

# Bridge Rectifier

## GBPC Series

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### Features:

- Plastic material
- Integrally moulded heatsink provide very low thermal resistance for maximum heat dissipation
- Surge overload ratings from 300 to 400A
- Terminals solderable per MIL-STD-202, method 208 (for wire type)
- Typical  $I_R$  less than 0.2 $\mu$ A
- High temperature soldering guaranteed : 260°C / 10 seconds 0.375 inches (9.5mm) lead lengths (for wire type)
- Isolated voltage from case to lead over 2,500V

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load, derate current by 20%

| Characteristics                                                                        |                               | Symbol                            | -005+       | -01+ | -04+ | -06+ | -08+ | -10+  | Units  |
|----------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|-------------|------|------|------|------|-------|--------|
| Max. Recurrent Peak Reverse Voltage                                                    |                               | V <sub>RRM</sub>                  | 50          | 100  | 400  | 600  | 800  | 1,000 | V      |
| Max. RMS Voltage                                                                       |                               | V <sub>RMS</sub>                  | 35          | 70   | 280  | 420  | 560  | 700   |        |
| Max. DC Blocking Voltage                                                               |                               | V <sub>DC</sub>                   | 50          | 100  | 400  | 600  | 800  | 1,000 |        |
| Maximum Average Forward Rectified Current at T <sub>c</sub> = 55°C                     | GBPC15<br>GBPC35              | I <sub>(AV)</sub>                 | 15<br>35    |      |      |      |      |       | A      |
| Peak Forward Surge Current, Single Sine-wave Superimposed on Rated Load (JEDEC method) | GBPC15<br>GBPC35              | I <sub>FSM</sub>                  | 300<br>400  |      |      |      |      |       |        |
| Maximum Instantaneous Forward Voltage Drop Per Element at Specified Current            | GBPC15 7.5 A<br>GBPC35 17.5 A | V <sub>F</sub>                    | 1.1         |      |      |      |      |       | V      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per Element                    |                               | I <sub>R</sub>                    | 5           |      |      |      |      |       | mA     |
| Typical Thermal Resistance (Note 1)                                                    |                               | R <sub>θJC</sub>                  | 1.5         |      |      |      |      |       | °C / W |
| Operating and Storage Temperature Range                                                |                               | T <sub>J</sub> , T <sub>STG</sub> | -50 to +150 |      |      |      |      |       | °C     |

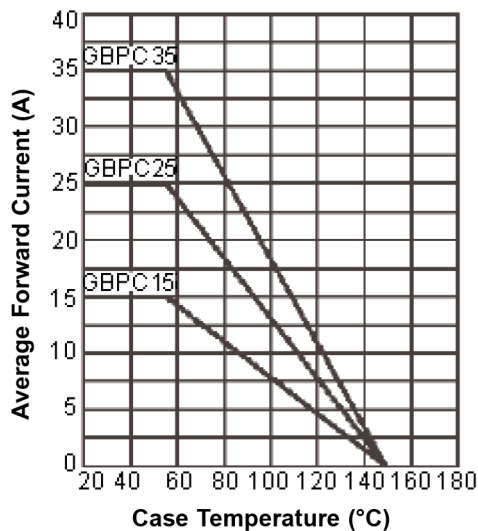
**Notes:** 1. Thermal Resistance from Junction to Case  
2. Suffix "W" - Wire Lead Structure

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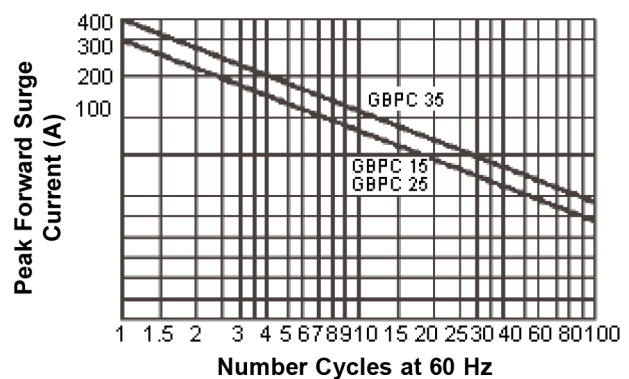
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## Ratings and Characteristic Curves

