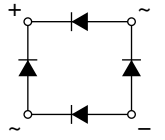




## Glass Passivated Single-Phase Bridge Rectifier



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 ( $T_A = 25\text{ °C}$ unless otherwise noted)                        |               |               |            |             |             |             |          |
|---|---------------|---------------|------------|-------------|-------------|-------------|----------|
| PARAMETER   | SYMBOL        | B40 C1000G    | B80 C1000G | B125 C1000G | B250 C1000G | B380 C1000G | 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 DC blocking voltage   | $V_{DC}$      | 65            | 125        | 200         | 400         | 600         | V        |
| Maximum peak working voltage  | $V_{RWM}$     | 90            | 180        | 300         | 600         | 800         | V        |
| Maximum non-repetitive peak voltage   | $V_{RSM}$     | 100           | 200        | 350         | 600         | 1000        | V        |
| Maximum repetitive peak forward surge current   | $I_{FRM}$     | 10            |            |             |             |             | A        |
| Maximum average forward output current for free air operation at $T_A = 45\text{ °C}$ | R- and L-load | 1.2           |            |             |             |             | A        |
|   | C-load        | 1.0           |            |             |             |             |          |
| Peak forward surge current single sine-wave on rated load                             | $I_{FSM}$     | 45            |            |             |             |             | A        |
| Rating for fusing at $T_J = 125\text{ °C}$ ( $t < 8.3\text{ ms}$ )                    | $I^2t$        | 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  | $C_L$         | 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 ( $T_A = 25\text{ °C}$ unless otherwise noted) |                      |        |            |            |             |             |             |         |
|---|----------------------|--------|------------|------------|-------------|-------------|-------------|---------|
| PARAMETER   | TEST CONDITIONS      | SYMBOL | B40 C1000G | B80 C1000G | B125 C1000G | B250 C1000G | B380 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        | $T_A = 25\text{ °C}$ | $I_R$  | 10         |            |             |             |             | $\mu A$ |



| THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted) |                  |            |            |             |             |             |      |
|---|------------------|------------|------------|-------------|-------------|-------------|------|
| PARAMETER   | SYMBOL           | B40 C1000G | B80 C1000G | B125 C1000G | B250 C1000G | B380 C1000G | UNIT |
| Typical thermal resistance (1)  | R <sub>θJA</sub> | 36         |            |             |             |             | °C/W |
|   | R <sub>θJL</sub> | 11         |            |             |             |             |      |

**Note**

(1) 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<sub>A</sub> = 25 °C unless otherwise noted)**

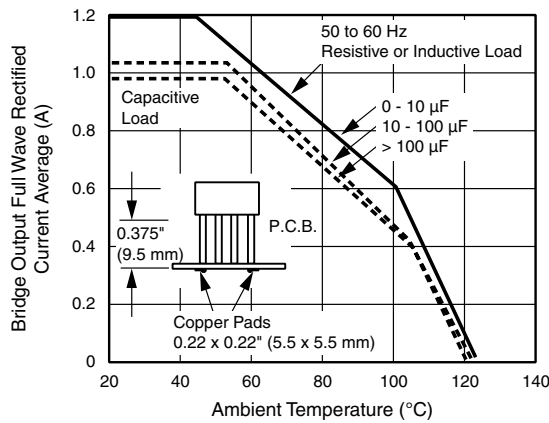


Fig. 1 - Derating Curves Output Rectified Current for B40C1000G...B125C1000G

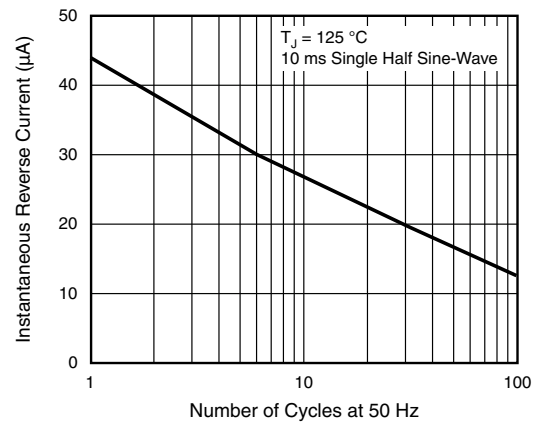


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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

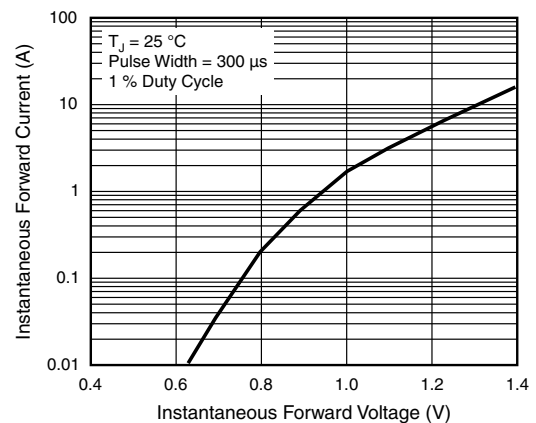


Fig. 4 - Typical Forward Characteristics Per Diode



Fig. 5 - Typical Reverse Characteristics Per Diode



Fig. 6 - Typical Junction Capacitance Per Diode

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





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