

### B40C800G thru B380C800G

Vishay General Semiconductor

### **Glass Passivated Single-Phase Bridge Rectifier**



**Case Style WOG** 

0.9 A

65 V to 600 V

45 A

10 µA

1.0 V

125 °C

**PRIMARY CHARACTERISTICS** 

I<sub>F(AV)</sub>

V<sub>RRM</sub>

I<sub>FSM</sub>

 $I_{R}$ 

 $V_{F}$ 

T<sub>.1</sub> max.

#### FEATURES

- Ideal for printed circuit boards
- High case dielectric strength
- · High surge current capability
- Typical I<sub>R</sub> less than 0.1 μA
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

#### **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

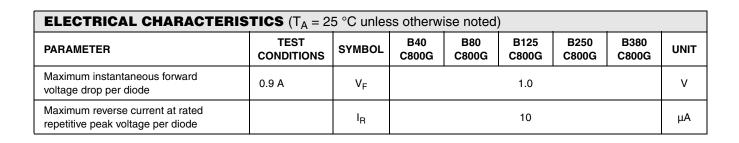
Epoxy meets UL 94V-0 flammability rating **Terminals:** Silver plated leads, solderable per J-STD-002 and JESD22-B102 E4 suffix for consumer grade **Polarity:** As marked on body

<b>MAXIMUM RATINGS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER		B40 C800G	B80 C800G	B125 C800G	B250 C800G	B380 C800G	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	65	125	200	400	600	V
Maximum RMS input voltage R- and C-load	V <sub>RMS</sub>	40	80	125	250	380	V
Maximum average forward output current for R- and L-load free air operation at $T_A = 45 \text{ °C}$ C-load	I <sub>F(AV)</sub>	0.9 0.8				A	
Maximum non-repetitive peak voltage	V <sub>RSM</sub>	100	200	350	600	1000	V
Maximum DC blocking voltage	V <sub>DC</sub>	65	125	200	400	600	V
Maximum peak working voltage	V <sub>RWM</sub>	90	180	300	600	900	V
Maximum repetitive peak forward surge current	I <sub>FRM</sub>	10				Α	
Peak forward surge current single sine-wave on rated load	I <sub>FSM</sub>	45				А	
Rating for fusing at $T_J = 125 \text{ °C}$ (t < 100 ms)	l <sup>2</sup> t	10				A <sup>2</sup> s	
Minimum series resistor C-load at $V_{RMS} = \pm 10 \%$	R <sub>t</sub>	1.0	2.0	4.0	8.0	12	Ω
Maximum load capacitance + 50 % - 10 %	CL	5000	2500	1000	500	200	μF
Operating junction temperature range	TJ	- 40 to + 125				°C	
Storage temperature range	T <sub>STG</sub>	- 40 to + 150				°C	



COMPLIANT

Vishay General Semiconductor



<b>THERMAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	B40 C800G	B80 C800G	B125 C800G	B250 C800G	B380 C800G	UNIT
Typical thermal resistance <sup>(1)</sup>	$R_{ heta JA} \ R_{ heta JL}$			36 11			°C/W

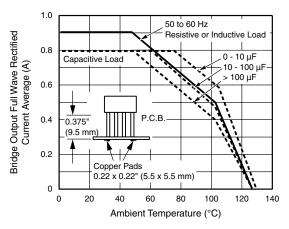
#### Note:

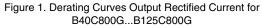
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. at 0.375" (9.5 mm) lead lengths with 0.22 x 0.22" (5.5 x 5.5 mm) copper pads

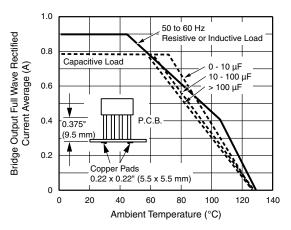
ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
B380C800G-E4/51	1.12	51	100	Plastic bag			

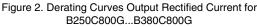
#### **RATINGS AND CHARACTERISTICS CURVES**

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











### B40C800G thru B380C800G

### Vishay General Semiconductor

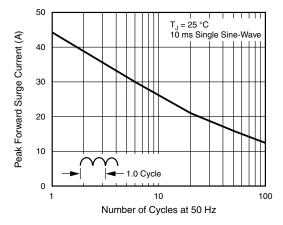


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

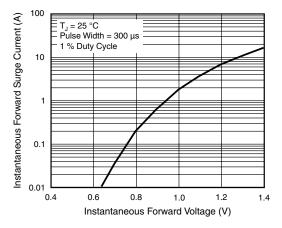


Figure 4. Typical Forward Characteristics Per Diode

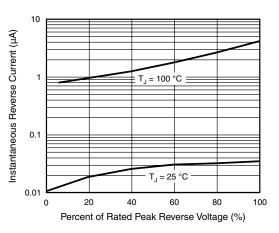


Figure 5. Typical Reverse Characteristics Per Diode

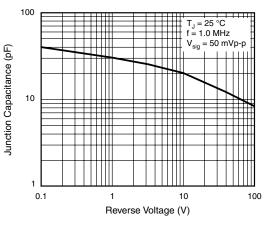
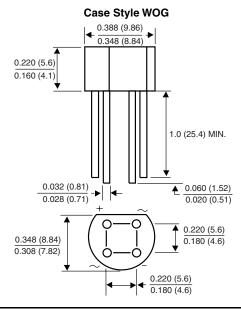


Figure 6. Typical Junction Capacitance Per Diode

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





Vishay

## 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.

# **Material Category Policy**

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.