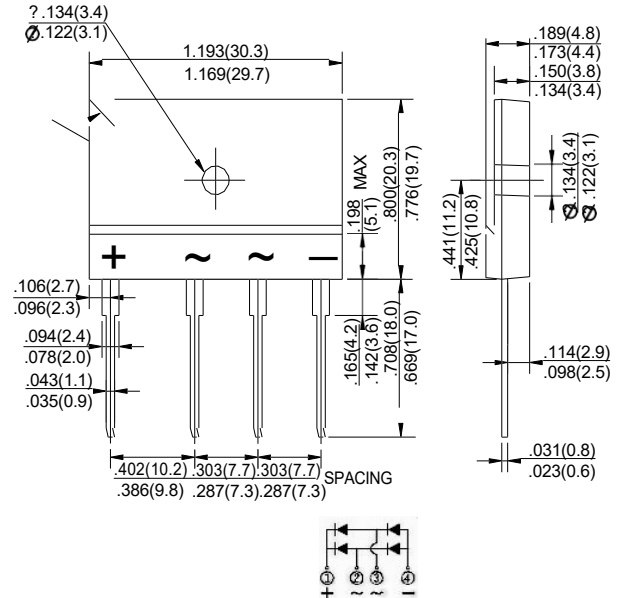


## SILICON BRIDGE RECTIFIERS

### Features

- ◆ Rating to 1000V prv
- ◆ deal 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         | GBJ25005    | GBJ2501 | GBJ2502 | GBJ2504 | GBJ2506 | GBJ2508 | GBJ2510 | 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) | $I_{AV}$        | 25.0<br>4.2 |         |         |         |         |         |         | A                    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)           | $I_{FSM}$       | 350         |         |         |         |         |         |         | A                    |
| Rating for Fusing ( $t < 8.3\text{ms}$ )                                                                         | $I^2t$          | 510         |         |         |         |         |         |         | $\text{A}^2\text{s}$ |
| Maximum forward voltage at 12.5A 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>mA  |
| Typical Junction Capacitance (Note 1)                                                                            | $C_J$           | 85          |         |         |         |         |         |         | pF                   |
| Typical Thermal Resistance (Note 2)                                                                              | $R_{\theta JC}$ | 1.0         |         |         |         |         |         |         | $^\circ\text{C/W}$   |
| Operating junction temperature range                                                                             | $T_J$           | -55 to +150 |         |         |         |         |         |         | $^\circ\text{C}$     |
| storage temperature range                                                                                        | $T_{STG}$       | -55 to +150 |         |         |         |         |         |         | $^\circ\text{C}$     |

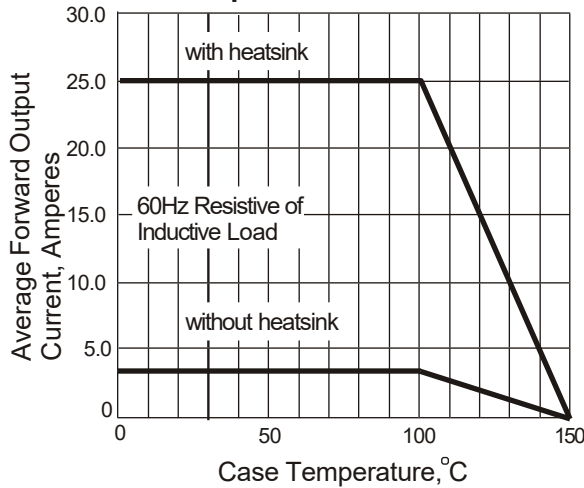
NOTES: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Device mounted on 250mm x 250mm x 20mm aluminum plate heatsink.

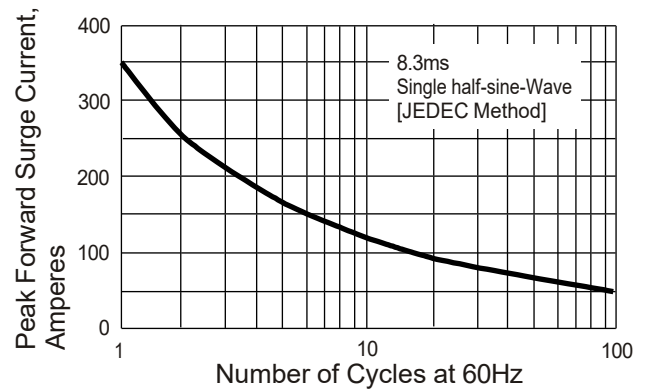
3. The typical data above is for reference only.

## Ratings And Characteristic Curves

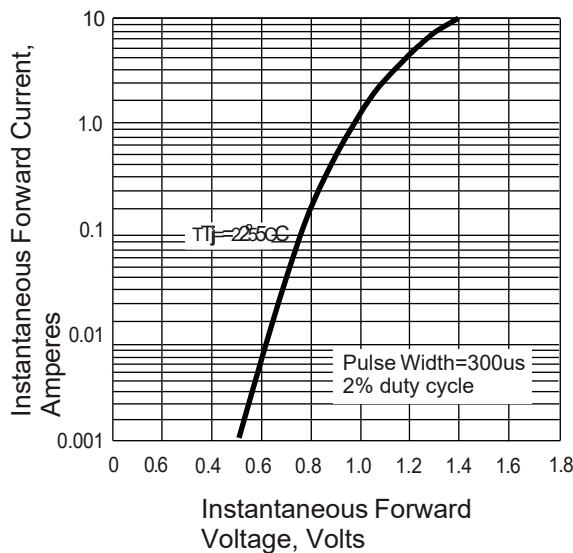
**Fig. 1 Derating Curve for Output Rectified Current**



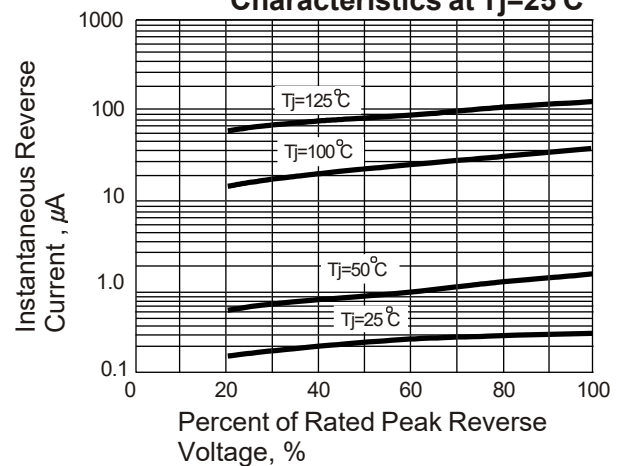
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



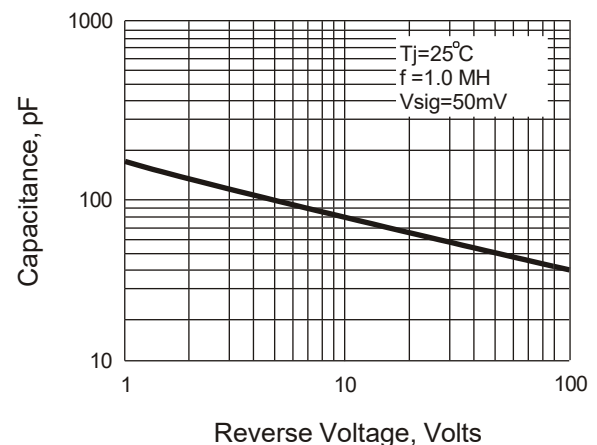
**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics at Tj=25°C**



**Fig. 5 Typical Junction Capacitance**



The curve above is for reference only.