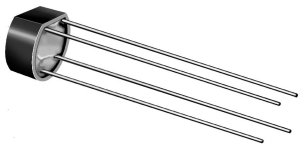
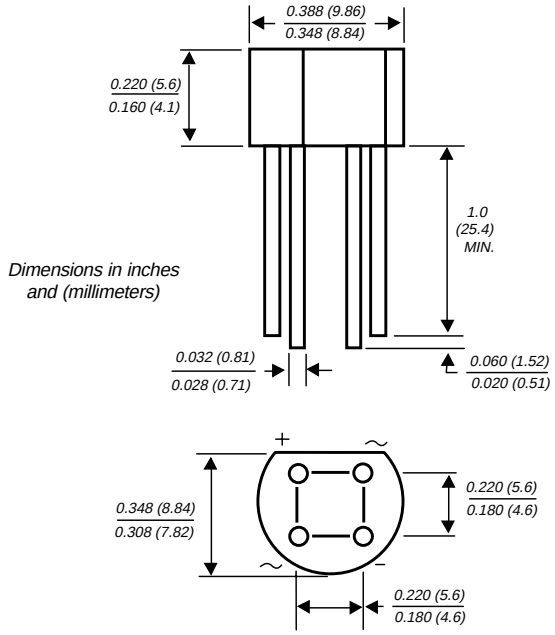
GENERAL SEMICONDUCTOR®

# B40C1500G THRU B380C1500G



Case Style WOG




## Glass Passivated Single-Phase Bridge Rectifier

**Reverse Voltage** 65 and 600 V
**Forward Current** 1.5 A

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- High case dielectric strength
- Typical $I_R$ less than 0.1μA
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5 lbs. (2.3kg) tension

## Mechanical Data

**Case:** Molded plastic body over passivated junctions
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026
**Mounting Position:** Any
**Weight:** 0.04 ounce, 1.1 grams

## Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| *Parameter* | *SYMBOLS* | *B40 C1500G* | *B80 C1500G* | *B125 C1500G* | *B250 C1500G* | *B380 C1500G* | *UNITS* |
|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 65 | 125 | 200 | 400 | 600 | V |
| Maximum RMS input voltage R + 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°C R + L-load<br>C-Load | $I_{F(AV)}$ | 1.6<br>1.5 | | | | | A |
| Peak forward surge current single sine wave on rated load at $T_J$=125°C | $I_{FSM}$ | 50 | | | | | A |
| Rating for fusing at $T_J$=125°C (t<100ms) | $I^2t$ | 12.5 | | | | | $A^2$sec |
| Minimum series resistor C-load at $V_{RMS}$ = ±10% | $R_t$ | 1.0 | 2.0 | 4.0 | 8.0 | 12 | Ω |
| Maximum load capacitance +50%<br>-10% | $C_L$ | 5000 | 2500 | 1000 | 500 | 200 | μF |
| Typical thermal resistance per leg (NOTE 1) | $R_{\Theta JA}$<br>$R_{\Theta JL}$ | 36<br>11 | | | | | °C/W |
| Operating junction temperature range | $T_J$ | -40 to +125 | | | | | °C |
| Storage temperature range | $T_{STG}$ | -40 to +150 | | | | | °C |

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| | *SYMBOLS* | *B40 C1500G* | *B80 C1500G* | *B125 C1500G* | *B250 C1500G* | *B380 C1500G* | *UNITS* |
|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per leg at 1.5A | $V_F$ | 1.0 | | | | | V |
| Maximum reverse current at rated repetitive peak voltage per leg $T_A$=25°C | $I_R$ | 10 | | | | | μA |

**Notes:**
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. at 0.375" (9.5mm) lead lengths with 0.2 x 0.2"

**8/23/99**

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## Ratings and Characteristic Curves ($T_A$ = 25°C unless otherwise noted)

