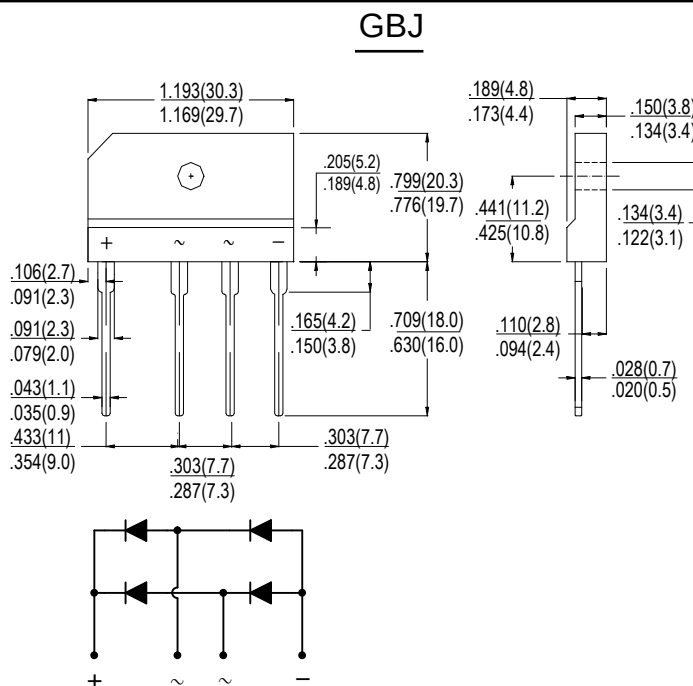


### Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

### Mechanical Data

- Case: Molded plastic, GBJ
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version



dimensions in inches and millimeters

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                                           | SYMBOL                            | GBJ 6005   | GBJ 601 | GBJ 602 | GBJ 604 | GBJ 606 | GBJ 608 | GBJ 610 | UNITS            |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------|---------|---------|---------|---------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage                                                                                       | V <sub>RRM</sub>                  | 50         | 100     | 200     | 400     | 600     | 800     | 1000    | V                |
| Working Peak Reverse Voltage                                                                                          | V <sub>RWM</sub>                  |            |         |         |         |         |         |         |                  |
| DC Blocking Voltage                                                                                                   | V <sub>DC</sub>                   |            |         |         |         |         |         |         |                  |
| RMS Reverse Voltage                                                                                                   | V <sub>RMS</sub>                  | 35         | 70      | 140     | 280     | 420     | 560     | 700     | V                |
| Average Rectified Output Current (Note 2)@T <sub>C</sub> =90℃                                                         | I <sub>F(AV)</sub>                | 6.0        |         |         |         |         |         |         | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | I <sub>FSM</sub>                  | 150        |         |         |         |         |         |         | A                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                        | I <sup>2</sup> t                  | 93.375     |         |         |         |         |         |         | A <sup>2</sup> s |
| Forward Voltage per element<br>@I <sub>F</sub> =3A<br>@I <sub>F</sub> =6A                                             | V <sub>FM</sub>                   | 1.0<br>1.1 |         |         |         |         |         |         | V                |
| Peak Reverse Current @T <sub>A</sub> =25℃<br>At Rated DC Blocking Voltage @T <sub>A</sub> =125℃                       | I <sub>R</sub>                    | 5.0<br>500 |         |         |         |         |         |         | uA               |
| Typical Junction Capacitance per leg                                                                                  | C <sub>J</sub>                    | 45         |         |         |         |         |         |         | pF               |
| Between junction and ambient, Without heatsink                                                                        | R <sub>θJA</sub>                  | 24         |         |         |         |         |         |         | ℃/W              |
| Between junction and case, With heatsink                                                                              | R <sub>θJC</sub>                  | 2.5        |         |         |         |         |         |         |                  |
| Operating and Storage Temperature Range                                                                               | T <sub>J</sub> , T <sub>STG</sub> | -55to+150  |         |         |         |         |         |         | ℃                |

Note: Unit case mounted on aluminum plate heatsink.

