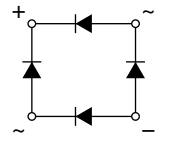




Glass Passivated Single-Phase Bridge Rectifier



Case Style WOG

FEATURES

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

RoHS
COMPLIANT

| PRIMARY CHARACTERISTICS | |
|--------------------------------|----------------------------------|
| Package | WOG |
| $I_{F(AV)}$ | 1.5 A |
| V_{RRM} | 65 V, 125 V, 200 V, 400 V, 600 V |
| I_{FSM} | 50 A |
| I_R | 10 μA |
| V_F at $I_F = 1.5 \text{ A}$ | 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 C1500G | B80 C1500G | B125 C1500G | B250 C1500G | B380 C1500G | 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 | 1.6 | | | | | A |
| | C-load | 1.5 | | | | | |
| Peak forward surge current single sine-wave on rated load | I_{FSM} | 50 | | | | | A |
| Rating for fusing at $T_J = 125 \text{ °C}$ ($t < 100 \text{ ms}$) | I^2t | 12.5 | | | | | A^2s |
| Minimum series resistor C-load at $V_{RMS} = \pm 10 \%$ | R_T | 1.0 | 2.0 | 4.0 | 8.0 | 12 | Ω |
| Maximum load capacitance | C_L | 5000 | 2500 | 1000 | 500 | 200 | μF |
| 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 C1500G | B80 C1500G | B125 C1500G | B250 C1500G | B380 C1500G | UNIT |
| Maximum instantaneous forward voltage drop per diode | 1.5 A | V_F | 1.0 | | | | | V |
| Maximum reverse current at rated repetitive peak voltage per diode | $T_A = 25 \text{ °C}$ | I_R | 10 | | | | | μA |



| THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) | | | | | | | |
|---|-----------------|------------|------------|-------------|-------------|-------------|--------------------|
| PARAMETER | SYMBOL | B40 C1500G | B80 C1500G | B125 C1500G | B250 C1500G | B380 C1500G | UNIT |
| Typical thermal resistance (1) | $R_{\theta JA}$ | 36 | | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 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 |
| B380C1500G-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 B40C1500G...B125C1500G

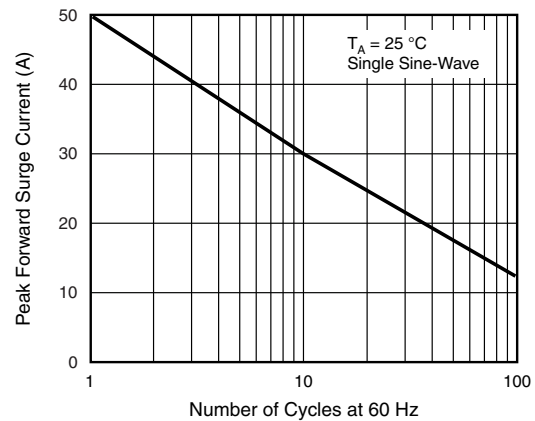


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



Fig. 2 - Derating Curves Output Rectified Current for B250C1500G...B380C1500G



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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