

GBJ15005 THRU GBJ1510

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER
REVERSE VOLTAGE: 50 to 1000 V
FORWARD CURRENT: 15 A

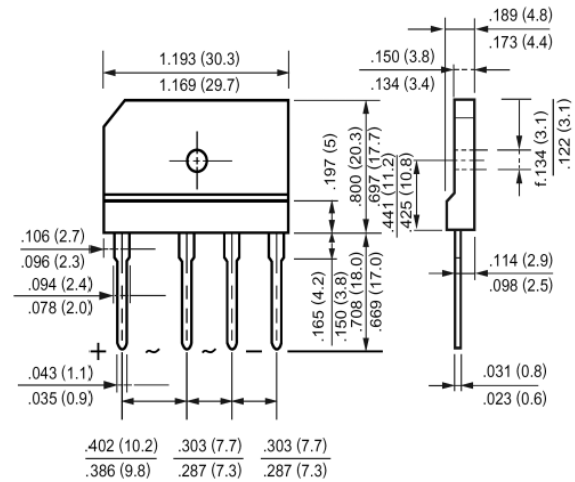
GBJ

Features

- Glass passivated chip junction
- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low reverse leakage current
- Low forward voltage drop
- High surge current capability

Mechanical data

- Case: Molded plastic, GBJ
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
- Mounting Position: Any



Dimensions in inches and (millimeters)

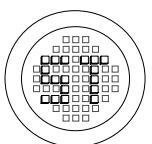
Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter | Symbols | GBJ 15005 | GBJ 1501 | GBJ 1502 | GBJ 1504 | GBJ 1506 | GBJ 1508 | GBJ 1510 | Units |
|--|-----------------|-------------|----------|----------|----------|----------|----------|----------|---------------|
| Maximum Recurrent 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 |
| Maximum Average Forward Rectified Current with Heatsink at $T_C = 100^\circ\text{C}$ | $I_{(AV)}$ | 15 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half-Sine -Wave superimposed on rated load (JEDEC Method) | I_{FSM} | 200 | | | | | | | A |
| Maximum Forward Voltage at 7.5 A DC and 25 °C | V_F | 1.05 | | | | | | | V |
| Maximum Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$ | I_R | 10 500 | | | | | | | μA |
| Typical Junction Capacitance ¹⁾ | C_J | 60 | | | | | | | pF |
| Typical Thermal Resistance ²⁾ | $R_{\theta JC}$ | 0.8 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T_J, T_S | -55 to +150 | | | | | | | °C |

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 VDC.

²⁾ Thermal resistance from junction to case with device mounted on 300 mm X 300 mm X 1.6 mm Cu plate heatsink.



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FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

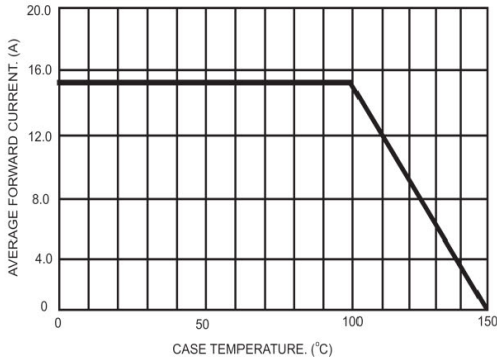


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT



FIG.3- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

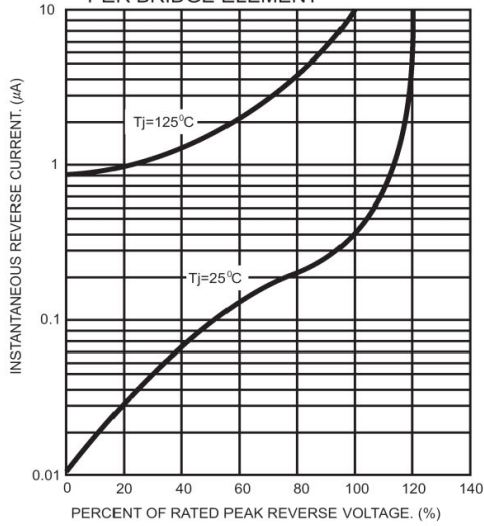


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

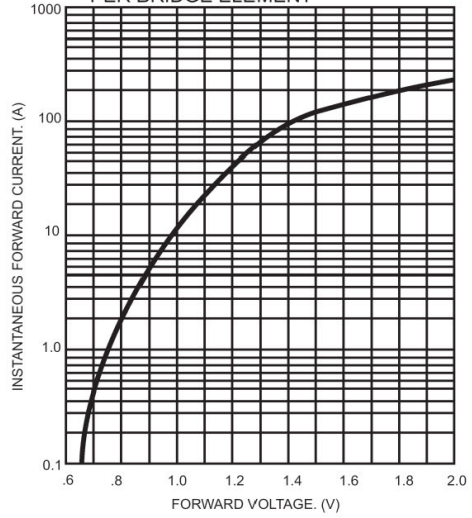
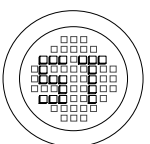
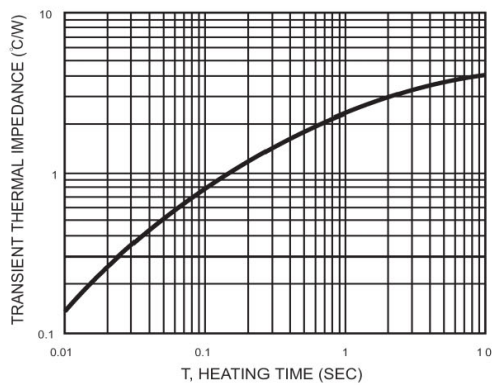


FIG.5- TYPICAL TRANSIENT THERMAL IMPEDANCE



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