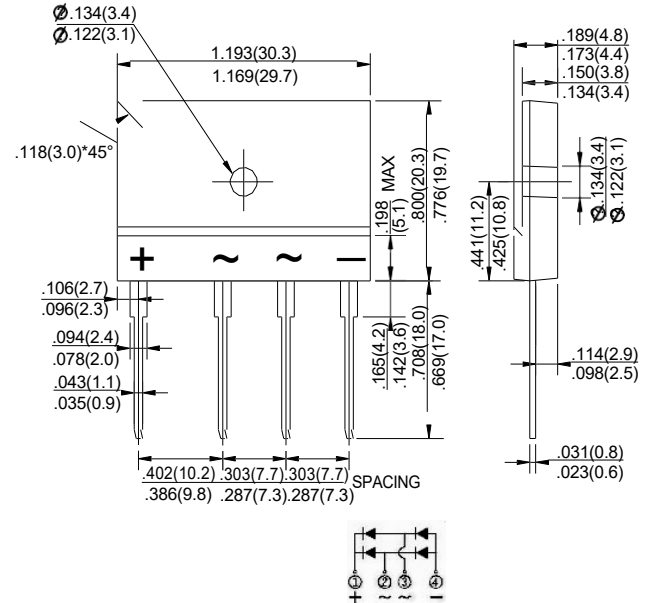


## SILICON BRIDGE RECTIFIERS

### Features

- ◆ 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         | GBJ6005     | GBJ601 | GBJ602 | GBJ604 | GBJ606 | GBJ608 | GBJ610 | 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 @ $T_c=100^{\circ}C$ (without heatsink) | $I_{AV}$        | 6.0<br>3.3  |        |        |        |        |        |        | A                |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)     | $I_{FSM}$       | 175.0       |        |        |        |        |        |        | A                |
| Rating for Fusing( $t<8.3ms$ )                                                                             | $I^2t$          | 127.0       |        |        |        |        |        |        | A <sup>2</sup> s |
| Maximum forward voltage at 3.0A DC                                                                         | $V_F$           | 1.0         |        |        |        |        |        |        | V                |
| Maximum DC reverse current $T_A=25^{\circ}C$<br>at rated DC blocking voltage $T_A=125^{\circ}C$            | $I_R$           | 10          |        |        |        |        |        |        | $\mu A$          |
|                                                                                                            |                 | 0.5         |        |        |        |        |        |        | mA               |
| Typical Junction Capacitance (Note 1)                                                                      | $C_J$           | 55          |        |        |        |        |        |        | pF               |
| Typical Thermal Resistance (Note 2)                                                                        | $R_{\theta JA}$ | 1.8         |        |        |        |        |        |        | $^{\circ}C/W$    |
| Operating junction temperature range                                                                       | $T_J$           | -55 to +150 |        |        |        |        |        |        | $^{\circ}C$      |
| storage temperature range                                                                                  | $T_{STG}$       | -55 to +150 |        |        |        |        |        |        | $^{\circ}C$      |

