

Product Summary

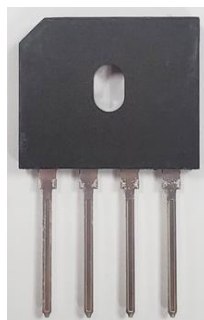
| V _{RRM} (V) | I _F (A) | V _F Max (V) @ I _F = 12.5A | I _R Max (μA) |
|----------------------|--------------------|--|-------------------------|
| 1000 | 25 | 1.05 | 10 |

Mechanical Data

- Package: GBU
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208 Ⓔ③
- Polarity Indicator: As Marked on the Body
- Weight: 3.8 grams (Approximate)
- Mounting Position: Any

Features

- Glass Passivated Die Construction
- Rating to 1000V PRV
- Ideal For Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic Technique
- UL Recognized File # E94661
- **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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

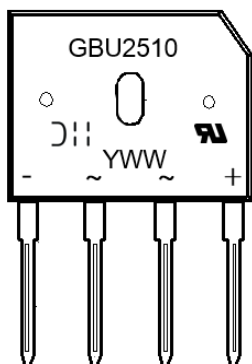


Ordering Information (Note 4)

| Part Number | Qualification | Package | Packing | |
|-------------|---------------|---------|---------|---------|
| | | | Qty. | Carrier |
| GBU2510-TU | Commercial | GBU | 20 | Tube |

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

Marking Information



GBU2510 = Product Type Marking Code
 ⓁⓂ = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 1 = 2021)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Value | Unit |
|--|--------------------|-------------|------------------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 1000 | V |
| Average Rectified Output Current | I _{F(AV)} | 25 3.6 | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave | I _{FSM} | 350 280 | A |
| Peak Forward Surge Current 1.0ms Single Half Sine-Wave | I _{FSM} | 700 560 | A |
| I ² t Rating for Fusing (t = 8.3ms) | I ² t | 508 | A ² s |
| Storage Temperature Range | T _{STG} | -55 to +150 | °C |
| Operating Junction Temperature Range | T _J | -40 to +150 | °C |

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Test Condition | Symbol | Max | Unit |
|---------------------------------------|--|----------------|------|------|
| Forward Voltage | I _F = 12.5A T _J = +25°C | V _F | 1.05 | V |
| Leakage Current | V _R at Rated T _J = +25°C | I _R | 10 | µA |
| Typical Junction Capacitance (Note 5) | | C _J | 93 | pF |

Thermal Characteristics

| Characteristic | Symbol | Typ. | Unit |
|---|------------------|------|------|
| Typical Thermal Resistance (Without Heatsink) | R _{θJC} | 3 | °C/W |
| | R _{θJL} | 10 | |
| | R _{θJA} | 30 | |
| Typical Thermal Resistance (Note 6) | R _{θJC} | 1 | °C/W |
| | R _{θJL} | 2 | |
| | R _{θJA} | 5 | |

- 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 JESD-51.
Unit mounted on 170mmx170mmx45mm Al Fin heatsink.

