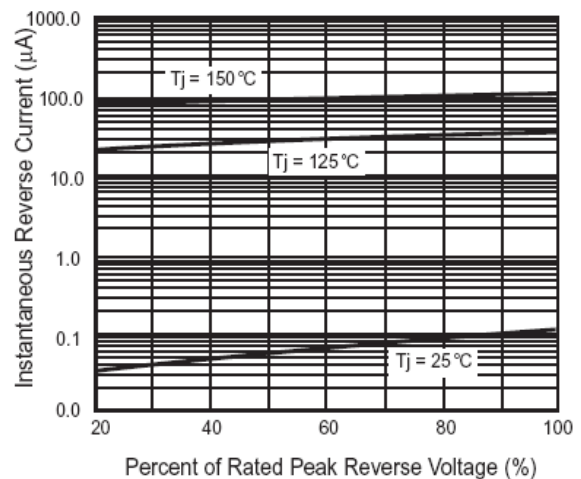


Figure 4. Typical Reverse Characteristics Per Leg

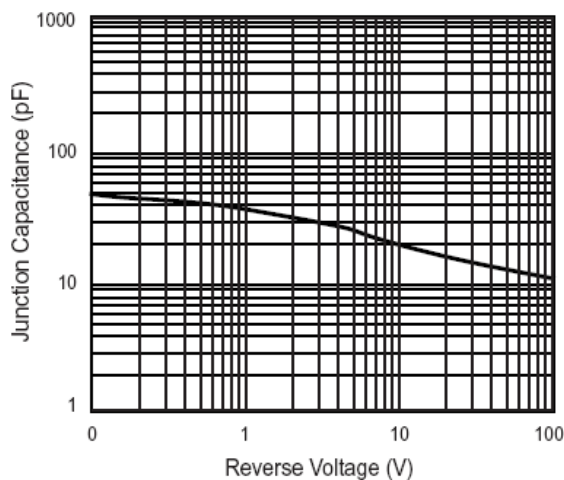


Figure 5. Typical Junction Capacitance Per Leg

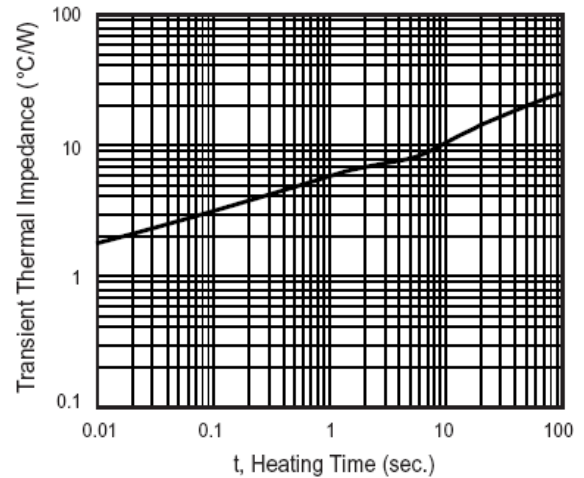


Figure 6. Typical Transient Thermal Impedance Per Leg