

Single-Phase Glass Passivated Bridge Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0
- Glass passivated die construction
- High case dielectric strength of 1500 V_{RMS}
- Low reverse leakage current
- Ideal for printed circuit boards
- Surge overload rating to 350A Peak
- This series is UL recognized under component index, File number E194718
- RoHS Compliant



GBJ



Mechanical Data

| | |
|-------------------------|---|
| Case: | Molded Plastic |
| Terminals: | Plated leads solderable per MIL-STD-202, method 208 |
| Polarity: | Molded on Body |
| Mounting: | Through Hole for #6 Screw |
| Mounting Torque: | 6.0 In-1bs Max. |
| Weight: | 6.6 grams |

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted)

| Symbol | Description | GBJ25 005 | GBJ25 01 | GBJ25 02 | GBJ25 04 | GBJ25 06 | GBJ25 08 | GBJ25 10 | Unit |
|---------------------------------------|--|-------------|----------|----------|----------|----------|----------|----------|------------------|
| V_{RRM} | Max. Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| V_{RMS} | Max. RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| V_{DC} | Max. DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| I_(AV) | Max. Average Forward Rectified Output Current at T _c =100°C | 25 | | | | | | | A |
| I_{FSM} | Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | 350 | | | | | | | A |
| I_t | Rating for Fusing (t<8.3ms) | 510 | | | | | | | A ² s |
| T_J, T_{STG} | Operating and Storage Temperature Range | -65 to +150 | | | | | | | ° C |

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GBJ25005 - GBJ2510

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol | Description | GBJ25 005 | GBJ25 01 | GBJ25 02 | GBJ25 04 | GBJ25 06 | GBJ25 08 | GBJ25 10 | Unit | |
|-----------------|--|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|---------|
| V_F | Max. Instantaneous Forward Voltage Drop per leg at 12.5A DC | 1.05 | | | | | | | V | |
| I_R | Max. DC Reverse Current at Rated DC Blocking Voltage per leg | $T_A=25^{\circ}C$ | | | | | | | 10 | μA |
| | | $T_C=125^{\circ}C$ | | | | | | | 500 | |
| C_J | Typical Junction Capacitance per leg (Note2) | 60 | | | | | | | pF | |
| $R_{\theta-JC}$ | Typical Thermal Resistance Junction to case (Note3) | 1.0 | | | | | | | $^{\circ}C/W$ | |

Notes:

1. Non-repetitive: For $1 > 1ms$ and $< 8.3ms$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to case per leg. Unit mounted 220 x 220 x 1.6mm aluminum plate heat sink.
4. Single phase, 60Hz, resistive or inductive load.
5. For capacitive load, derate current by 20%.

Typical Characteristics Curves

Fig.1- Derating Curve Output Rectified Current

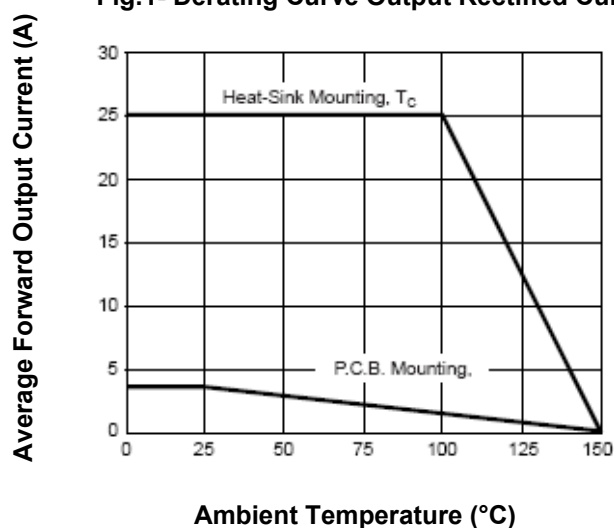
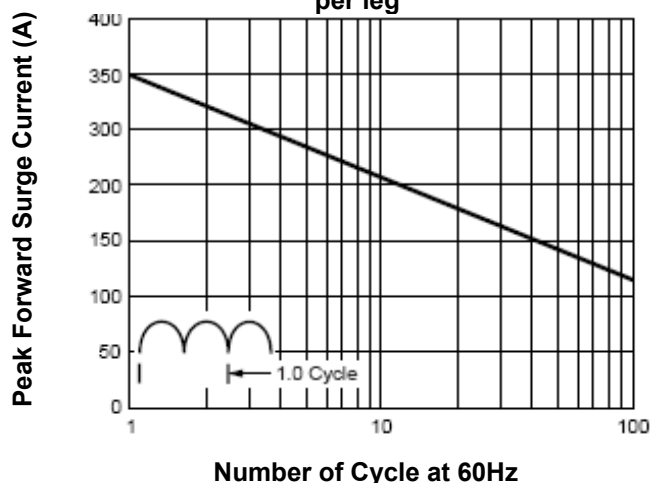


Fig.2- Max. Non-Repetitive Peak Forward Surge Current per leg



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Fig.3- Typical Forward Characteristics per leg

