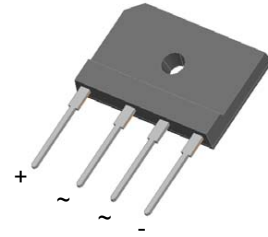


Features

- UL recognition
- Glass passivated chip junction
- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7s, per JESD 22-B106

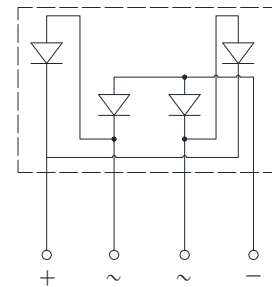


Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- Package: GBJ(5S)
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: As marked on body



Schematic Diagram

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

| Parameter | Symbol | GBJ20005 | GBJ2001 | GBJ2002 | GBJ2004 | GBJ2006 | GBJ2008 | GBJ2010 | Unit |
|--|--|-------------|---------|---------|---------|---------|---------|---------|-----------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Average Rectified Output Current @ 60Hz Sine Wave, R-load | with Heatsink $T_C=100^{\circ}\text{C}$ | 20.0 | | | | | | | A |
| | without Heatsink $T_A=25^{\circ}\text{C}$ | 4.0 | | | | | | | |
| Forward Surge Current (Non-Repetitive) @ 60Hz Half Sine Wave, 1 Cycle, $T_J=25^{\circ}\text{C}$ | I_{FSM} | 280 | | | | | | | A |
| Forward Surge Current (Non-Repetitive) @ 1ms Square Wave, 1 Cycle, $T_J=25^{\circ}\text{C}$ | | 560 | | | | | | | |
| Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$, $T_J=25^{\circ}\text{C}$, Rating per Diode | I^2t | 325 | | | | | | | A^2S |
| Thermal Resistance, Between Junction and Ambient, without Heatsink | $R_{\theta JA}$ | 18 | | | | | | | $^{\circ}\text{C}/\text{W}$ |
| Thermal Resistance, Between Junction and Case, with Heatsink | $R_{\theta JC}$ | 1.5 | | | | | | | |
| Junction Temperature | T_J | -55 to +150 | | | | | | | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -55 to +150 | | | | | | | $^{\circ}\text{C}$ |
| Dielectric Strength @ Terminals to Case, AC 1 Minute | V_{dis} | 2.5 | | | | | | | KV |
| Mounting Torque @Recommend Torque: 5kg·cm | Tor | 8.0 | | | | | | | kg·cm |

Electrical Characteristics (T_A=25°C Unless otherwise specified)

| Parameter | Symbol | Test Conditions | Value | Unit |
|---|----------------|---|-------|------|
| Maximum Instantaneous Forward Voltage Drop Per Diode | V _F | I _{FM} =10A | 1.0 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage Per Diode | I _R | T _J =25°C | 5 | μA |
| | | T _J =125°C | 100 | |
| Typical Junction Capacitance | C _J | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 83 | pF |

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

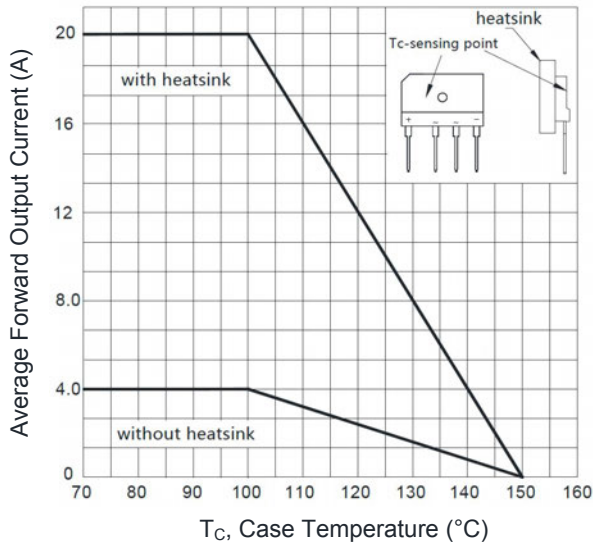


Figure 1. I_o - T_c Curve

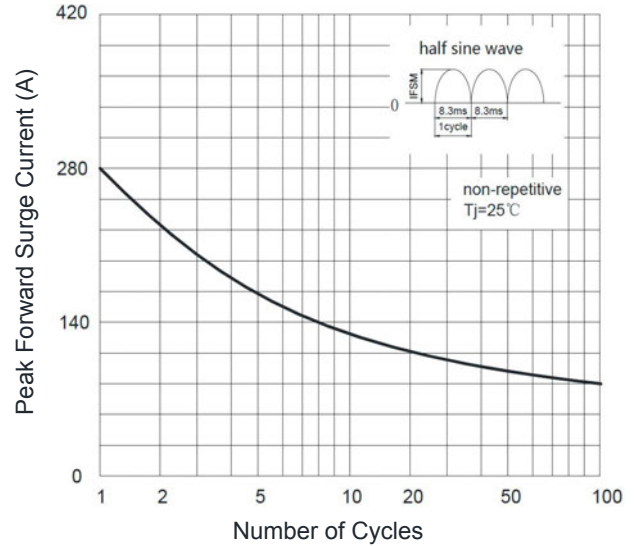


Figure 2. Surge Forward Current Capability

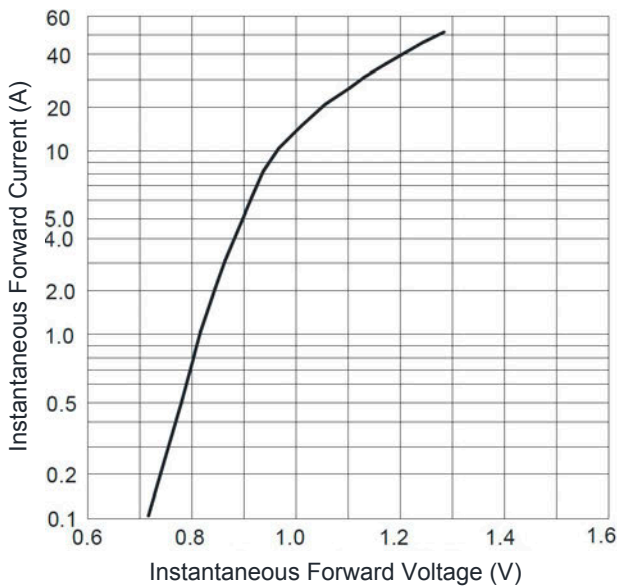


Figure 3. Typical Forward Voltage

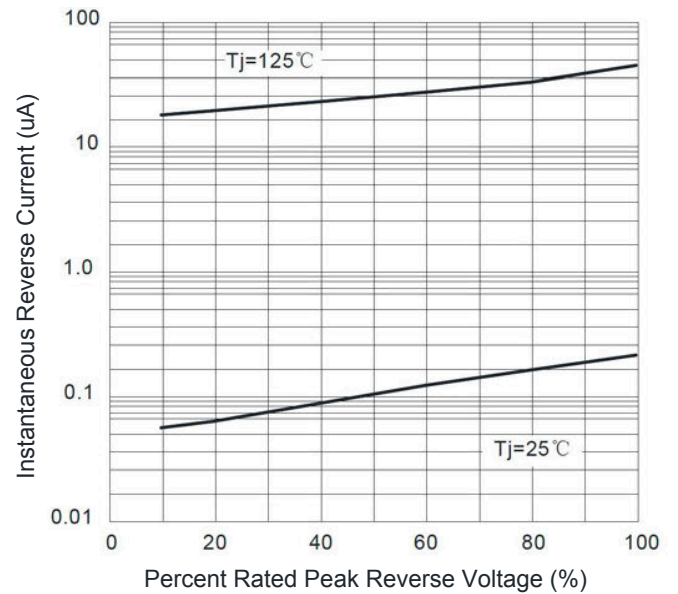
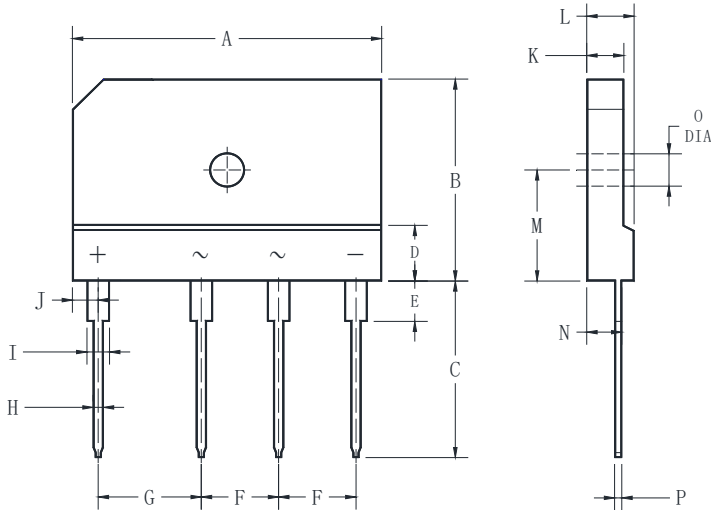


Figure 4. Typical Reverse Characteristics

Package Outline Dimensions (GBJ)



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 29.700 | 30.300 | 1.169 | 1.193 |
| B | 19.700 | 20.300 | 0.776 | 0.799 |
| C | 17.000 | 18.000 | 0.669 | 0.709 |
| D | 4.800 | 5.800 | 0.189 | 0.228 |
| E | 3.800 | 4.200 | 0.150 | 0.165 |
| F | 7.300 | 7.700 | 0.287 | 0.303 |
| G | 9.800 | 10.200 | 0.386 | 0.402 |
| H | 0.900 | 1.100 | 0.035 | 0.043 |
| I | 2.000 | 2.400 | 0.079 | 0.094 |
| J | 2.300 | 2.700 | 0.091 | 0.106 |
| K | 3.400 | 3.800 | 0.134 | 0.150 |
| L | 4.400 | 4.800 | 0.173 | 0.189 |
| M | 10.800 | 11.200 | 0.425 | 0.441 |
| N | 3.100 | 3.700 | 0.122 | 0.146 |
| O | 3.100 | 3.400 | 0.122 | 0.134 |
| P | 0.600 | 0.800 | 0.024 | 0.031 |