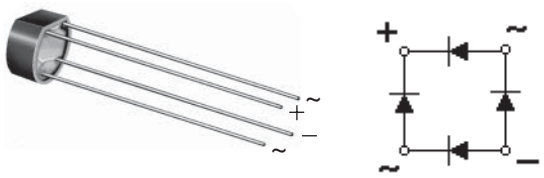
Glass Passivated Single-Phase Bridge Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	65 V to 600 V
I_{FSM}	45 A
I_R	10 µA
V_F	1.0 V
T_j max.	125 °C

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 seconds

Mechanical Data

Case: WOG

Epoxy meets UL-94V-0 Flammability rating

Terminals: Silver plated (E4 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

Polarity: As marked on body

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

Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	B40 C1000G	B80 C1000G	B125 C1000G	B250 C1000G	B380 C1000G	Units
Maximum repetitive peak reverse voltage	V_{RRM}	65	125	200	400	600	V
Maximum RMS input voltage R + 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 R + L-load free air operation at T_A = 45 °C C-Load	$I_{F(AV)}$	1.2 1.0					A
Peak forward surge current single sine wave on rated load	I_{FSM}	45					A
Rating for fusing at T_J = 125 °C (t < 8.3 ms)	I^2t	10					A^2sec
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

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbols	B40 C1000G	B80 C1000G	B125 C1000G	B250 C1000G	B380 C1000G	Units
Maximum instantaneous forward voltage drop per leg	at 1.0 A	V_F	1.0					V
Maximum reverse current at rated repetitive peak voltage per leg	T_A = 25 °C	I_R	10					µA

Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	B40 C1000G	B80 C1000G	B125 C1000G	B250 C1000G	B380 C1000G	Unit
Typical thermal resistance per leg (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.

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

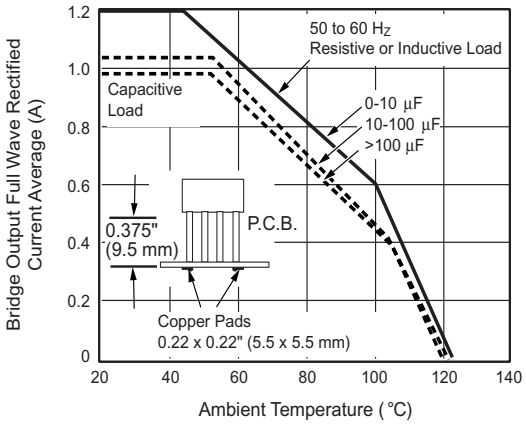


Figure 1. Derating Curves Output Rectified Current for B40C1000G...B125C1000G

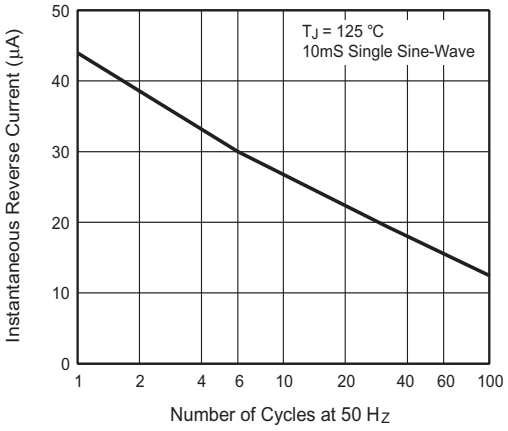


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

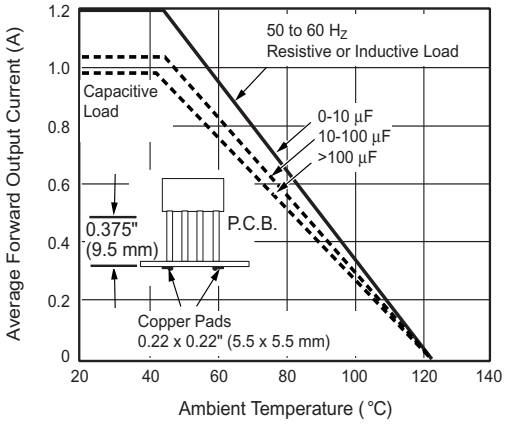


Figure 2. Derating Curves Output Rectified Current for B250C1000G...B380C1000G

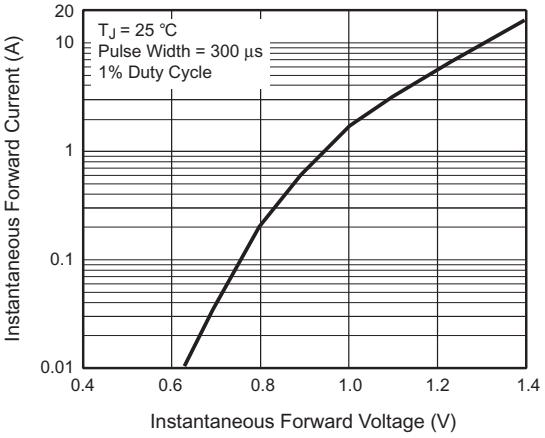


Figure 4. Typical Forward Characteristics Per Leg

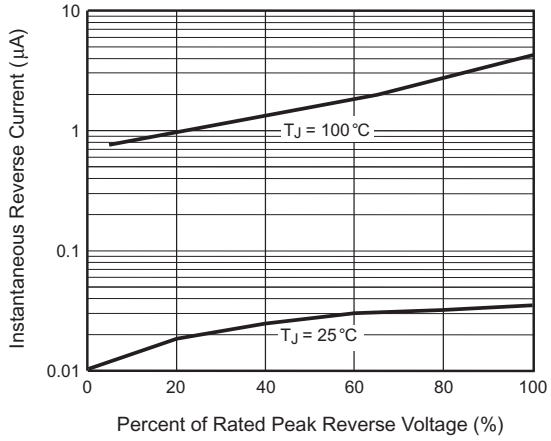


Figure 5. Typical Reverse Characteristics Per Leg

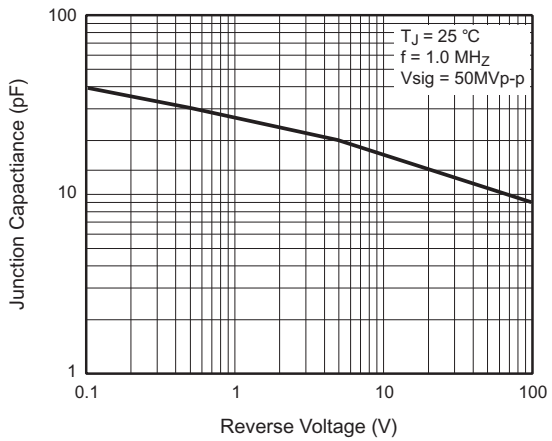


Figure 6. Typical Junction Capacitance Per Leg

Package outline dimensions in inches (millimeters)