**FIG.1 - DERATING CURVES OUTPUT RECTIFIED CURRENT FOR B40C1500G...B125C1500G**

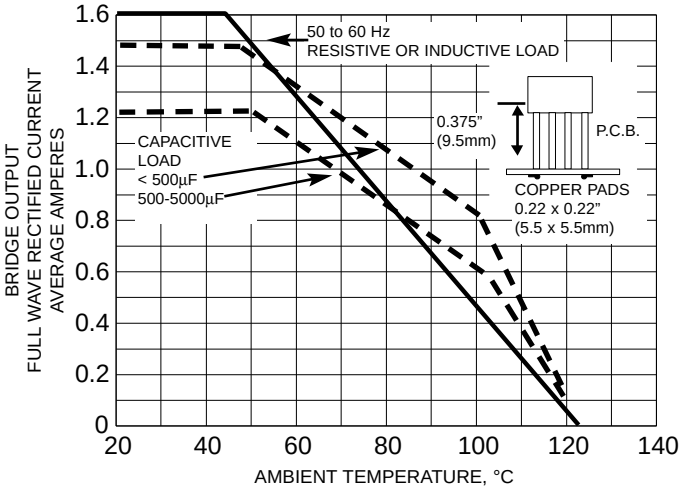


**FIG.2 - DERATING CURVES OUTPUT RECTIFIED CURRENT FOR B250C1500G...B380C1500G**

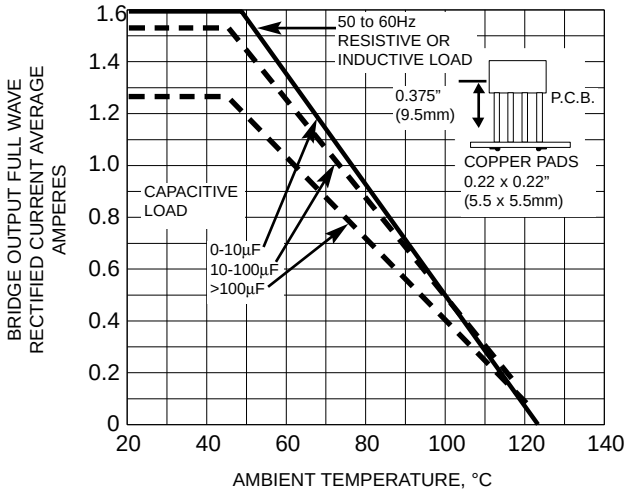


**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**

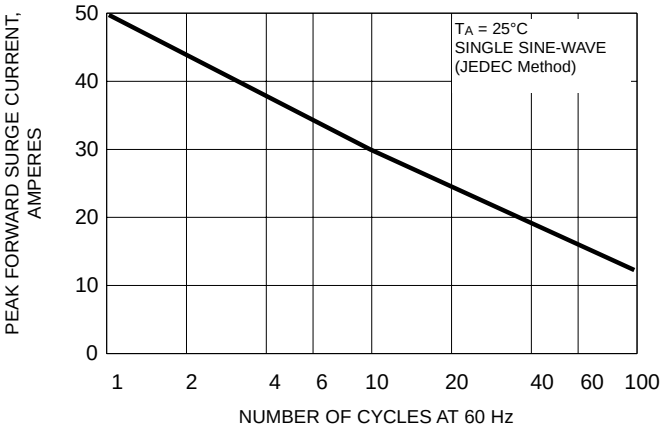


**FIG. 4 - TYPICAL FORWARD CHARACTERISTICS PER LEG**

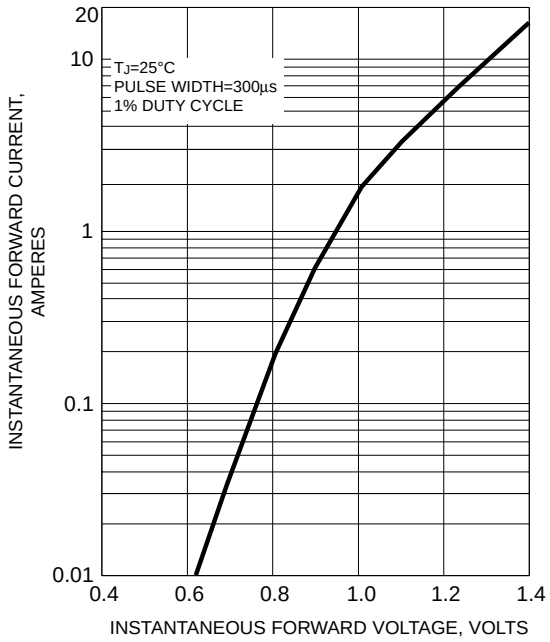


**FIG. 5 - TYPICAL REVERSE CHARACTERISTICS PER LEG**

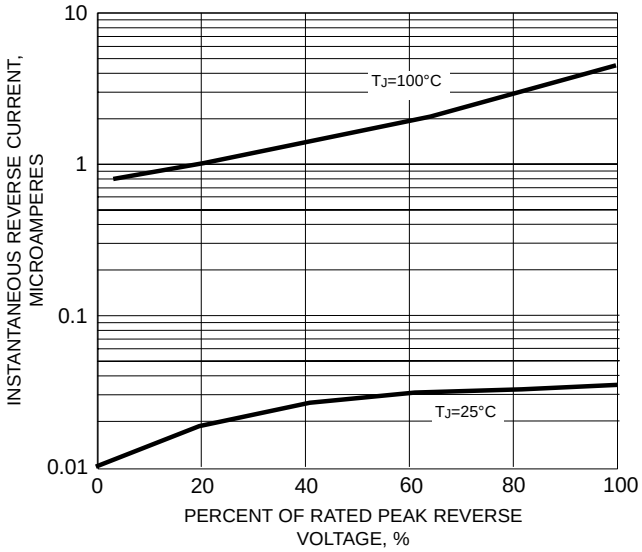


**FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG**