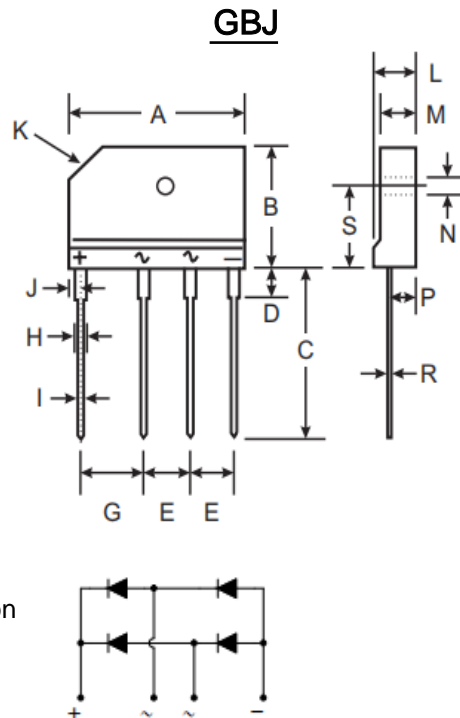


### Features

- 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



| GBJ                  |           |       |
|----------------------|-----------|-------|
| Dim                  | Min       | Max   |
| A                    | 29.70     | 30.30 |
| B                    | 19.70     | 20.30 |
| C                    | 17.00     | 18.00 |
| D                    | 3.80      | 4.20  |
| E                    | 7.30      | 7.70  |
| G                    | 9.80      | 10.20 |
| H                    | 2.00      | 2.40  |
| I                    | 0.90      | 1.10  |
| J                    | 2.30      | 2.70  |
| K                    | 3.0 X 45° |       |
| L                    | 4.40      | 4.80  |
| M                    | 3.40      | 3.80  |
| N                    | 3.10      | 3.40  |
| P                    | 2.50      | 2.90  |
| R                    | 0.60      | 0.80  |
| S                    | 10.80     | 11.20 |
| All Dimensions in mm |           |       |

### 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%.

| NUMBER  | SYMBOL          | GBJ 8005   | GBJ 801 | GBJ 802 | GBJ 804 | GBJ 806 | GBJ 808 | GBJ 810 | UNITS            |
|---|-----------------|------------|---------|---------|---------|---------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$       |            |         |         |         |         |         |         |                  |
| Working Peak Reverse Voltage  | $V_{RWM}$       | 50         | 100     | 200     | 400     | 600     | 800     | 1000    | V                |
| DC Blocking Voltage   | $V_{DC}$        |            |         |         |         |         |         |         |                  |
| RMS Reverse Voltage   | $V_{RMS}$       | 35         | 70      | 140     | 280     | 420     | 560     | 700     | V                |
| Average Rectified Output Current (Note 2)@ $T_C=90^\circ C$   | IF(AV)          | 8.0        |         |         |         |         |         |         | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 175        |         |         |         |         |         |         | A                |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ )  | $I^2t$          | 127.09     |         |         |         |         |         |         | A <sup>2</sup> s |
| Forward Voltage per element @ $I_F=4A$<br>@ $I_F=8A$  | $V_{FM}$        | 1.0<br>1.1 |         |         |         |         |         |         | V                |
| Peak Reverse Current @ $T_A=25^\circ C$<br>At Rated DC Blocking Voltage @ $T_A=125^\circ C$                     | $I_R$           | 5.0<br>500 |         |         |         |         |         |         | uA               |
| Typical Junction Capacitance per leg  | $C_J$           | 55         |         |         |         |         |         |         | pF               |
| Between junction and ambient, Without heatsink  | $R_{\theta JA}$ | 24         |         |         |         |         |         |         | °C/W             |
| Between junction and case, With heatsink  | $R_{\theta JC}$ | 1.6        |         |         |         |         |         |         |                  |
| Operating and Storage Temperature Range   | $T_J, T_{STG}$  | -55to+150  |         |         |         |         |         |         | °C               |

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance from junction to case per element. Unit mounted on 75 x 75 x 1.6mm aluminum plate heat sink.

