

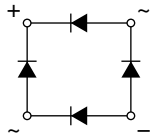


**THE DATASHEET OF
W005G-E4/51**





Glass Passivated Single-Phase Bridge Rectifier



Case Style WOG

FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- Typical I_R less than 0.1 μ A
- High case dielectric strength
- High surge current capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



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 JESD 22-B102

Polarity: as marked on body

LINKS TO ADDITIONAL RESOURCES



| PRIMARY CHARACTERISTICS | |
|-------------------------|---|
| $I_{F(AV)}$ | 1.5 A |
| V_{RRM} | 50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V |
| I_{FSM} | 50 A |
| I_R | 5 μ A |
| V_F at $I_F = 1.0$ A | 1.0 V |
| T_J max. | 150 °C |
| Package | WOG |
| Circuit configuration | Quad |

| MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted) | | | | | | | | | |
|---|----------------|-------------|------|------|------|------|------|------|------------------|
| PARAMETER | SYMBOL | W005G | W01G | W02G | W04G | W06G | W08G | W10G | 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 $T_A = 25$ °C | $I_{F(AV)}$ | 1.5 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load | I_{FSM} | 50 | | | | | | | A |
| Rating for fusing ($t < 8.3$ ms) | I^2t | 10 | | | | | | | 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 | VALUES | UNIT |
| Maximum instantaneous forward voltage per diode | $I_F = 1.0$ A | V_F | 1.0 | V |
| Maximum DC reverse current at rated DC blocking voltage per diode | $T_A = 25$ °C | I_R | 5.0 | μ A |
| | $T_A = 125$ °C | | 500 | |
| Typical junction capacitance per diode | 4.0 V, 1 MHz | C_J | 14 | pF |



| THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | | | | | | |
|---|------------------|-------|------|------|------|------|------|------|------|
| PARAMETER | SYMBOL | W005G | W01G | W02G | W04G | W06G | W08G | W10G | UNIT |
| Typical thermal resistance ⁽¹⁾ | R _{θJA} | 36 | | | | | | | °C/W |
| | R _{θJL} | 11 | | | | | | | |

Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length PCB mounting. PCB size 0.22" x 0.22" (5.5 mm x 5.5 mm)

