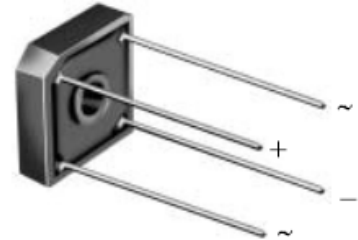


**3.0A Glass Passivated Bridge Rectifier**

**Features**

- Glass passivated chip junction
- High case dielectric strength 1500 VRMS
- Typical IR less than 0.1µA
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds  
0.375" (9.5mm) lead length at 5lbs.(2.3kg) tension
- This series is UL recognized under component index, File number E194718
- RoHS compliant



GBPC1



**Mechanical Data**

|                         |  |
|-------------------------|--|
| <b>Case:</b>            | GBPC1, Molded plastic body over passivated junctions     |
| <b>Epoxy:</b>           | Plastic package has UL flammability classification 94V-0 |
| <b>Terminals:</b>       | Plated leads solderable per MIL-STD-750, Method 2026     |
| <b>Polarity:</b>        | As marked on case  |
| <b>Mounting Torque:</b> | 8.8 in. – lbs. max.                                      |
| <b>Weight:</b>          | 0.1 ounce, 2.8 grams                                     |

**Maximum Ratings And Electrical Characteristics (T<sub>amb</sub>=25°C)**

| Symbols       | Parameter                                 | GBPC 1005 | GBPC 101 | GBPC 102 | GBPC 104 | GBPC 106 | GBPC 108 | GBPC 110 | Unit | Conditions   |
|---------------|---|-----------|----------|----------|----------|----------|----------|----------|------|--|
| <b>VRRM</b>   | Maximum Repetitive Peak Reverse Voltage   | 50        | 100      | 200      | 400      | 600      | 800      | 1000     | V    |  |
| <b>VRMS</b>   | Maximum RMS Voltage                       | 35        | 70       | 140      | 280      | 420      | 560      | 700      | V    |  |
| <b>VDC</b>    | Maximum DC Blocking Voltage               | 50        | 100      | 200      | 400      | 600      | 800      | 1000     | V    |  |
| <b>IF(AV)</b> | Maximum Average Forward Rectified Current | 3.0       |          |          |          |          |          |          | A    | Tc=60° C<br>Note 1   |
| <b>IFSM</b>   | Peak Forward Surge Current                | 60        |          |          |          |          |          |          | A    | 8.3ms Single Sine-wave Superimposed on Rated Load (JEDEC Method) |

