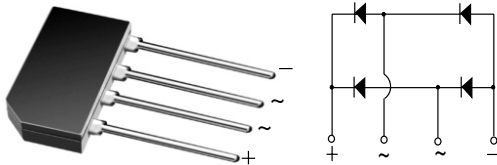


## Glass Passivated Single-Phase Bridge Rectifier



Case Type GBL

### FEATURES

- UL recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- Typical  $I_R$  less than 0.1  $\mu\text{A}$
- High case dielectric strength
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

### MECHANICAL DATA

**Case:** GBL

Epoxy meets UL 94 V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

**Polarity:** As marked on body

| PRIMARY CHARACTERISTICS |                     |
|-------------------------|---------------------|
| $I_{F(AV)}$             | 1.5 A               |
| $V_{RRM}$               | 200 V, 600 V, 800 V |
| $I_{FSM}$               | 60 A                |
| $I_R$                   | 5 $\mu\text{A}$     |
| $V_F$                   | 1.0 V               |
| $T_J$ max.              | 150 °C              |

| MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)           |                |               |         |         |                      |
|--|----------------|---------------|---------|---------|----------------------|
| PARAMETER  | SYMBOL         | G2SBA20       | G2SBA60 | G2SBA80 | UNIT                 |
| Maximum repetitive peak reverse voltage                                  | $V_{RRM}$      | 200           | 600     | 800     | V                    |
| Maximum RMS voltage  | $V_{RMS}$      | 140           | 420     | 560     | V                    |
| Maximum DC blocking voltage  | $V_{DC}$       | 200           | 600     | 800     | V                    |
| Maximum average forward rectified output current at $T_A = 25\text{ °C}$ | $I_{F(AV)}$    | 1.5           |         |         | A                    |
| Peak forward surge current single sine-wave superimposed on rated load   | $I_{FSM}$      | 60            |         |         | A                    |
| Rating for fusing ( $t < 8.3\text{ ms}$ )                                | $I^2t$         | 15            |         |         | $\text{A}^2\text{s}$ |
| Operating junction and storage temperature range                         | $T_J, T_{STG}$ | - 55 to + 150 |         |         | °C                   |

| ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ °C}$ unless otherwise noted) |   |        |            |         |         |               |
|---|---|--------|------------|---------|---------|---------------|
| PARAMETER   | TEST CONDITIONS                               | SYMBOL | G2SBA20    | G2SBA60 | G2SBA80 | UNIT          |
| Maximum instantaneous forward voltage drop per diode                      | 0.75 A  | $V_F$  | 1.00       |         |         | V             |
| Maximum DC reverse current at rated DC blocking voltage per diode         | $T_A = 25\text{ °C}$<br>$T_A = 125\text{ °C}$ | $I_R$  | 5.0<br>300 |         |         | $\mu\text{A}$ |

| THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) |                 |         |         |         |                    |
|--|-----------------|---------|---------|---------|--------------------|
| PARAMETER  | SYMBOL          | G2SBA20 | G2SBA60 | G2SBA80 | UNIT               |
| Typical thermal resistance   | $R_{\theta JA}$ |         | 40      |         | $^\circ\text{C/W}$ |
|  | $R_{\theta JC}$ |         | 12      |         |                    |

**Note:**

(1) Unit mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length

| ORDERING INFORMATION (Example) |                 |                        |               |                      |
|--------------------------------|-----------------|------------------------|---------------|----------------------|
| PREFERRED P/N                  | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE        |
| G2SBA60-E3/45                  | 2.017           | 45                     | 20            | Tube                 |
| G2SBA60-E3/51                  | 2.017           | 51                     | 400           | Anti-static PVC tray |