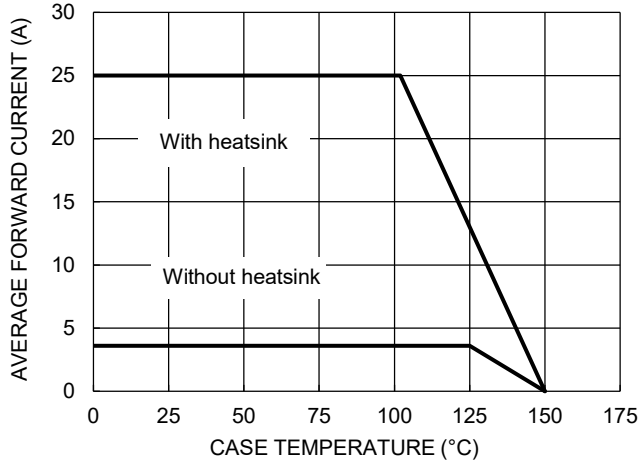


Figure 1. Forward Current Derating Curve

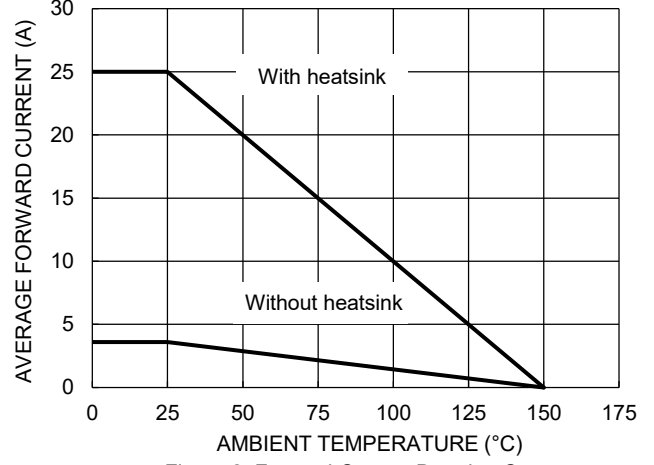


Figure 2. Forward Current Derating Curve

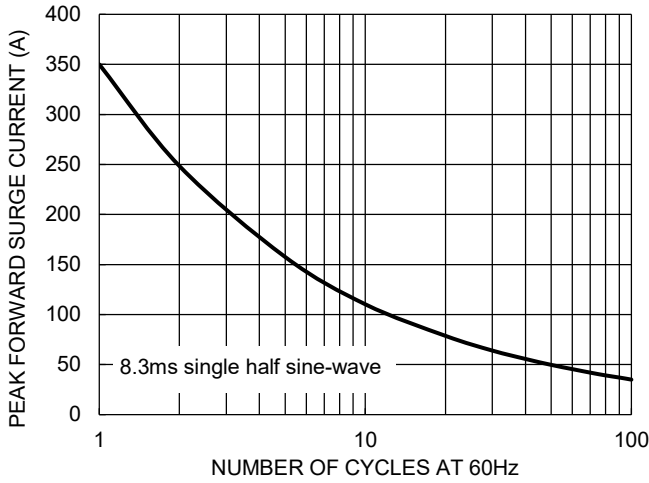


Figure 3. Maximum Non-Repetitive Surge Current

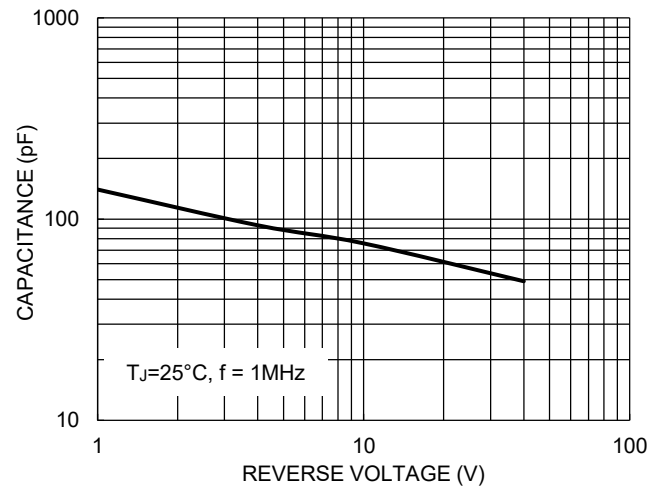


Figure 4. Typical Junction Capacitance

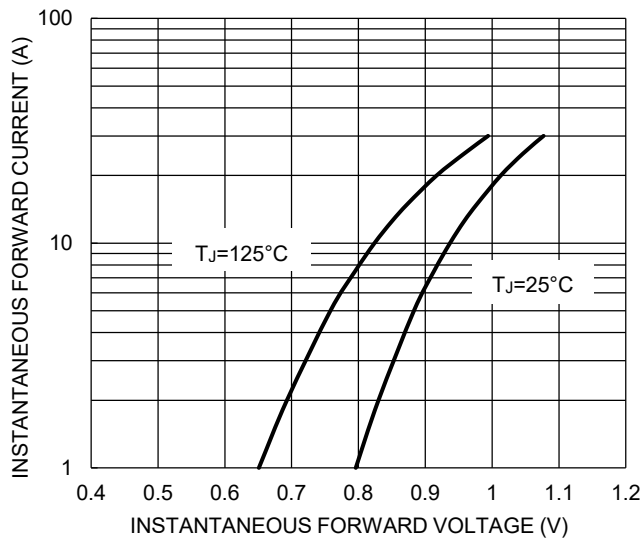


Figure 5. Typical Forward Characteristics

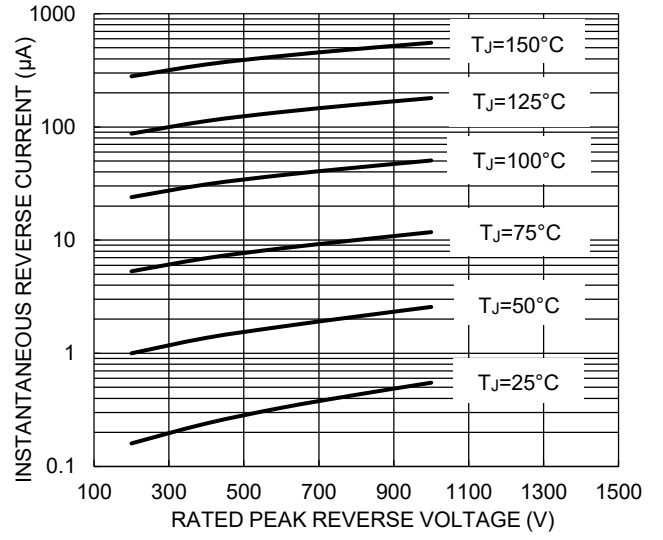
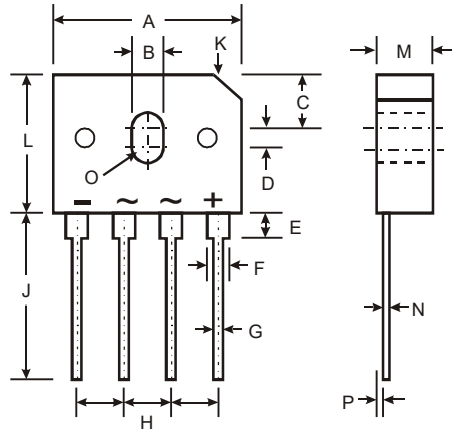


Figure 6. Typical Reverse Characteristics

Package Outline Dimensions

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

GBU



| 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 |
| O | 1.90R | |
| P | 0.76 | 1.0 |
| All Dimensions in mm | | |

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