# 3.0A Glass Passivated Bridge Rectifier

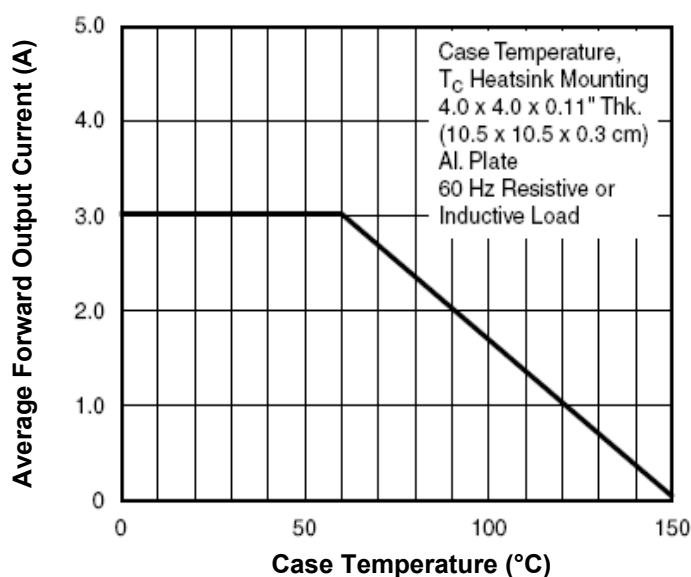
## GBPC1005 - GBPC110

| Symbols         | Parameter   | GBPC 1005   | GBPC 101 | GBPC 102 | GBPC 104 | GBPC 106 | GBPC 108 | GBPC 110 | Unit                   | Conditions                            |
|-----------------|---|-------------|----------|----------|----------|----------|----------|----------|------------------------|---------------------------------------|
| $I^2t$          | Rating for Fusing ( $t < 8.3\text{ms}$ )                        | 15          |          |          |          |          |          |          | $\text{A}^2\text{sec}$ |                                       |
| $V_F$           | Maximum Instantaneous Forward Voltage Drop per leg              | 1.0         |          |          |          |          |          |          | V                      | $I_F = 1.5\text{A}$                   |
| $I_R$           | Maximum DC Reverse Current at Rated DC Blocking Voltage per leg | 5.0         |          |          |          |          |          |          | $\mu\text{A}$          | $T_A = 25^\circ\text{C}$              |
|                 |   | 500         |          |          |          |          |          |          |                        | $T_A = 125^\circ\text{C}$             |
| $C_J$           | Typical Junction Capacitance per leg                            | 21          |          |          |          |          |          |          | pF                     | $V_R = 4\text{V}$ , $f = 1\text{MHz}$ |
| $R_{\theta JA}$ | Typical Thermal Resistance per leg                              | 12          |          |          |          |          |          |          | $^\circ\text{C/W}$     | Note 2                                |
| $R_{\theta JC}$ |   | 8.0         |          |          |          |          |          |          |                        |                                       |
| $T_J, T_{STG}$  | Operating Junction and Storage Temperature Range                | -55 to +150 |          |          |          |          |          |          | $^\circ\text{C}$       |                                       |

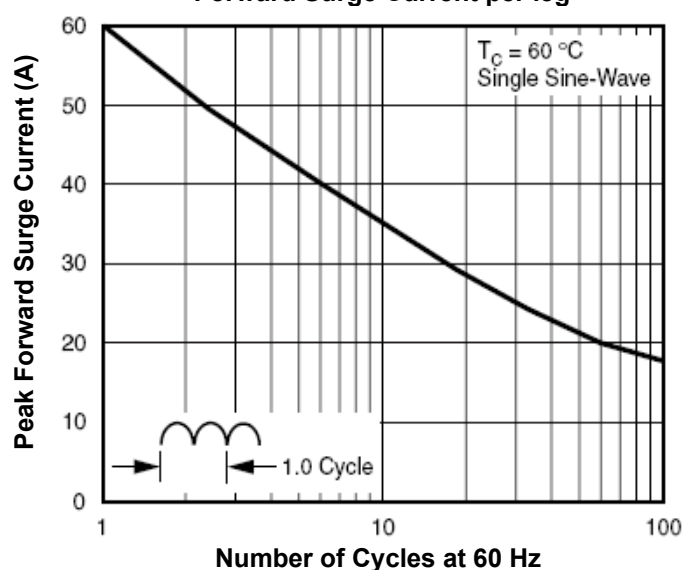
- Note:**
- Unit mounted on 4.0 x 4.0 x 0.11" thick (10.5 x 10.5 x 0.3cm) aluminum plate.
  - Bolt down on heat sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw.

