

## GBP306 THRU GBP310

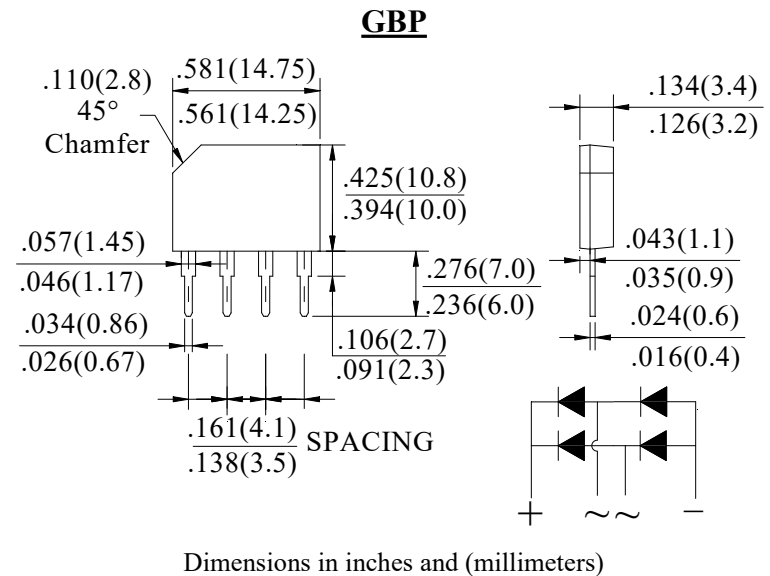
### SINGLE PHASE 3.0AMPS. GLASS PASSIVATED BRIDGE RECTIFIERS

#### FEATURE

- . UL Listed Under Recognized Component Index, File Number E338195
- . Glass passivated chip junctions
- . High case dielectric strength
- . Low Reverse Leakage Current
- . High surge current capability
- . Ideal for Printed Circuit Board Applications

#### MECHANICAL DATA

- . Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0
- . Terminals: Pure tin plated, Lead free.
- Leads solderable per MIL-STD-750, Method 2026.
- . Polarity: Marked on body
- . Mounting position: Any



### 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, derate current by 20%

| Type Number  | SYM BOL     | GBP306 | GBP308       | GBP310 | units              |
|--|-------------|--------|--------------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$   | 600    | 800          | 1000   | V                  |
| Maximum RMS Voltage  | $V_{RMS}$   | 420    | 560          | 700    | V                  |
| Maximum DC blocking Voltage  | $V_{DC}$    | 600    | 800          | 1000   | V                  |
| Maximum Average Forward (with heatsink Note2)<br>Rectified Current @ $T_C=100^{\circ}C$ (without heatsink) | $I_{F(AV)}$ |        | 3.0<br>1.5   |        | A                  |
| Peak Forward Surge Current 8.3ms single half<br>sine-wave superimposed on rate load (JEDEC<br>method)      | $I_{FSM}$   |        | 90           |        | A                  |
| Maximum Forward Voltage @ 3.0A DC<br>Drop per element @ 1.5A DC  | $V_F$       |        | 1.1<br>1.0   |        | V                  |
| Maximum DC Reverse Current @ $T_J=25^{\circ}C$<br>at rated DC blocking voltage @ $T_J=125^{\circ}C$        | $I_R$       |        | 5.0<br>500.0 |        | $\mu A$            |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ )   | $I^2t$      |        | 33.6         |        | A <sup>2</sup> Sec |
| Typical Junction Capacitance (Note 1)  | $C_J$       |        | 35           |        | pF                 |
| Typical Thermal Resistance (Note 2)  | $R_{(JC)}$  |        | 3.0          |        | $^{\circ}C/W$      |
| Storage Temperature  | $T_{STG}$   |        | -55 to +150  |        | $^{\circ}C$        |
| Operating Junction Temperature   | $T_J$       |        | -55 to +150  |        | $^{\circ}C$        |

#### Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Device mounted on 50mm x 50mm x 1.6mm Cu Plate Heatsink.

