



# GBJ50AG THRU GBJ50MG

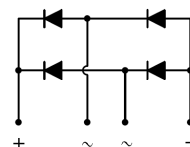
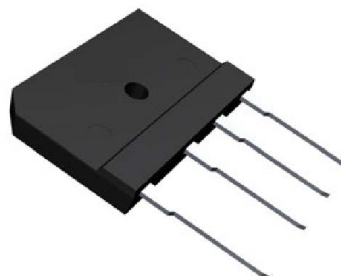
## GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE - **50 to 1000** Volts  
FORWARD CURRENT - **50.0** Amperes

### FEATURES

- Polarity: As marked on body
- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has U/L  
The flammability classification 94V-0
- Mounting position: Any
- Weight: 0.24 ounces , 6.79 grams

### GBJ



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| CHARACTERISTICS                                                                                         | SYMBOL          | GBJ50AG     | GBJ50BG | GBJ50DG | GBJ50GG | GBJ50JG | GBJ50KG | GBJ50MG | 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 Rectified Current<br>(with heatsink Note 2)                                     | $I_{(AV)}$      | 50          |         |         |         |         |         |         | A             |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load (JEDEC Method) | $I_{FSM}$       | 400         |         |         |         |         |         |         | A             |
| Maximum Forward Voltage at 25 A DC                                                                      | $V_F$           | 1.0         |         |         |         |         |         |         | V             |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage                                              | $I_R$           | 5.0<br>500  |         |         |         |         |         |         | $\mu A$       |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ )                                                                | $I^2t$          | 664         |         |         |         |         |         |         | $A^2s$        |
| Typical Junction Capacitance Per Element (Note1)                                                        | $C_J$           | 140         |         |         |         |         |         |         | pF            |
| Typical Thermal Resistance (Note2)                                                                      | $R_{\theta JC}$ | 1.0         |         |         |         |         |         |         | $^{\circ}C/W$ |
| Operating Temperature Range                                                                             | $T_J$           | -55 to +150 |         |         |         |         |         |         | $^{\circ}C$   |
| Storage Temperature Range                                                                               | $T_{STG}$       | -55 to +150 |         |         |         |         |         |         | $^{\circ}C$   |

NOTES: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Device mounted on 150mm\*150mm\*1.6mm Cu Plate Heatsink.



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FIG.1-FORWARD CURRENT DERATING CURVE

