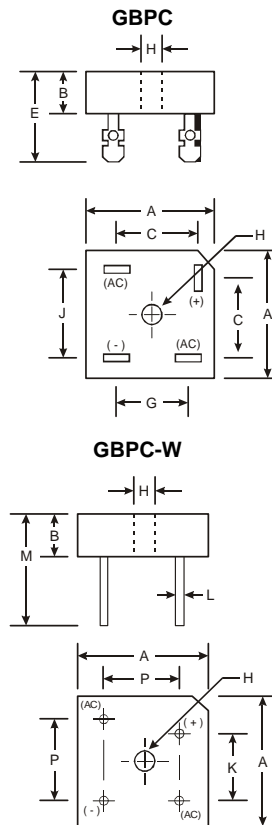


Features

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 300A Peak
- Electrically Isolated Metal Base for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 1500V
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Date Code 0514+)** (Note 4)

Mechanical Data

- Case: GBPC/GBPC-W
- Case Material: Molded Plastic with Heatsink Internally Mounted in the Bridge Encapsulation. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish — Silver. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting: Through Hole for #10 Screw
- Mounting Torque: 8.0 Inch-pounds Maximum
- Ordering Information: See Page 3
- Marking: Type Number
- GBPC Weight: 20 grams (approximate)
- GBPC-W Weight: 14 grams (approximate)



| GBPC / GBPC-W | | |
|----------------------|--------------------|-------|
| Dim | Min | Max |
| A | 28.30 | 28.80 |
| B | 7.40 | 8.25 |
| C | 16.10 | 17.10 |
| E | 18.80 | 21.30 |
| G | 13.80 | 14.80 |
| H | Hole for #10 screw | |
| | 5.08Ø | 5.59Ø |
| J | 17.60 | 18.60 |
| K | 10.90 | 11.90 |
| L | 0.97Ø | 1.07Ø |
| M | 31.80 | — |
| P | 17.60 | 18.60 |
| All Dimensions in mm | | |

"W" Suffix Designates Wire Leads
No Suffix Designates Faston Terminals

Maximum Ratings and Electrical Characteristics

@T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | GBPC15005/W | GBPC1501/W | GBPC1502/W | GBPC1504/W | GBPC1506/W | GBPC1508/W | GBPC1510/W | Unit | |
|---|-----------------------------------|-------------|------------|------------|------------|------------|------------|------------|------|------------------|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| DC Blocking Voltage | V _R | | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Average Rectified Output Current @ T _C = 70°C | I _O | 15 | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 300 | | | | | | | | A |
| Forward Voltage (per element) @ I _F = 7.5A | V _{FM} | 1.1 | | | | | | | | V |
| Peak Reverse Current @ T _C = 25°C at Rated DC Blocking Voltage @ T _C = 125°C | I _R | 5.0 | | | | | | | | µA |
| I ² t Rating for Fusing (Note 1) | I ² t | 374 | | | | | | | | A ² s |
| Typical Total Capacitance (Note 2) | C _T | 300 | | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJC} | 5.0 | | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | | | | °C |

- Notes:
1. Non-repetitive, for t > 1.0ms and t < 8.3ms.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal resistance junction to case mounted on heatsink.
 4. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/products/lead_free.html.

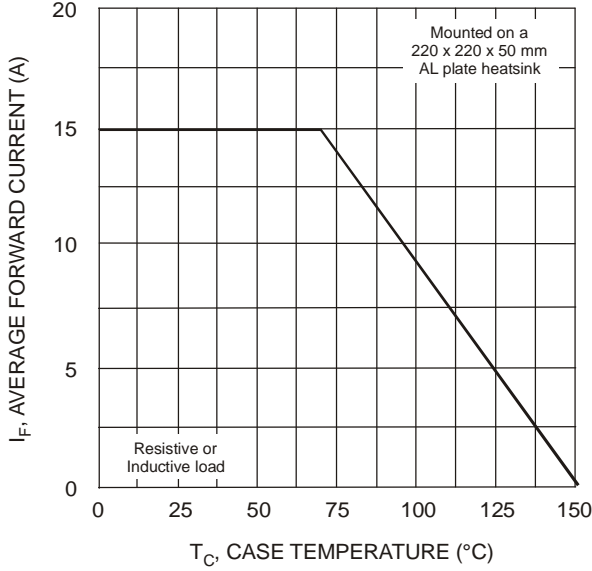


Fig. 1 Forward Current Derating Curve

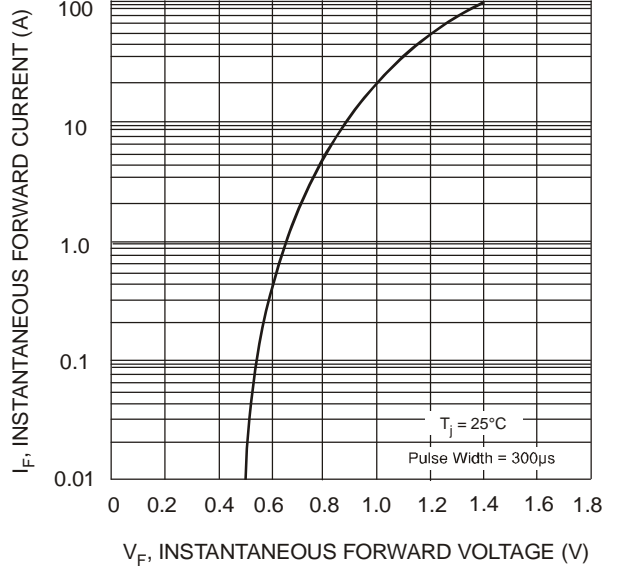


Fig. 2 Typical Forward Characteristics (per element)

