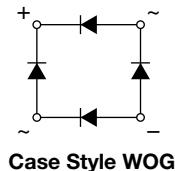


## Glass Passivated Single-Phase Bridge Rectifier



### FEATURES

- Ideal for printed circuit boards
- High case dielectric strength
- High surge current capability
- Typical  $I_R$  less than 0.1  $\mu$ A
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

| PRIMARY CHARACTERISTICS |                                  |
|-------------------------|----------------------------------|
| Package                 | WOG                              |
| $I_{F(AV)}$             | 0.9 A                            |
| $V_{RRM}$               | 65 V, 125 V, 200 V, 400 V, 600 V |
| $I_{FSM}$               | 45 A                             |
| $I_R$                   | 10 $\mu$ A                       |
| $V_F$ at $I_F = 0.9$ A  | 1.0 V                            |
| $T_J$ max.              | 125 °C                           |
| Diode variations        | Quad                             |

### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for power supply, adapter, charger, lighting ballaster on consumers, and home appliances applications.

### MECHANICAL DATA

#### Case: WOG

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E4 - RoHS-compliant, commercial grade

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

**Polarity:** As marked on body

| MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)   |             |               |              |               |               |               |          |
|---|-------------|---------------|--------------|---------------|---------------|---------------|----------|
| PARAMETER   | SYMBOL      | B40<br>C800G  | B80<br>C800G | B125<br>C800G | B250<br>C800G | B380<br>C800G | UNIT     |
| Maximum repetitive peak reverse voltage   | $V_{RRM}$   | 65            | 125          | 200           | 400           | 600           | V        |
| Maximum RMS input voltage R- and C-load   | $V_{RMS}$   | 40            | 80           | 125           | 250           | 380           | V        |
| Maximum average forward output current R- and L-load<br>for free air operation at $T_A = 45$ °C | $I_{F(AV)}$ | 0.9           |              |               |               |               | A        |
| C-load  |             | 0.8           |              |               |               |               |          |
| Maximum non-repetitive peak voltage   | $V_{RSM}$   | 100           | 200          | 350           | 600           | 1000          | V        |
| Maximum DC blocking voltage   | $V_{DC}$    | 65            | 125          | 200           | 400           | 600           | V        |
| Maximum peak working voltage  | $V_{RWM}$   | 90            | 180          | 300           | 600           | 900           | V        |
| Maximum repetitive peak forward surge current   | $I_{FRM}$   | 10            |              |               |               |               | A        |
| Peak forward surge current single sine-wave on rated load                                       | $I_{FSM}$   | 45            |              |               |               |               | A        |
| Rating for fusing at $T_J = 125$ °C (t < 100 ms)  | $I^2t$      | 10            |              |               |               |               | $A^2s$   |
| Minimum series resistor C-load at $V_{RMS} = \pm 10$ %  | $R_T$       | 1.0           | 2.0          | 4.0           | 8.0           | 12            | $\Omega$ |
| Maximum load capacitance<br>+ 50 %<br>- 10 %  | $C_L$       | 5000          | 2500         | 1000          | 500           | 200           | $\mu$ F  |
| Operating junction temperature range  | $T_J$       | - 40 to + 125 |              |               |               |               | °C       |
| Storage temperature range   | $T_{STG}$   | - 40 to + 150 |              |               |               |               | °C       |

| ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted) |                 |        |              |              |               |               |               |         |
|--|-----------------|--------|--------------|--------------|---------------|---------------|---------------|---------|
| PARAMETER  | TEST CONDITIONS | SYMBOL | B40<br>C800G | B80<br>C800G | B125<br>C800G | B250<br>C800G | B380<br>C800G | UNIT    |
| Maximum instantaneous forward voltage drop per diode               | 0.9 A           | $V_F$  | 1.0          |              |               |               |               | V       |
| Maximum reverse current at rated repetitive peak voltage per diode |                 | $I_R$  | 10           |              |               |               |               | $\mu$ A |

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

| PARAMETER                                 | SYMBOL          | B40<br>C800G | B80<br>C800G | B125<br>C800G | B250<br>C800G | B380<br>C800G | UNIT               |
|---|-----------------|--------------|--------------|---------------|---------------|---------------|--------------------|
| Typical thermal resistance <sup>(1)</sup> | $R_{\theta JA}$ |              |              | 36            |               |               |                    |
|   | $R_{\theta JL}$ |              |              | 11            |               |               | $^\circ\text{C/W}$ |

**Note**

<sup>(1)</sup> Thermal resistance from junction to ambient and from junction to lead mounted on PCB at 0.375" (9.5 mm) lead lengths with 0.22" x 0.22" (5.5 mm x 5.5 mm) copper pads

**ORDERING INFORMATION** (Example)

| PREFERRED P/N   | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
|-----------------|-----------------|------------------------|---------------|---------------|
| B380C800G-E4/51 | 1.12            | 51                     | 100           | Plastic bag   |

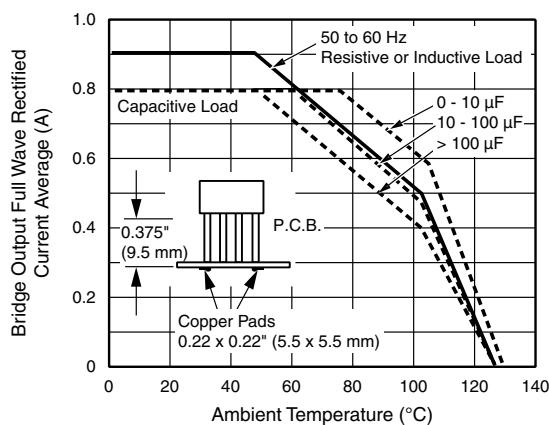
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Derating Curves Output Rectified Current for B40C800G...B125C800G

