

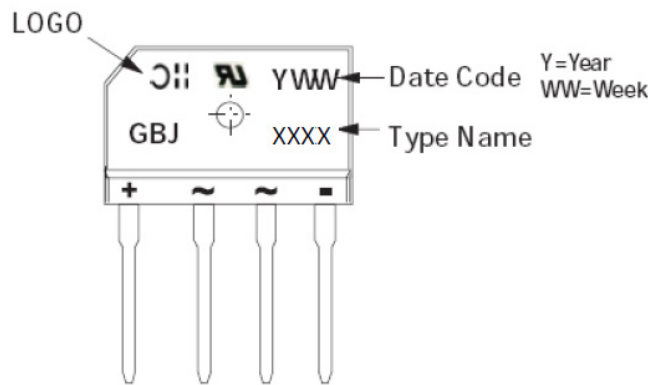
Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 2500V_{RMS}
- Low Reverse Leakage Current
- Surge Overload Rating to 350A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish; RoHS Compliant (Notes 1 & 2)**

Mechanical Data

- Case: GBJ
- Case Material: Molded Plastic.
UL Flammability Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Plated Leads, Solderable per MIL-STD-202, Method 208 **Ⓢ**
- Lead Free Plating (Tin Finish).
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Marking: Type Number
- Weight: 6.6 grams (Approximate)

Marking Information



- 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.

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

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

| Characteristic | Symbol | GBJ 25005 | GBJ 2501 | GBJ 2502 | GBJ 2504 | GBJ 2506 | GBJ 2508 | GBJ 2510 | 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 Output Current (Note 3) @ T _C = 100°C | I _o | 25 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on rated Load | I _{FSM} | 350 | | | | | | | A |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Typical Thermal Resistance Junction to Case (Note 5) | R _{θJC} | 1.0 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | °C |

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

| Characteristic | Symbol | Value | Unit |
|---|------------------|-----------|------------------|
| Forward Voltage (per element) @ I _F = 12.5A | V _{FM} | 1.05 | V |
| Peak Reverse Current @ T _C = 25°C at Rated DC Blocking Voltage @ T _C = 125°C | I _R | 10 500 | μA |
| I ² t Rating for Fusing (t > 1ms and < 8.3 ms) (Note 3) | I ² t | 510 | A ² s |
| Typical Total Capacitance (per element) (Note 4) | C _T | 85 | pF |

- Notes:
3. Non-repetitive, for t > 1ms and < 8.3 ms.
 4. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 5. Thermal resistance from junction to case per element. Unit mounted on 250 x 250 x 20mm aluminum plate heat sink.

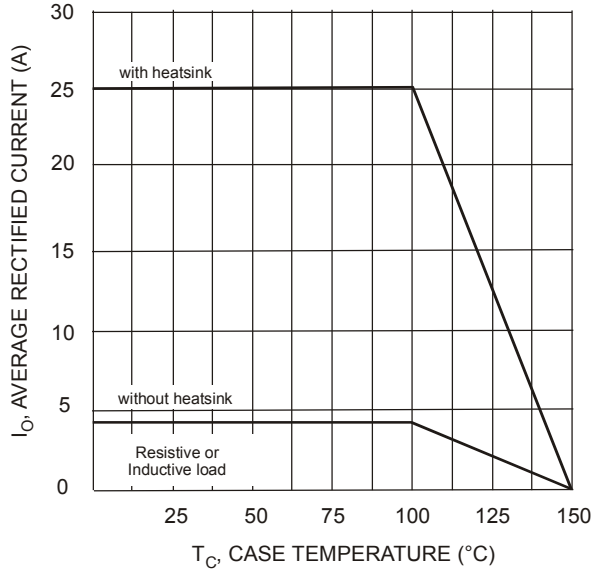


Fig. 1 Forward Current Derating Curve

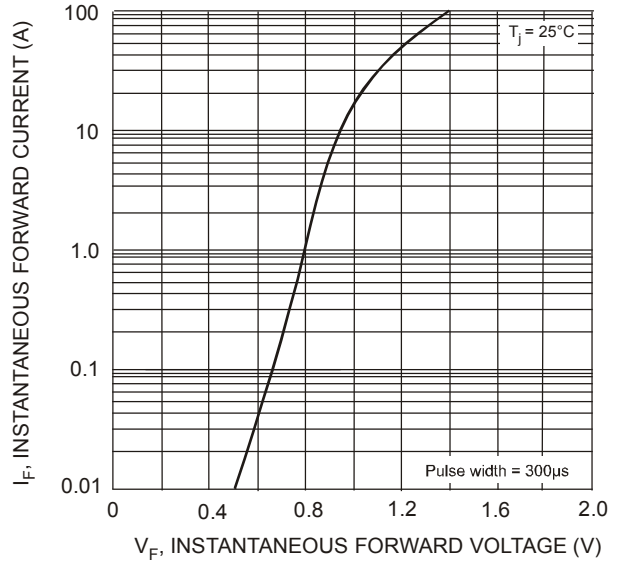


Fig. 2 Typical Forward Characteristics (per element)

