

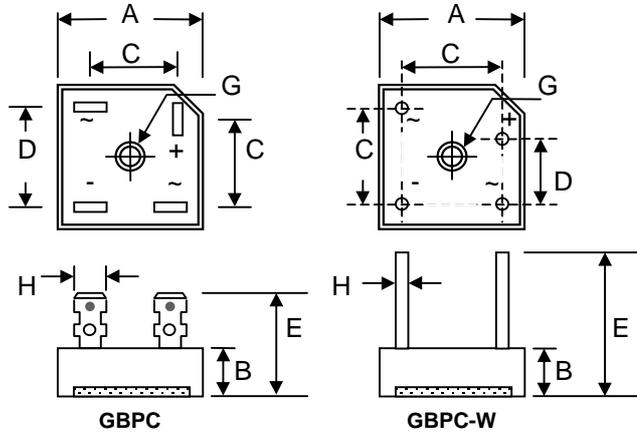
10A GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
-  Recognized File # E157705

Mechanical Data

- Case: Molded Plastic with Heatsink, Available in Both Low Profile and Standard Case
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 21 grams (GBPC); 18 grams (GBPC-W)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| Dim | GBPC Low Profile / Standard | | GBPC-W Low Profile / Standard | |
|-----|-----------------------------------|---------------|----------------------------------|--------------|
| | Min | Max | Min | Max |
| A | 28.40 | 28.70 | 28.40 | 28.70 |
| B | 7.50 / 10.97 | 8.50 / 11.23 | 7.50 / 10.97 | 8.50 / 11.23 |
| C | 15.70 | 16.70 | 17.10 | 19.10 |
| D | 17.50 | 18.50 | 10.90 | 11.90 |
| E | 19.08 / 22.86 | 21.58 / 25.40 | 30.50 | — |
| G | Hole for #10 screw, 5.08Ø Nominal | | | |
| H | 6.35 Typical | | 0.97Ø | 1.07Ø |

