

Features

- Glass Passivated Die Construction
- Rating to 1,000V PRV
- Low Reverse Leakage Current
- Surge Overload Rating to 150A Peak
- Ideal for Printed Circuit Board Applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: GBL
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish. Solderable per MIL-STD 202, Method 208
- Polarity: Marked on Body, See "Marking Information" Below
- Marking: Date Code and Type Number
- Weight: 2.52 grams (Approximate)

Ordering Information (Note 4)

| Part Number | Qualification | Case | Packaging |
|-------------|---------------|------|-----------|
| GBL410_HF | Commercial | GBL | 25/Tube |

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
 2. See http://www.diodes.com/quality/lead_free.html 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 <http://www.diodes.com/products/packages.html>.

Marking Information

GBL_HF



GBL410 = Product Type Marking Code
 = Manufacturers' Code Marking
 YBWW = Date Code Marking
 Y = Last Digit of Year (ex: 7 = 2017)
 B = Designator for "Green" Molding Compound
 WW = Week Code (01 – 53)

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

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

| Characteristic | Symbol | Value | Unit | |
|---|-----------------------------------|-----------------|------------------|----|
| Peak Repetitive Reverse Voltage | V _{RRM} | 1,000 | V | |
| Working Peak Reverse Voltage | V _{RWM} | | | |
| DC Blocking Voltage | V _R | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 700 | V | |
| Average Forward Rectified Current (Note 5) | With Heatsink | 4.0 | A | |
| | Without Heatsink | 2.4 | | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 150 | A | |
| Forward Voltage (Per Element) | @ I _F = 2.0A | V _{FM} | 1.0 | V |
| Peak Reverse Current at Rated DC Blocking Voltage | @T _J = +25°C | I _R | 5 | μA |
| | @T _J = +125°C | | 500 | |
| I ² t Rating for Fusing (Note 6) | I ² t | 93 | A ² s | |
| Typical Total Capacitance per Element (Note 7) | C _T | 35 | pF | |
| Typical Thermal Resistance Junction to Case (Note 5) | R _{θJC} | 4.2 | °C/W | |
| Typical Thermal Resistance Junction to Lead | R _{θJL} | 4.0 | °C/W | |
| Typical Thermal Resistance Junction to Ambient (Note 5) | R _{θJA} | 10 | °C/W | |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C | |

- Notes:
5. Unit mounted on 50x50x1.6mm Cu plate heatsink.
 6. Non-repetitive, for t > 3.0ms and < 8.3ms.
 7. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

