

B40C1500G, B80C1500G, B125C1500G, B250C1500G, B380C1500G

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Glass Passivated Single-Phase Bridge Rectifier





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					

FEATURES







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





RoHS COMPLIANT

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		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		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					Α
Maximum average forward output current R- and L-load		1.6				A	
for free air operation at $T_A = 45$ °C C-load	I _{F(AV)}	1.5					
Peak forward surge current single sine-wave on rated load		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 %	C _L	5000	2500	1000	500	200	μF
Operating junction temperature range	TJ	- 40 to + 125					°C
Storage temperature range	T _{STG}	Tsrs - 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				μΑ	

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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
Typical trieffilal resistance (7)	$R_{\theta JL}$			11			C/VV

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)

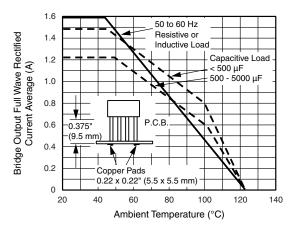


Fig. 1 - Derating Curves Output Rectified Current for B40C1500G...B125C1500G

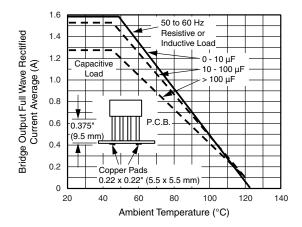


Fig. 2 - Derating Curves Output Rectified Current for B250C1500G...B380C1500G

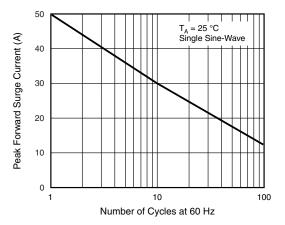


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

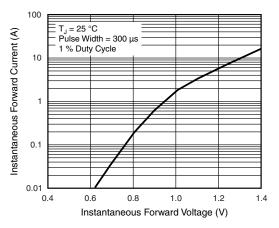
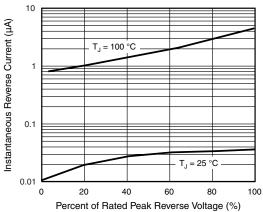


Fig. 4 - Typical Forward Characteristics Per Diode

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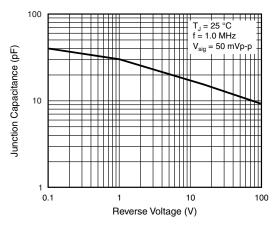
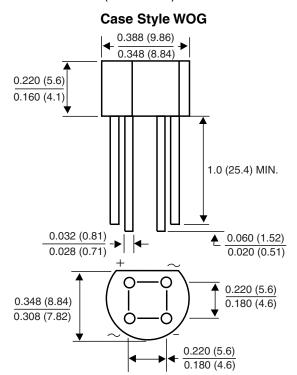


Fig. 6 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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