

Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	1.5 A					
V _{RRM}	65 V to 600 V					
I _{FSM}	50 A					
I _R	10 μΑ					
V_{F}	1.0 V					
T _J max.	125 °C					

FEATURES





• High case dielectric strength

(e4)

High surge current capability

RoHS

Typical I_R 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

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)							
PARAMETER		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	٧
Maximum DC blocking voltage	V_{DC}	65	125	200	400	600	٧
Maximum peak working voltage		90	180	300	600	800	V
Maximum non-repetitive peak voltage		100	200	350	600	1000	V
Maximum repetitive peak forward surge current	I _{FRM}	10					Α
Maximum average forward output current for R- and L-load free air operation at T _A = 45 °C C-load		1.6 1.5					Α
Peak forward surge current single sine-wave on rated load	I _{FSM}	50					Α
Rating for fusing at T _J = 125 °C (t < 100 ms)		12.5					A ² s
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 % - 10 %	CL	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

B40C1500G thru B380C1500G

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ELECTRICAL CHARACTERISTICS (T _A = 25 °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 °C	I _R	10		μΑ			

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	B40 C1500G	B80 C1500G	B125 C1500G	B250 C1500G	B380 C1500G	UNIT
Typical thermal resistance (1)	$R_{ hetaJA} \ R_{ hetaJL}$	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						
B380C1500G-E4/51	1.12	51	100	Plastic bag				

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

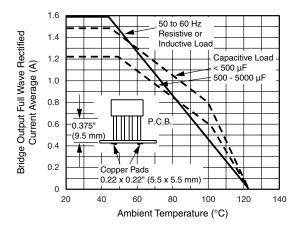


Figure 1. Derating Curves Output Rectified Current for B40C1500G...B125C1500G

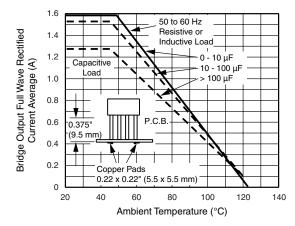


Figure 2. Derating Curves Output Rectified Current for B250C1500G...B380C1500G



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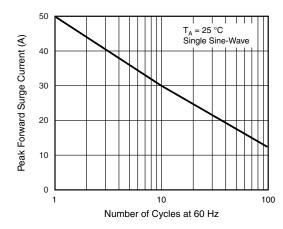


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

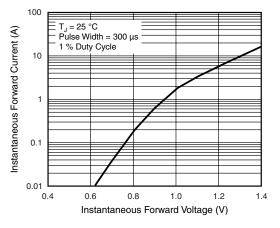


Figure 4. Typical Forward Characteristics Per Diode

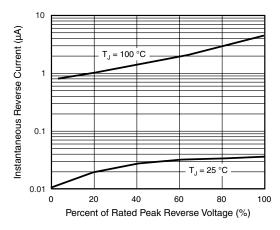


Figure 5. Typical Reverse Characteristics Per Diode

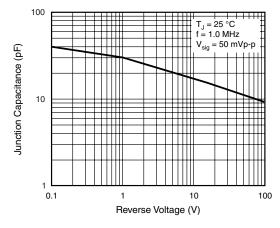
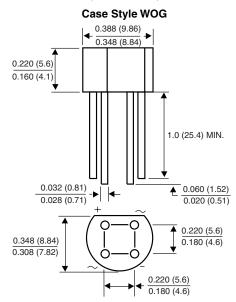


Figure 6. Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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