



# GBJ25005 - GBJ2510

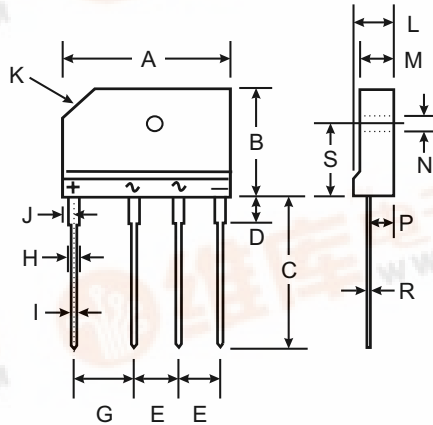
## 25A GLASS PASSIVATED BRIDGE RECTIFIER

### Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of  $1500V_{RMS}$
- Low Reverse Leakage Current
- Surge Overload Rating to 350A Peak
- Ideal for Printed Circuit Board Applications
- Plastic Material - UL Flammability Classification 94V-0
- UL Listed Under Recognized Component Index, File Number E94661

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Weight: 6.6 grams (approx)
- Marking: Type Number



| GBJ                  |           |       |
|----------------------|-----------|-------|
| Dim                  | Min       | Max   |
| A                    | 29.70     | 30.30 |
| B                    | 19.70     | 20.30 |
| C                    | 17.00     | 18.00 |
| D                    | 3.80      | 4.20  |
| E                    | 7.30      | 7.70  |
| G                    | 9.80      | 10.20 |
| H                    | 2.00      | 2.40  |
| I                    | 0.90      | 1.10  |
| J                    | 2.30      | 2.70  |
| K                    | 3.0 X 45° |       |
| L                    | 4.40      | 4.80  |
| M                    | 3.40      | 3.80  |
| N                    | 3.10      | 3.40  |
| P                    | 2.50      | 2.90  |
| R                    | 0.60      | 0.80  |
| S                    | 10.80     | 11.20 |
| All Dimensions in mm |           |       |

### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

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

| Characteristic   | Symbol                          | GBJ 25005   | GBJ 2501 | GBJ 2502 | GBJ 2504 | GBJ 2506 | GBJ 2508 | GBJ 2510 | Unit         |
|--|---------------------------------|-------------|----------|----------|----------|----------|----------|----------|--------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                 | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V            |
| RMS Reverse Voltage  | $V_{R(RMS)}$                    | 35          | 70       | 140      | 280      | 420      | 560      | 700      | V            |
| Average Forward Rectified Output Current (Note 1)<br>@ $T_C = 100^\circ C$   | $I_o$                           | 25          |          |          |          |          |          |          | A            |
| Non-Repetitive Peak Forward Surge Current 8.3 ms<br>single half sine-wave superimposed on rated load<br>(JEDEC Method) | $I_{FSM}$                       | 350         |          |          |          |          |          |          | A            |
| Forward Voltage (per element)<br>@ $I_F = 12.5A$   | $V_{FM}$                        | 1.05        |          |          |          |          |          |          | V            |
| Peak Reverse Current<br>at Rated DC Blocking Voltage<br>@ $T_C = 25^\circ C$<br>@ $T_C = 125^\circ C$                  | $I_R$                           | 10<br>500   |          |          |          |          |          |          | $\mu A$      |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ ) (Note 1)  | $I^2t$                          | 510         |          |          |          |          |          |          | $A^2s$       |
| Typical Junction Capacitance (per element) (Note 2)  | $C_j$                           | 85          |          |          |          |          |          |          | pF           |
| Typical Thermal Resistance Junction to Case (Note 3)   | $R_{\theta JC}$                 | 0.6         |          |          |          |          |          |          | $^\circ C/W$ |
| Operating and Storage Temperature Range  | $T_j, T_{STG}$                  | -65 to +150 |          |          |          |          |          |          | $^\circ C$   |

- Notes:
1. Non-repetitive, for  $t > 1ms$  and  $< 8.3 ms$ .
  2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
  3. Thermal resistance from junction to case per element. Unit mounted on 220 x 220 x 1.6mm aluminum plate heat sink.



