



## 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                              |
| $I_{F(AV)}$            | 1.0 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 $I_F = 1.0$ 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>C1000G | B80<br>C1000G | B125<br>C1000G | B250<br>C1000G | B380<br>C1000G | 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 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            | 800            | V                |
| Maximum non-repetitive peak voltage                                                                             | V <sub>RSM</sub>   | 100           | 200           | 350            | 600            | 1000           | V                |
| Maximum repetitive peak forward surge current                                                                   | I <sub>FRM</sub>   | 10            |               |                |                |                | A                |
| Maximum average forward output current R- and L-load<br>for free air operation at T <sub>A</sub> = 45 °C C-load | I <sub>F(AV)</sub> | 1.2           |               |                |                |                | A                |
|                                                                                                                 |                    | 1.0           |               |                |                |                |                  |
| 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 < 8.3 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 + 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>C1000G | B80<br>C1000G | B125<br>C1000G | B250<br>C1000G | B380<br>C1000G | UNIT    |
|--------------------------------------------------------------------|-----------------|--------|---------------|---------------|----------------|----------------|----------------|---------|
| Maximum instantaneous forward voltage drop per diode               | 1.0 A           | $V_F$  | 1.0           |               |                |                |                | V       |
| Maximum reverse current at rated repetitive peak voltage per diode | $T_A = 25$ °C   | $I_R$  | 10            |               |                |                |                | $\mu A$ |

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

| PARAMETER                                 | SYMBOL           | B40<br>C1000G | B80<br>C1000G | B125<br>C1000G | B250<br>C1000G | B380<br>C1000G | 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 |
|------------------|-----------------|------------------------|---------------|---------------|
| B380C1000G-E4/51 | 1.12            | 51                     | 100           | Plastic bag   |

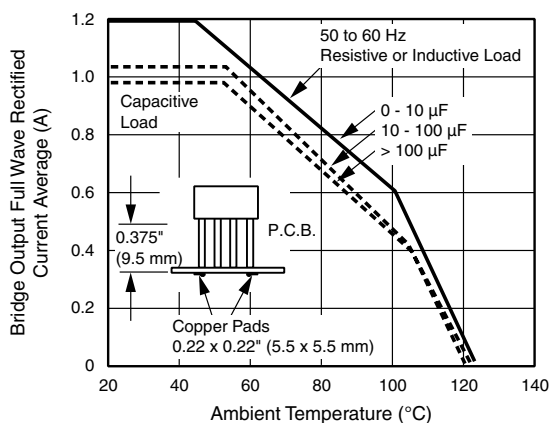
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Derating Curves Output Rectified Current for B40C1000G...B125C1000G

