

GBJ Plastic-Encapsulate Bridge Rectifier

General Purpose Bridge Rectifier

Features:

- I_o 25A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip

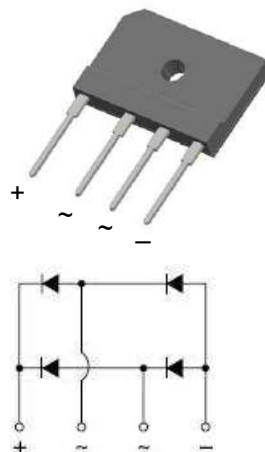
Applications:

- General purpose 1 phase Bridge rectifier applications

Marking

- GBJ25XX
- XX : From 005 To 10

GBJ



Limiting Values (Absolute Maximum Rating)

| Item | Symbol | Unit | Conditions | GBJ25 | | | | | | |
|--------------------------------------|-----------|-----------------------------|---|------------|-----|-----|-----|-----|-----|------|
| | | | | 005 | 01 | 02 | 04 | 06 | 08 | 10 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current | I_o | A | 60Hz sine wave, With heatsink $T_c=115^\circ\text{C}$ R-load | 25 | | | | | | |
| Surge(Non-repetitive)Forward Current | I_{FSM} | A | 60Hz sine wave, 1 cycle, $T_j=25^\circ\text{C}$ | 500 | | | | | | |
| Current Squared Time | I^2t | A^2S | $1\text{ms} \leq t < 8.3\text{ms}$ $T_j=25^\circ\text{C}$, Rating of per diode | 600 | | | | | | |
| Storage Temperature | T_{stg} | $^\circ\text{C}$ | | -55 ~ +150 | | | | | | |
| Junction Temperature | T_j | $^\circ\text{C}$ | | -55 ~ +150 | | | | | | |
| Dielectric Strength | V_{dis} | KV | Terminals to case, AC 1 minute | 2.5 | | | | | | |
| Mounting Torque | T_{or} | $\text{kg} \cdot \text{cm}$ | Recommend torque: $5\text{kg} \cdot \text{cm}$ | 8 | | | | | | |

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | Max |
|----------------------|------------------|---------------------------|--|------|
| Peak Forward Voltage | V_{FM} | V | $I_{FM}=25.0\text{A}$, Pulse measurement, Rating of per diode | 0.92 |
| Peak Reverse Current | I_{RRM} | μA | $V_{RM}=V_{RRM}$, Pulse measurement, Rating of per diode | 5 |
| Thermal Resistance | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | Between junction and ambient, Without heatsink | 22 |
| | $R_{\theta J-C}$ | | Between junction and case, With heatsink | 0.6 |