**RATING AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

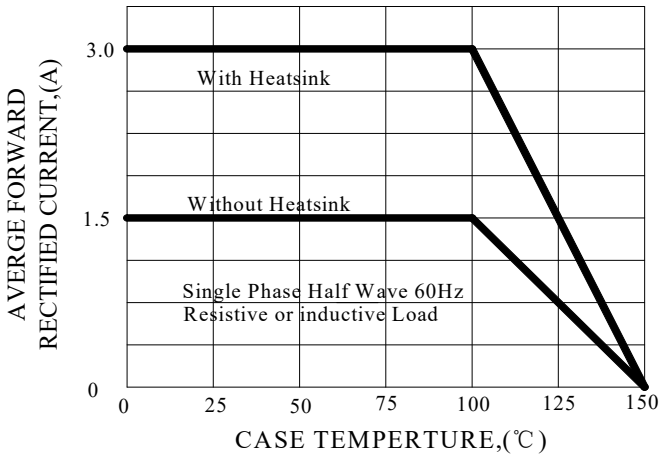


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

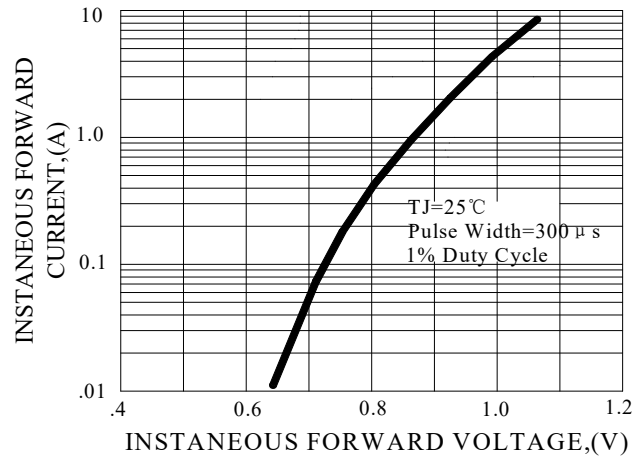


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

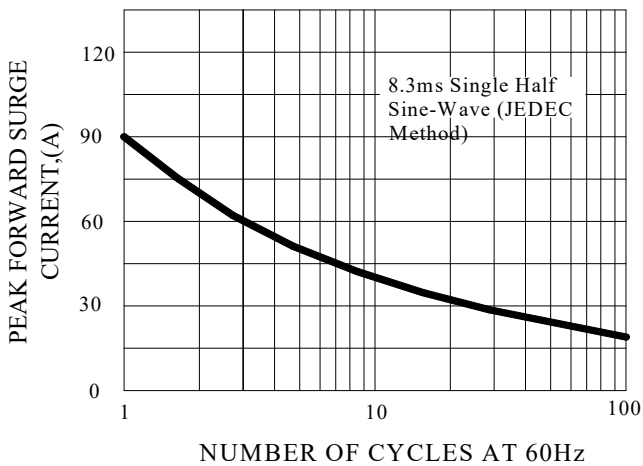


FIG.4-TYPICAL JUNCTION CAPACITANCE

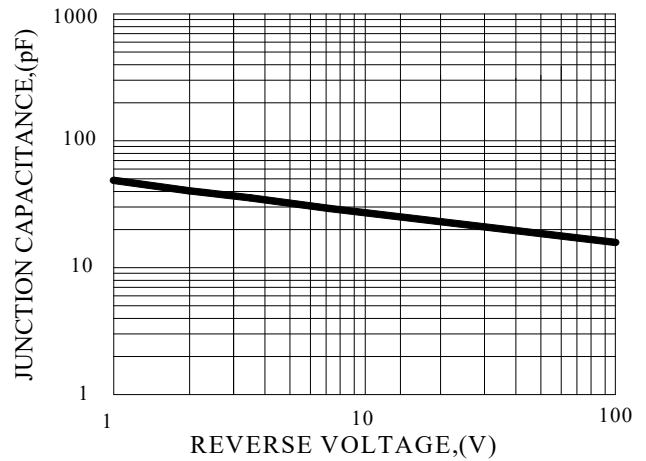
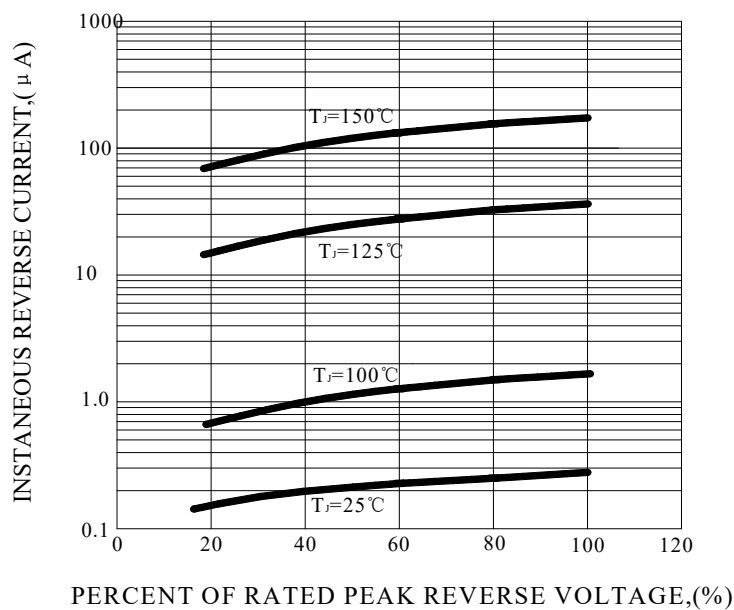
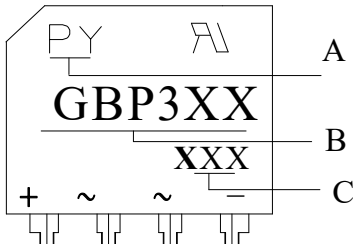


