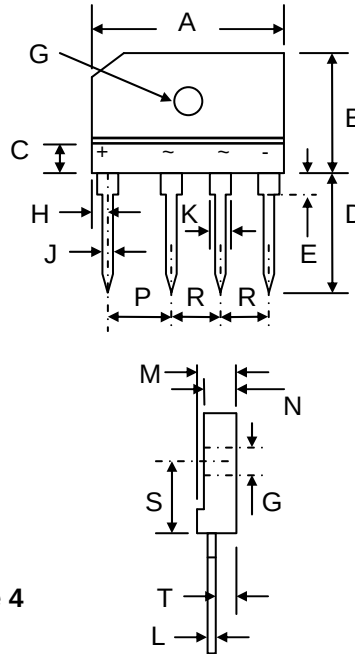


### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
-  Recognized File # E157705

### Mechanical Data

- Case: GBJ-6, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 7.0 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 0.8 N.m Max.
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| GBJ-6                |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 29.7 | 30.3 |
| B                    | 19.7 | 20.3 |
| C                    | 4.8  | 5.8  |
| D                    | 17.0 | 18.0 |
| E                    | 3.6  | 4.2  |
| G                    | 3.1Ø | 3.4Ø |
| H                    | 2.3  | 2.7  |
| J                    | 0.9  | 1.1  |
| K                    | 2.0  | 2.4  |
| L                    | 0.6  | 0.8  |
| M                    | 4.4  | 4.8  |
| N                    | 3.4  | 3.8  |
| P                    | 9.8  | 10.2 |
| R                    | 7.3  | 7.7  |
| S                    | 10.8 | 11.2 |
| T                    | 2.5  | 2.9  |
| All Dimensions in mm |      |      |

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic                                                                                                     | Symbol                                                 | GBJ8A       | GBJ8B | GBJ8D | GBJ8G | GBJ8J | GBJ8K | GBJ8M | Unit             |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-------|-------|-------|-------|-------|-------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                             | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V                |
| RMS Reverse Voltage                                                                                                | V <sub>R(RMS)</sub>                                    | 35          | 70    | 140   | 280   | 420   | 560   | 700   | V                |
| Average Rectified Output Current @T <sub>C</sub> = 110°C (Note 1)                                                  | I <sub>O</sub>                                         | 8.0         |       |       |       |       |       |       | A                |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I <sub>FSM</sub>                                       | 170         |       |       |       |       |       |       | A                |
| Forward Voltage per leg @I <sub>F</sub> = 4.0A                                                                     | V <sub>FM</sub>                                        | 1.05        |       |       |       |       |       |       | V                |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                | I <sub>RM</sub>                                        | 5.0<br>500  |       |       |       |       |       |       | µA               |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                     | I <sup>2</sup> t                                       | 166         |       |       |       |       |       |       | A <sup>2</sup> s |
| Typical Junction Capacitance (Note 2)                                                                              | C <sub>J</sub>                                         | 55          |       |       |       |       |       |       | pF               |
| Thermal Resistance Junction to Ambient (Note 3)<br>Thermal Resistance Junction to Case (Note 1)                    | R <sub>θJA</sub><br>R <sub>θJC</sub>                   | 26<br>2.8   |       |       |       |       |       |       | °C/W             |
| RMS Isolation Voltage Terminals to Case, t = 1min                                                                  | V <sub>iso</sub>                                       | 2500        |       |       |       |       |       |       | V                |
| Operating and Storage Temperature Range                                                                            | T <sub>J</sub> , T <sub>STG</sub>                      | -55 to +150 |       |       |       |       |       |       | °C               |

Note: 1. Mounted on 100 x 100 x 1.6mm thick Al. heatsink.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
3. Mounted on PCB with 12 x 12mm copper pads and measured at lead length 9.5mm from case.

