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[B125C1500G-E4/51](#)

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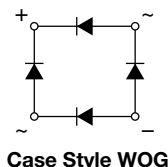


# B40C1500G, B80C1500G, B125C1500G, B250C1500G, B380C1500G

www.vishay.com

Vishay Semiconductors

## Glass Passivated Single-Phase Bridge Rectifier



### FEATURES

- Ideal for printed circuit boards
- High case dielectric strength
- High surge current capability
- Typical  $I_R$  less than 0.1  $\mu A$
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://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 $\mu A$
$V_F$ at $I_F = 1.5 A$	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 R- and L-load for free air operation at $T_A = 45\text{ °C}$	$I_{F(AV)}$	1.6						A
		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 <sup>2</sup> s
Minimum series resistor C-load at $V_{RMS} = \pm 10\%$	$R_T$	1.0	2.0	4.0	8.0	12	$\Omega$	
Maximum load capacitance + 50 % - 10 %	$C_L$	5000	2500	1000	500	200	$\mu F$	
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					$\mu A$



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THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	B40 C1500G	B80 C1500G	B125 C1500G	B250 C1500G	B380 C1500G	UNIT
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub>	36					°C/W
	R <sub>θJL</sub>	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<sub>A</sub> = 25 °C unless otherwise noted)**

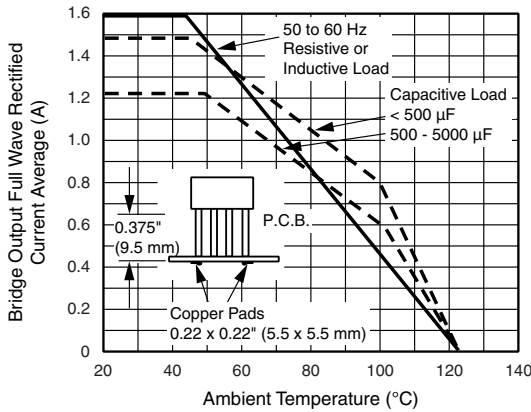


Fig. 1 - Derating Curves Output Rectified Current for B40C1500G...B125C1500G

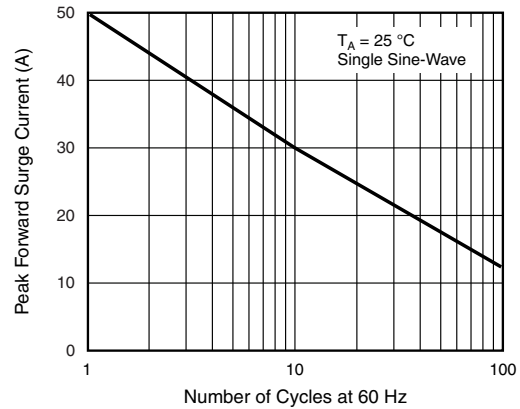


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

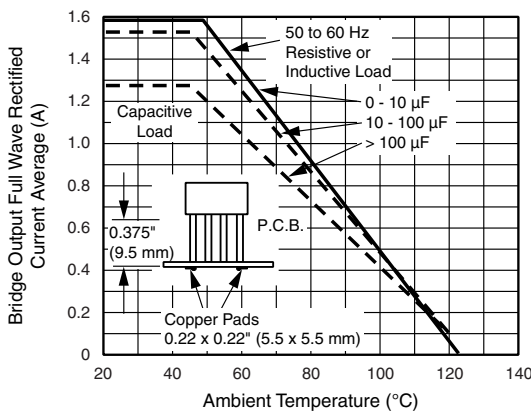


Fig. 2 - Derating Curves Output Rectified Current for B250C1500G...B380C1500G

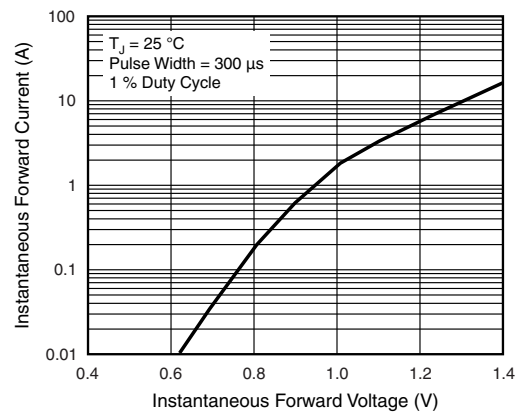


Fig. 4 - Typical Forward Characteristics Per Diode



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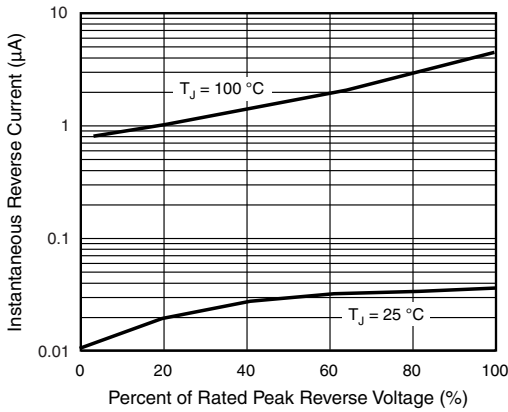


Fig. 5 - Typical Reverse Characteristics Per Diode

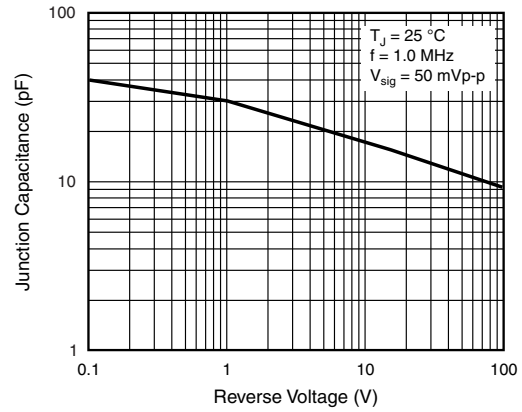
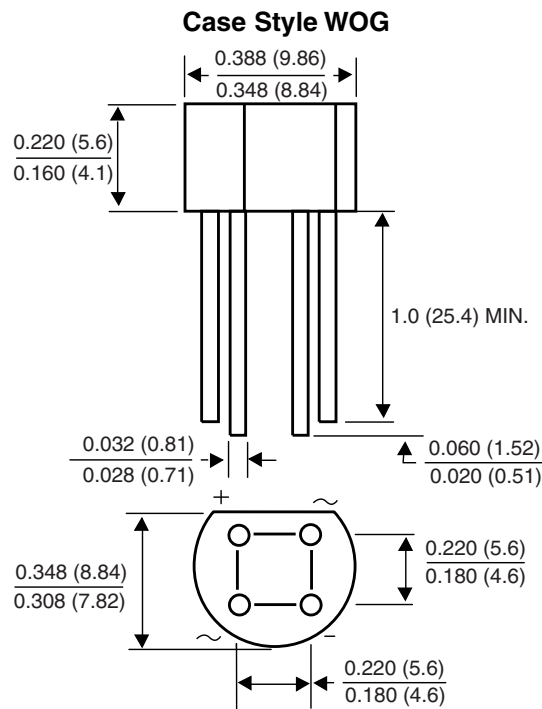


Fig. 6 - Typical Junction Capacitance Per Diode

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





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