Typical Characteristics

FIG.1-MAXIMUM FORWARD SURGE CURRENT

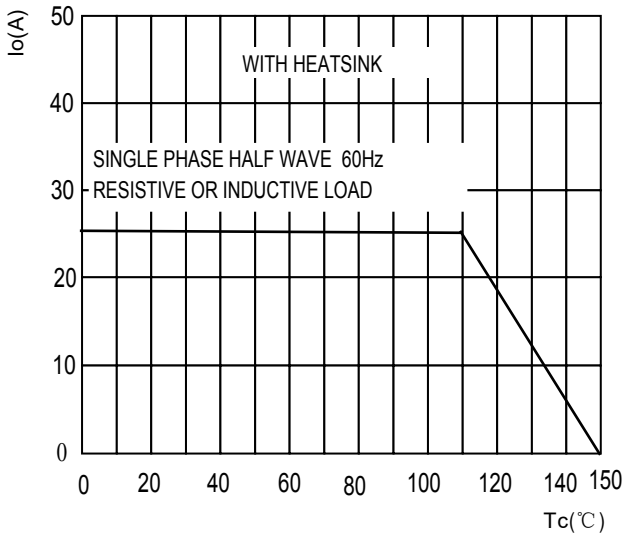


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

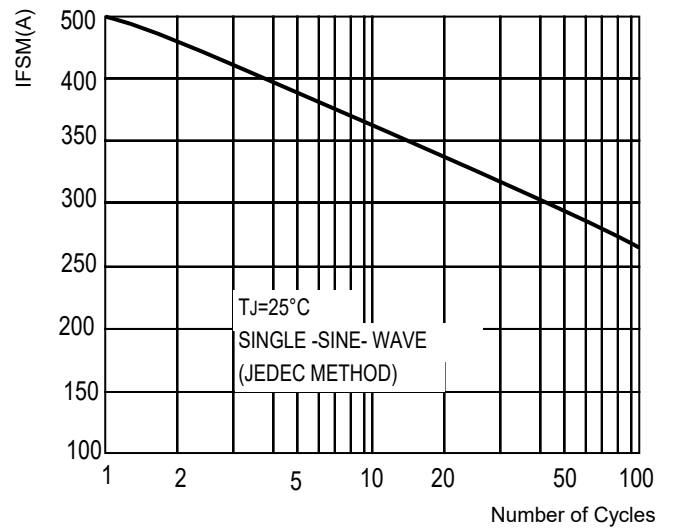


FIG.3-TYPICAL FORWARD CHARACTERISTICS

