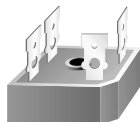




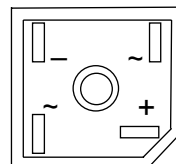
## GBPC 12, 15, 25, 35 SERIES

### Features

- Integrally molded heatsink provided very low thermal resistance for maximum heat dissipation.
- Surge overload ratings from 300 amperes to 400 amperes.
- Isolated voltage from case to lead over 2500 volts.
- UL certified, UL #E96005.

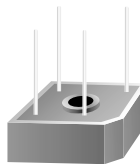


GBPC

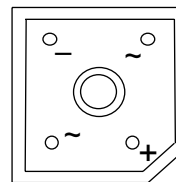


### Suffix "W"

Wire Lead Structure



GBPC-W



### Suffix "M"

Terminal Location  
Face to Face

## Bridge Rectifiers (Glass Passivated)

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol      | Parameter                                                                 | Value                 |     |     |     |     |     |      | Units            |
|-------------|---------------------------------------------------------------------------|-----------------------|-----|-----|-----|-----|-----|------|------------------|
|             |                                                                           | 005                   | 01  | 02  | 04  | 06  | 08  | 10   |                  |
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage                                        | 50                    | 100 | 200 | 400 | 600 | 800 | 1000 | V                |
| $V_{RMS}$   | Maximum RMS Bridge Input Voltage                                          | 35                    | 70  | 140 | 280 | 420 | 560 | 700  | V                |
| $V_R$       | DC Reverse Voltage (Rated $V_R$ )                                         | 50                    | 100 | 200 | 400 | 600 | 800 | 1000 | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current<br>@ $T_A = 55^\circ\text{C}$           | <b>GBPC12</b>         |     |     |     |     |     |      | A                |
|             |                                                                           | <b>GBPC15</b>         |     |     |     |     |     |      | A                |
|             |                                                                           | <b>GBPC25</b>         |     |     |     |     |     |      | A                |
|             |                                                                           | <b>GBPC35</b>         |     |     |     |     |     |      | A                |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave | <b>GBPC12, 15, 25</b> |     |     |     |     |     |      | A                |
|             |                                                                           | <b>GBPC35</b>         |     |     |     |     |     |      | A                |
| $T_{stg}$   | Storage Temperature Range                                                 | -55 to +150           |     |     |     |     |     |      | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature                                            | -55 to +150           |     |     |     |     |     |      | $^\circ\text{C}$ |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

# Bridge Rectifiers (Glass Passivated)

(continued)

GBPC 12, 15, 25, 35 SERIES

## Thermal Characteristics

| Symbol          | Parameter                            | Value | Units         |
|-----------------|--------------------------------------|-------|---------------|
| $P_D$           | Power Dissipation                    | 83.3  | W             |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead | 1.5   | $^{\circ}C/W$ |

## Electrical Characteristics $T_A = 25^{\circ}C$ unless otherwise noted

| Symbol | Parameter                                                                                                                              | Device     | Units                |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|
| $V_F$  | Forward Voltage Drop, per bridge<br>@ 6.0 A <b>GBPC12</b><br>@ 7.5 A <b>GBPC15</b><br>@ 12.5 A <b>GBPC25</b><br>@ 17.5 A <b>GBPC35</b> | 1.1        | V                    |
| $I_R$  | Reverse Current, per leg<br>@ rated $V_R$ $T_A = 25^{\circ}C$<br>$T_A = 125^{\circ}C$                                                  | 5.0<br>500 | $\mu A$<br>$\mu A$   |
|        | $I^2t$ rating for fusing<br>$t < 8.3$ ms <b>GBPC12, 15, 25</b><br><b>GBPC35</b>                                                        | 375<br>660 | $A^2Sec$<br>$A^2Sec$ |
| $C_T$  | Total Capacitance, per leg<br>$V_R = 4.0$ V, <b>GBPC12, 15, 25</b><br>$f = 1.0$ MHz <b>GBPC35</b>                                      | 180<br>200 | pF<br>pF             |

## Typical Characteristics

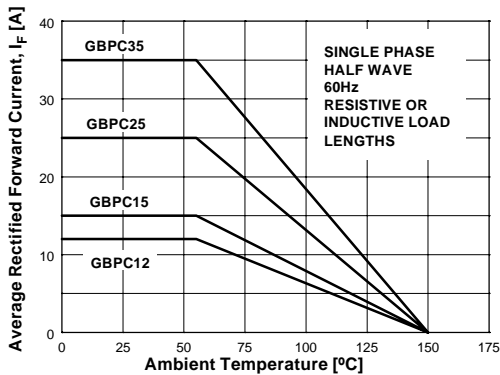


Figure 1. Forward Current Derating Curve

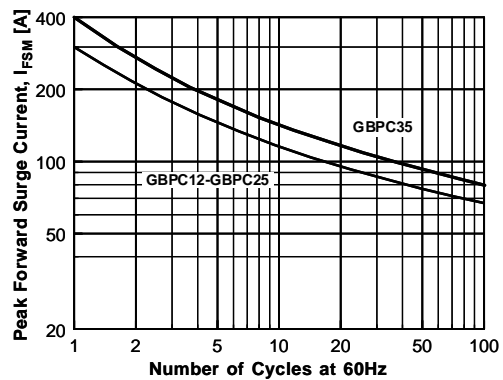


Figure 2. Non-Repetitive Surge Current

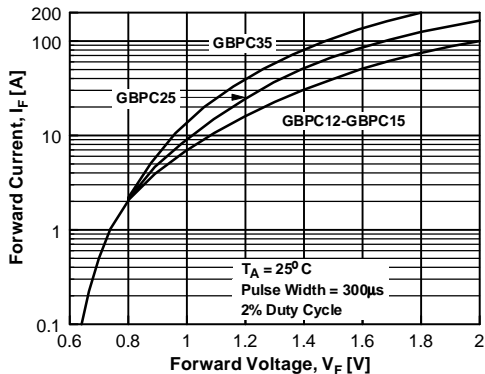


Figure 3. Forward Voltage Characteristics

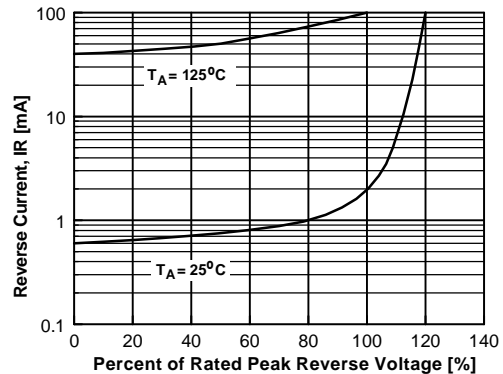


Figure 4. Reverse Current vs Reverse Voltage

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