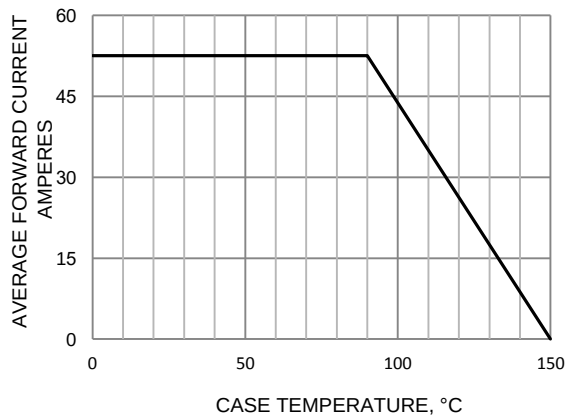


FIG.2-MAXIMUM FORWARD SURGE CURRENT

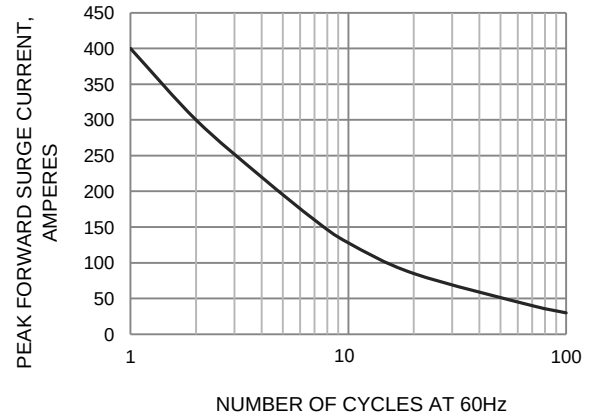


FIG.3-TYPICAL JUNCTION CAPACITANCE

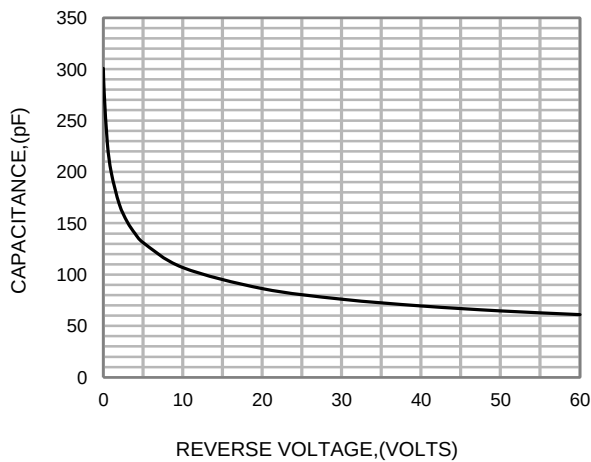


FIG.4-TYPICAL FORWARD CHARACTERISTICS

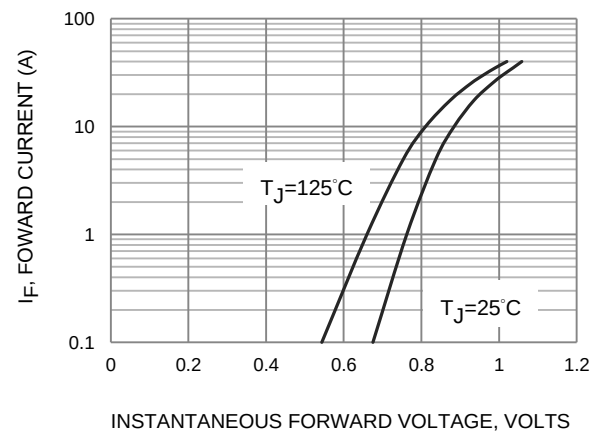
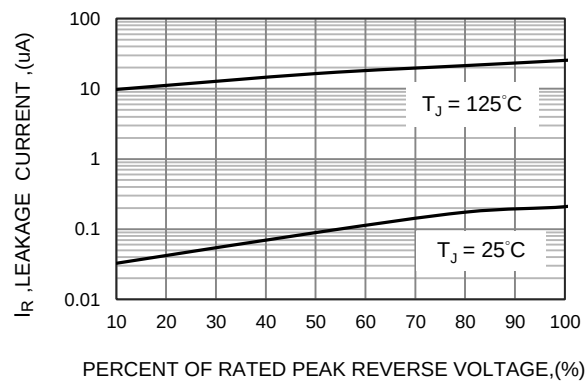
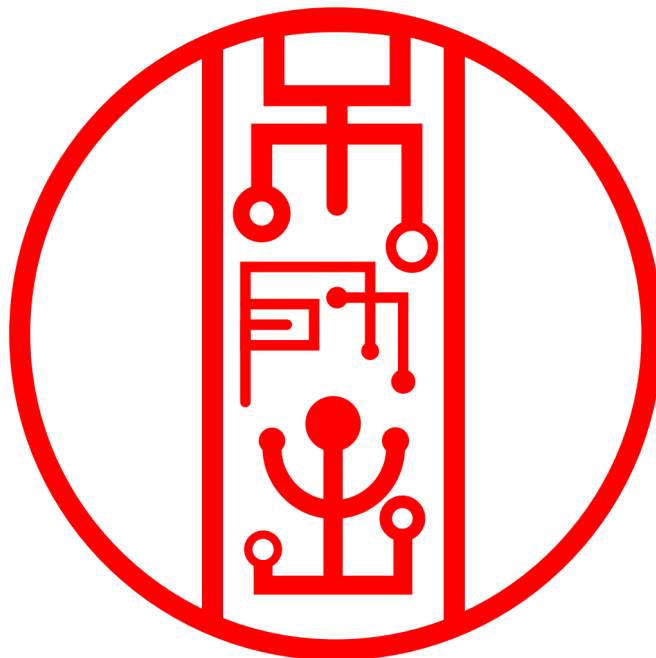
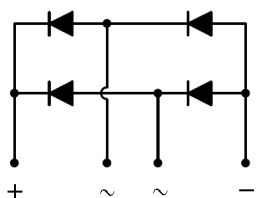


FIG.5-TYPICAL REVERSE CHARACTERISTICS



## GBJ Package Outline Dimensions



GBJ mechanical data

| UNIT |     | A     | B     | C    | D     | E    | F    | G    | H    | I    | J    | K    | L    | M     | N    | O    | P    |
|------|-----|-------|-------|------|-------|------|------|------|------|------|------|------|------|-------|------|------|------|
| mm   | max | 30.30 | 20.30 | 3.80 | 18.00 | 2.90 | 0.80 | 11.2 | 4.80 | 5.80 | 4.20 | 2.40 | 1.15 | 10.20 | 7.70 | C3.0 | φ3.6 |
|      | min | 29.70 | 19.70 | 3.40 | 17.00 | 2.50 | 0.55 | 10.8 | 4.40 | 4.80 | 3.80 | 2.00 | 0.90 | 9.80  | 7.30 |      | φ3.0 |
| mil  | max | 1193  | 799   | 150  | 709   | 114  | 31   | 441  | 189  | 228  | 165  | 94   | 45   | 402   | 303  | C118 | φ142 |
|      | min | 1169  | 776   | 134  | 669   | 98   | 22   | 425  | 173  | 189  | 150  | 79   | 35   | 386   | 287  |      | φ118 |