2W005G, 2W01G, 2W02G, 2W04G, 2W06G, 2W08G, 2W10G

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Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier



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 µA | | | | | | |
| V_F at $I_F = 2.0$ A | 1.1 V | | | | | | |
| T _J max. | 150 °C | | | | | | |
| Package | WOG | | | | | | |
| Circuit configuration | Quad | | | | | | |

FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- Typical I_B less than 0.5 µA
- High case dielectric strength
- High surge current capability
- Solder dip 260 °C, 40 s
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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 | 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 | | | | | | | А |
| Peak forward surge current single half sine-wave superimposed on rated load | I _{FSM} | 60 | | | | | А | | |
| Rating for fusing (t < 8.3 ms) | l ² t | 15 | | | | | A ² s | | |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +150 | | | | | | °C | |

| ELECTRICAL CHARACTERISTICS (T _A = 25 °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 A | V _F | | | | 1.1 | | | | V |
| Maximum DC reverse | T _A = 25 °C | 5.0 | | | | | | | | |
| current at rated DC blocking voltage per diode | T _A = 125 °C | I _R | 500 | | | | | | μA | |
| Typical junction capacitance per diode | 4.0 V, 1 MHz | CJ | | 40 |) | | | 20 | | pF |



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| THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted) | | | | | | | | | |
|--|-----------------|---|--|--|--|--|------|------|------|
| PARAMETER | SYMBOL | SYMBOL 2W005G 2W01G 2W02G 2W04G 2W06G 2W08G 2W10G L | | | | | | UNIT | |
| Typical thermal resistance ⁽¹⁾ | $R_{\theta JA}$ | 40 | | | | | | | °C/W |
| Typical thermal resistance of | $R_{\theta JL}$ | 15 | | | | | 0/10 | | |

Note

⁽¹⁾ 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) | JNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE | | | | | | | |
| 2W06G-E4/51 | 1.12 | 51 | 100 | Plastic bag | | | | | |

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

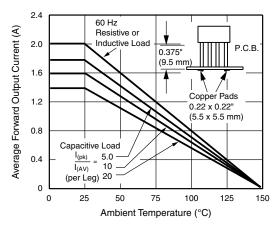


Fig. 1 - Derating Curve Output Rectified Current

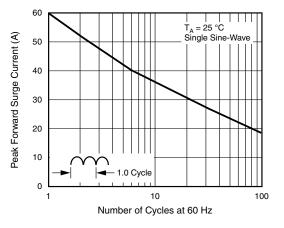


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

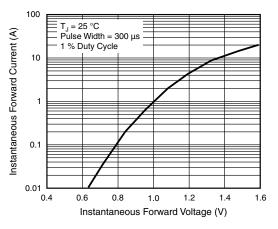


Fig. 3 - Typical Forward Characteristics Per Diode

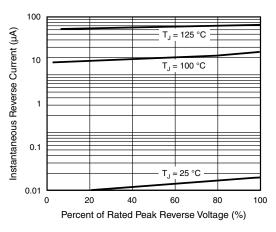
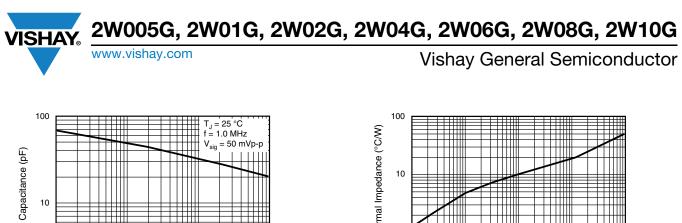


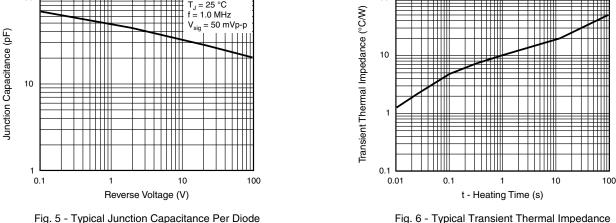
Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

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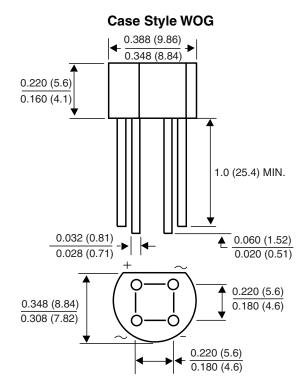
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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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