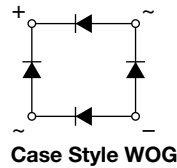




## Glass Passivated Single-Phase Bridge Rectifier



### FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- Typical  $I_R$  less than 0.5  $\mu\text{A}$
- High case dielectric strength
- High surge current capability
- Solder dip 260 °C, 40 s
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### LINKS TO ADDITIONAL RESOURCES



| PRIMARY CHARACTERISTICS        |   |
|--------------------------------|---|
| $I_{F(AV)}$                    | 2.0 A   |
| $V_{RRM}$                      | 50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V |
| $I_{FSM}$                      | 60 A  |
| $I_R$                          | 5 $\mu\text{A}$                                 |
| $V_F$ at $I_F = 2.0 \text{ A}$ | 1.1 V   |
| $T_J$ max.                     | 150 °C  |
| Package                        | WOG   |
| Circuit configuration          | 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 ( $T_A = 25 \text{ }^\circ\text{C}$ unless otherwise noted)          |                |             |       |       |       |       |       |       |                      |
|--|----------------|-------------|-------|-------|-------|-------|-------|-------|----------------------|
| PARAMETER  | SYMBOL         | 2W005G      | 2W01G | 2W02G | 2W04G | 2W06G | 2W08G | 2W10G | UNIT                 |
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V                    |
| Maximum RMS voltage  | $V_{RMS}$      | 35          | 70    | 140   | 280   | 420   | 560   | 700   | V                    |
| Maximum DC blocking voltage  | $V_{DC}$       | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V                    |
| Maximum average forward rectified current at 0.375" (9.5 mm) lead length at (fig. 1) | $I_{F(AV)}$    | 2.0         |       |       |       |       |       |       | A                    |
| Peak forward surge current single half sine-wave superimposed on rated load          | $I_{FSM}$      | 60          |       |       |       |       |       |       | A                    |
| Rating for fusing ( $t < 8.3 \text{ ms}$ )   | $I^2t$         | 15          |       |       |       |       |       |       | $\text{A}^2\text{s}$ |
| Operating junction and storage temperature range                                     | $T_J, T_{STG}$ | -55 to +150 |       |       |       |       |       |       | $^\circ\text{C}$     |

| ELECTRICAL CHARACTERISTICS ( $T_A = 25 \text{ }^\circ\text{C}$ unless otherwise noted) |                                    |        |        |       |       |       |       |       |       |               |
|--|------------------------------------|--------|--------|-------|-------|-------|-------|-------|-------|---------------|
| PARAMETER  | TEST CONDITIONS                    | SYMBOL | 2W005G | 2W01G | 2W02G | 2W04G | 2W06G | 2W08G | 2W10G | UNIT          |
| Maximum instantaneous forward voltage drop per diode                                   | $I_F = 2.0 \text{ A}$              | $V_F$  | 1.1    |       |       |       |       |       |       | V             |
| Maximum DC reverse current at rated DC blocking voltage per diode                      | $T_A = 25 \text{ }^\circ\text{C}$  | $I_R$  | 5.0    |       |       |       |       |       |       | $\mu\text{A}$ |
|  | $T_A = 125 \text{ }^\circ\text{C}$ |        | 500    |       |       |       |       |       |       |               |
| Typical junction capacitance per diode   | 4.0 V, 1 MHz                       | $C_J$  | 40     |       |       |       | 20    |       |       | pF            |



| THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted) |                  |        |       |       |       |       |       |       |      |
|---|------------------|--------|-------|-------|-------|-------|-------|-------|------|
| PARAMETER   | SYMBOL           | 2W005G | 2W01G | 2W02G | 2W04G | 2W06G | 2W08G | 2W10G | UNIT |
| Typical thermal resistance <sup>(1)</sup>                               | R <sub>θJA</sub> | 40     |       |       |       |       |       | °C/W  |      |
|   | R <sub>θJL</sub> | 15     |       |       |       |       |       |       |      |

**Note**

<sup>(1)</sup> Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length PCB mounting

| ORDERING INFORMATION (Example) |                 |                        |               |               |
|--------------------------------|-----------------|------------------------|---------------|---------------|
| PREFERRED P/N                  | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| 2W06G-E4/51                    | 1.12            | 51                     | 100           | Plastic bag   |

**RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)**

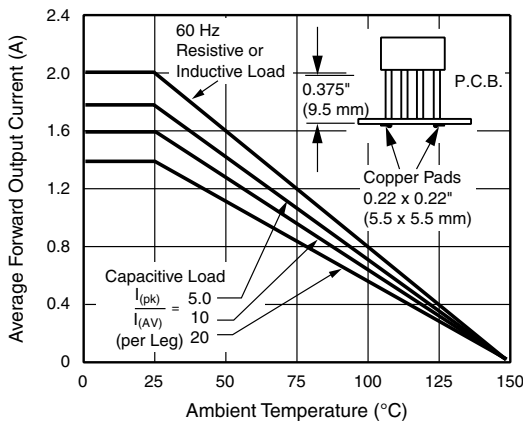


Fig. 1 - Derating Curve Output Rectified Current

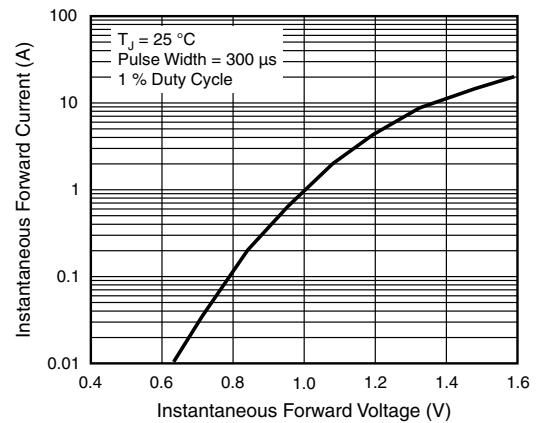


Fig. 3 - Typical Forward Characteristics Per Diode

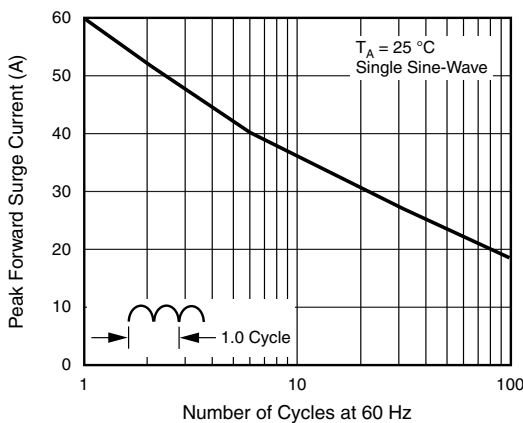


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

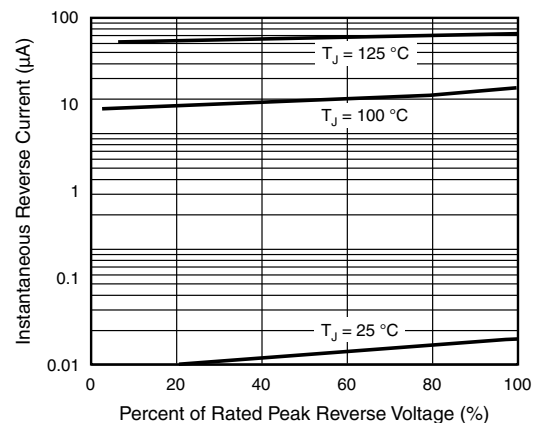


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

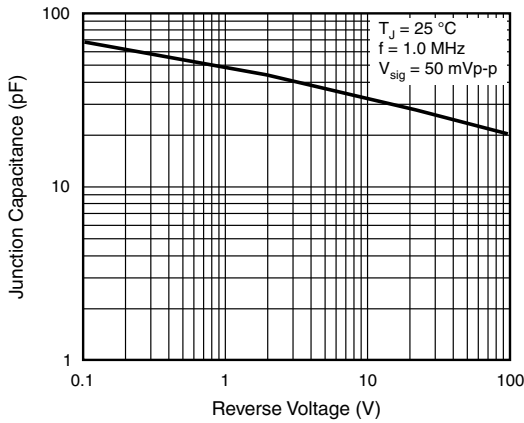


Fig. 5 - Typical Junction Capacitance Per Diode

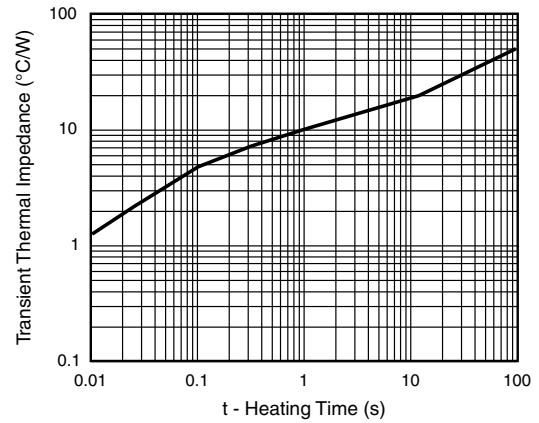
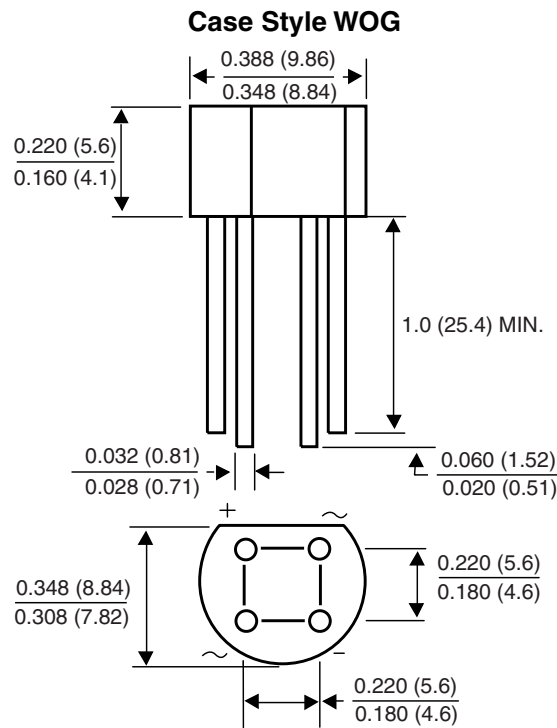


Fig. 6 - Typical Transient Thermal Impedance

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





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