### Rating and Characteristic Curves

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



**Fig.2-Maximum Non-Repetitive Peak Forward Surge Current per leg**



# 3.0A Glass Passivated Bridge Rectifier

## GBPC1005 - GBPC110

Fig.3-Typical Forward Characteristics per leg

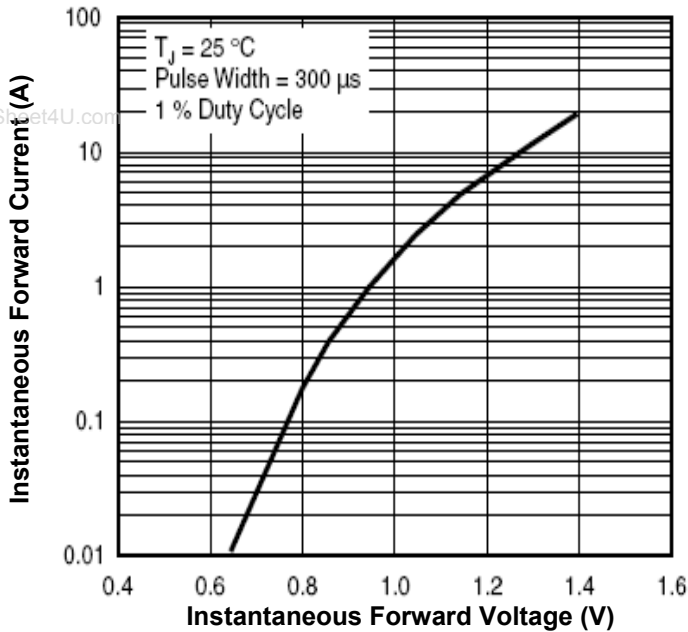


Fig.4-Typical Reverse Leakage Characteristics per leg

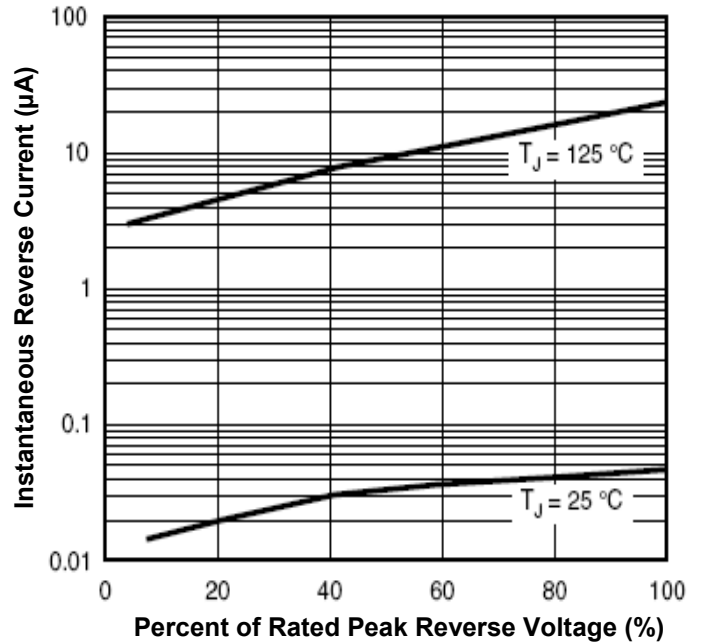
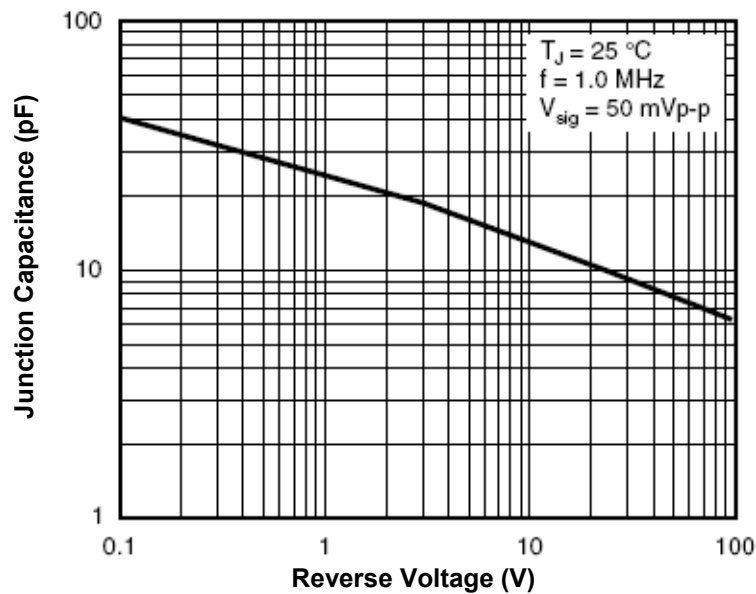


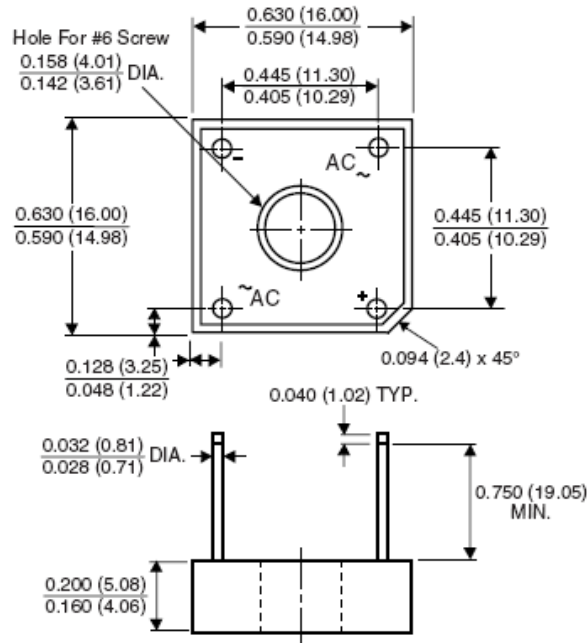
Fig.5-Typical Junction Capacitance per leg



# 3.0A Glass Passivated Bridge Rectifier

## GBPC1005 - GBPC1110

### Dimensions in inch (mm)



### Case Style GBPC1

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