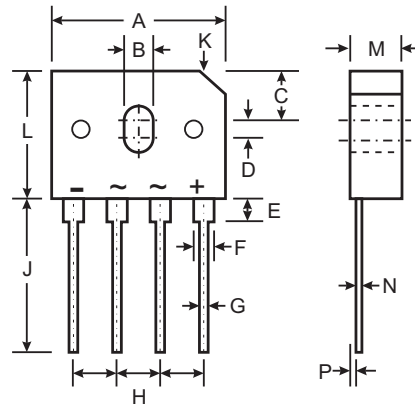


Features

- 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_A = 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 Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Forward Rectified Current (Note 1) @ T _C = 100°C | I _(AV) | | | | 8.0 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | I _{FSM} | | | | 200 | | | | A |
| Forward Voltage (per element) @ I _F = 4.0A | V _{FM} | | | | 1.0 | | | | V |
| Peak Reverse Current @ T _C = 25°C at Rated DC Blocking Voltage @ T _C = 125°C | I _R | | | | 5.0 500 | | | | μA |
| I ² t Rating for Fusing (t < 8.3ms) (Note 2) | I ² t | | | | 166 | | | | A ² s |
| Typical Total Capacitance per Element (Note 3) | C _T | | | | 130 | | | | pF |
| Typical Thermal Resistance Junction to Case (Note 1) | R _{θJC} | | | | 2.2 | | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | | | | -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*.

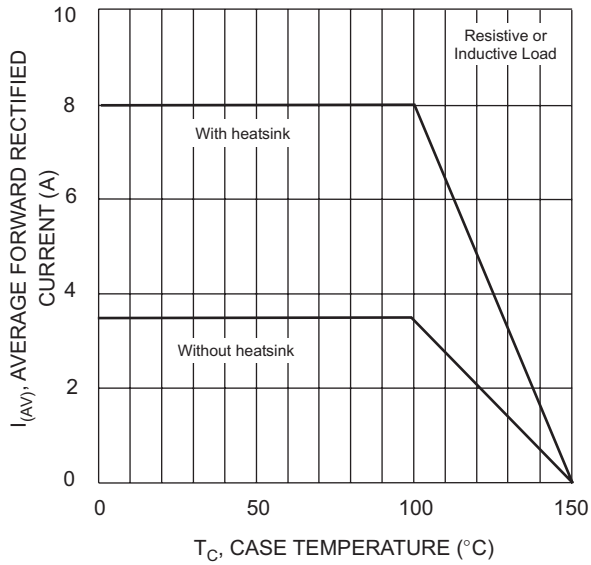


Fig. 1 Forward Current Derating Curve

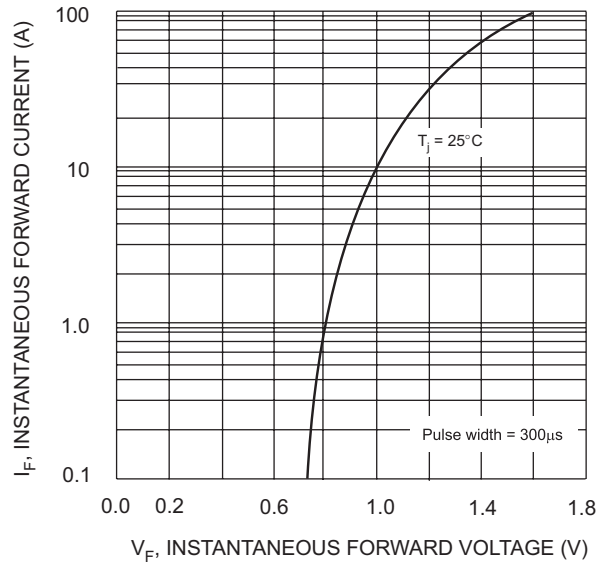


Fig. 2 Typical Forward Characteristics, per element

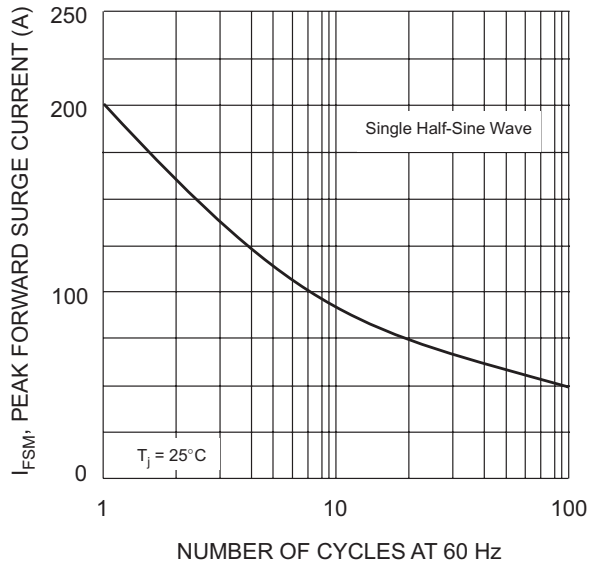


Fig. 3 Maximum Non-Repetitive Surge Current

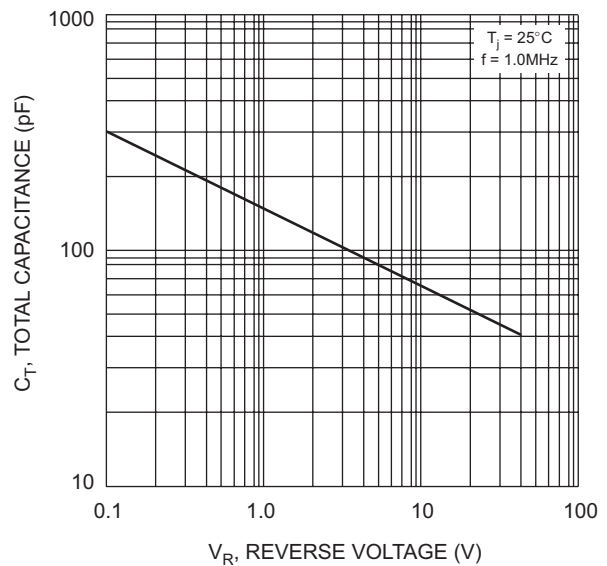


Fig. 4 Typical Total Capacitance, per element

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>.

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.