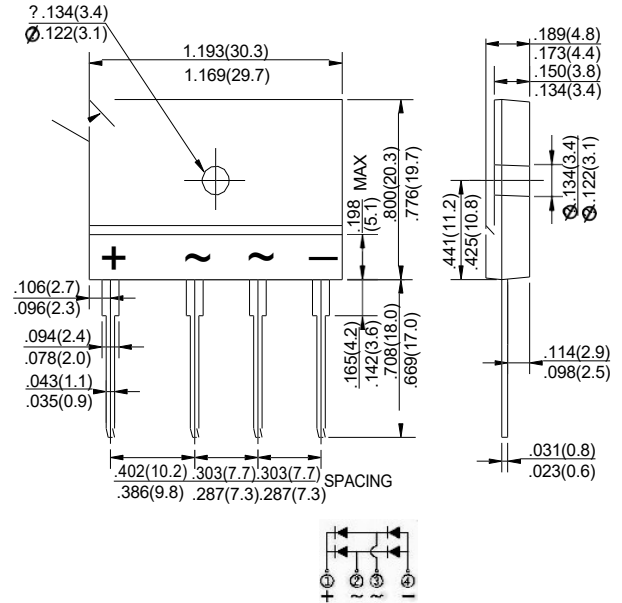


## SILICON BRIDGE RECTIFIERS

### Features

- ◆ Rating 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         | GBJ8005     | GBJ801 | GBJ802 | GBJ804 | GBJ806 | GBJ808 | GBJ810 | 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) | $I_{AV}$        | 8.0<br>3.4  |        |        |        |        |        |        | A                            |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)           | $I_{FSM}$       | 200         |        |        |        |        |        |        | A                            |
| Rating for Fusing ( $t < 8.3\text{ms}$ )                                                                         | $I^2t$          | 166.0       |        |        |        |        |        |        | $\text{A}^2\text{s}$         |
| Maximum forward voltage at 4.0A DC                                                                               | $V_F$           | 1.0         |        |        |        |        |        |        | V                            |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=125^\circ\text{C}$        | $I_R$           | 10<br>0.5   |        |        |        |        |        |        | $\mu\text{A}$<br>$\text{mA}$ |
| 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

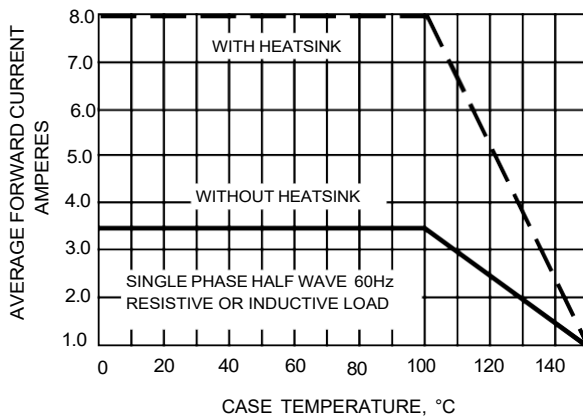


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

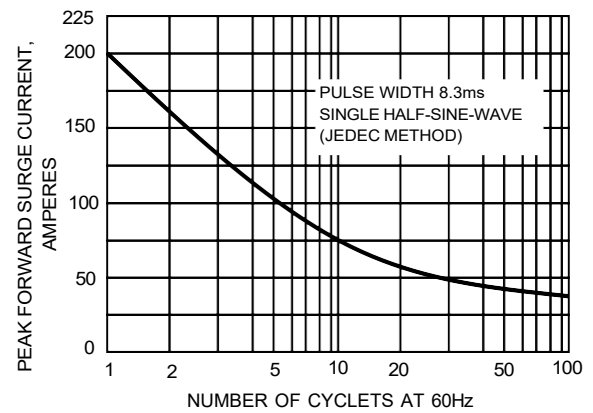


FIG.3-TYPICAL JUNCTION CAPACITANCE

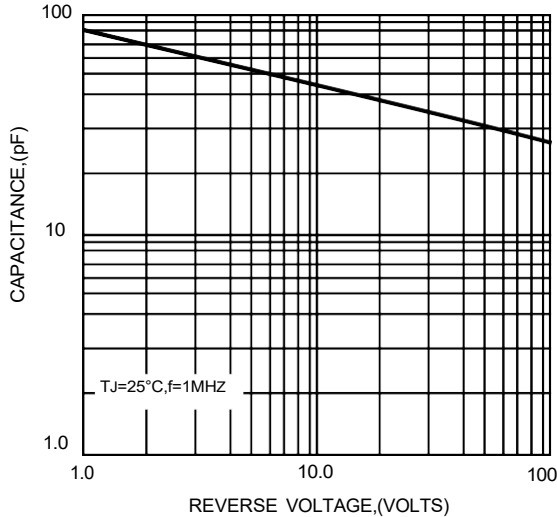


FIG.4-TYPICAL FORWARD CHARACTERISTICS

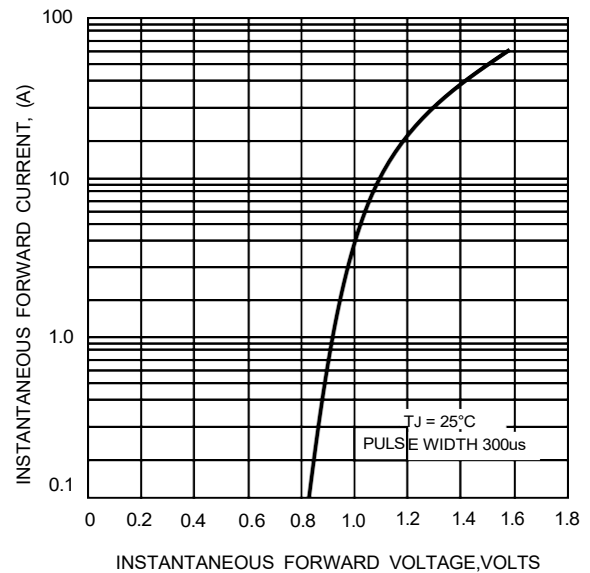
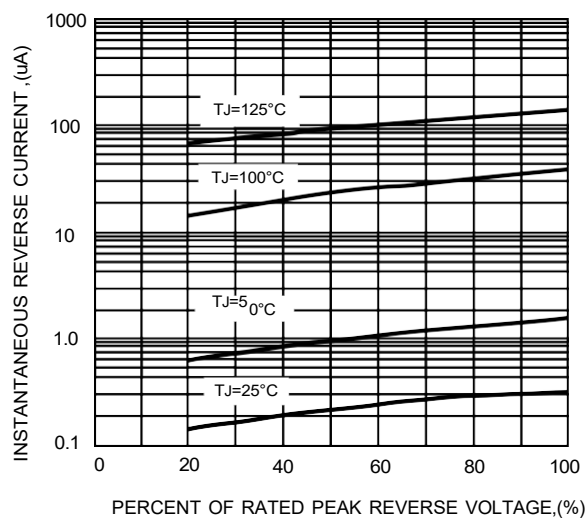


FIG.5-TYPICAL REVERSE CHARACTERISTICS



The curve above is for reference only.