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

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

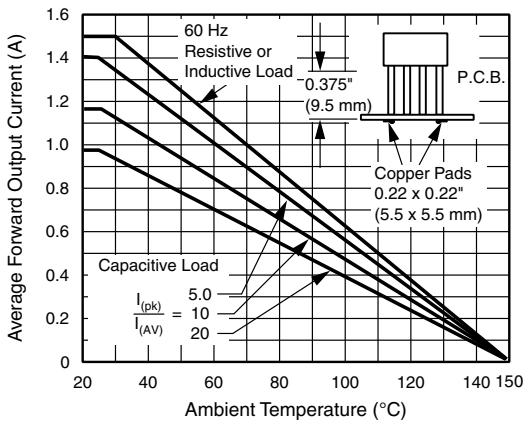


Fig. 1 - Derating Curve Output Rectified Current

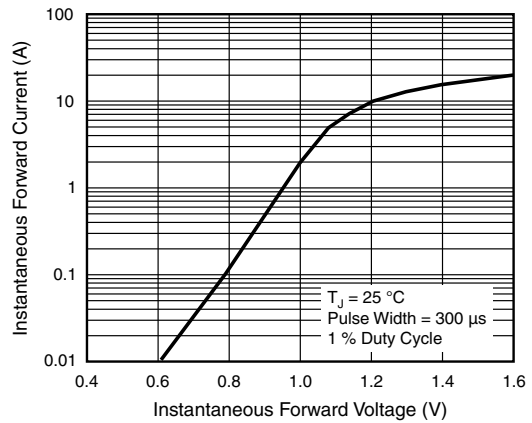


Fig. 3 - Typical Forward Characteristics Per Diode

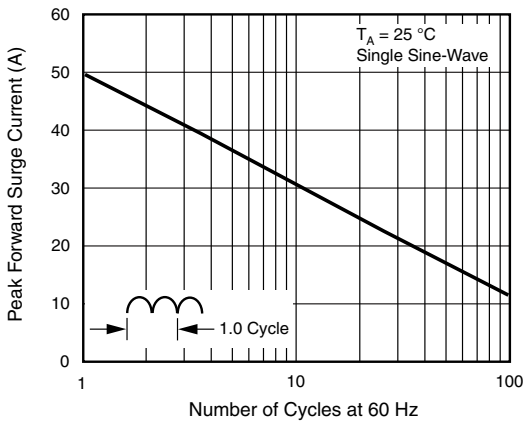


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

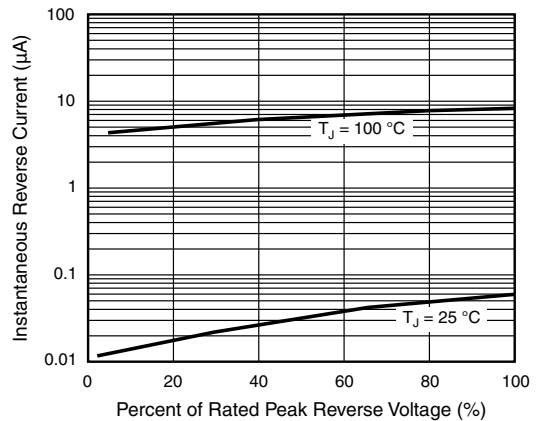


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

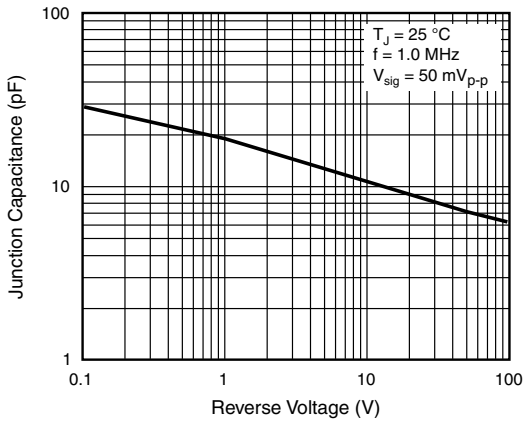


Fig. 5 - Typical Junction Capacitance Per Diode

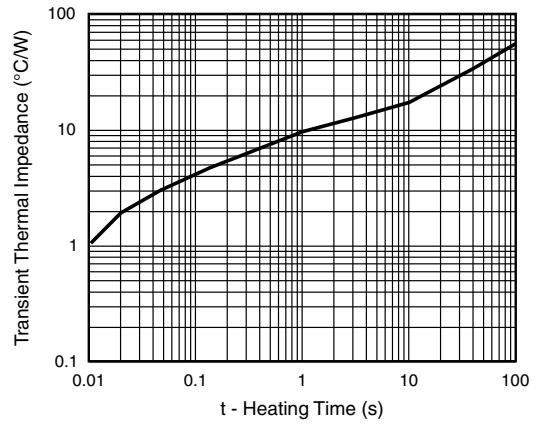
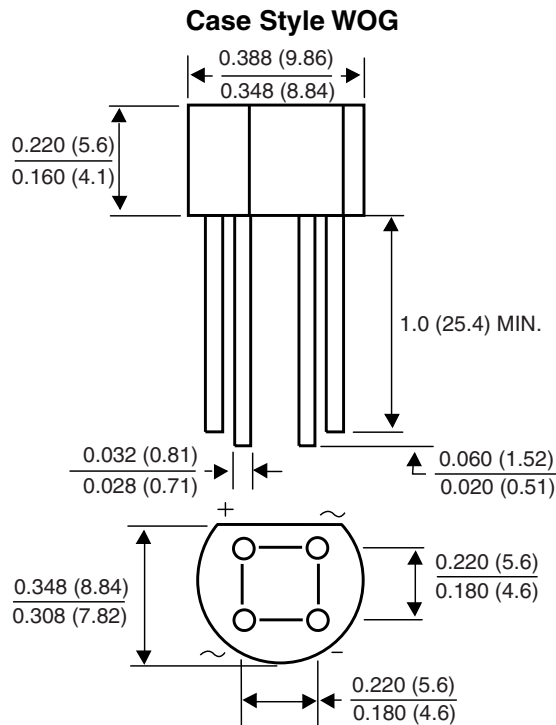


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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