

### Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500VRMS
- Low Reverse Leakage Current
- Surge Overload Rating to 200A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Note 4)**

### Mechanical Data

- Case: GBU
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish — Tin. Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Marked on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Ordering Information: See Last Page
- Marking: Date Code and Type Number
- Weight: 6.6 grams (approximate)



| GBU                  |           |      |
|----------------------|-----------|------|
| Dim                  | Min       | Max  |
| A                    | 21.8      | 22.3 |
| B                    | 3.5       | 4.1  |
| C                    | 7.4       | 7.9  |
| D                    | 1.65      | 2.16 |
| E                    | 2.25      | 2.75 |
| F                    | 1.95      | 2.35 |
| G                    | 1.02      | 1.27 |
| H                    | 4.83      | 5.33 |
| J                    | 17.5      | 18.0 |
| K                    | 3.2 X 45° |      |
| L                    | 18.3      | 18.8 |
| M                    | 3.30      | 3.56 |
| N                    | 0.46      | 0.56 |
| P                    | 0.76      | 1.0  |
| All Dimensions in mm |           |      |

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

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

| Characteristic  | Symbol   | GBU 8005    | GBU 801 | GBU 802 | GBU 804 | GBU 806 | GBU 808 | GBU 810 | Unit             |
|---|--|-------------|---------|---------|---------|---------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V                |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>                                    | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V                |
| Average Forward Rectified Current (Note 1) @ T <sub>C</sub> = 100°C                                   | I <sub>(AV)</sub>                                      | 8.0         |         |         |         |         |         |         | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>single half sine-wave superimposed on rated load   | I <sub>FSM</sub>                                       | 200         |         |         |         |         |         |         | A                |
| Forward Voltage (per element) @ I <sub>F</sub> = 4.0A   | V <sub>FM</sub>  | 1.0         |         |         |         |         |         |         | V                |
| Peak Reverse Current @ T <sub>C</sub> = 25°C<br>at Rated DC Blocking Voltage @ T <sub>C</sub> = 125°C | I <sub>R</sub>   | 5.0<br>500  |         |         |         |         |         |         | μA               |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms) (Note 2)   | I <sup>2</sup> t                                       | 166         |         |         |         |         |         |         | A <sup>2</sup> s |
| Typical Total Capacitance per Element (Note 3)  | C <sub>T</sub>   | 130         |         |         |         |         |         |         | pF               |
| Typical Thermal Resistance Junction to Case (Note 1)  | R <sub>θJC</sub>                                       | 2.2         |         |         |         |         |         |         | °C/W             |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub>                      | -55 to +150 |         |         |         |         |         |         | °C               |

- Notes:
1. Unit mounted on 50 x 50 x 1.6mm copper plate heatsink.
  2. Non-repetitive, for t > 1.0ms and < 8.3ms.
  3. Per element, measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.



Fig. 1 Forward Current Derating Curve

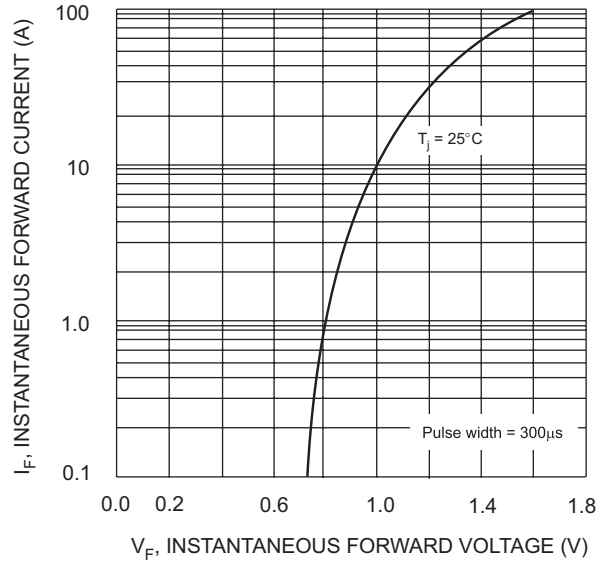


Fig. 2 Typical Forward Characteristics, per element



Fig. 3 Maximum Non-Repetitive Surge Current

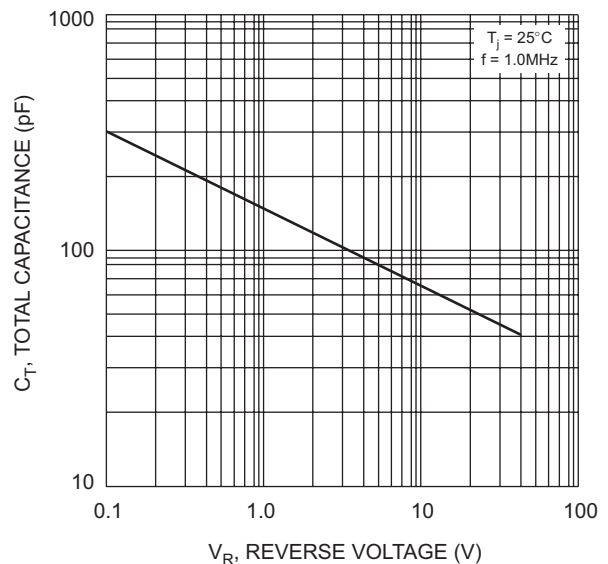


Fig. 4 Typical Total Capacitance, per element

**Ordering Information** (Note 5)

| Device  | Packaging | Shipping |
|---------|-----------|----------|
| GBU8005 | GBU       | 20/Tube  |
| GBU801  | GBU       | 20/Tube  |
| GBU802  | GBU       | 20/Tube  |
| GBU804  | GBU       | 20/Tube  |
| GBU806  | GBU       | 20/Tube  |
| GBU808  | GBU       | 20/Tube  |
| GBU810  | GBU       | 20/Tube  |

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

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.