## RATINGS AND CHARACTERISTICS CURVES

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

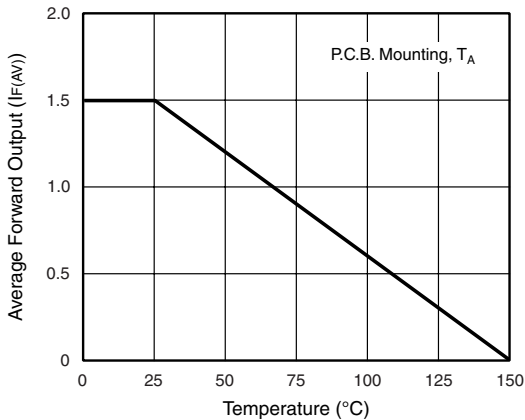


Figure 1. Derating Curve Output Rectified Current

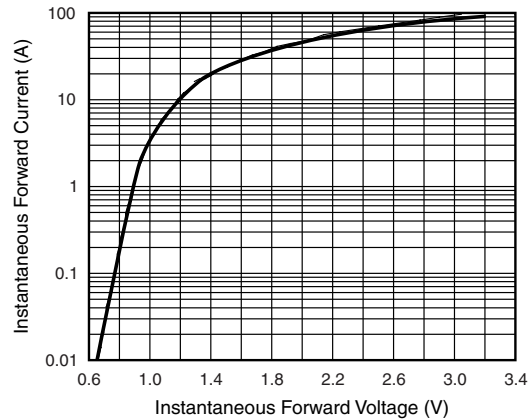


Figure 3. Typical Forward Characteristics Per Diode

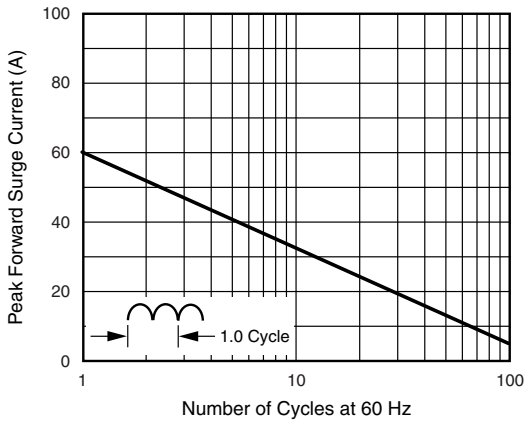


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

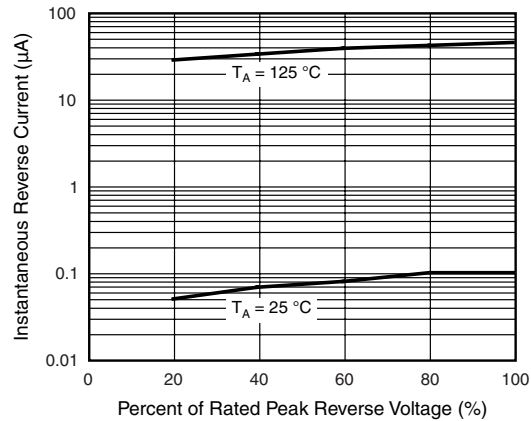


Figure 4. Typical Reverse Characteristics Per Diode

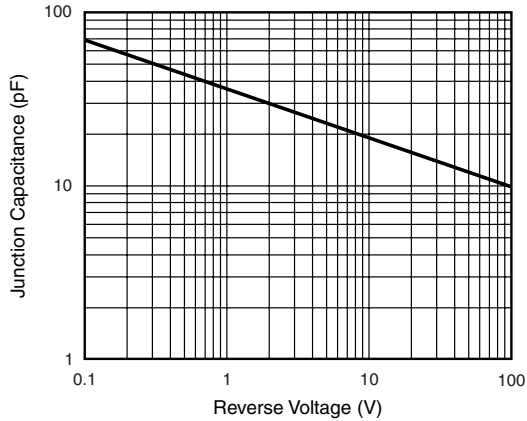


Figure 5. Typical Junction Capacitance Per Diode

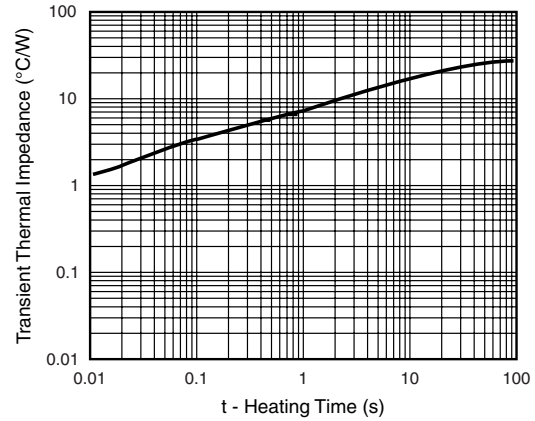
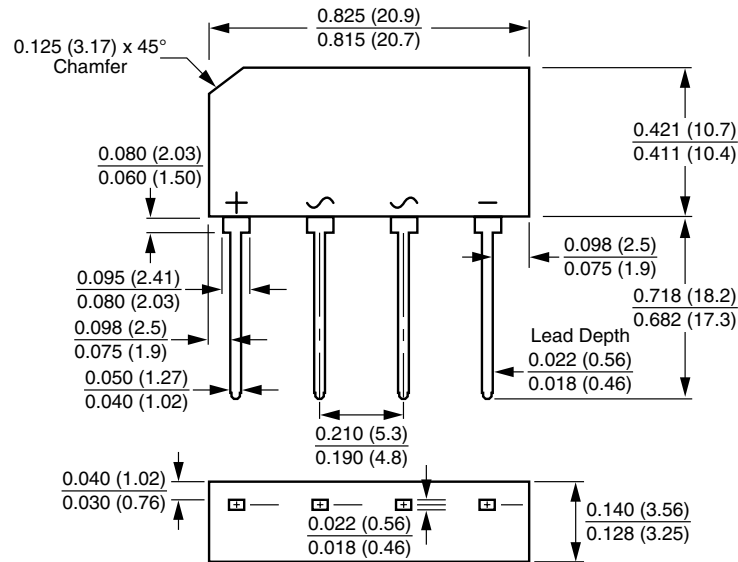


Figure 6. Typical Transient Thermal Impedance

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### Case Type GBL



Polarity shown on front side of case, positive lead beveled corner



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