# GBJ50AG THRU GBJ50MG

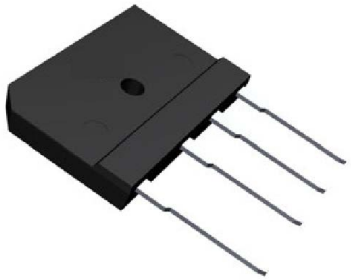
## GLASS PASSIVATED BRIDGE RECTIFIERS

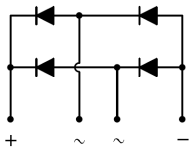
REVERSE VOLTAGE - **50** to **1000** Volts
FORWARD CURRENT - **50.0** Amperes

### 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 postition:Any
- Weight: 0.24 ounces , 6.79 grams

**GBJ**






## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ 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 (with heatsink Note 2) | $I_{(AV)}$ | 50 | | | | | | | A |
| Peak Forward Surage Current 8.3ms Single Half Sine-Wave 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 $T_J$=25℃ at Rated DC Blocking Voltage $T_J$=125℃ | $I_R$ | 5.0<br>500 | | | | | | | uA |
| $I^2t$ 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 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

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.

FIG.1-FORWARD CURRENT DERATING CURVE

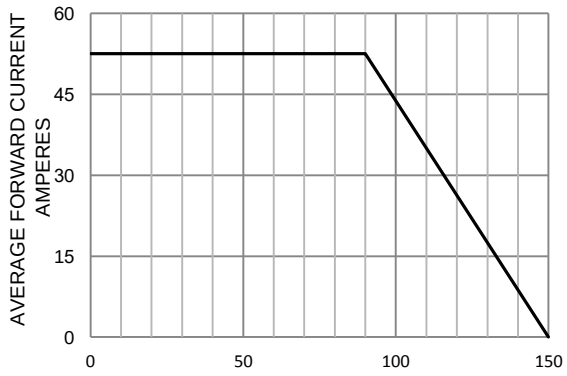



FIG.2-MAXIMUM FOWARD SURGE CURRENT

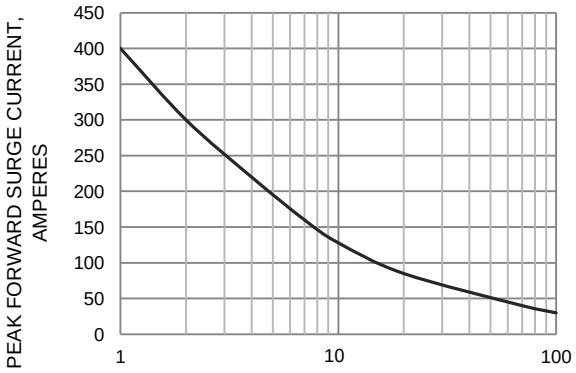



FIG.3-TYPICAL JUNCTION CAPACITANCE

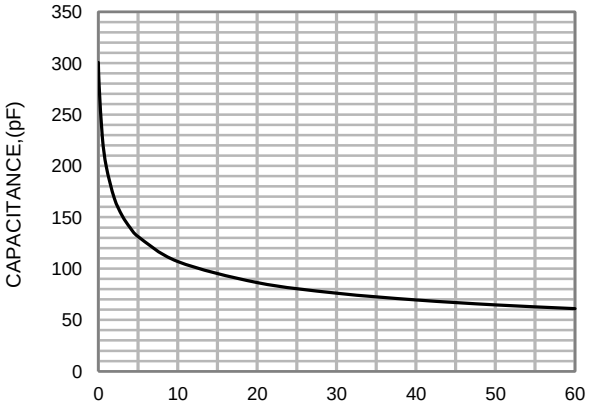



FIG.4-TYPICAL FORWARD CHARACTERISTICS

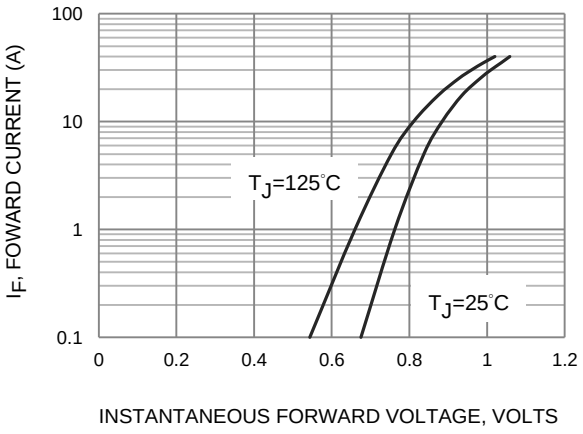
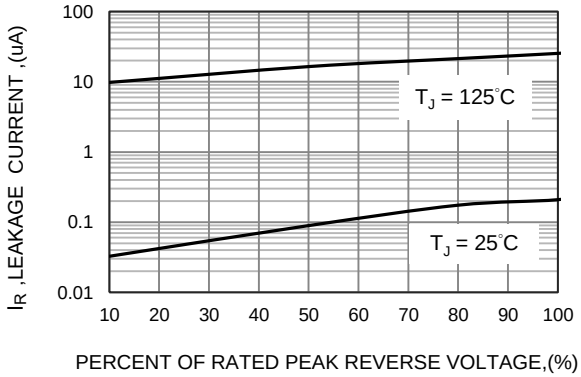
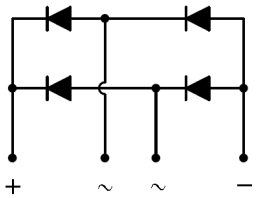



FIG.5-TYPICAL REVERSE CHARACTERISTICS



## 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 |