Elektronische Bauelemente

# GBJ50005 ~ GBJ5010

**Voltage 50V ~ 1000V**

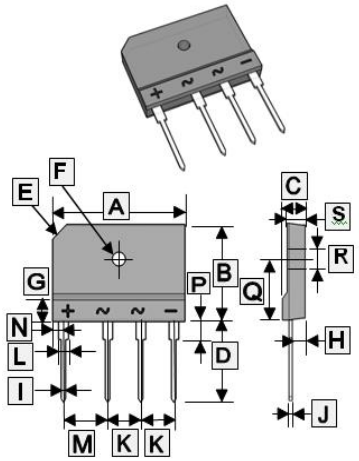
**50.0 Amp Glass Passivited Bridge Rectifiers**

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

## 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 Underwriters Laboratory flammability classification 94V-0

**GBJ**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 29.7 | 30.3 | J | 0.6 | 0.8 |
| B | 19.7 | 20.3 | K | 7.3 | 7.7 |
| C | 4.4 | 4.8 | L | 2.0 | 2.4 |
| D | 17.0 | 18.0 | M | 9.8 | 10.2 |
| E | 3.0 x 45° | | N | 2.3 | 2.7 |
| F | 3.1 | 3.4 | P | 3.6 | 4.2 |
| G | - | 5.1 | Q | 10.8 | 11.2 |
| H | 2.5 | 2.9 | R | 3.1 | 3.4 |
| I | 0.9 | 1.1 | S | 3.4 | 3.8 |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

| Parameter | | Symbol | Part Number | | | | | | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | GBJ 50005 | GBJ 5001 | GBJ 5002 | GBJ 5004 | GBJ 5006 | GBJ 5008 | GBJ 5010 | |
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Bridge Input 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 heat sink[2]) Rectified Current @$T_C$=100°C (without heat sink) | | $I_{(AV)}$ | 50 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method) | | $I_{FSM}$ | 400 | | | | | | | A |
| Maximum Forward Voltage @ 25A DC | | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $T_J$=25°C | $I_R$ | 10.0 | | | | | | | μA |
| | $T_J$=125°C | | 500 | | | | | | | |
| $I^2t$ Rating for Fusing (t<8.3ms) | | $I^2t$ | 660 | | | | | | | $A^2s$ |
| Typical Thermal Resistance [1] | | $R_{\theta JC}$ | 1.5 | | | | | | | °C/W |
| Operating and Storage temperature range | | $T_J$,$T_{STG}$ | -55~150 | | | | | | | °C |

Notes :

1. Thermal resistance from junction to case with units mounted on heat sink.
2. Device mounted on 300mm*300mm*1.6mm Cu plate heat sink.

## RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

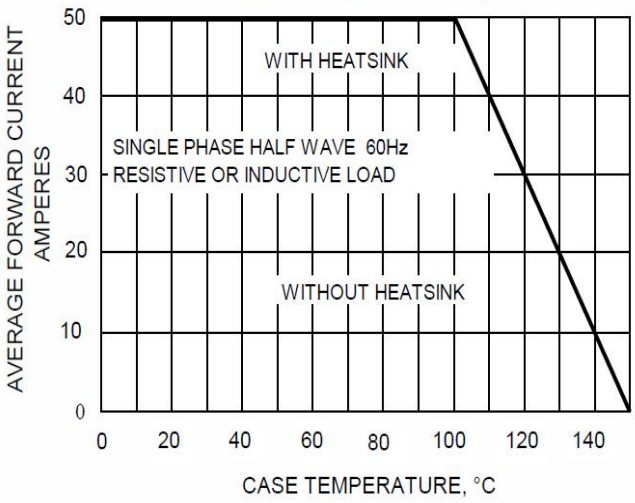



FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

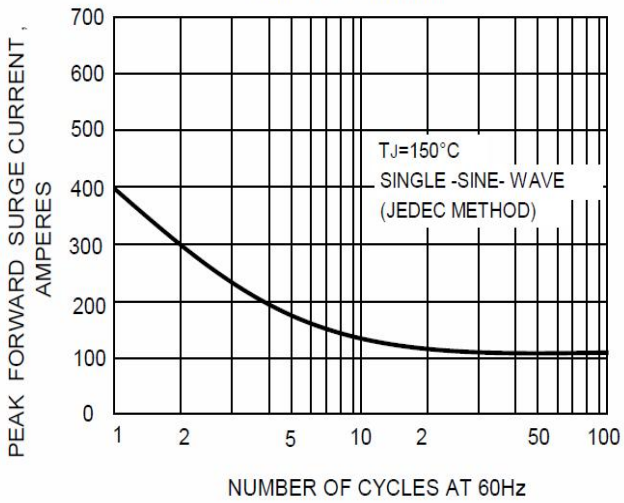



FIG.3-TYPICAL FORWARD CHARACTERISTICS

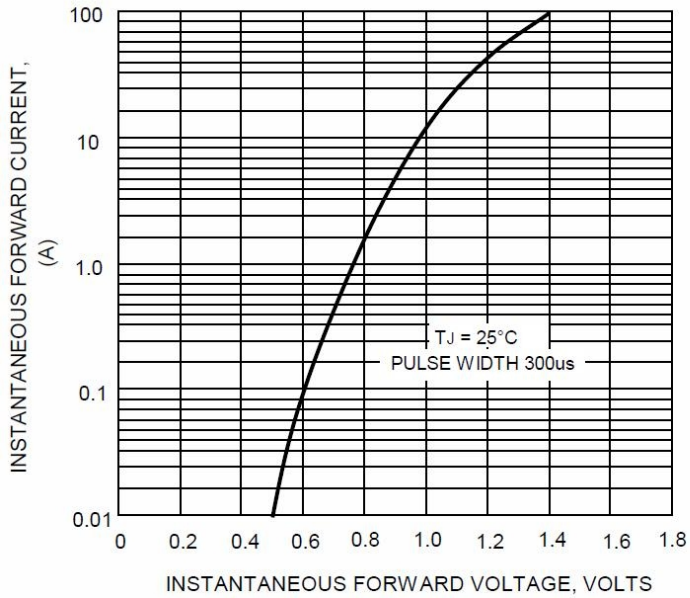



FIG.4-TYPICAL REVERSE CHARACTERISTICS