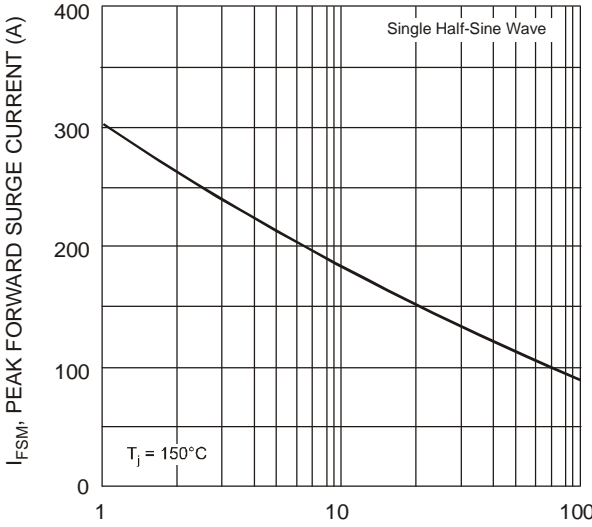


Fig. 3 Max Non-Repetitive Surge Current

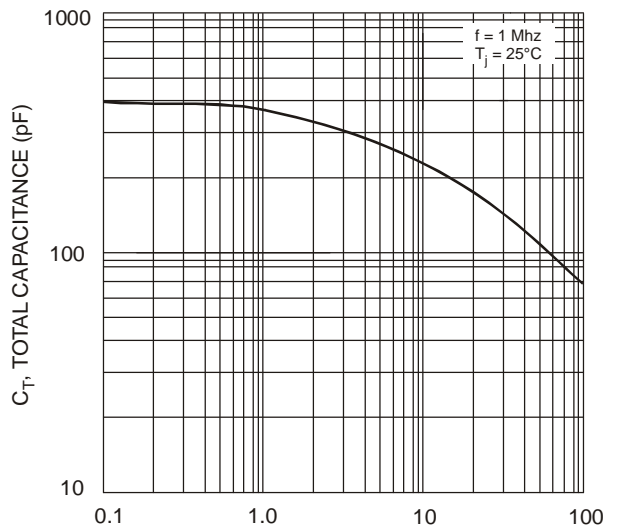


Fig. 4 Typical Total Capacitance (per element)

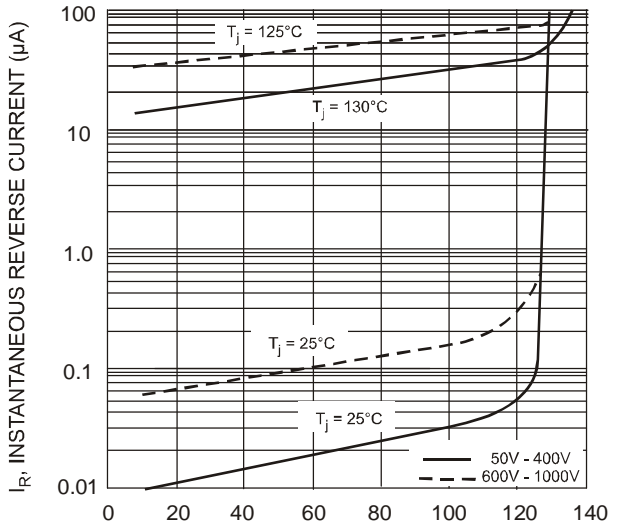


Fig. 5 Typical Reverse Characteristics (per element)

Ordering Information (Note 5)

| Device | Packaging | Shipping |
|------------|-----------|----------|
| GBPC15005 | GBPC | 100/Tray |
| GBPC1501 | GBPC | 100/Tray |
| GBPC1502 | GBPC | 100/Tray |
| GBPC1504 | GBPC | 100/Tray |
| GBPC1506 | GBPC | 100/Tray |
| GBPC1508 | GBPC | 100/Tray |
| GBPC1510 | GBPC | 100/Tray |
| GBPC15005W | GBPC-W | 100/Tray |
| GBPC1501W | GBPC-W | 100/Tray |
| GBPC1502W | GBPC-W | 100/Tray |
| GBPC1504W | GBPC-W | 100/Tray |
| GBPC1506W | GBPC-W | 100/Tray |
| GBPC1508W | GBPC-W | 100/Tray |
| GBPC1510W | GBPC-W | 100/Tray |

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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