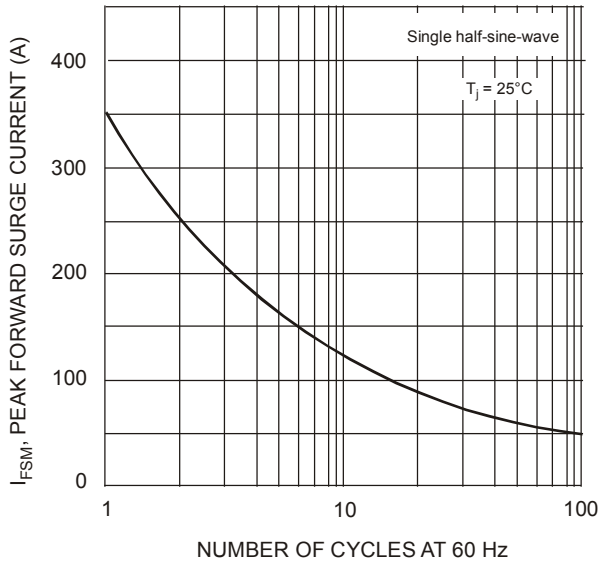


Fig. 3 Maximum Non-Repetitive Surge Current

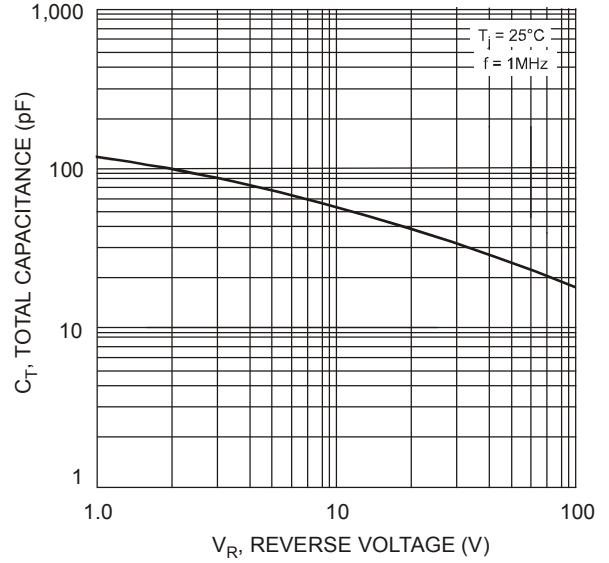


Fig. 4 Typical Total Capacitance, Per Element

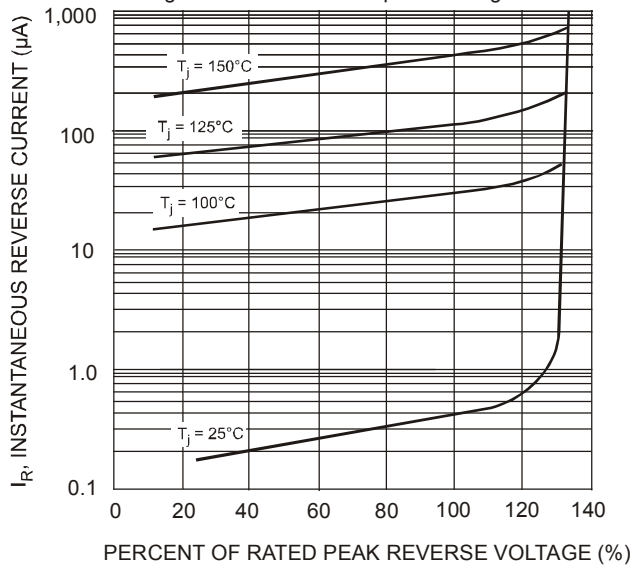


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 6)

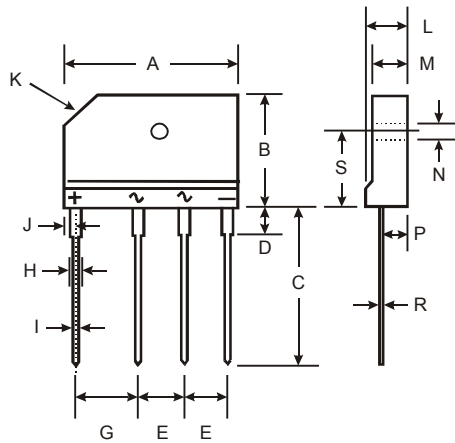
| Part Number | Case | Packaging |
|-------------|------|-----------|
| GBJ25005-F | GBJ | 15/Tube |
| GBJ2501-F | GBJ | 15/Tube |
| GBJ2502-F | GBJ | 15/Tube |
| GBJ2504-F | GBJ | 15/Tube |
| GBJ2506-F | GBJ | 15/Tube |
| GBJ2508-F | GBJ | 15/Tube |
| GBJ2510-F | GBJ | 15/Tube |

Note: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Package Outline Dimensions

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

GBJ



| GBJ | | |
|-----------------------------|-----------|-------|
| Dim | Min | Max |
| A | 29.70 | 30.30 |
| B | 19.70 | 20.30 |
| C | 17.00 | 18.00 |
| D | 3.80 | 4.20 |
| E | 7.30 | 7.70 |
| G | 9.80 | 10.20 |
| H | 2.00 | 2.40 |
| I | 0.90 | 1.10 |
| J | 2.30 | 2.70 |
| K | 3.0 X 45° | |
| L | 4.40 | 4.80 |
| M | 3.40 | 3.80 |
| N | 3.10 | 3.40 |
| P | 2.50 | 2.90 |
| R | 0.60 | 0.80 |
| S | 10.80 | 11.20 |
| All Dimensions in mm | | |

Note: For high voltage applications, the appropriate industry sector guidelines should be considered with regards to creepage and clearance.

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