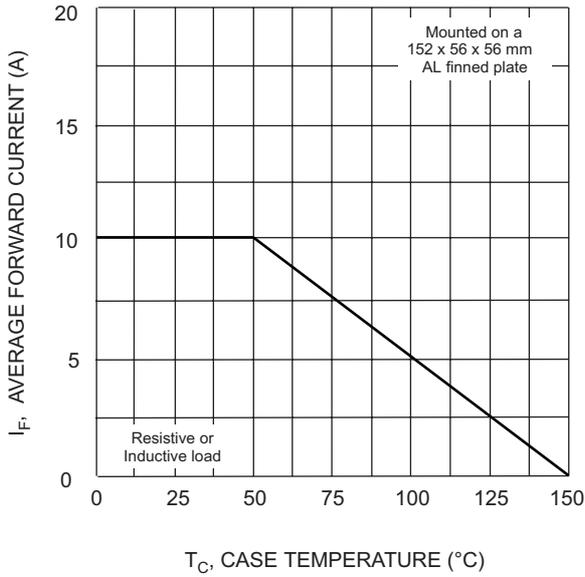
All Dimension in mm

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

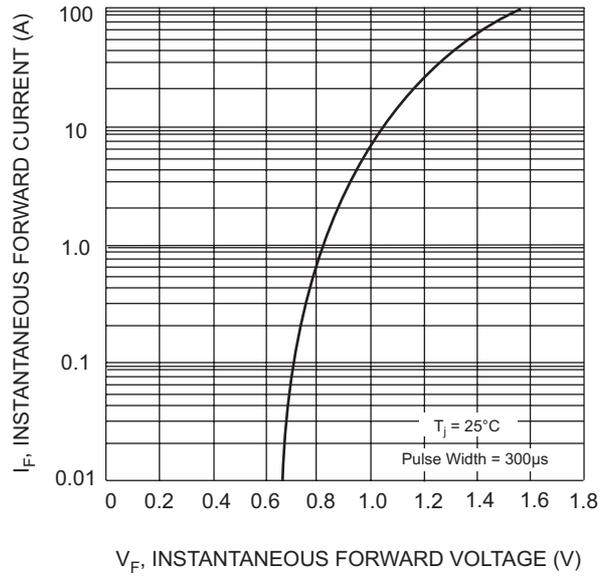
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic | Symbol | GBPC10 | | | | | | | | | | Unit |
|---|---------------------------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|---------------------------|
| | | 00 | 01 | 02 | 04 | 06 | 08 | 10 | 12 | 14 | 16 | |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | 980 | 1120 | V |
| Average Rectified Output Current @ $T_C = 50^\circ\text{C}$ | I_O | 10 | | | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 200 | | | | | | | | | | A |
| Forward Voltage per leg @ $I_F = 5.0\text{A}$ | V_{FM} | 1.1 | | | | | | | | | | V |
| Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$ | I_{RM} | 5.0 500 | | | | | | | | | | μA |
| I^2t Rating for Fusing ($t < 8.3\text{ms}$) | I^2t | 160 | | | | | | | | | | A^2s |
| Typical Junction Capacitance (Note 1) | C_j | 300 | | | | | | | | | | pF |
| Typical Thermal Resistance per leg (Note 2) | $R_{\theta JC}$ | 2.0 | | | | | | | | | | $^\circ\text{C}/\text{W}$ |
| RMS Isolation Voltage from Case to Leads | V_{ISO} | 2500 | | | | | | | | | | V |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +150 | | | | | | | | | | $^\circ\text{C}$ |

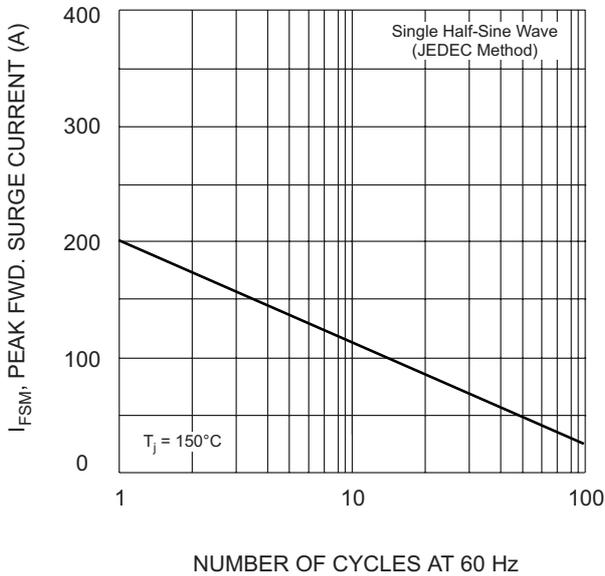
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
2. Mounted on 152 x 56 x 56mm Al. finned plate.



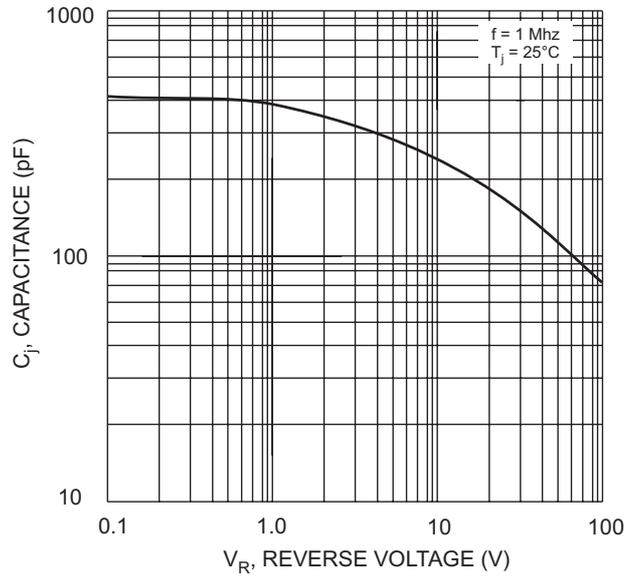
T_C , CASE TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



