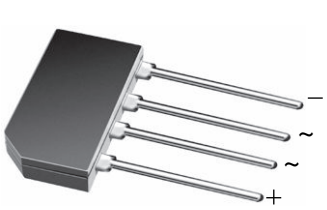
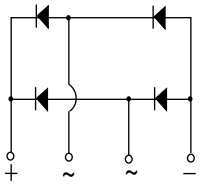
## Glass Passivated Single-Phase Bridge Rectifier





**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 µA
- High case dielectric strength
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances application.

### MECHANICAL DATA

**Case:** GBL
Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** As marked on body

| PRIMARY CHARACTERISTICS | |
|---|---|
| Package | GBL |
| $I_{F(AV)}$ | 1.5 A |
| $V_{RRM}$ | 200 V, 600 V, 800 V |
| $I_{FSM}$ | 80 A |
| $I_R$ | 5 µA |
| $V_F$ at $I_F$ = 0.75 V | 1.0 V |
| $T_J$ max. | 150 °C |
| Diode variations | In-Line |

**MAXIMUM RATINGS** ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | G2SB20 | G2SB60 | G2SB80 | 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 °C | $I_{F(AV)}$ | 1.5 | | | A |
| Peak forward surge current single sine-wave superimposed on rated load | $I_{FSM}$ | 80 | | | A |
| Rating for fusing (t < 8.3 ms) | $I^2t$ | 27 | | | $A^2s$ |
| Operating junction and storage temperature range | $T_J$, $T_{STG}$ | - 55 to + 150 | | | °C |

**ELECTRICAL CHARACTERISTICS** ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | TEST CONDITIONS | SYMBOL | G2SB20 | G2SB60 | G2SB80 | 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 °C | $I_R$ | 5.0 | | | µA |
| | $T_A$ = 125 °C | | 300 | | | |

| **THERMAL CHARACTERISTICS** ($T_A$ = 25 °C unless otherwise noted) | | | | | |
|---|---|---|---|---|---|
| **PARAMETER** | **SYMBOL** | **G2SB20** | **G2SB60** | **G2SB80** | **UNIT** |
| Typical thermal resistance | $R_{\theta JA}$ | 40 | | | °C/W |
| | $R_{\theta JC}$ | 12 | | | |

**Note**

- Unit mounted on PCB with 0.5" x 0.5" (12 mm 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** |
| G2SB60-E3/45 | 2.045 | 45 | 20 | Tube |
| G2SB60-E3/51 | 2.045 | 51 | 400 | Anti-static PVC tray |