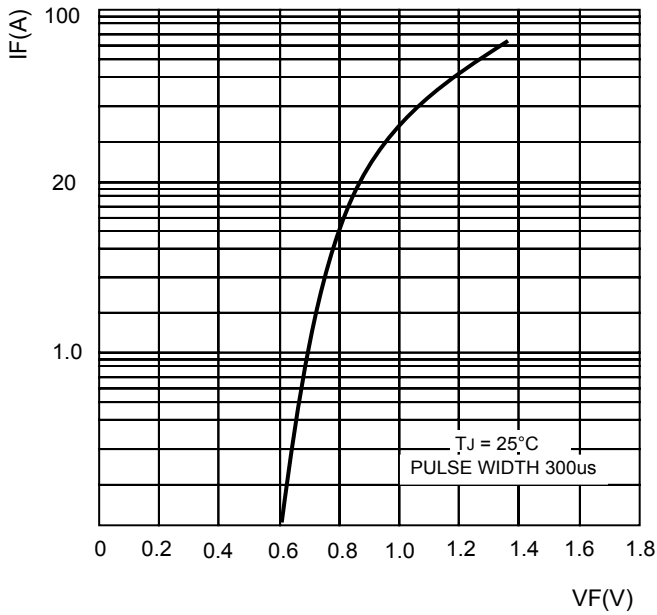


FIG.4-TYPICAL REVERSE CHARACTERISTICS

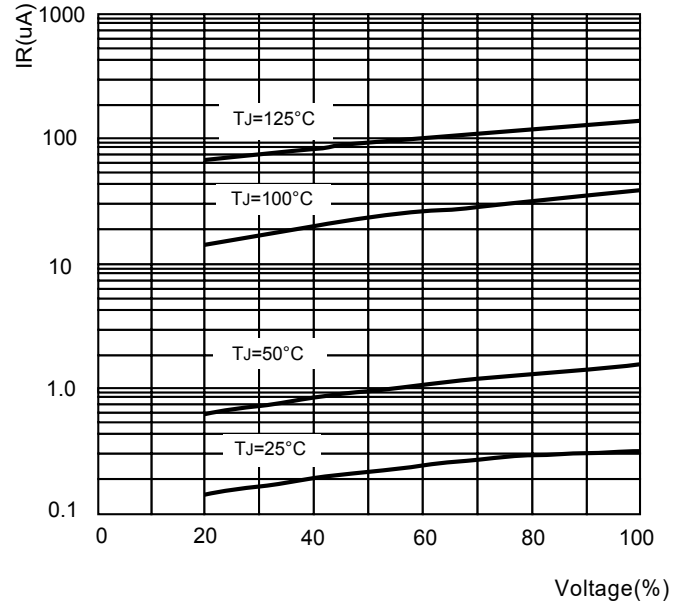
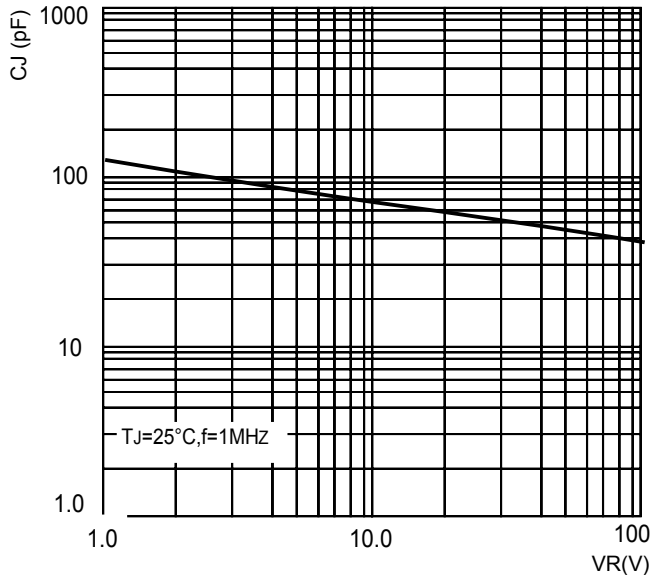
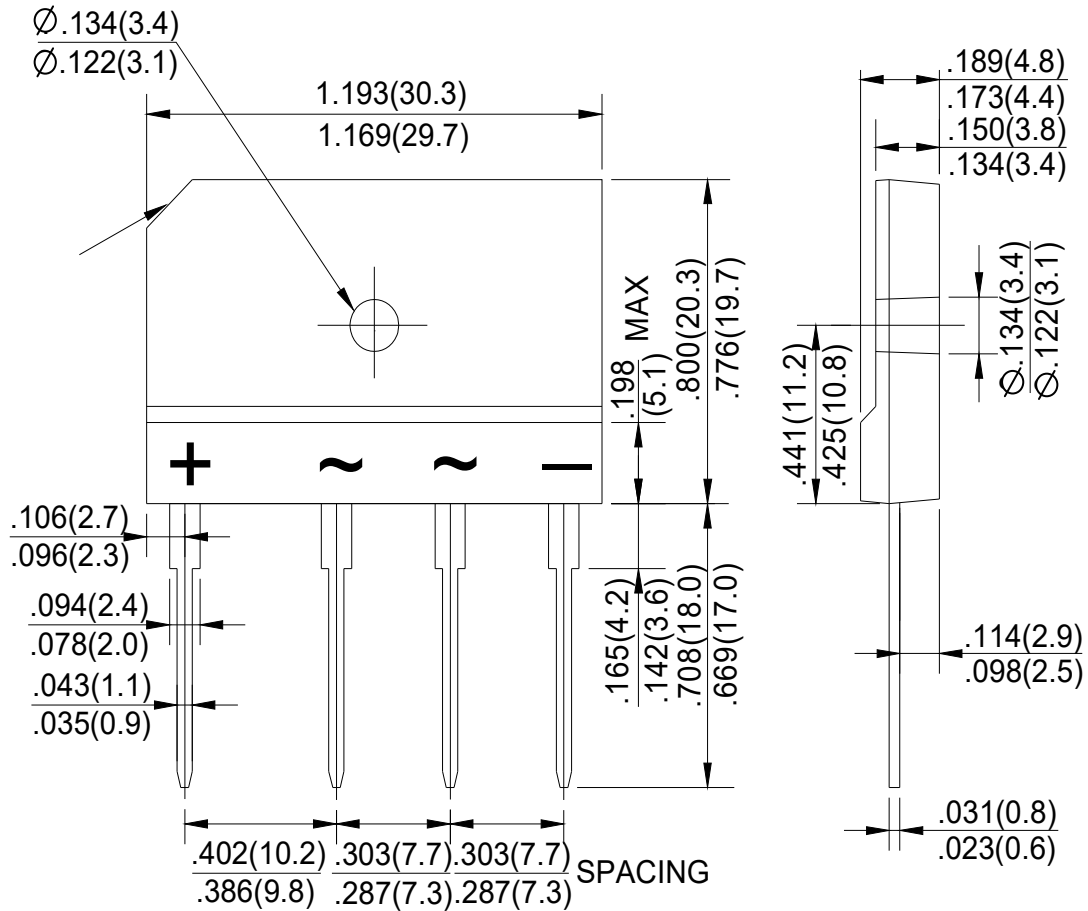