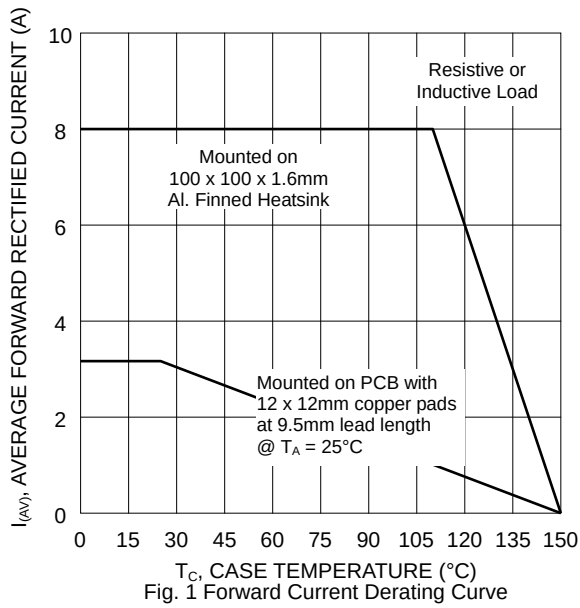


Fig. 1 Forward Current Derating Curve

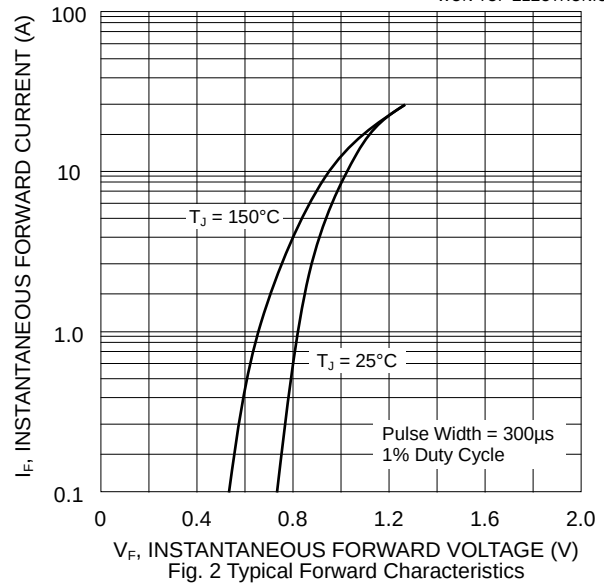


Fig. 2 Typical Forward Characteristics

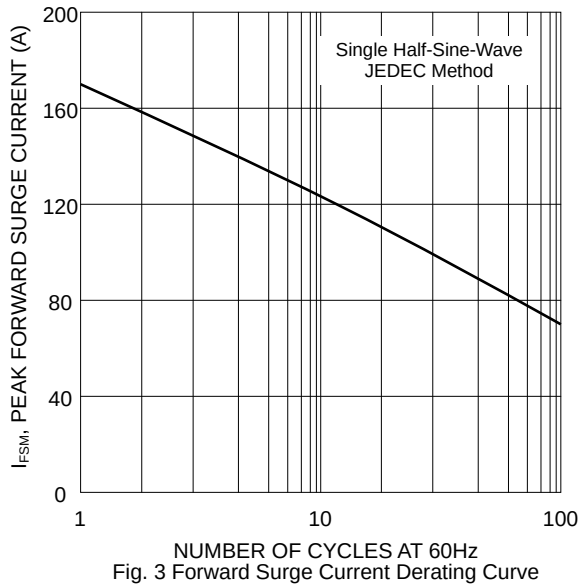


Fig. 3 Forward Surge Current Derating Curve

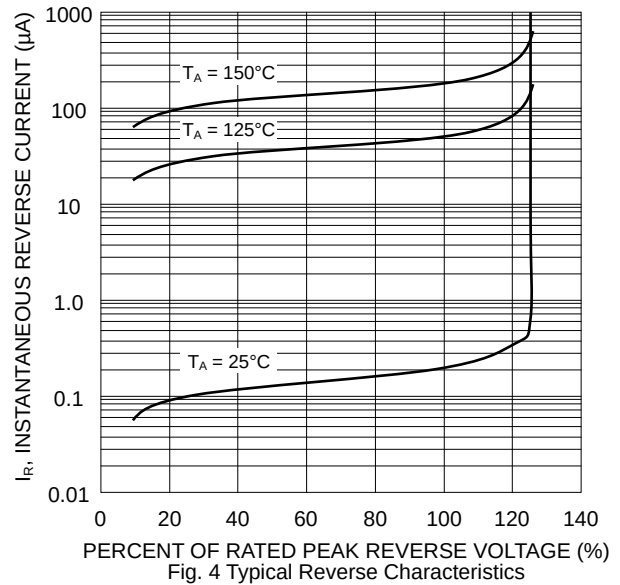


Fig. 4 Typical Reverse Characteristics

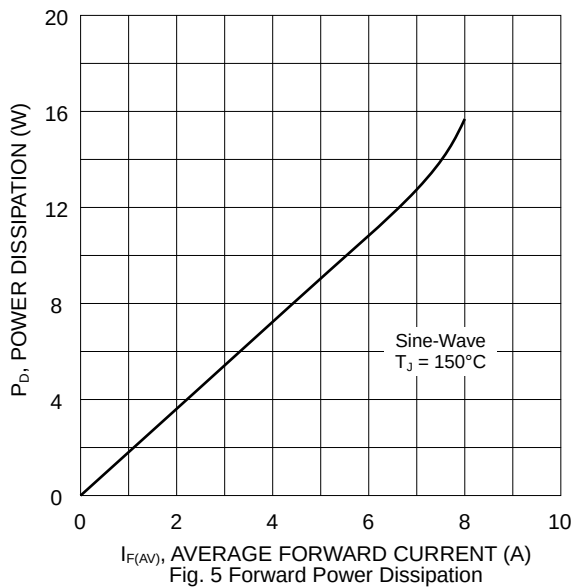


Fig. 5 Forward Power Dissipation

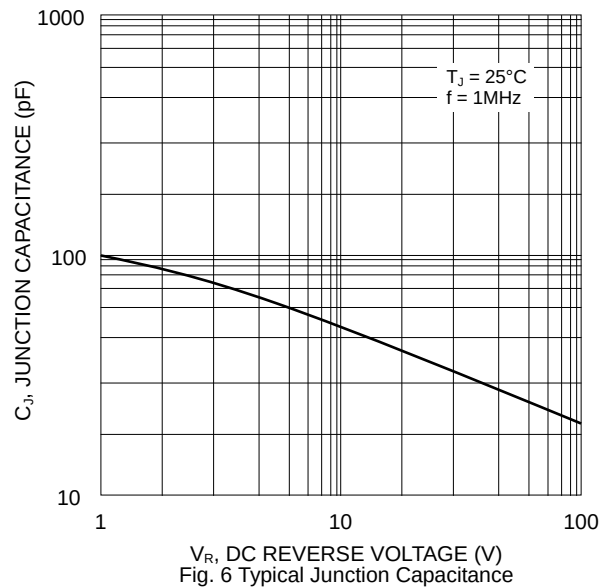
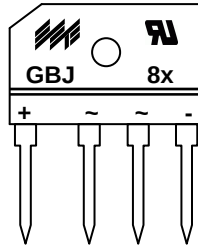


Fig. 6 Typical Junction Capacitance

## MARKING INFORMATION



GBJ8x      = Device Number  
 x          = A, B, D, G, J, K or M  
 Polarity   = As Marked on Body

## PACKAGING INFORMATION

### BULK

| Tube Size<br>L x W x H (mm) | Quantity<br>(PCS) | Inner Box Size<br>L x W x H (mm) | Quantity<br>(PCS) | Carton Size<br>L x W x H (mm) | Quantity<br>(PCS) | Approx. Gross Weight<br>(KG) |
|-----------------------------|-------------------|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|
| 475 x 40 x 7                | 15                | 490 x 145 x 135                  | 750               | 510 x 305 x 160               | 1,500             | 16.0                         |

**Note:** 1. Anti-static tube, water clear color.

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| GBJ8A       | SIL Bridge   | 15 Units/Tube     |
| GBJ8B       | SIL Bridge   | 15 Units/Tube     |
| GBJ8D       | SIL Bridge   | 15 Units/Tube     |
| GBJ8G       | SIL Bridge   | 15 Units/Tube     |
| GBJ8J       | SIL Bridge   | 15 Units/Tube     |
| GBJ8K       | SIL Bridge   | 15 Units/Tube     |
| GBJ8M       | SIL Bridge   | 15 Units/Tube     |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, GBJ8A-LF.**

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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