

**GLASS PASSIVATED BRIDGE RECTIFIERS**

REVERSE VOLTAGE - **50 to 1000** Volts  
FORWARD CURRENT - **10** Amperes

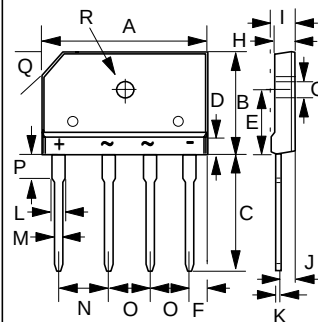
**FEATURES**

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability.
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- The plastic material has UL flammability classification 94V-0
- UL Recognition File # E95060

**MECHANICAL DATA**

- Polarity : Symbols molded on body
- Weight : 0.23 ounces, 6.6 grams
- Mounting position : Any

**GBJ**



| GBJ                          |             |             |
|------------------------------|-------------|-------------|
| DIM.                         | MIN.        | MAX.        |
| A                            | 29.70       | 30.30       |
| B                            | 19.70       | 20.30       |
| C                            | 17.0        | 18.0        |
| D                            | 4.70        | 4.90        |
| E                            | 10.80       | 11.20       |
| F                            | 2.30        | 2.70        |
| G                            | 3.10        | 3.40        |
| H                            | 3.40        | 3.80        |
| I                            | 4.40        | 4.80        |
| J                            | 2.50        | 2.90        |
| K                            | 0.60        | 0.80        |
| L                            | 2.00        | 2.40        |
| M                            | 0.90        | 1.10        |
| N                            | 9.80        | 10.20       |
| O                            | 7.30        | 7.70        |
| P                            | 3.80        | 4.20        |
| Q                            | (3.0) x 45° |             |
| R                            | 3.10 $\phi$ | 3.40 $\phi$ |
| All Dimensions in millimeter |             |             |

**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%

| CHARACTERISTICS                                                                                              | SYMBOL          | GBJ 10005   | GBJ 1001 | GBJ 1002 | GBJ 1004 | GBJ 1006 | GBJ 1008 | GBJ 1010 | UNIT             |
|--------------------------------------------------------------------------------------------------------------|-----------------|-------------|----------|----------|----------|----------|----------|----------|------------------|
| 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 (with heatsink Note 2)<br>Rectified Current@T <sub>c</sub> =110°C (without heatsink) | $I_{(AV)}$      | 10.0<br>3.0 |          |          |          |          |          |          | A                |
| Peak Forward Surge Current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC METHOD)       | $I_{FSM}$       | 170         |          |          |          |          |          |          | A                |
| Maximum forward Voltage at 5.0A DC                                                                           | $V_F$           | 1.05        |          |          |          |          |          |          | V                |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C<br>at Rated DC Blocking Voltage @T <sub>J</sub> =125°C      | $I_R$           | 10<br>500   |          |          |          |          |          |          | uA               |
| $I^2 t$ Rating for fusing (t < 8.3ms)                                                                        | $I^2 t$         | 120         |          |          |          |          |          |          | A <sup>2</sup> S |
| Typical Junction<br>Capacitance per element (Note 1)                                                         | $C_J$           | 55          |          |          |          |          |          |          | pF               |
| Typical Thermal Resistance (Note 2)                                                                          | $R_{\theta JC}$ | 1.4         |          |          |          |          |          |          | °C/W             |
| Operating Temperature Range                                                                                  | $T_J$           | -55 to +150 |          |          |          |          |          |          | °C               |
| Storage Temperature Range                                                                                    | $T_{STG}$       | -55 to +150 |          |          |          |          |          |          | °C               |

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2.Device mounted on 150mm x 150mm x 1.6mm Cu Plate Heatsink.