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

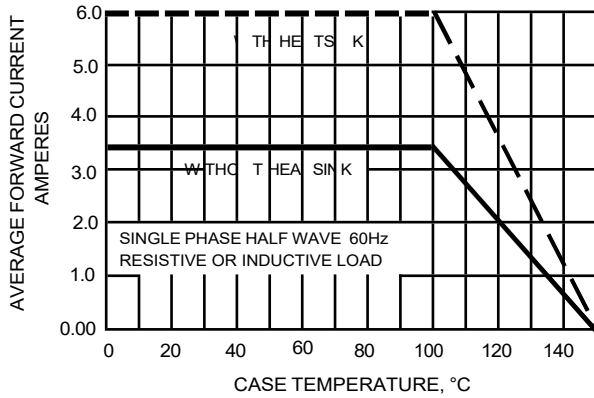


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

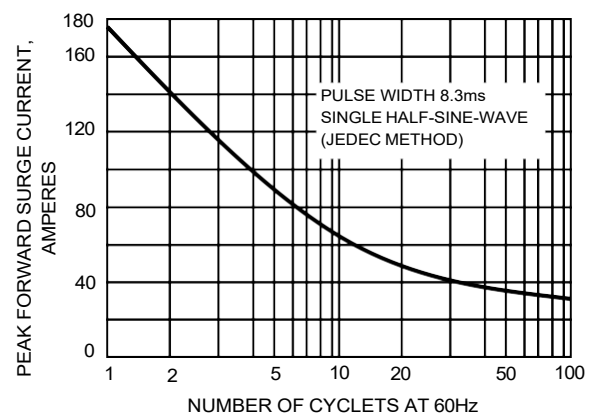


FIG.3-TYPICAL JUNCTION CAPACITANCE

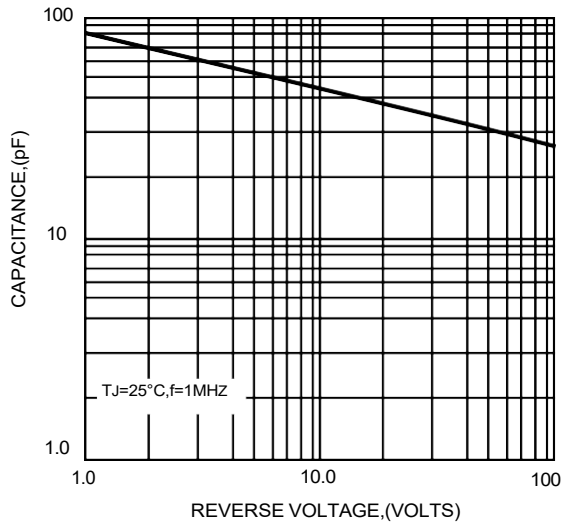


FIG.4-TYPICAL FORWARD CHARACTERISTICS

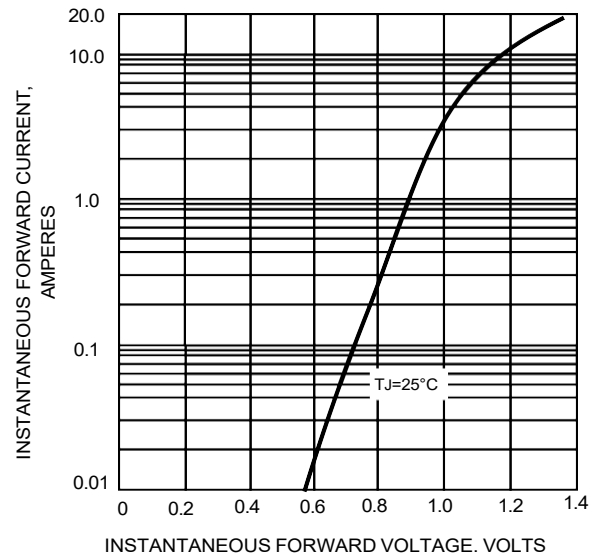
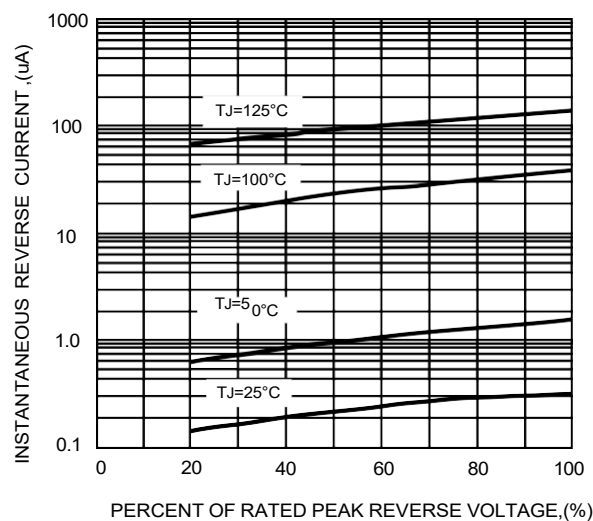


FIG.5-TYPICAL REVERSE CHARACTERISTICS



The curve above is for reference only.