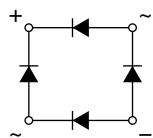




## Glass Passivated Single-Phase Bridge Rectifier



Case Style WOG

## 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 <sub>RRM</sub>                              | 65            | 125          | 200           | 400           | 600           | V                |
| Maximum RMS input voltage R- and C-load                                                    | V <sub>RMS</sub>                              | 40            | 80           | 125           | 250           | 380           | V                |
| Maximum average forward output current<br>for free air operation at T <sub>A</sub> = 45 °C | I <sub>F(AV)</sub><br>R- and L-load<br>C-load | 0.9           |              |               |               |               | A                |
|                                                                                            |                                               | 0.8           |              |               |               |               |                  |
| Maximum non-repetitive peak voltage                                                        | V <sub>RSM</sub>                              | 100           | 200          | 350           | 600           | 1000          | V                |
| Maximum DC blocking voltage                                                                | V <sub>DC</sub>                               | 65            | 125          | 200           | 400           | 600           | V                |
| Maximum peak working voltage                                                               | V <sub>RWM</sub>                              | 90            | 180          | 300           | 600           | 900           | V                |
| Maximum repetitive peak forward surge current                                              | I <sub>FRM</sub>                              | 10            |              |               |               |               | A                |
| Peak forward surge current single sine-wave on rated load                                  | I <sub>FSM</sub>                              | 45            |              |               |               |               | A                |
| Rating for fusing at T <sub>J</sub> = 125 °C (t < 100 ms)                                  | I <sup>2</sup> t                              | 10            |              |               |               |               | A <sup>2</sup> s |
| Minimum series resistor C-load at V <sub>RMS</sub> = ± 10 %                                | R <sub>T</sub>                                | 1.0           | 2.0          | 4.0           | 8.0           | 12            | Ω                |
| Maximum load capacitance<br>+ 50 %<br>- 10 %                                               | C <sub>L</sub>                                | 5000          | 2500         | 1000          | 500           | 200           | μF               |
| Operating junction temperature range                                                       | T <sub>J</sub>                                | - 40 to + 125 |              |               |               |               | °C               |
| Storage temperature range                                                                  | T <sub>STG</sub>                              | - 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 <sub>θJA</sub> | 36           |              |               |               |               | °C/W |
|                                           | R <sub>θJL</sub> | 11           |              |               |               |               |      |

**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   |

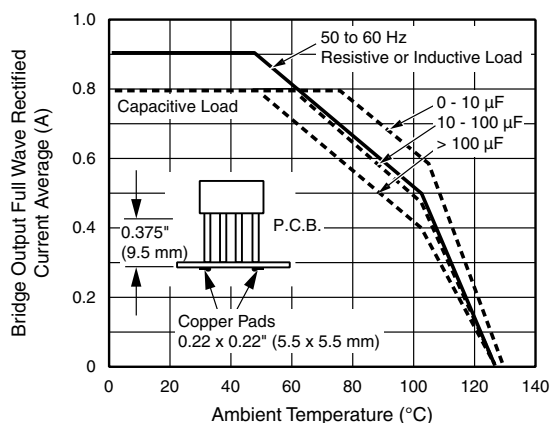
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