REV. 2, 01-Dec-2000, KBDG03

FIG.1 - FORWARD CURRENT DERATING CURVE

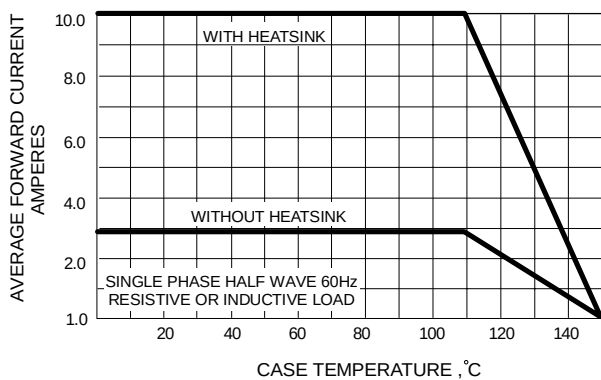


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

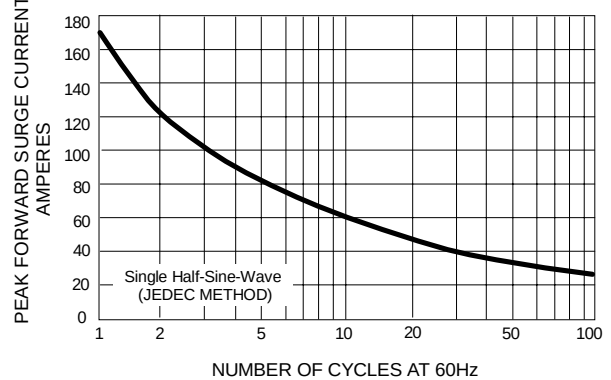


FIG.3 - TYPICAL JUNCTION CAPACITANCE

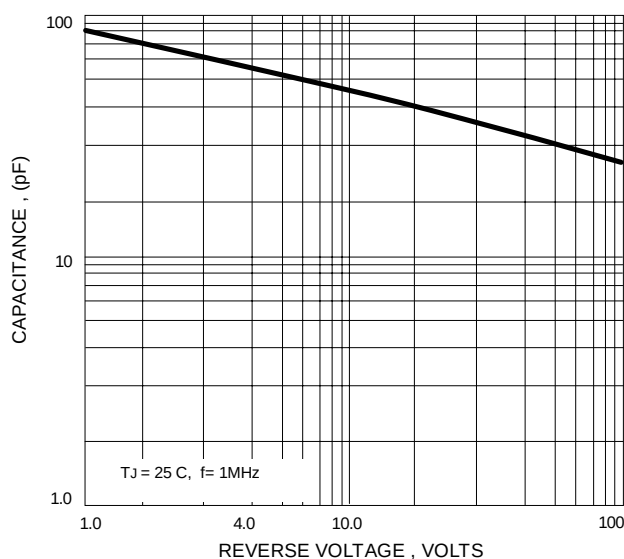


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

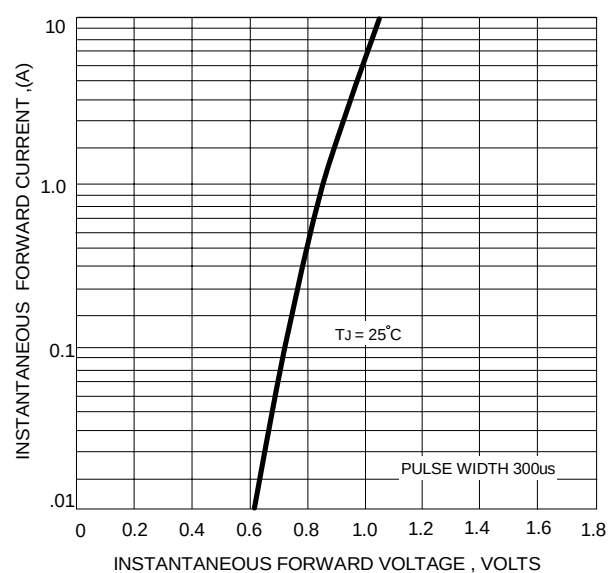


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