FIG.1 - FORWARD CURRENT DERATING CURVE

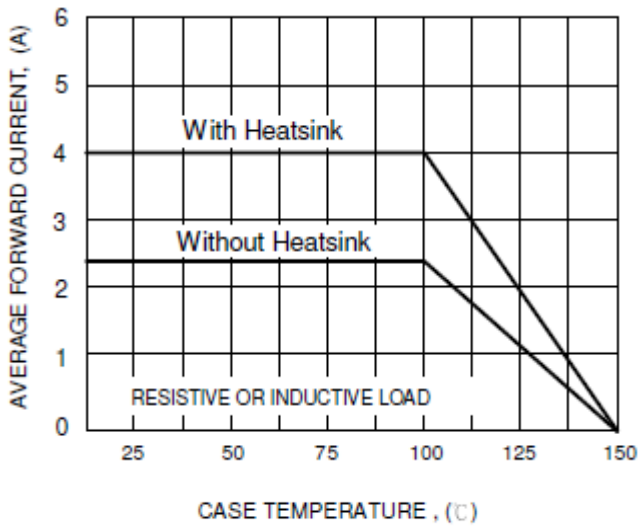


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

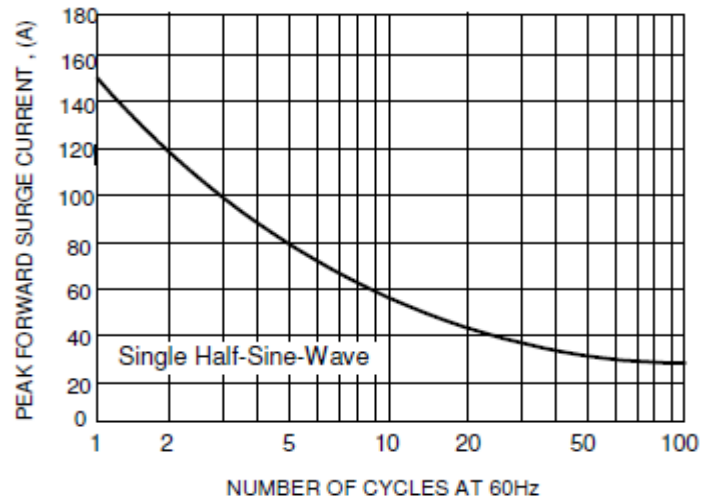


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

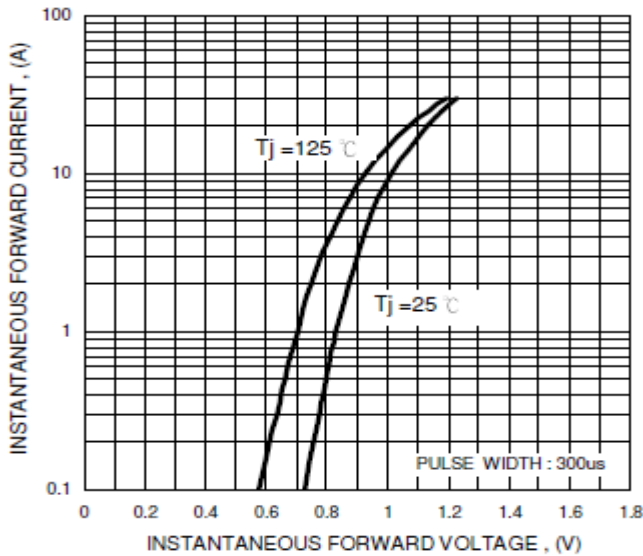


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

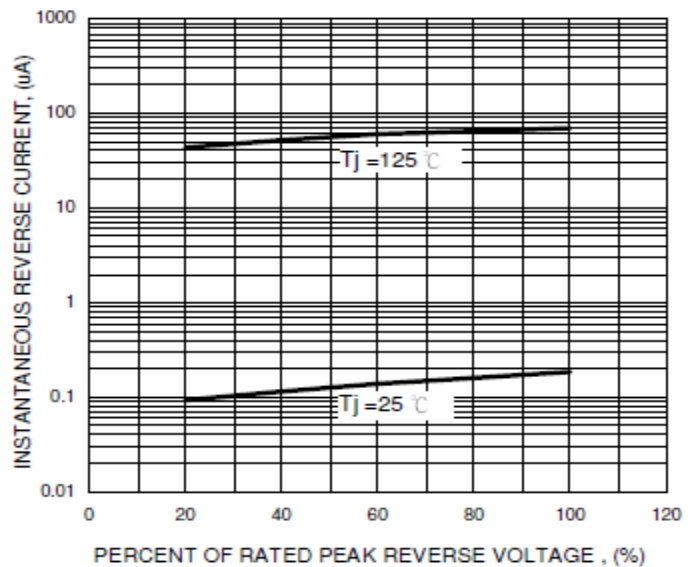


FIG.5 - TYPICAL JUNCTION CAPACITANCE

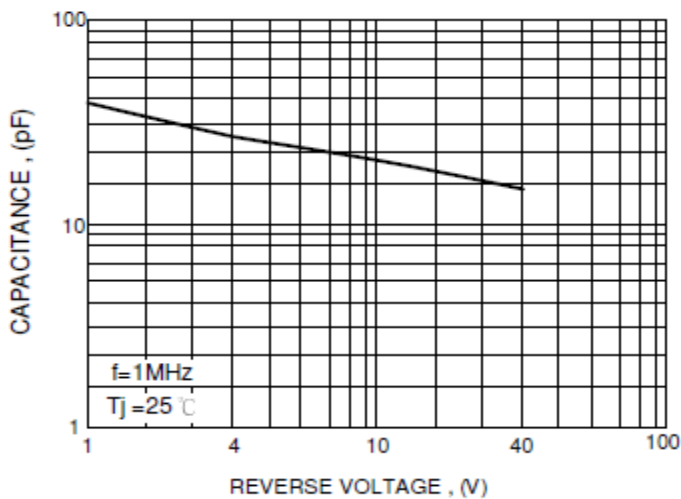
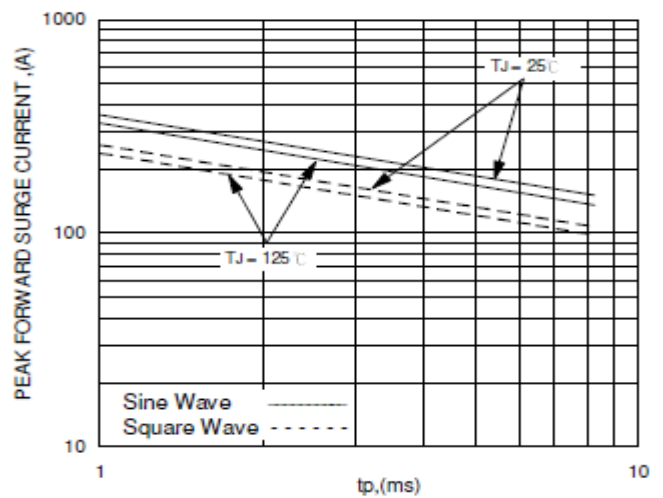


FIG.6 - NON-REPETITIVE SURGE CURRENT

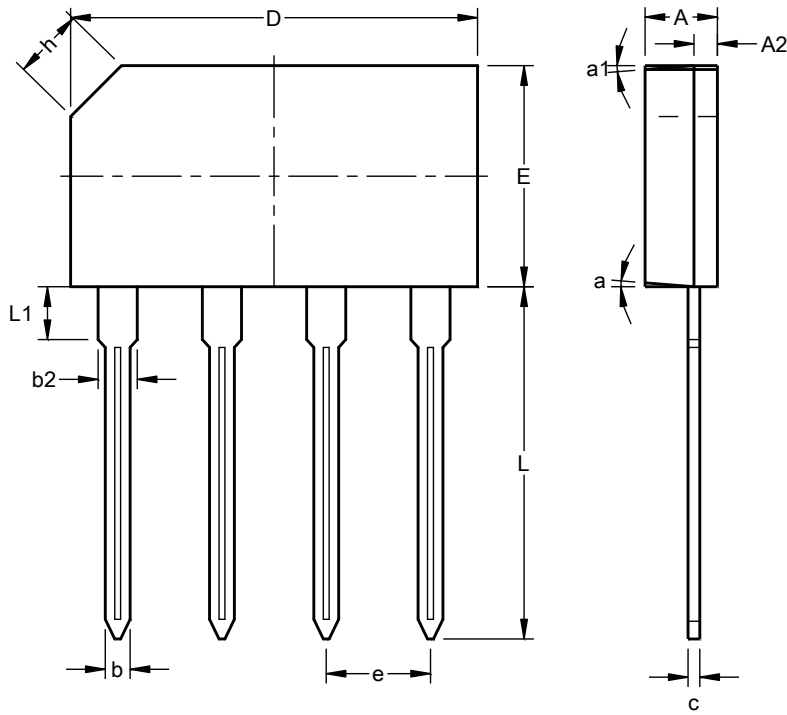


Package Outline Dimensions

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

NEW PRODUCT

GBL



| GBL | | | |
|----------------------|-------|-------|------|
| Dim | Min | Max | Typ |
| A | 3.30 | 3.70 | -- |
| A2 | 0.80 | 1.20 | -- |
| b | 1.02 | 1.27 | -- |
| b2 | 1.95 | 2.35 | -- |
| c | 0.40 | 0.60 | -- |
| D | 20.20 | 20.80 | -- |
| E | 10.70 | 11.30 | -- |
| e | 4.83 | 5.33 | -- |
| h | -- | -- | 0.35 |
| L | 17.50 | 18.00 | -- |
| L1 | 2.30 | 2.70 | -- |
| a | -- | 5° | -- |
| a1 | -- | 5° | -- |
| All Dimensions in mm | | | |

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