Fig. 1 Output Current Derating Curve

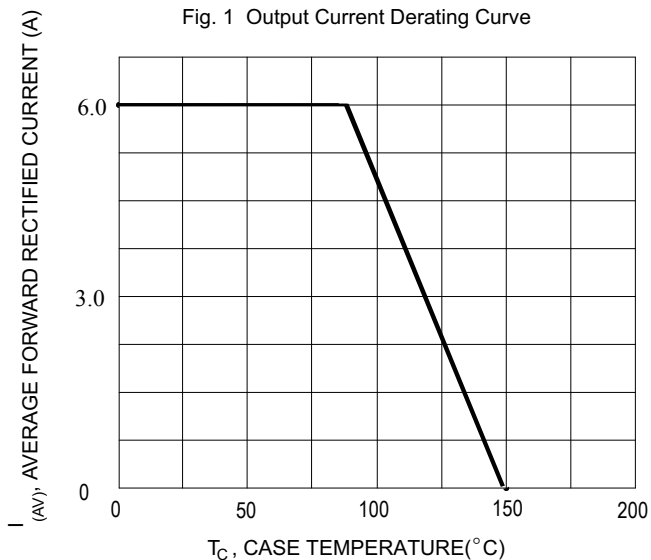


Fig. 2 Typical Forward Characteristics (per leg)

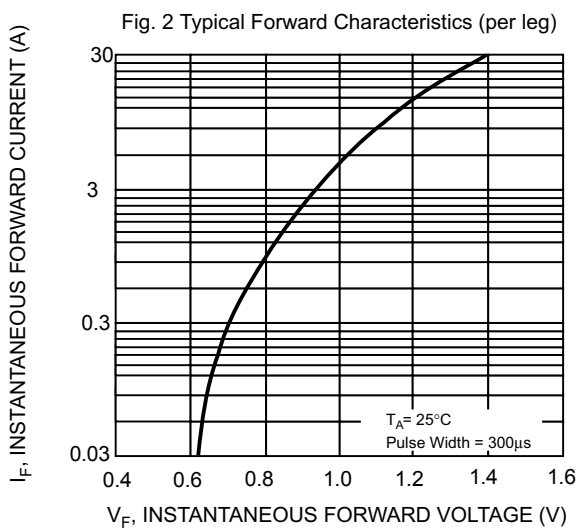


Fig. 3 Maximum Peak Forward Surge Current (per leg)

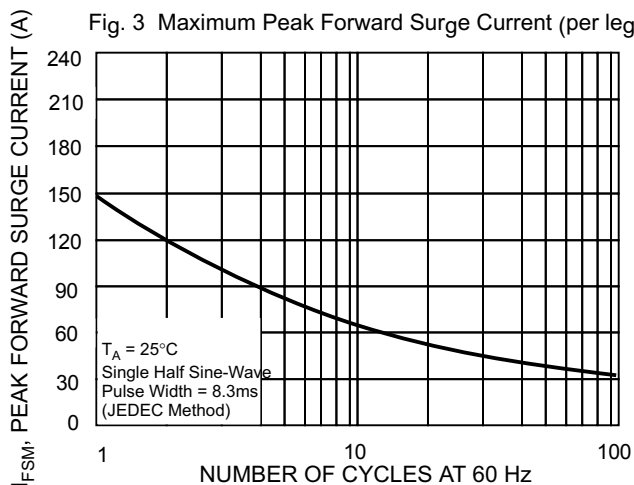


Fig. 4 Typical Junction Capacitance

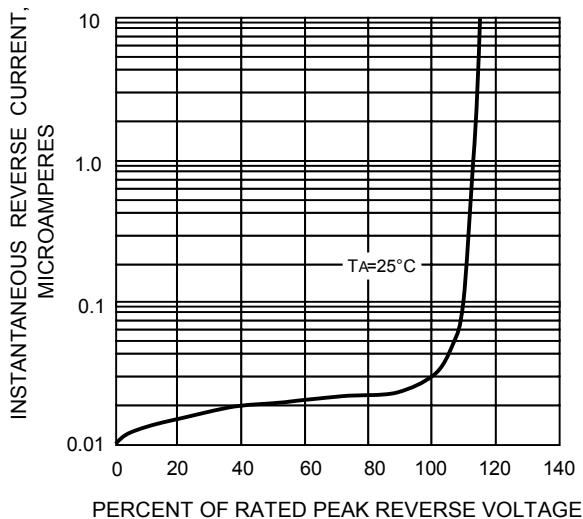


FIG.5 TYPICAL REVERSE CHARACTERISTICS

