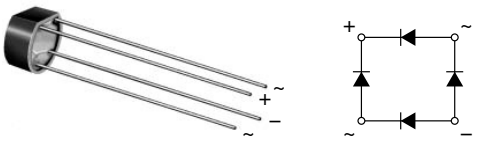
Glass Passivated Single-Phase Bridge Rectifier



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 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.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.5 A
V_{RRM}	65 V to 600 V
I_{FSM}	50 A
I_R	10 µA
V_F	1.0 V
T_J max.	125 °C

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	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 / C-load	$I_{F(AV)}$	1.6 / 1.5					A
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

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)	$R_{\theta JA}$ $R_{\theta JL}$	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**
B380C1500G-E4/51	1.12	51	100	Plastic bag

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

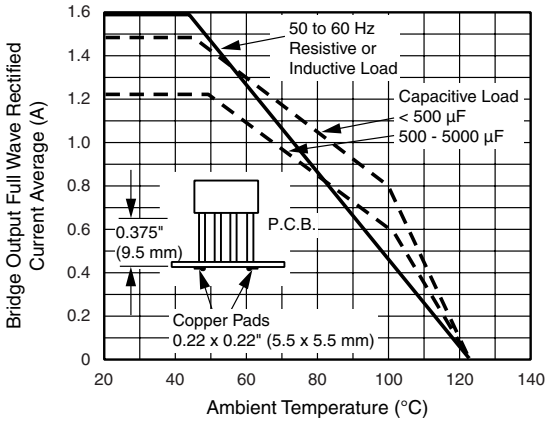


Figure 1. Derating Curves Output Rectified Current for B40C1500G...B125C1500G

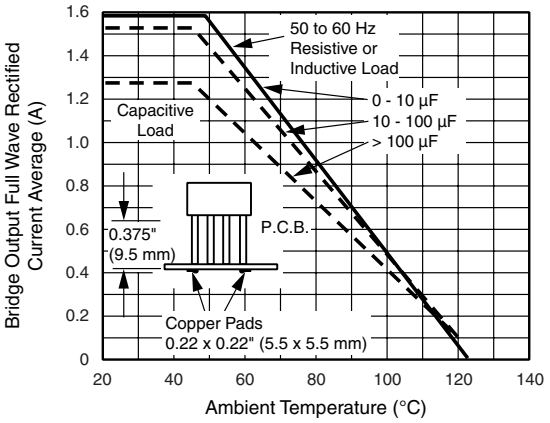


Figure 2. Derating Curves Output Rectified Current for B250C1500G...B380C1500G

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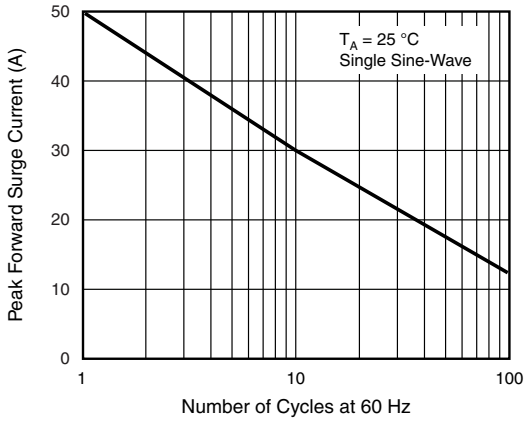


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

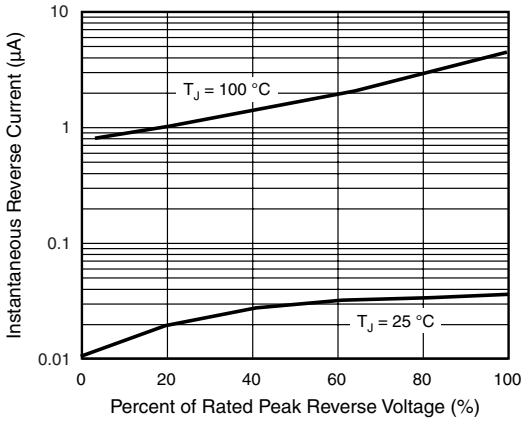


Figure 5. Typical Reverse Characteristics Per Diode

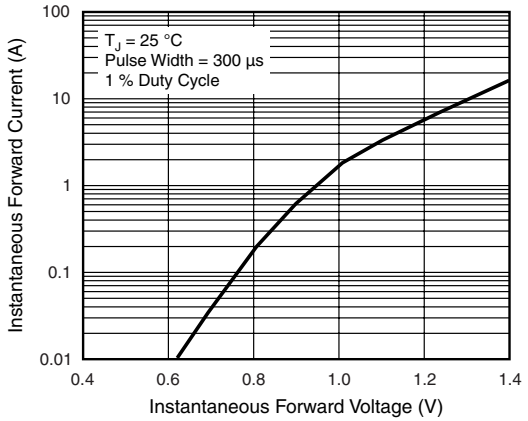


Figure 4. Typical Forward Characteristics Per Diode

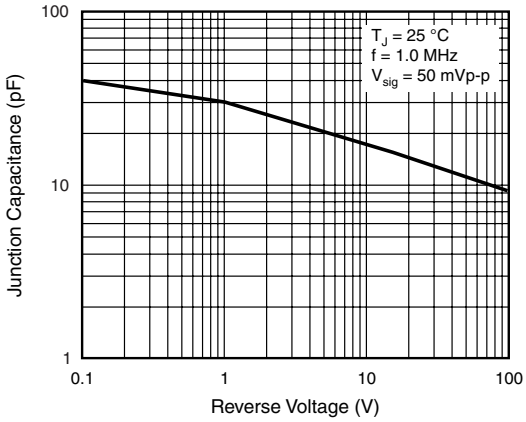
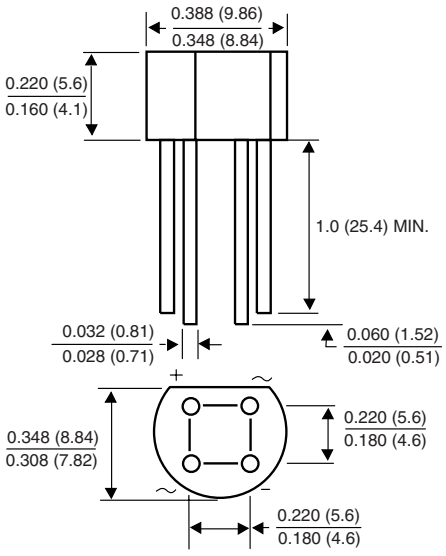


Figure 6. Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style WOG



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