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

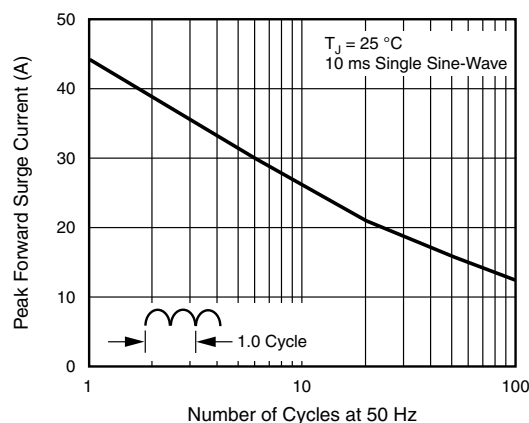


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

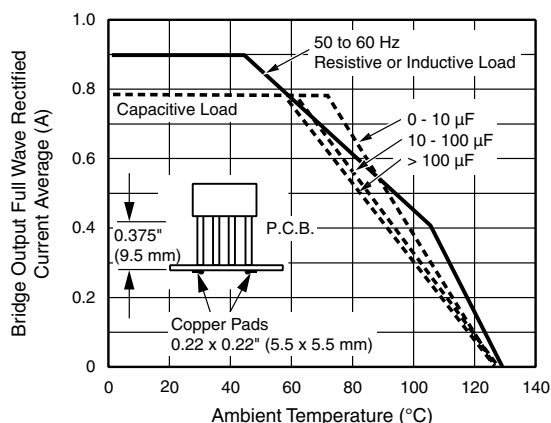


Fig. 2 - Derating Curves Output Rectified Current for B250C800G...B380C800G

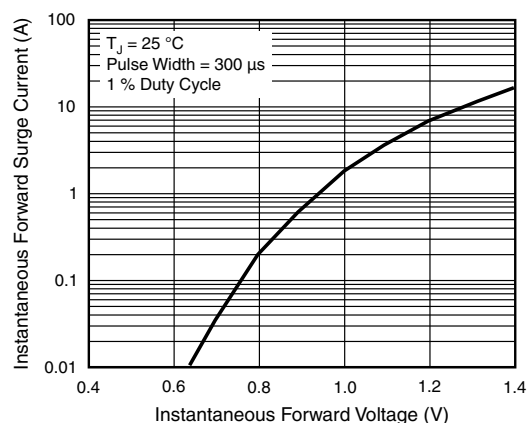


Fig. 4 - Typical Forward Characteristics Per Diode

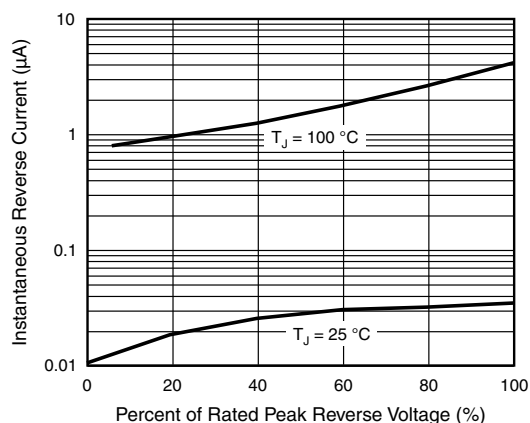


Fig. 5 - Typical Reverse Characteristics Per Diode

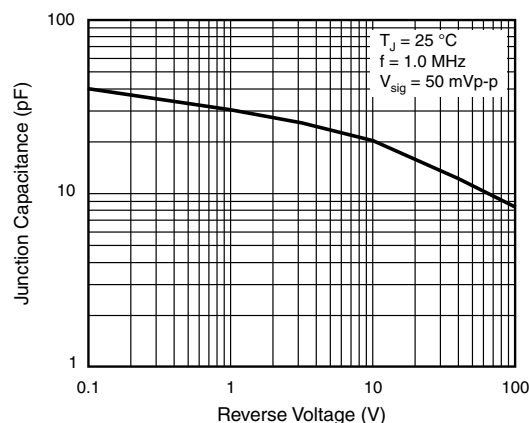
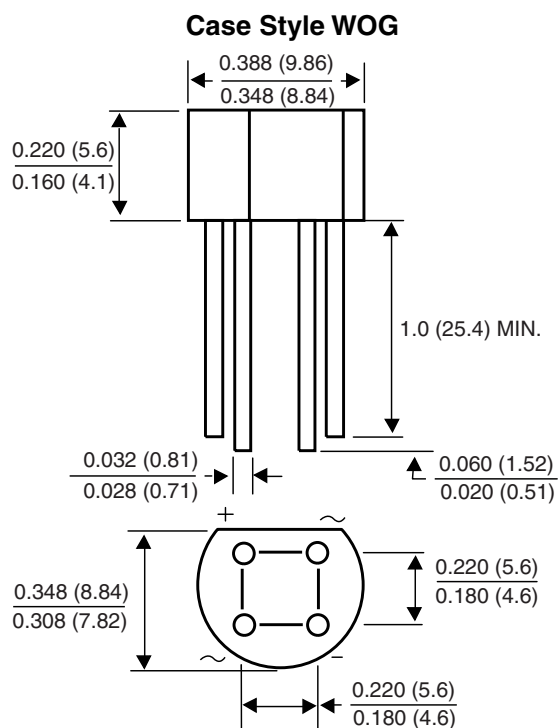


Fig. 6 - Typical Junction Capacitance Per Diode

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





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