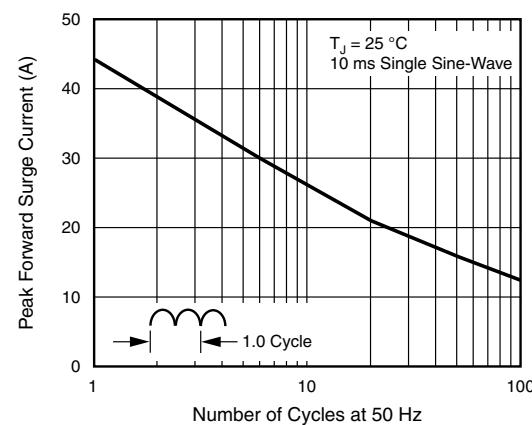


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

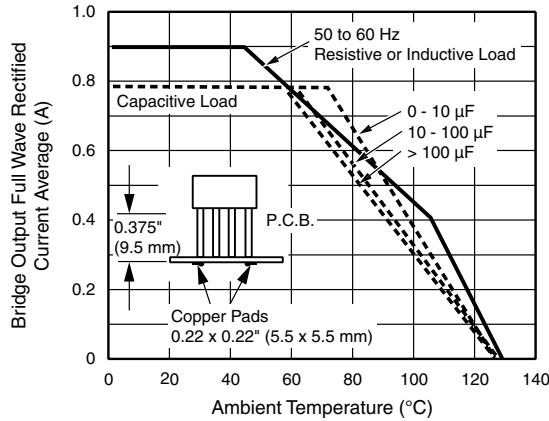


Fig. 2 - Derating Curves Output Rectified Current for B250C800G...B380C800G

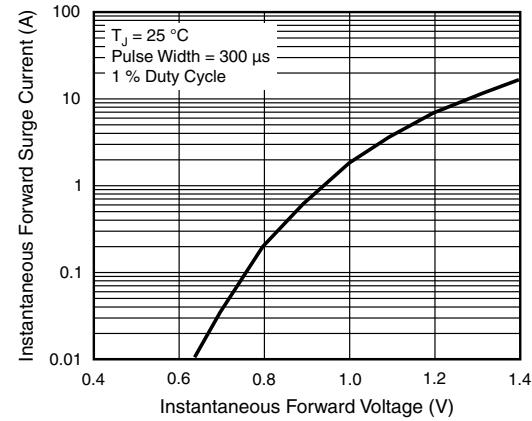


Fig. 4 - Typical Forward Characteristics Per Diode

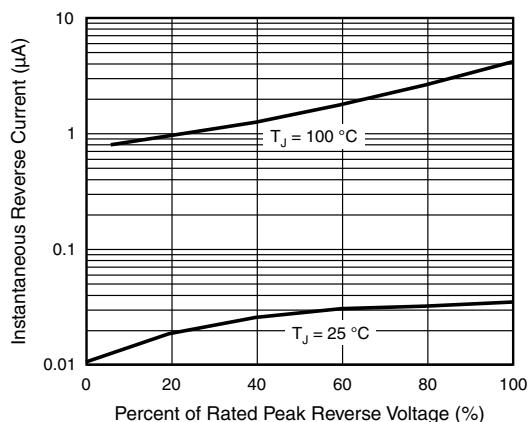


Fig. 5 - Typical Reverse Characteristics Per Diode

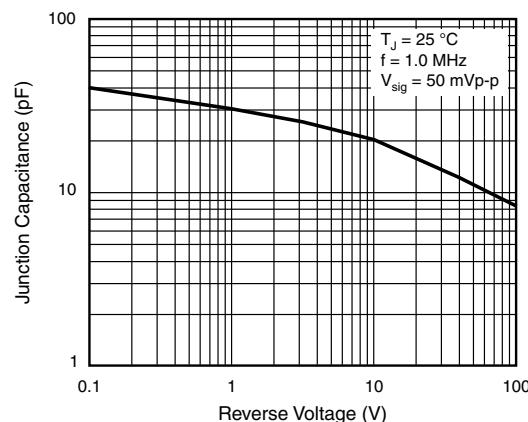
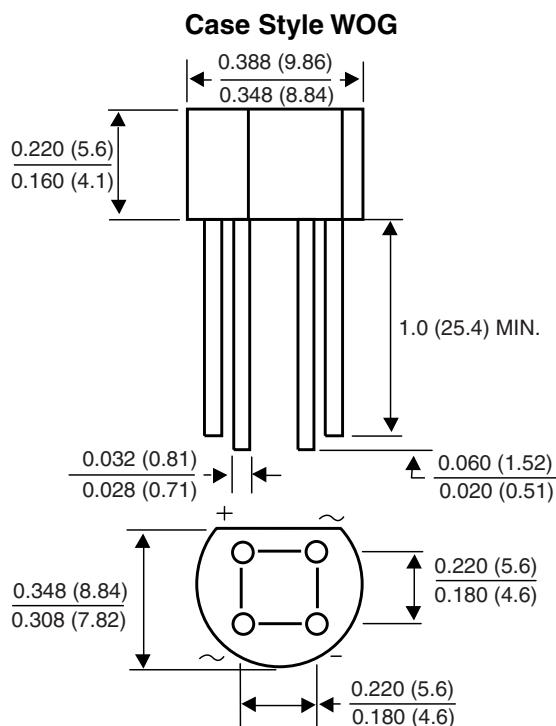


Fig. 6 - Typical Junction Capacitance Per Diode

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



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