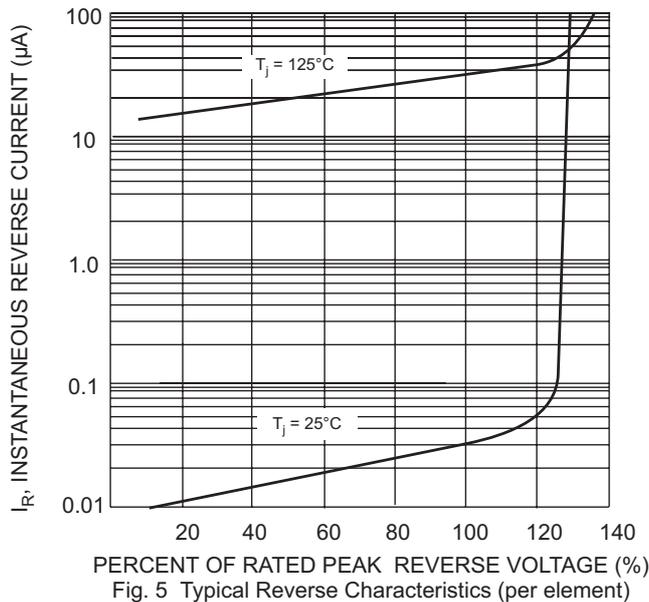
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz
Fig. 3 Max Non-Repetitive Surge Current

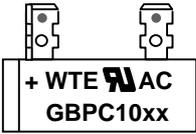
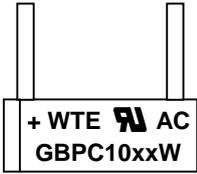


V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 5 Typical Reverse Characteristics (per element)

MARKING INFORMATION

| | |
|---|--|
| <p>GBPC</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>WTE = Manufacturer's Logo GBPC10xx = Device Number xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16 Polarity = As Marked on Body</p> | <p>GBPC-W</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>WTE = Manufacturer's Logo GBPC10xxW = Device Number xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16 Polarity = As Marked on Body</p> |
|---|--|

PACKAGING INFORMATION

BULK

| Case Style | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|---------------|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|
| GBPC | 195 x 195 x 40 | 50 | 405 x 205 x 240 | 500 | 12.0 |
| GBPC-W | 195 x 195 x 40 | 50 | 405 x 205 x 240 | 500 | 11.0 |

Note: 1. Paper box, white or brown color.

ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|---------------|-------------------|
| GBPC1000 | Square Bridge | 50 Units/Box |
| GBPC1000W | Square Bridge | 50 Units/Box |
| GBPC1001 | Square Bridge | 50 Units/Box |
| GBPC1001W | Square Bridge | 50 Units/Box |
| GBPC1002 | Square Bridge | 50 Units/Box |
| GBPC1002W | Square Bridge | 50 Units/Box |
| GBPC1004 | Square Bridge | 50 Units/Box |
| GBPC1004W | Square Bridge | 50 Units/Box |
| GBPC1006 | Square Bridge | 50 Units/Box |
| GBPC1006W | Square Bridge | 50 Units/Box |
| GBPC1008 | Square Bridge | 50 Units/Box |
| GBPC1008W | Square Bridge | 50 Units/Box |
| GBPC1010 | Square Bridge | 50 Units/Box |
| GBPC1010W | Square Bridge | 50 Units/Box |
| GBPC1012 | Square Bridge | 50 Units/Box |
| GBPC1012W | Square Bridge | 50 Units/Box |
| GBPC1014 | Square Bridge | 50 Units/Box |
| GBPC1014W | Square Bridge | 50 Units/Box |
| GBPC1016 | Square Bridge | 50 Units/Box |
| GBPC1016W | Square Bridge | 50 Units/Box |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, GBPC1000-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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