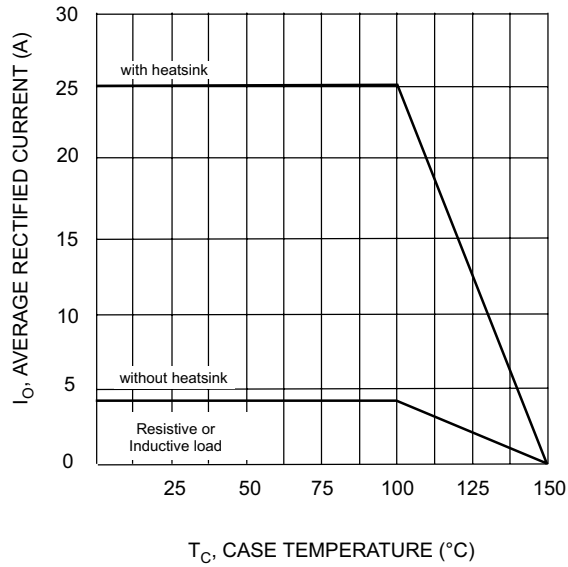


Fig. 1 Forward Current Derating Curve

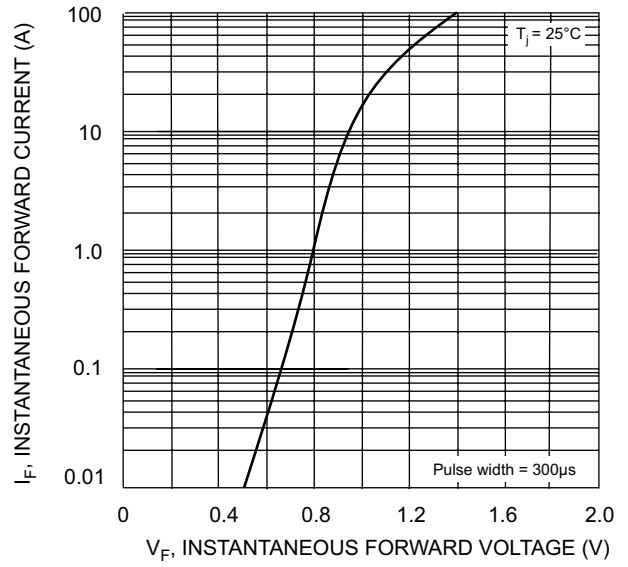


Fig. 2 Typical Forward Characteristics (per element)

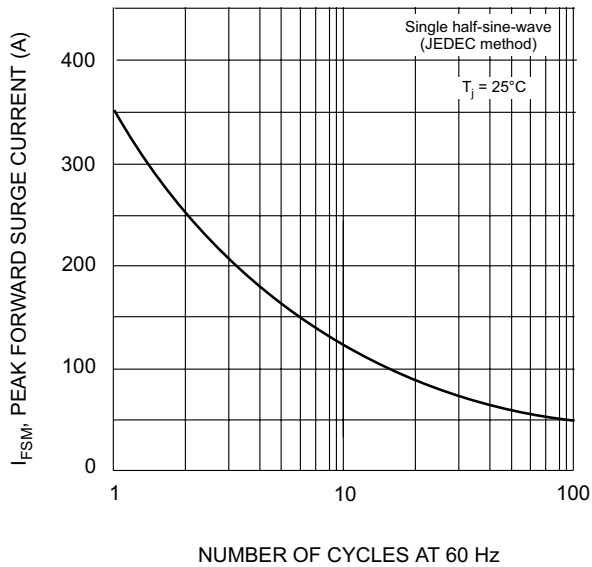


Fig. 3 Maximum Non-Repetitive Surge Current

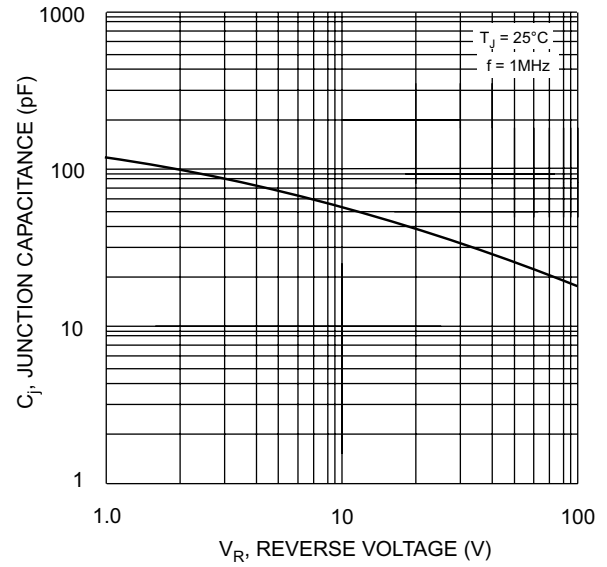


Fig. 4 Typical Junction Capacitance

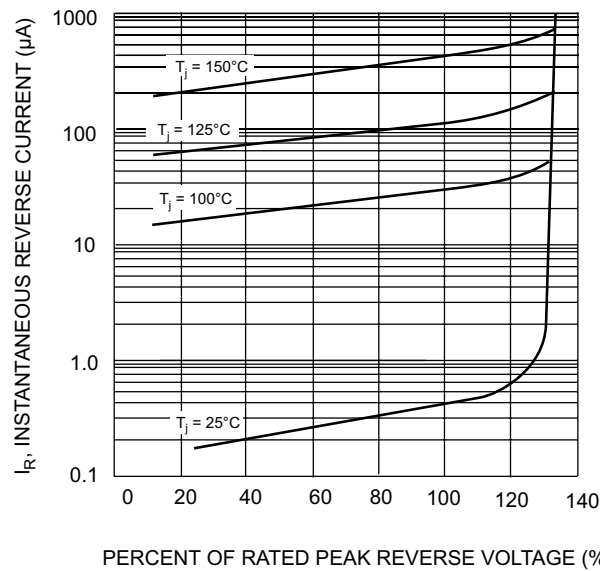


Fig. 5 Typical Reverse Characteristics