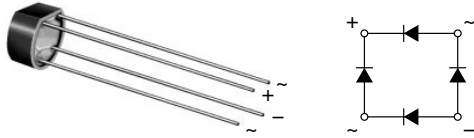


## Glass Passivated Single-Phase Bridge Rectifier



Case Style WOG

### FEATURES

- Ideal for printed circuit boards
- High case dielectric strength
- High surge current capability
- Typical  $I_R$  less than 0.1  $\mu$ A
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



RoHS  
COMPLIANT

### TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for power supply, adapter, charger, lighting ballaster on consumers and home appliances applications.

### MECHANICAL DATA

**Case:** WOG

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Silver plated leads, solderable per J-STD-002 and JESD22-B102

E4 suffix for consumer grade

**Polarity:** As marked on body

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.0 A
$V_{RRM}$	65 V to 600 V
$I_{FSM}$	45 A
$I_R$	10 $\mu$ A
$V_F$	1.0 V
$T_J$ max.	125 °C

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)							
PARAMETER	SYMBOL	B40 C1000G	B80 C1000G	B125 C1000G	B250 C1000G	B380 C1000G	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 $T_A = 45$ °C C-load	$I_{F(AV)}$	1.2 1.0					A
Peak forward surge current single sine-wave on rated load	$I_{FSM}$	45					A
Rating for fusing at $T_J = 125$ °C ( $t < 8.3$ ms)	$I^2t$	10					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 <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	B40 C1000G	B80 C1000G	B125 C1000G	B250 C1000G	B380 C1000G	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V <sub>F</sub>	1.0					V
Maximum reverse current at rated repetitive peak voltage per diode	T <sub>A</sub> = 25 °C	I <sub>R</sub>	10					μA

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	B40 C1000G	B80 C1000G	B125 C1000G	B250 C1000G	B380 C1000G	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 P.C.B. at 0.375" (9.5 mm) lead lengths with 0.22 x 0.22" (5.5 x 5.5 mm) copper pads

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
B380C1000G-E4/51	1.12	51	100	Plastic bag

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub> = 25 °C unless otherwise noted)