## RATINGS AND CHARACTERISTICS CURVES ($T_A$ = 25 °C unless otherwise noted)

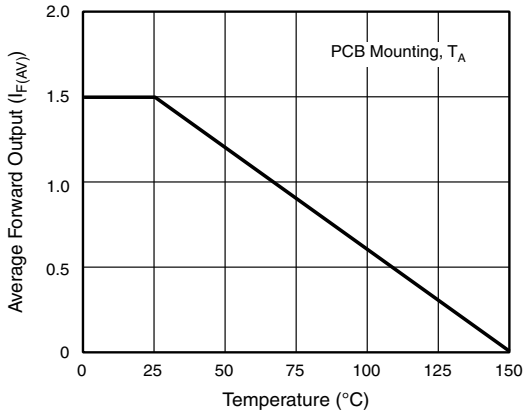



Fig. 1 - Derating Curve Output Rectified Current

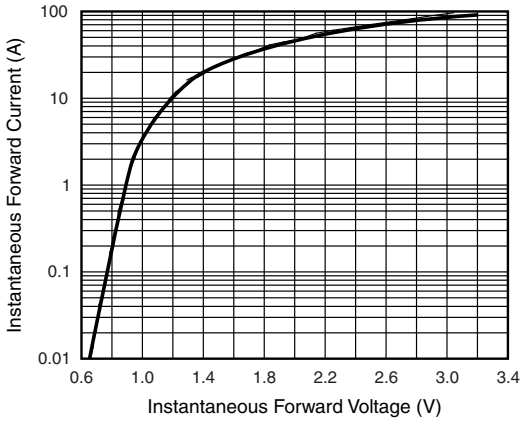



Fig. 3 - Typical Forward Characteristics Per Diode

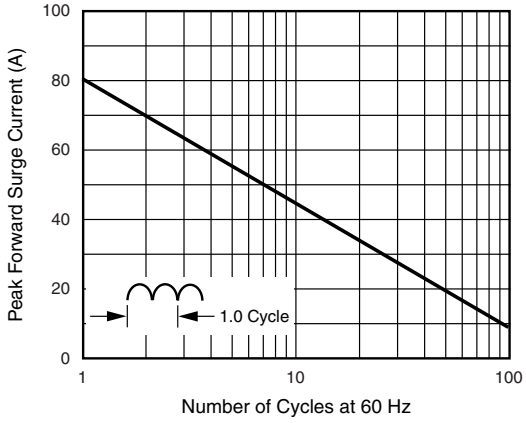



Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

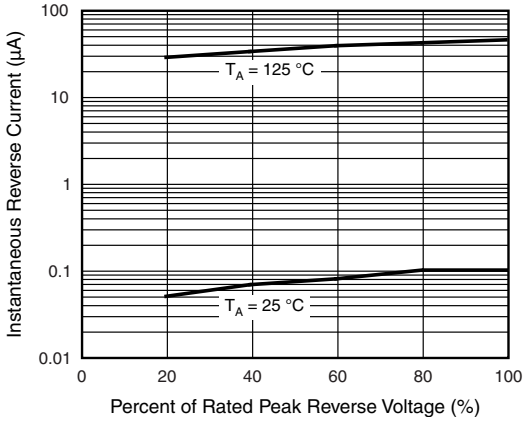



Fig. 4 - Typical Reverse Characteristics Per Diode

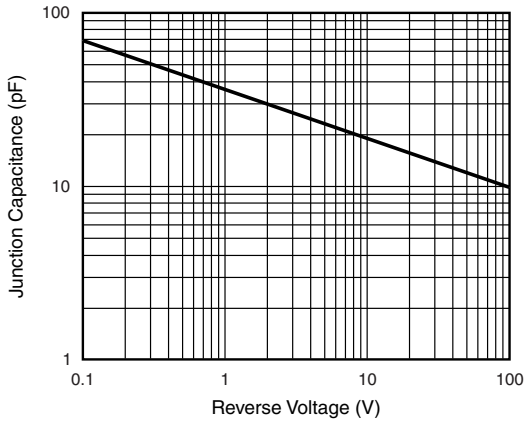



Fig. 5 - Typical Junction Capacitance Per Diode

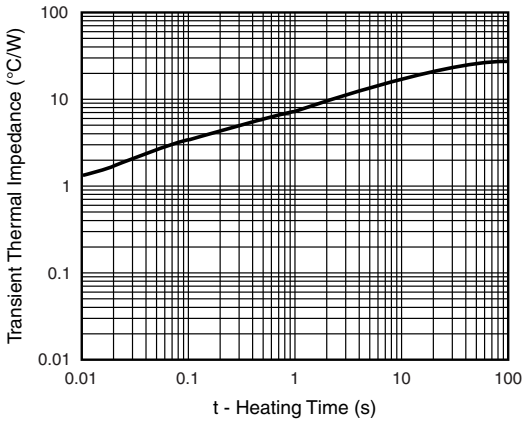
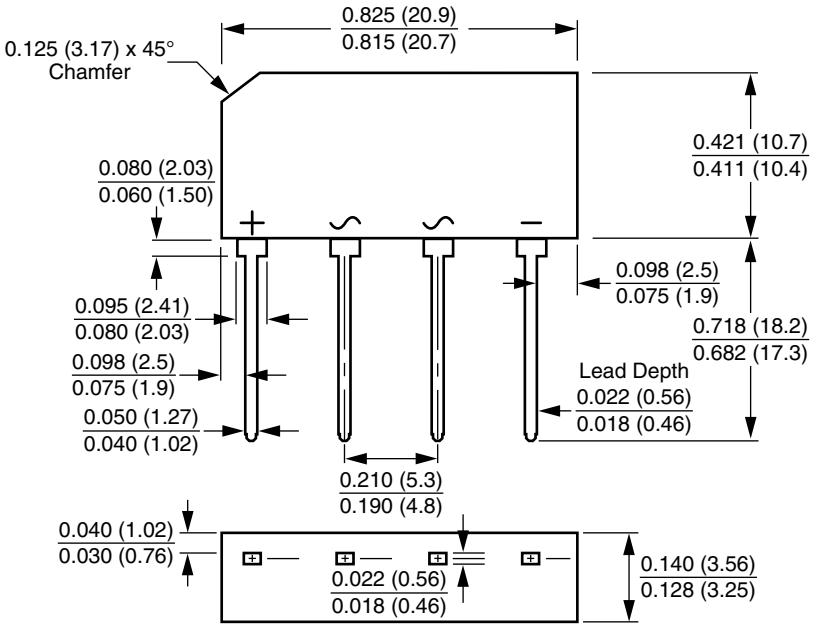



Fig. 6 - Typical Transient Thermal Impedance

## **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

### Case Type GBL




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

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