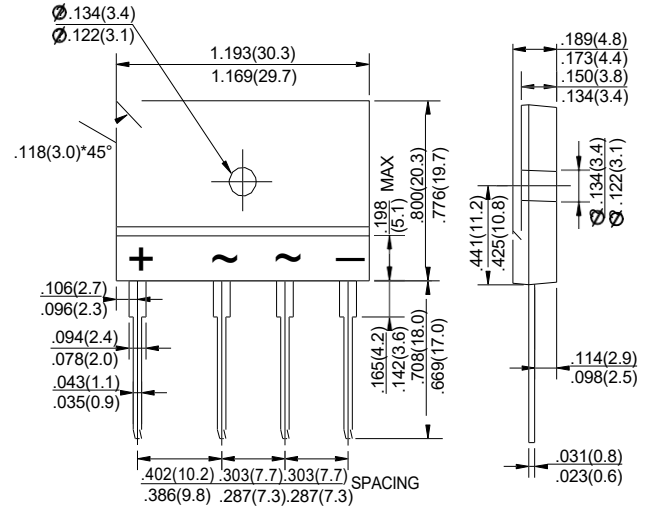


## SILICON BRIDGE RECTIFIERS

### Features

- ◆ Glass Passivated Chip Junction
- ◆ Reting to 1000V PRV
- ◆ Ideal for printed circuit board
- ◆ Reliable low cost construction utilizing molded plastic
- ◆ technique Plastic material has U/L lammability classification 94V-0
- ◆ Low forward voltage drop,high current capability

### GBJ



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                                           | SYMBOLS         | GBJ10005    | GBJ1001 | GBJ1002 | GBJ1004 | GBJ1006 | GBJ1008 | GBJ1010 | UNITS                |
|---------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---------|---------|---------|---------|---------|---------|----------------------|
| Marking Code                                                                                                        |                 |             |         |         |         |         |         |         |                      |
| Maximum repetitive peak reverse voltage                                                                             | $V_{RRM}$       | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V                    |
| Maximum RMS 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 heatsink NOTE 2)<br>Rectified current @ $T_c = 100^\circ\text{C}$ (without heatsink)  | $I_{(AV)}$      | 10.0<br>3.4 |         |         |         |         |         |         | A                    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)              | $I_{FSM}$       | 220         |         |         |         |         |         |         | A                    |
| Rating for Fusing ( $t < 8.3\text{ms}$ )                                                                            | $I^2t$          | 200.86      |         |         |         |         |         |         | $\text{A}^2\text{s}$ |
| Maximum forward voltage at 5.0A DC                                                                                  | $V_F$           | 1.0         |         |         |         |         |         |         | V                    |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A = 25^\circ\text{C}$<br>$T_A = 125^\circ\text{C}$ | $I_R$           | 10          |         |         |         |         |         |         | $\mu\text{A}$        |
|                                                                                                                     |                 | 0.5         |         |         |         |         |         |         | mA                   |
| Typical Junction Capacitance (Note 1)                                                                               | $C_J$           | 55          |         |         |         |         |         |         | pF                   |
| Typical Thermal Resistance (Note 2)                                                                                 | $R_{\theta JA}$ | 1.8         |         |         |         |         |         |         | $^\circ\text{C/W}$   |
| Operating junction temperature range                                                                                | $T_J$           | -55 to +150 |         |         |         |         |         |         | $^\circ\text{C}$     |
| storage temperature range                                                                                           | $T_{STG}$       | -55 to +150 |         |         |         |         |         |         | $^\circ\text{C}$     |

NOTES: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Device mounted on 75mm\*75mm\*1.6mm Cu plate heatsink.