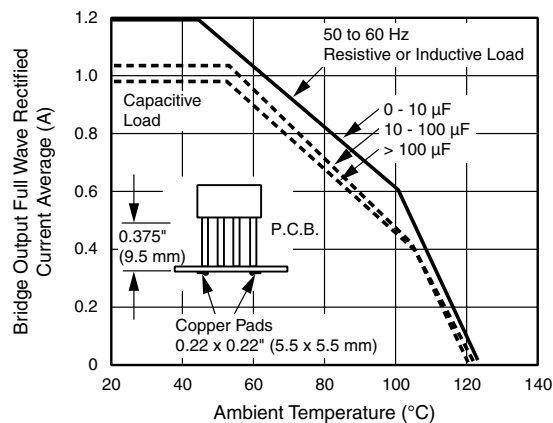


Figure 1. Derating Curves Output Rectified Current for B40C1000G...B125C1000G

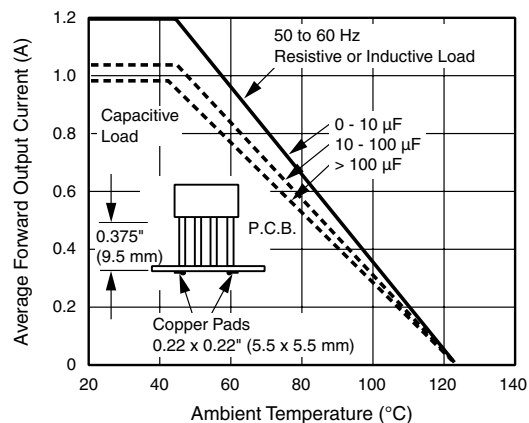


Figure 2. Derating Curves Output Rectified Current for B250C1000G...B380C1000G

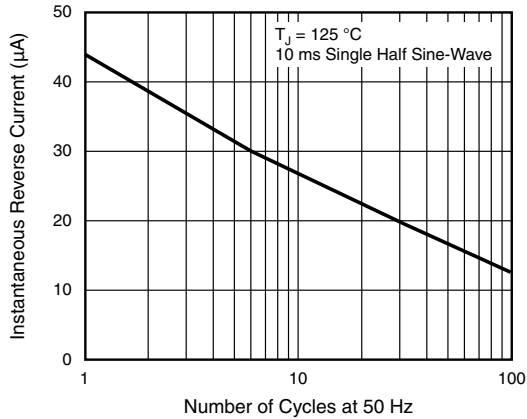


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

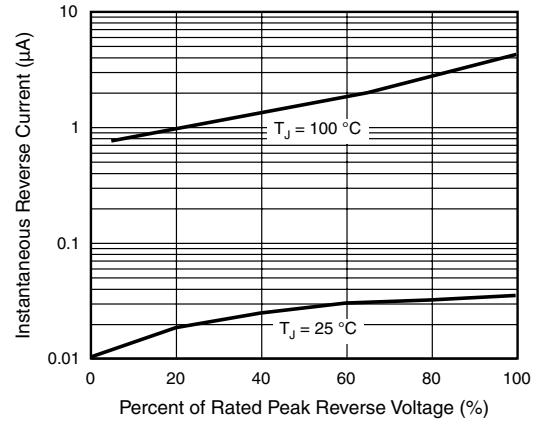


Figure 5. Typical Reverse Characteristics Per Diode

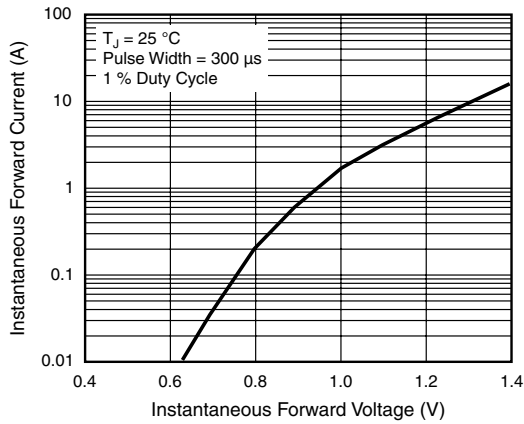


Figure 4. Typical Forward Characteristics Per Diode

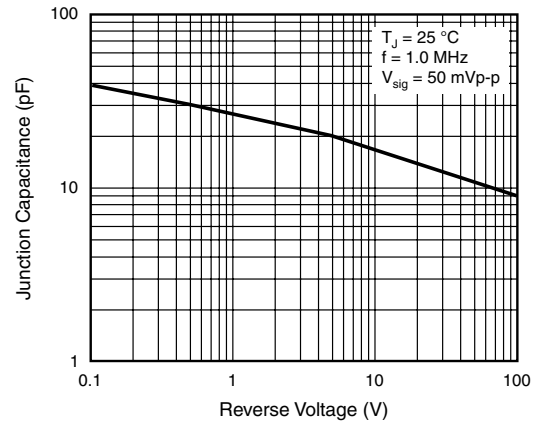
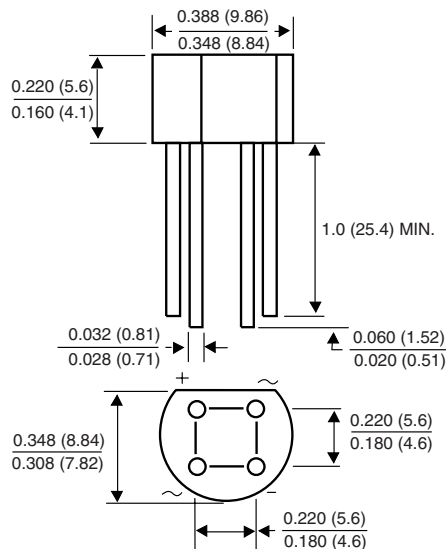


Figure 6. Typical Junction Capacitance Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### Case Style WOG





## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.