



## SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIER

### GBLA005 THRU GBLA10

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

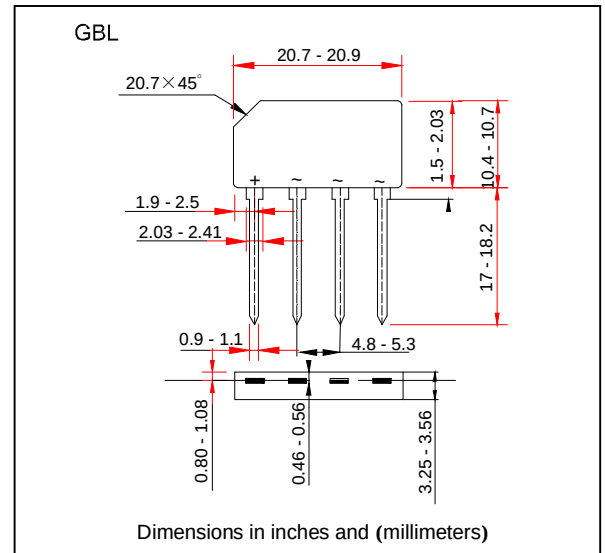
4.0 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junctions
- High case dielectric strength
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed 260°C/10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

- Case: molded plastic body
- Terminal: Plated leads solderable per MIL-STD-750 Method 2026
- Mounting position: Any
- Weight: 0.071 ounce, 2.0 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

|                                                                                                        |                       | SYMBOLS                          | GBLA<br>005                | GBLA<br>01 | GBLA<br>02 | GBLA<br>04 | GBLA<br>06 | GBLA<br>08 | GBLA<br>10 | UNIT             |
|--------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|----------------------------|------------|------------|------------|------------|------------|------------|------------------|
| Maximum Reverse Peak Repetitive Voltage                                                                |                       | V <sub>RRM</sub>                 | 50                         | 100        | 200        | 400        | 600        | 800        | 1000       | Volts            |
| Maximum RMS Voltage                                                                                    |                       | V <sub>RMS</sub>                 | 35                         | 70         | 140        | 280        | 420        | 560        | 700        | Volts            |
| Maximum DC Blocking Voltage                                                                            |                       | V <sub>DC</sub>                  | 50                         | 100        | 200        | 400        | 600        | 800        | 1000       | Volts            |
| Maximum Average Forward Rectified Output Current, At<br>T <sub>C</sub> =50°C<br>T <sub>A</sub> =40°C   |                       | I <sub>(AV)</sub>                | 4.0(Note 1)<br>3.0(Note 2) |            |            |            |            |            |            | Amps             |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on<br>rated load (JEDEC Method) |                       | I <sub>FSM</sub>                 | 120                        |            |            |            |            |            |            | Amps             |
| Rating for Fusing (t<8.3ms)                                                                            |                       | I <sup>2</sup> t                 | 60                         |            |            |            |            |            |            | A <sup>2</sup> s |
| Maximum Instantaneous Forward Voltage drop<br>Per Bridge element 4.0A                                  |                       | V <sub>F</sub>                   | 1.0                        |            |            |            |            |            |            | Volts            |
| Maximum Reverse Current at rated<br>DC blocking voltage per element                                    | T <sub>A</sub> =25°C  | I <sub>R</sub>                   | 5.0                        |            |            |            |            |            |            | μ A              |
|                                                                                                        | T <sub>A</sub> =125°C |                                  | 500                        |            |            |            |            |            |            |                  |
| Typical Junction Capacitance per leg (Note 3)                                                          |                       | C <sub>J</sub>                   | 95.0                       |            |            | 40.0       |            |            |            | pF               |
| Typical Thermal Resistance (Note 1)                                                                    |                       | R <sub>JA</sub>                  | 22                         |            |            |            |            |            |            | °C/W             |
| Typical Thermal Resistance (Note 2)                                                                    |                       | R <sub>JL</sub>                  | 10                         |            |            |            |            |            |            | °C/W             |
| Operating and Storage Temperature Range                                                                |                       | T <sub>J</sub> ,T <sub>STG</sub> | (-55 to +150)              |            |            |            |            |            |            | °C               |

- Notes:**
1. Unit mounted on 3.0×3.0×0.11" thick (7.5×7.5×0.3cm) AL. plate
  2. Unit mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5×0.5"(12×12mm) copper pads
  3. Measured at 1.0MHz and applied reverse voltage of 4.0 V