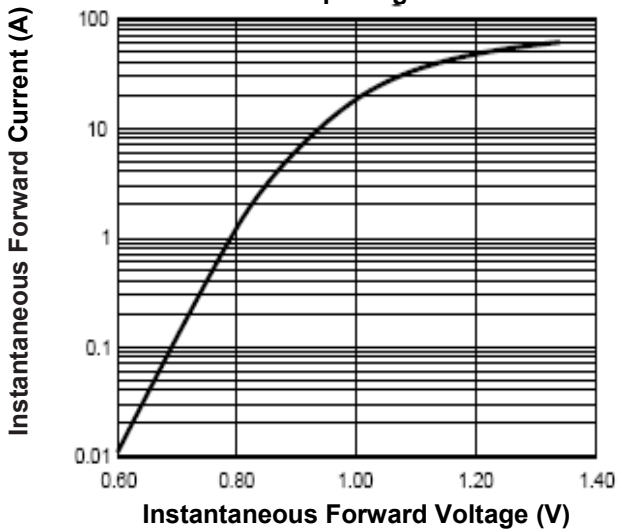


Fig.4- Typical Reverse Characteristics per leg

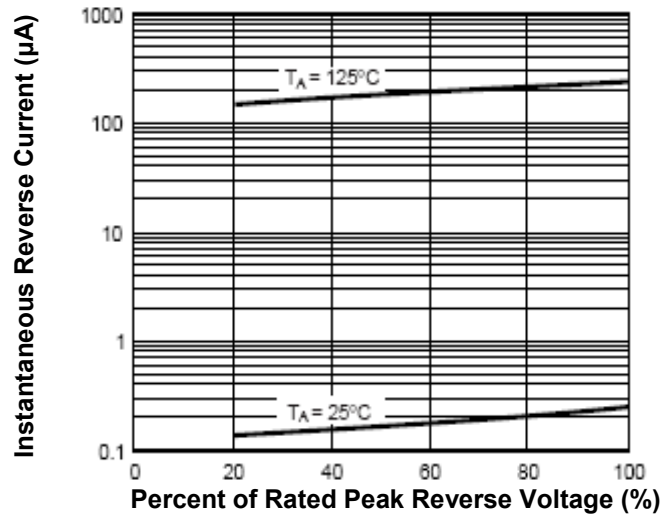


Fig.5- Typical Junction Capacitance per leg

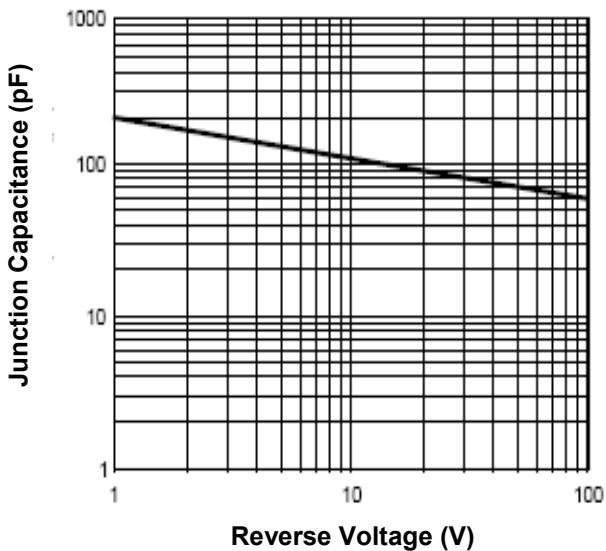
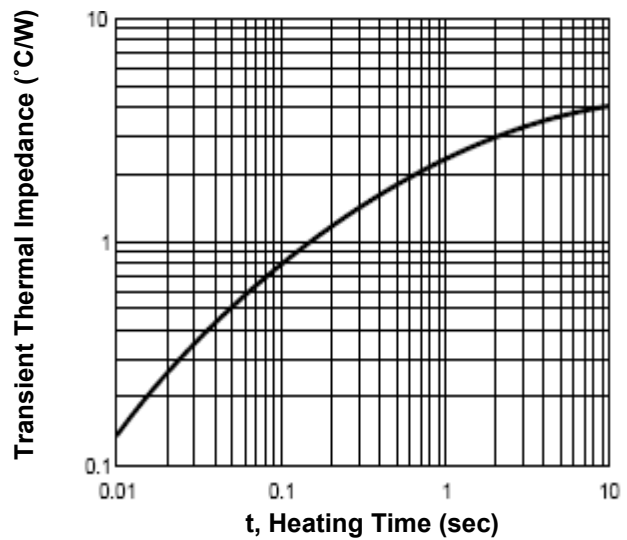


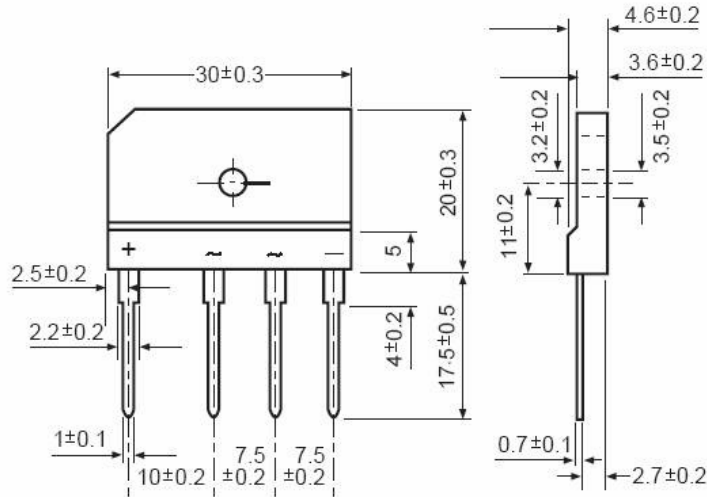
Fig.6- Typical Transient Thermal Impedance



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Dimensions in mm



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