3. The typical data above is for reference only.

## Ratings And Characteristic Curves

FIG.1-FORWARD CURRENT DERATING CURVE

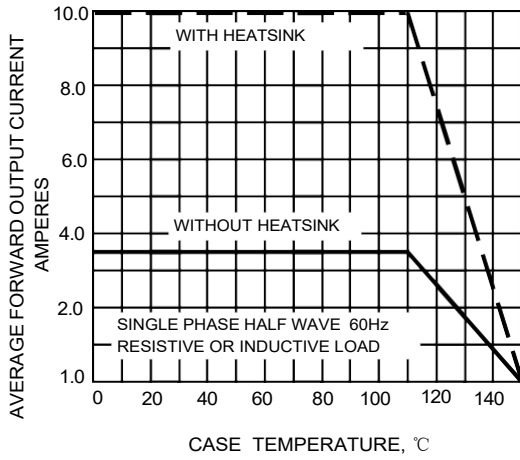


FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

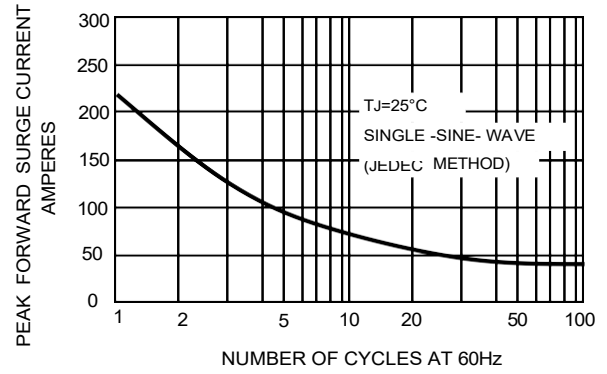


FIG.3-TYPICAL JUNCTION CAPACITANCE

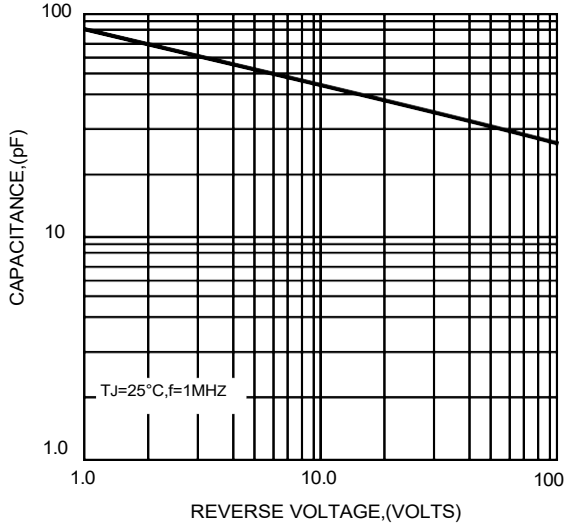


FIG.4-TYPICAL FORWARD CHARACTERISTICS

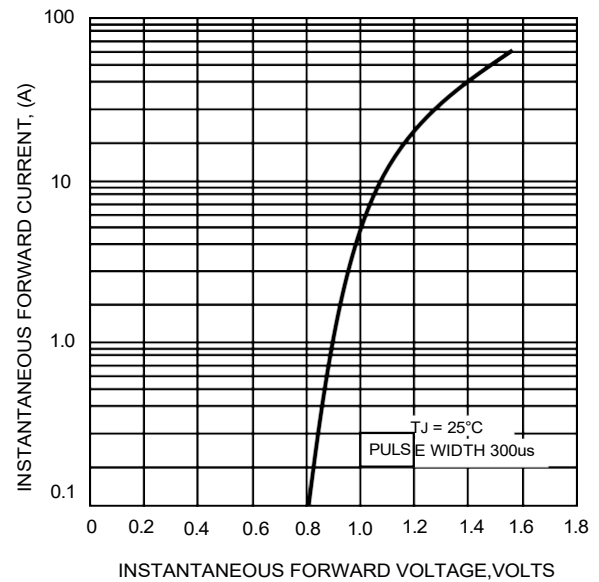
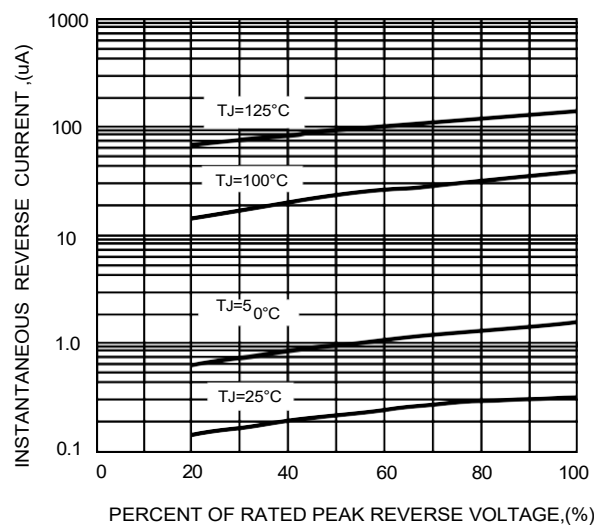


FIG.5-TYPICAL REVERSE CHARACTERISTICS



The curve above is for reference only.