


## Product Summary

| $V_{RRM}$ (V) | $I_F$ (A) | $V_F$ Max (V)<br>@ $I_F = 4A$ | $I_R$ Max ( $\mu A$ ) |
|---------------|-----------|-------------------------------|-----------------------|
| 800           | 8         | 0.92                          | 5                     |

## Mechanical Data

- Package: GBP
- Package Material: Plastic Material, UL Flammability Classification 94V-0 (No Br, Sb, Cl)
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 
- Polarity Indicator: Symbol Molded on Body
- Weight: 1.33 grams (Approximate)

## Features

- Glass Passivated Die Construction
- Low-Forward Voltage Drop
- Ideal for Printed Circuit Board
- Reliable Low-Cost Construction Utilizing Molded Plastic
- UL Recognized File # E95060
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- Halogen and Antimony Free. "Green" Device (Note 3)**
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative.**

GBP

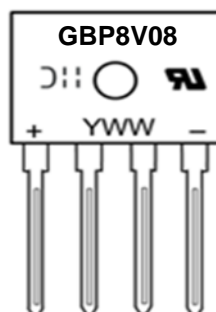



## Ordering Information (Note 4)

| Orderable Part Number | Package | Packing |         |
|-----------------------|---------|---------|---------|
|                       |         | Qty.    | Carrier |
| GBP8V08               | GBP     | 35      | Tube    |

- Notes:
- EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
  - See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  - Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  - For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

## Marking Information



GBP8V08 = Product Type Marking Code  
 = Manufacturer's Code Marking  
 YWW = Date Code Marking  
 Y = Last Digit of Year (ex: 5 = 2025)  
 WW = Week Code (01 to 53)

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic  | Symbol             | Value                | Unit             |
|---|--------------------|----------------------|------------------|
| Maximum Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>   | 800                  | V                |
| Maximum Average Rectified Output Current<br>@ T <sub>J</sub> = +150°C             | I <sub>F(AV)</sub> | With Heatsink<br>8.0 | A                |
| Without Heatsink  |                    | 2.2                  |                  |
| Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load | I <sub>FSM</sub>   | 165                  | A                |
| Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed on Rated Load |                    | 330                  | A                |
| I <sup>2</sup> t Rating for Fusing (t = 8.3ms)                                    | I <sup>2</sup> t   | 113                  | A <sup>2</sup> s |
| Operating Temperature Range   | T <sub>J</sub>     | -55 to +150          | °C               |
| Storage Temperature Range   | T <sub>STG</sub>   | -55 to +150          | °C               |

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                        | Test Conditions  | Symbol         | Min | Typ | Max        | Unit |
|---------------------------------------|--|----------------|-----|-----|------------|------|
| Forward Voltage                       | I <sub>F</sub> = 4A, T <sub>J</sub> = +25°C                                | V <sub>F</sub> | —   | 0.9 | 0.92       | V    |
| Leakage Current                       | V <sub>R</sub> = 800V<br>T <sub>J</sub> = +25°C<br>T <sub>J</sub> = +125°C | I <sub>R</sub> | —   | —   | 5.0<br>500 | μA   |
| Typical Junction Capacitance (Note 5) |  | C <sub>T</sub> |     | 50  |            | pF   |

**Thermal Characteristics**

| Characteristic                                | Symbol           | Typ | Unit |
|---|------------------|-----|------|
| Typical Thermal Resistance (Without Heatsink) | R <sub>θJC</sub> | 7   | °C/W |
|   | R <sub>θJL</sub> | 15  |      |
|   | R <sub>θJA</sub> | 46  |      |
| Typical Thermal Resistance (Notes 6 & 7)      | R <sub>θJC</sub> | 2.5 | °C/W |
|   | R <sub>θJL</sub> | 4.5 |      |
|   | R <sub>θJA</sub> | 11  |      |

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
6. Thermal resistance junction to case, lead and ambient in accordance with JE5D-51.  
7. Device mounted on 200mm x 200mm x 10mm copper plate heatsink.