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### RATINGS AND CHARACTERISTIC CURVES GBLA005 THRU GBLA10

FIG. 1- DERATING CURVE  
OUTPUT RECTIFIED CURRENT

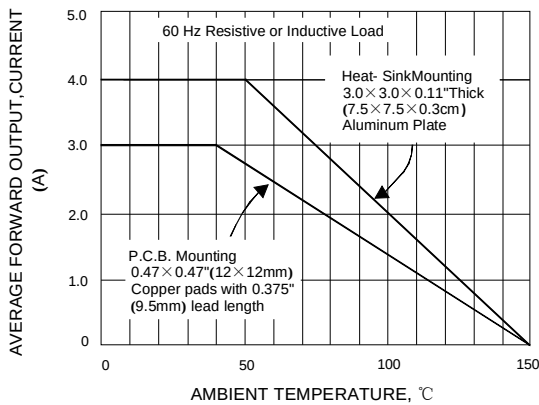


FIG. 2- MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER LEG

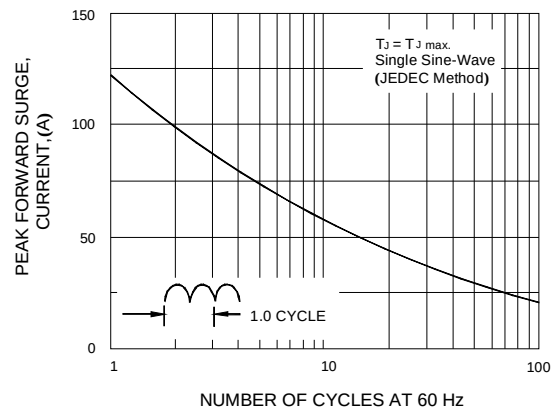


FIG. 3- TYPICAL FORWARD VOLTAGE  
CHARACTERISTICS PER LEG

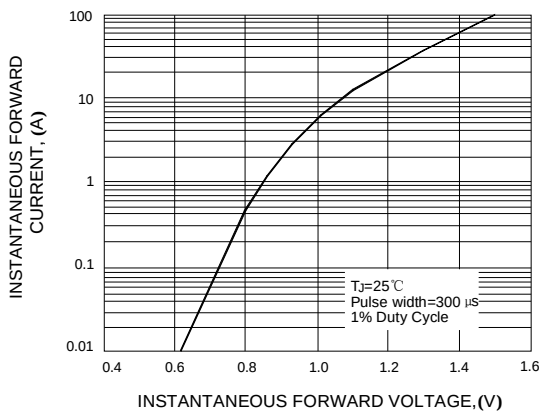


FIG. 4- TYPICAL REVERSE LEAKAGE  
CHARACTERISTICS PER LEG

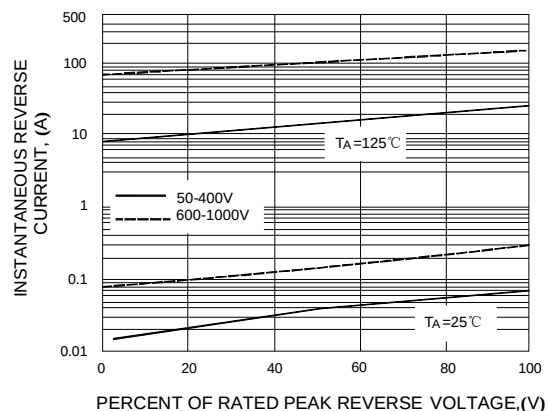


FIG. 5- TYPICAL JUNCTION CAPACITANCE  
PER LEG

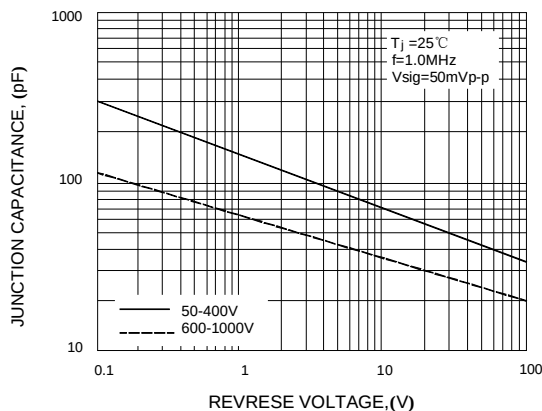


FIG. 6- TYPICAL TRANSIENT THERMAL  
IMPEDANCE PER LEG

