

Bridge Rectifiers



Features

- Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package:** GBPC
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GBPC50005 | GBPC5001 | GBPC5002 | GBPC5004 | GBPC5006 | GBPC5008 | GBPC5010 |
|---|------------------|------------------|-----------|----------|----------|----------|----------|----------|----------|
| Device marking code | | | GBPC50005 | GBPC5001 | GBPC5002 | GBPC5004 | GBPC5006 | GBPC5008 | GBPC5010 |
| Repetitive Peak Reverse Voltage | V _{RRM} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, T _c =55°C | I _O | A | 50 | | | | | | |
| Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, T _a =25°C | I _{FSM} | A | 500 | | | | | | |
| Current Squared Time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode | I ² t | A ² S | 1040 | | | | | | |
| Storage Temperature | T _{stg} | °C | -55 ~+150 | | | | | | |
| Junction Temperature | T _j | °C | -55 ~+150 | | | | | | |
| Dielectric Strength, Terminals to case, AC 1 minute | V _{dis} | KV | 2.5 | | | | | | |
| Mounting Torque | TOR | kg·cm | 10 | | | | | | |

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | GBPC50005 | GBPC5001 | GBPC5002 | GBPC5004 | GBPC5006 | GBPC5008 | GBPC5010 |
|---|------------------|------|-----------------------------------|-----------|----------|----------|----------|----------|----------|----------|
| Maximum instantaneous forward voltage drop per diode | V _{FM} | V | I _{FM} =25A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM} | μA | V _{RM} =V _{RRM} | 10 | | | | | | |

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GBPC50005 | GBPC5001 | GBPC5002 | GBPC5004 | GBPC5006 | GBPC5008 | GBPC5010 |
|---|--------------------|------|-----------|----------|----------|----------|----------|----------|----------|
| Thermal Resistance Between junction and case, With heatsink | R _{θ J-C} | °C/W | 0.95 | | | | | | |



GBPC50005 THRU GBPC5010

Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| GBPC50005~GBPC5010 | A1 | Approximate 13.8 | 50 | 50 | 500 | Paper Box |

Characteristics (Typical)