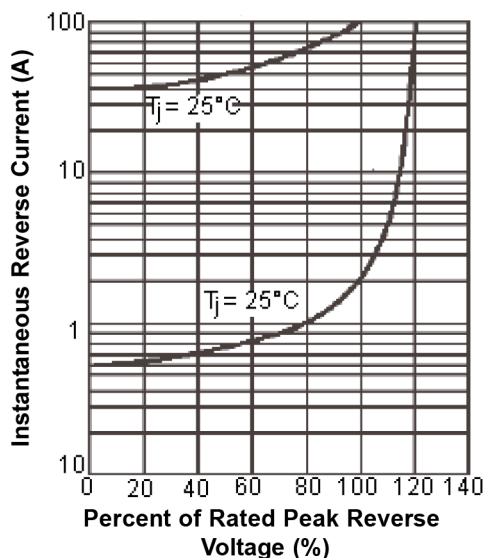
Maximum Forward Current Derating Curve



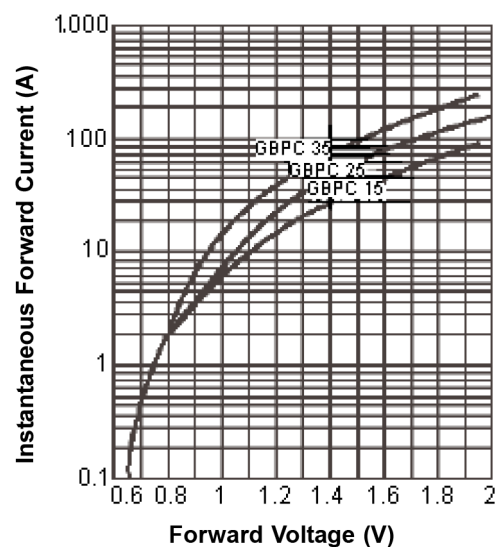
Maximum Non-Repetitive Forward Surge Current Per Bridge Element



Typical Reverse Characteristics Per Bridge Element



Typical Forward Characteristics Per Bridge Element



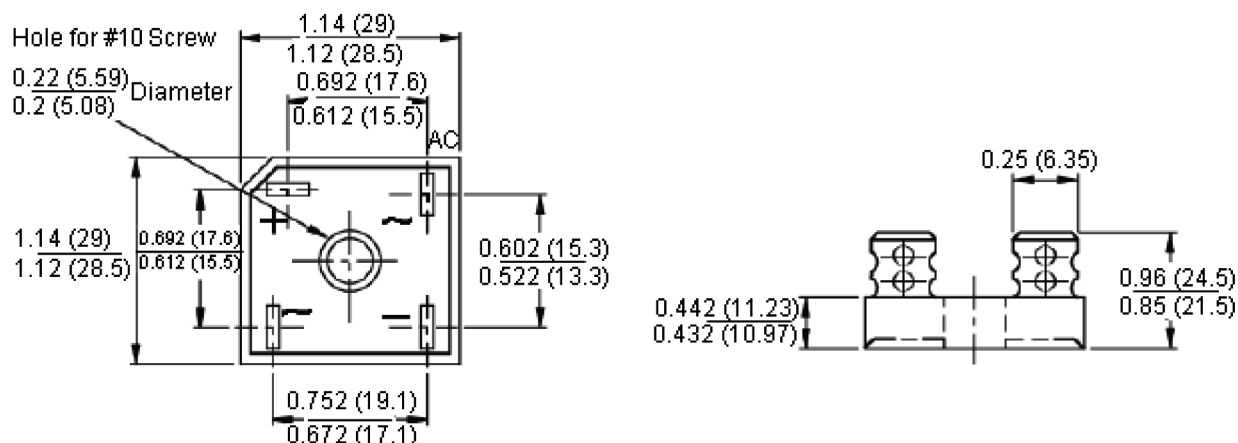
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### Dimensions:



Dimensions : Inches (Millimetres)

### Part Number Table

| Description                   | Part Number |
|-------------------------------|-------------|
| Bridge Rectifier, 15A, 50V    | GBPC15005+  |
| Bridge Rectifier, 15A, 100V   | GBPC1504+   |
| Bridge Rectifier, 15A, 600V   | GBPC1506+   |
| Bridge Rectifier, 15A, 800V   | GBPC1508+   |
| Bridge Rectifier, 35A, 100V   | GBPC3501+   |
| Bridge Rectifier, 35 A, 600V  | GBPC3506+   |
| Bridge Rectifier, 35A, 800V   | GBPC3508+   |
| Bridge Rectifier, 35A, 1,000V | GBPC3510+   |
| Bridge Rectifier, 50A, 100V   | GBPC5001+   |

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