FIG.5-TYPICAL REVERSE CHARACTERISTICS



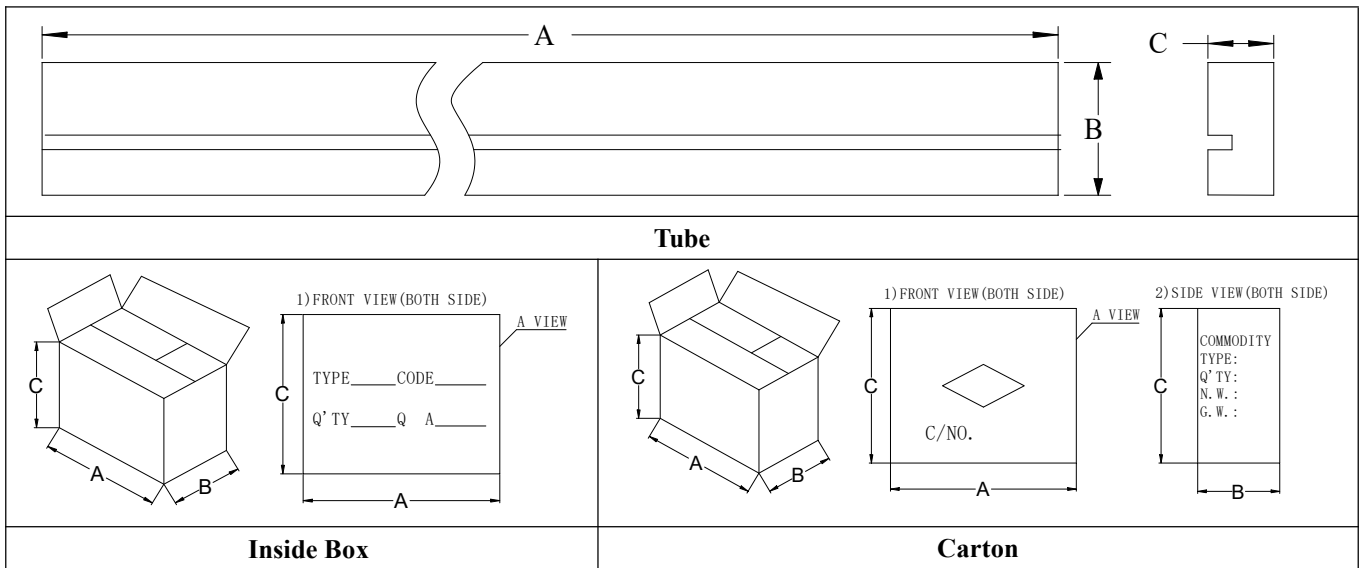
## Marking and packaging illustration

### 1、Marking



| SYMBOL   | Explanation  |
|----------|--------------|
| <b>A</b> | Trademark    |
| <b>B</b> | Product Name |
| <b>C</b> | Date Code    |

### 2、Packaging



| OUTLINE    | A<br>(mm) | B<br>(mm) | C<br>(mm) |
|------------|-----------|-----------|-----------|
| Tube       | 390 ± 1   | 28.8 ± 1  | 6.1 ± 1   |
| Inside box | 395 ± 3   | 155 ± 3   | 155 ± 3   |
| Carton     | 420 ± 5   | 180 ± 5   | 325 ± 5   |

| COUNT | TUBE<br>(PCS) | BOX<br>(PCS) | CARTON<br>(PCS) |
|-------|---------------|--------------|-----------------|
| GBP   | 25            | 2500         | 5000            |