FIG1:Io-Tc Curve

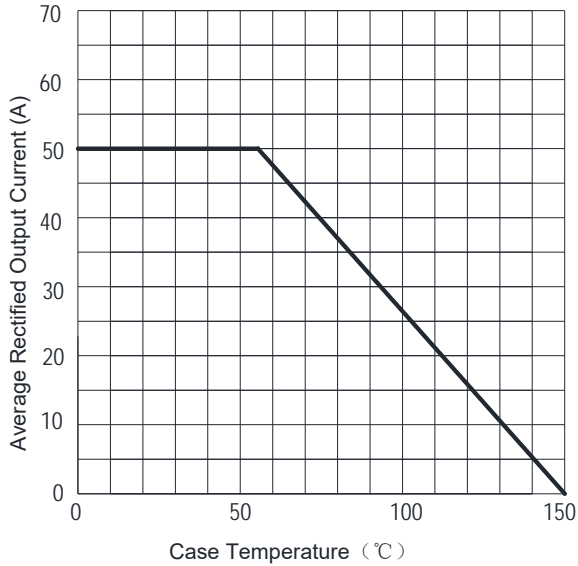


FIG2:Surge Forward Current Capability

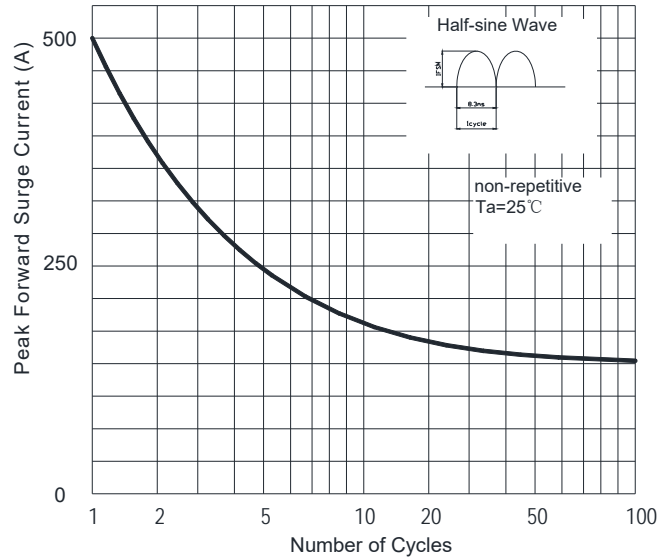


FIG3:Instantaneous Forward Voltage

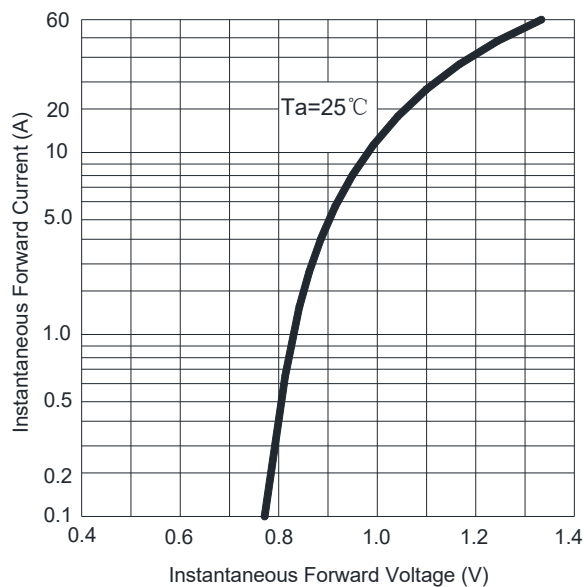
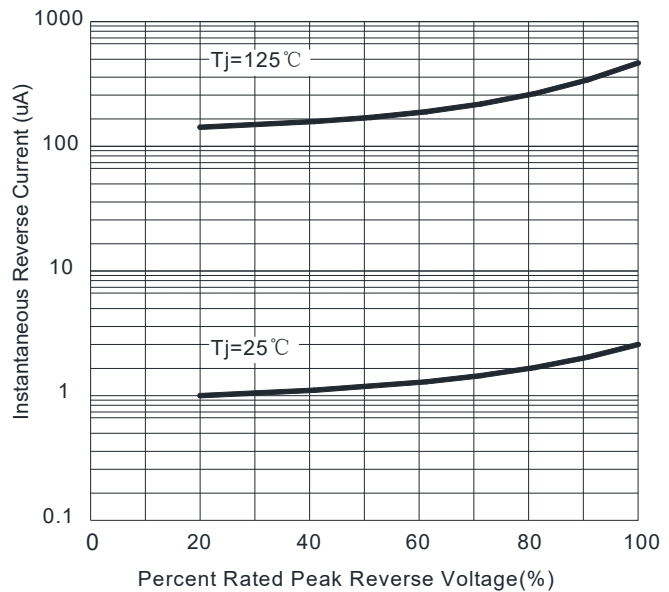


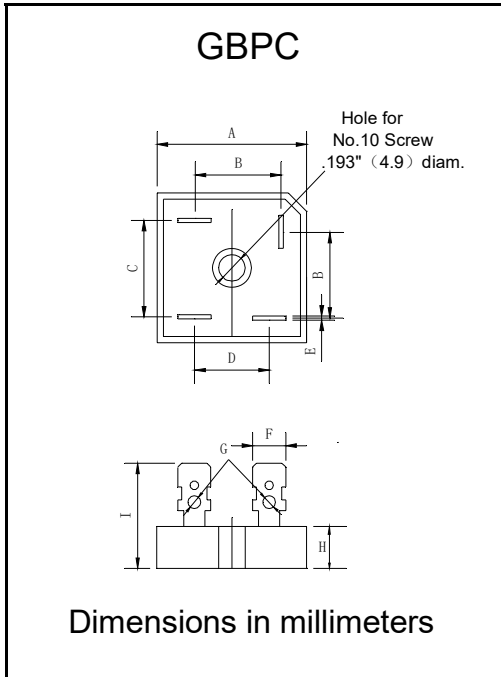
FIG4:Typical Reverse Characteristics





GBPC50005 THRU GBPC5010

■ Outline Dimensions



| GBPC | | |
|------|------|------|
| Dim | Min | Max |
| A | 28.2 | 28.8 |
| B | 15.3 | 17.3 |
| C | 17.1 | 19.1 |
| D | 13.2 | 15.2 |
| E | 0.75 | 0.85 |
| F | 6.2 | 6.4 |
| G | 2.2 | 2.6 |
| H | 7.6 | 8.2 |
| I | 19 | |



GBPC50005 THRU GBPC5010

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