FIG.5-TYPICAL JUNCTION CAPACITANCE



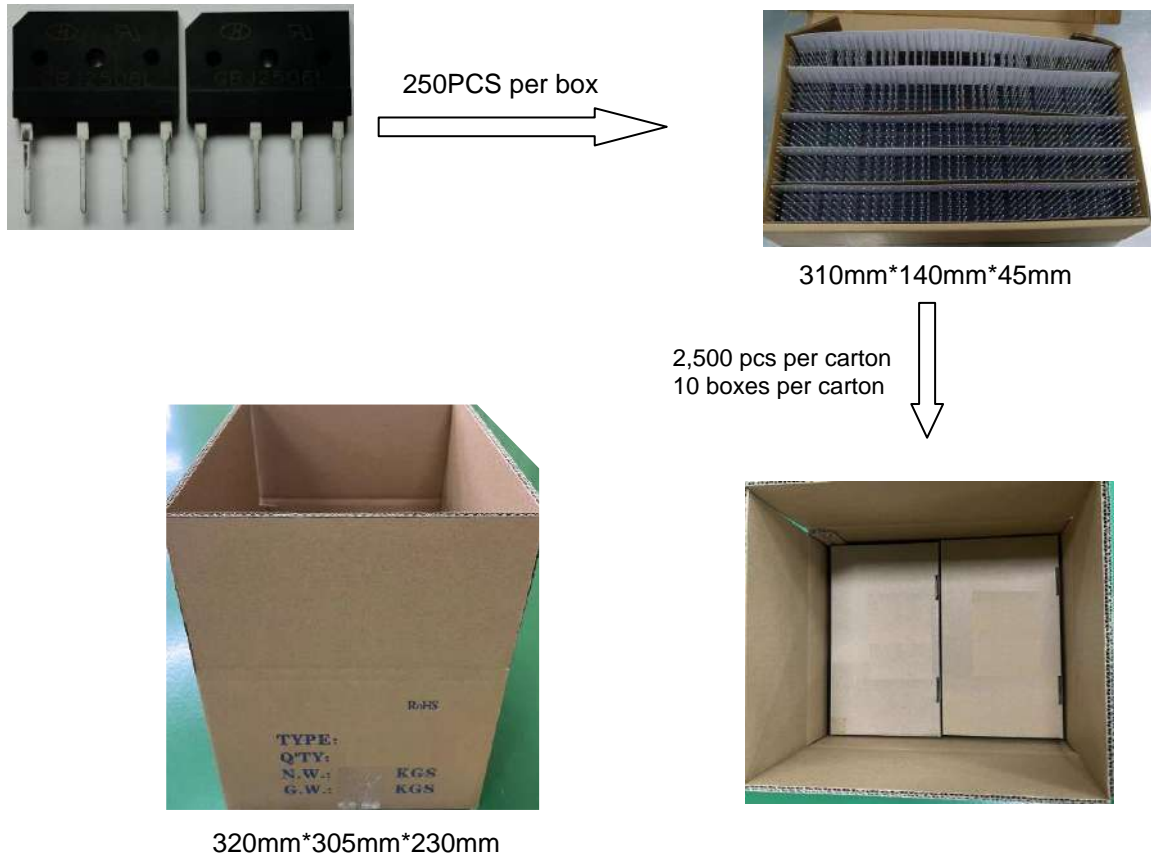
GBJ Package Outline Dimensions



Dimensions in inches and (millimeters)

Packaging Specifications of GBJ

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



Storage

1 It is recommended to store the products in the following conditions:

Humidity: 75% R.H. Max.

Temperature : 0°C~35°C(32°F~95°F)

2 Shelf life : 12 month at < 0°C~35°C(32°F~95°F) and <75% R.H.