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B40C1500G, B80C1500G, B125C1500G, B250C1500G, B380C1500G

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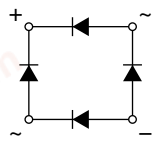
Vishay Semiconductors

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 µA
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Pb e4 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 µA
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 °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 for free air operation at T_A = 45 °C	R- and L-load	$I_{F(AV)}$	1.6					A
	C-load		1.5					
Peak forward surge current single sine-wave on rated load		I_{FSM}	50					A
Rating for fusing at T_J = 125 °C (t < 100 ms)		I^2t	12.5					A^2s
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 %	C_L	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

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					µA

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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)	$R_{\theta JA}$	36					°C/W
	$R_{\theta JL}$	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_A = 25 °C unless otherwise noted)

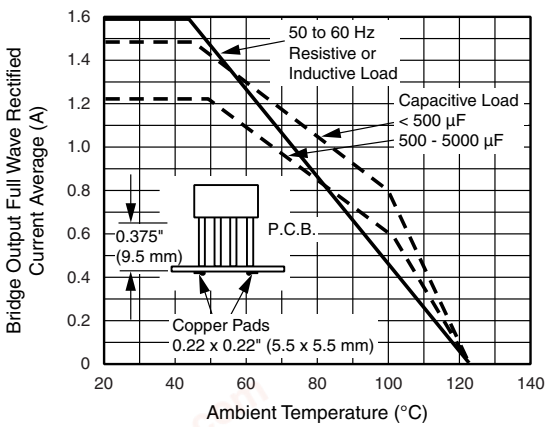

Fig. 1 - Derating Curves Output Rectified Current for B40C1500G...B125C1500G

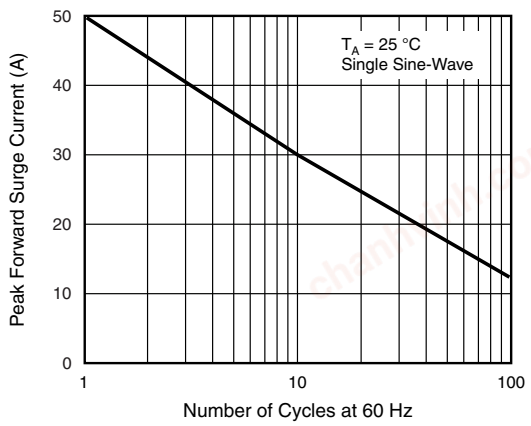

Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

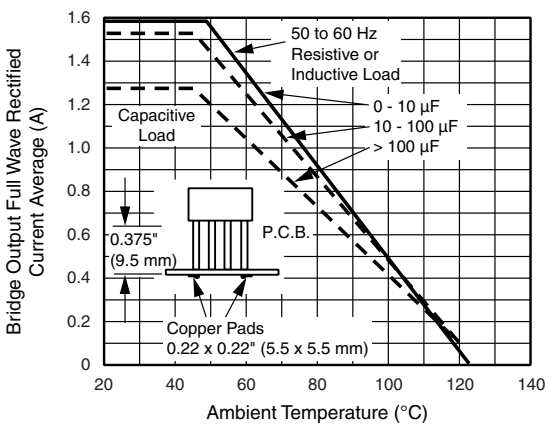

Fig. 2 - Derating Curves Output Rectified Current for B250C1500G...B380C1500G

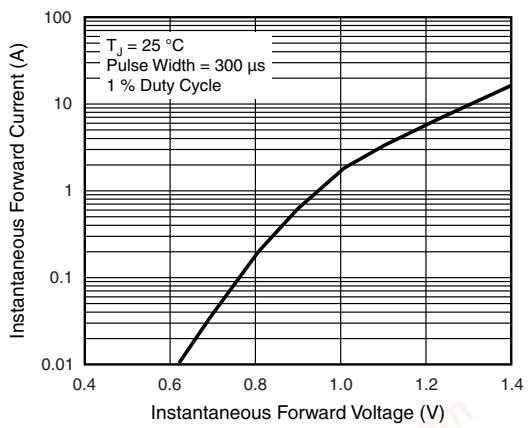

Fig. 4 - Typical Forward Characteristics Per Diode

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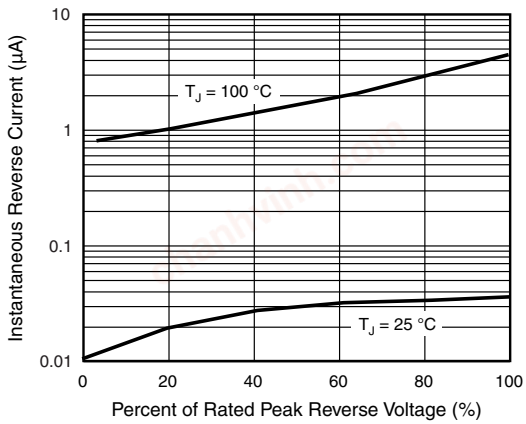


Fig. 5 - Typical Reverse Characteristics Per Diode

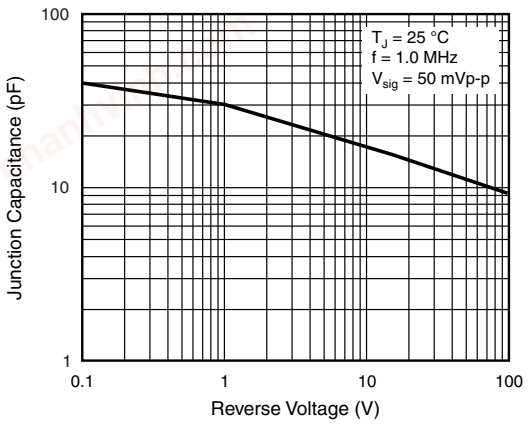
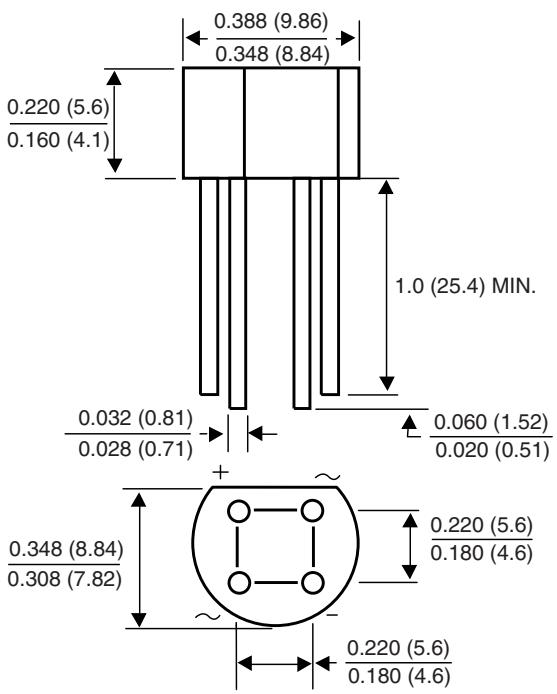


Fig. 6 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style WOG



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