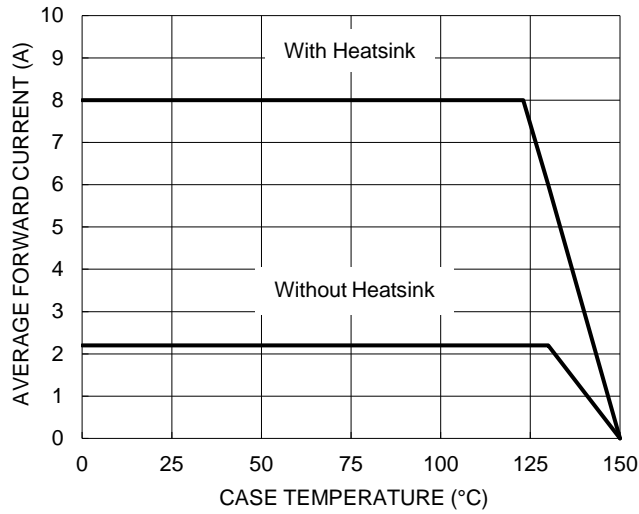


Figure 1. Forward Current Derating Curve

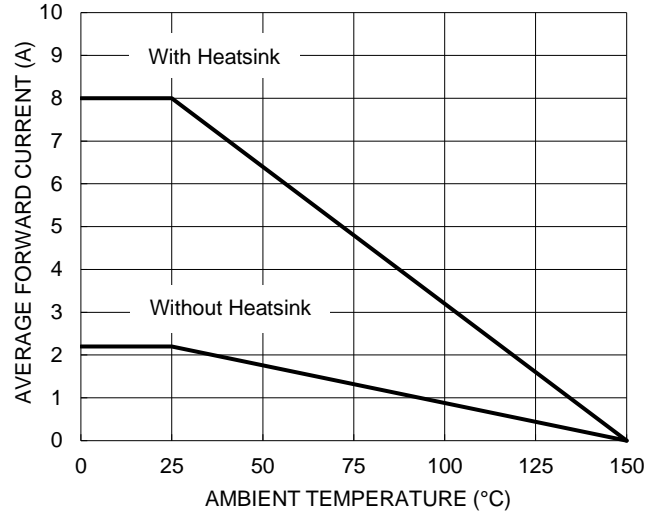


Figure 2. Forward Current Derating Curve

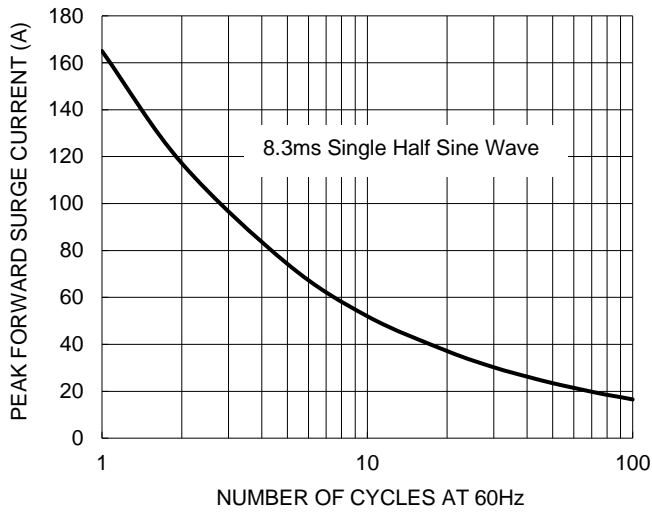


Figure 3. Maximum Non-Repetitive Surge Current

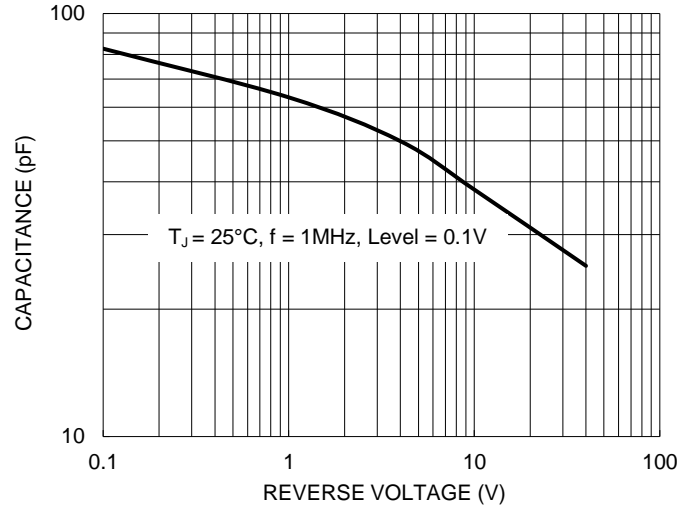


Figure 4. Typical Junction Capacitance

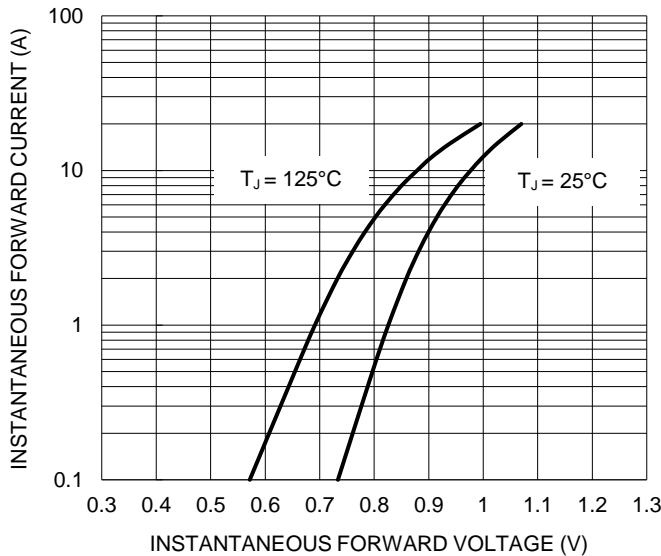


Figure 5. Typical Forward Characteristics

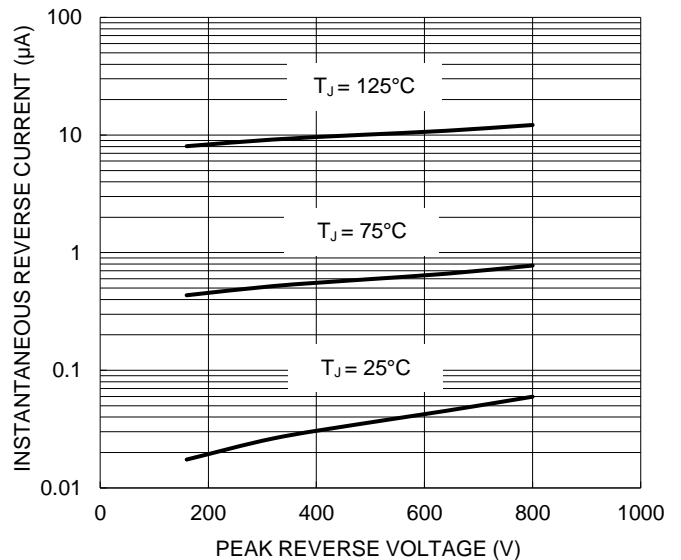
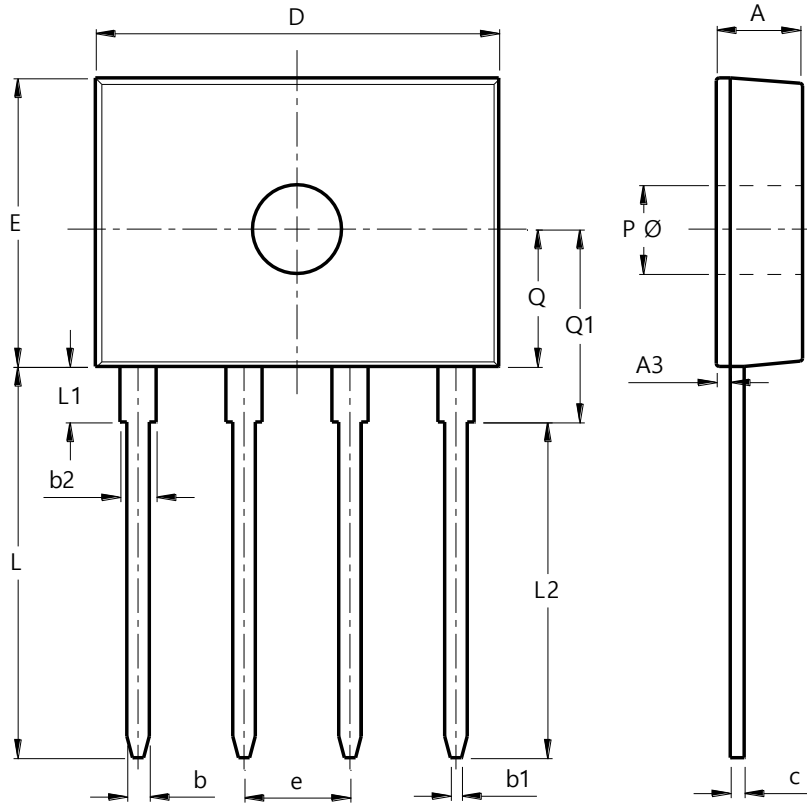


Figure 6. Typical Reverse Characteristics

## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**GBP**



| GBP                  |           |       |       |
|----------------------|-----------|-------|-------|
| Dim                  | Min       | Max   | TYP   |
| A                    | 2.90      | 3.30  | 3.10  |
| A3                   | 0.30      | 0.70  | 0.50  |
| b                    | 0.76      | 0.86  | 0.81  |
| b1                   | 0.35      | 0.45  | 0.40  |
| b2                   | 1.20      | 1.40  | 1.30  |
| c                    | 0.40      | 0.60  | 0.50  |
| D                    | 14.20     | 14.70 | 14.50 |
| E                    | 10.10     | 10.70 | 10.40 |
| e                    | 3.71      | 3.91  | 3.81  |
| L                    | 13.80     | 14.40 | 14.10 |
| L1                   | 1.80      | 2.20  | 2.00  |
| L2                   | 12.10 REF |       |       |
| P Ø                  | 3.20 REF  |       |       |
| Q                    | 4.65      | 5.25  | 4.95  |
| Q1                   | 6.65      | 7.25  | 6.95  |
| All Dimensions in mm |           |       |       |

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