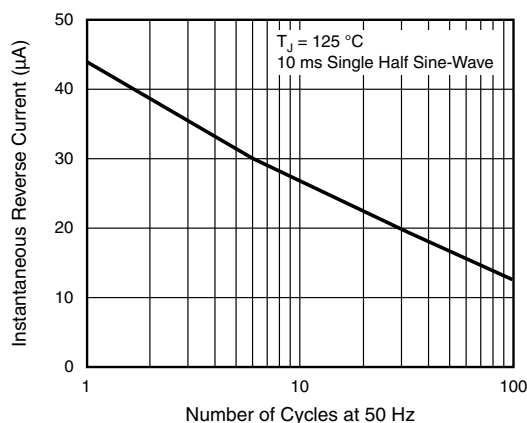


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

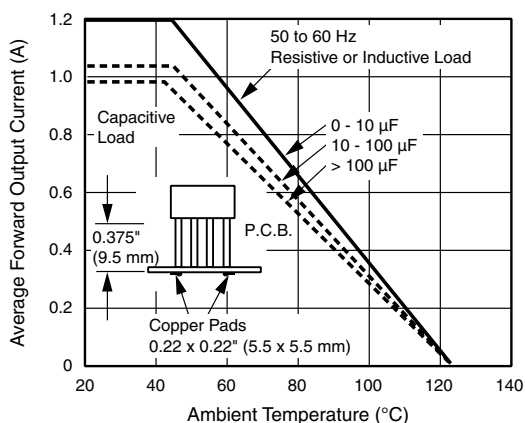


Fig. 2 - Derating Curves Output Rectified Current for B250C1000G...B380C1000G

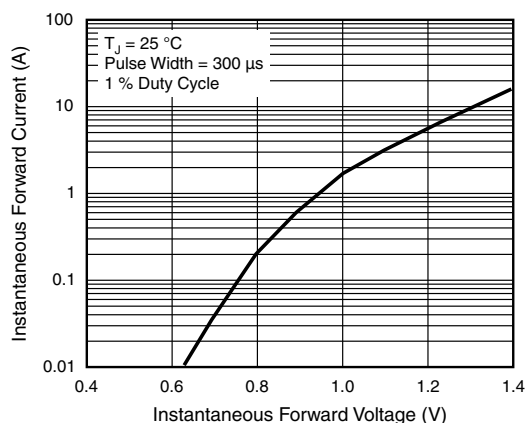


Fig. 4 - Typical Forward Characteristics Per Diode

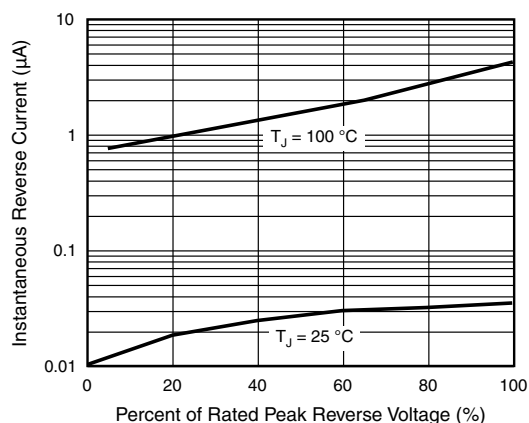


Fig. 5 - Typical Reverse Characteristics Per Diode

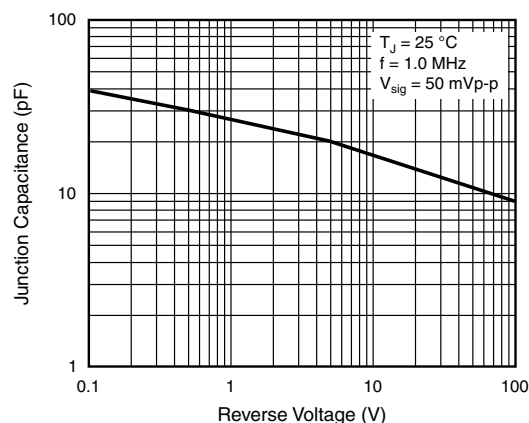
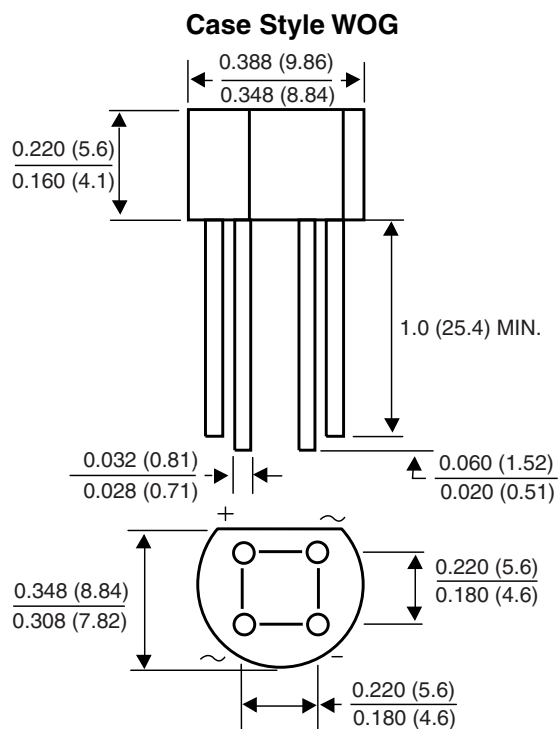


Fig. 6 - Typical Junction Capacitance Per Diode

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





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