

# B40-B380/C1000

**PRV : 100 - 900 Volts**  
**Io : 1.0 Amperes**

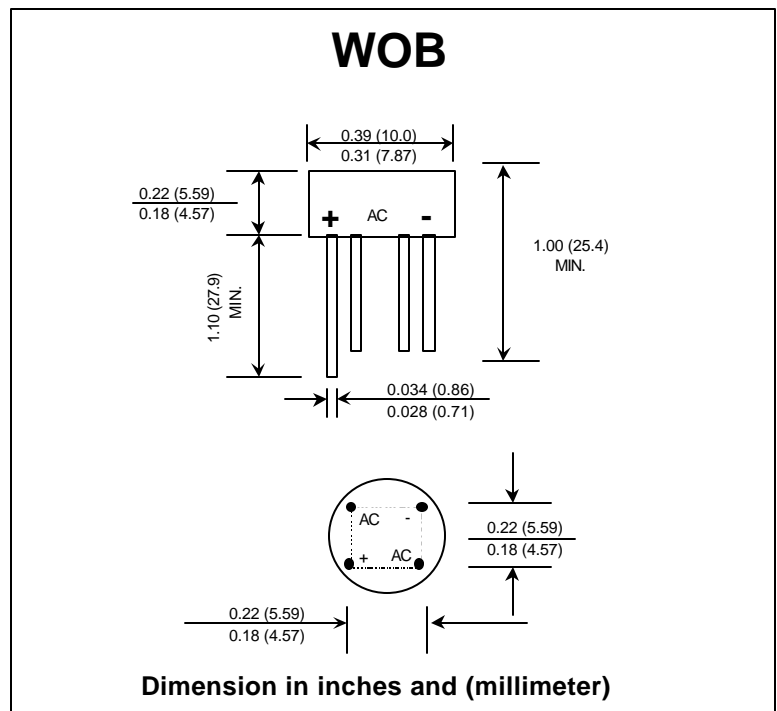
## FEATURES :

- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board

## MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Plated leads solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 1.29 grams

# SILICON BRIDGE RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

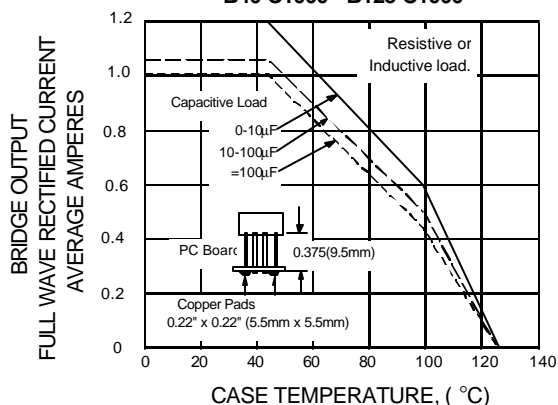
RATING	SYMBOL	B40-C1000	B80-C1000	B125-C1000	B250-C1000	B380-C1000	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	200	300	600	900	Volts
Maximum RMS Input Voltage R+C -Load	V <sub>RMS</sub>	40	80	125	250	380	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	300	600	900	Volts
Maximum Average Forward Current For Free Air Operation at T <sub>c</sub> = 45°C R+L -Load	I <sub>F(AV)</sub>	1.2					Amps.
C -Load		1.0					
Peak Forward Surge Current Single half sine wave on rated load (JEDEC Method) at T <sub>J</sub> = 125 °C	I <sub>FSM</sub>	40					Amps.
Rating for fusing at T <sub>J</sub> = 125°C ( t < 100 ms.)	I <sub>t</sub> <sup>2</sup>	10					A <sup>2</sup> S
Maximum Series Resistor C-Load V <sub>RMS</sub> = ± 10%	R <sub>t</sub>	1.0	2.0	4.0	8.0	12.0	Ω
Maximum load Capacitance + 50%	C <sub>L</sub>	5000	2500	1000	500	200	μF
-10%							
Maximum Forward Voltage per Diode at I <sub>F</sub> = 1.0 Amp.	V <sub>F</sub>	1.0					Volts
Maximum Reverse Current at Rated Repetitive Peak Voltage per Diode T <sub>a</sub> = 25 °C	I <sub>R</sub>	10					μA
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	36					°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 50 to + 125					°C
Storage Temperature Range	T <sub>STG</sub>	- 50 to + 125					°C

## Notes :

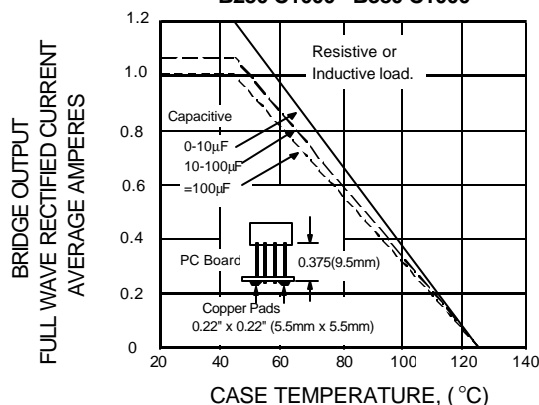
- 1) Thermal resistance from Junction to Ambient at 0.375" (9.5 mm) lead length P.C. Board with, 0.22" x 0.22" (5.5 x 5.5 mm) copper Pads.

## RATING AND CHARACTERISTIC CURVES ( B40-B380/C1000 )

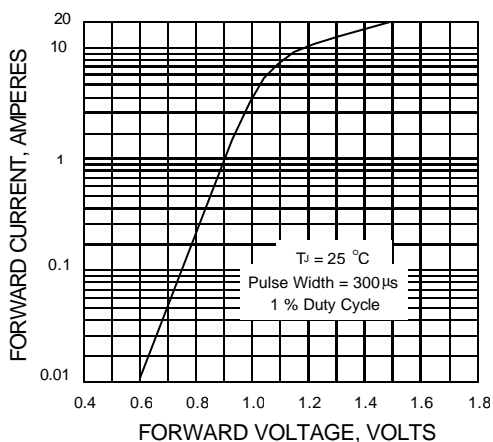
**FIG.1 - DERATING CURVE  
FOR OUTPUT RECTIFIED CURRENT  
B40 C1000 - B125 C1000**



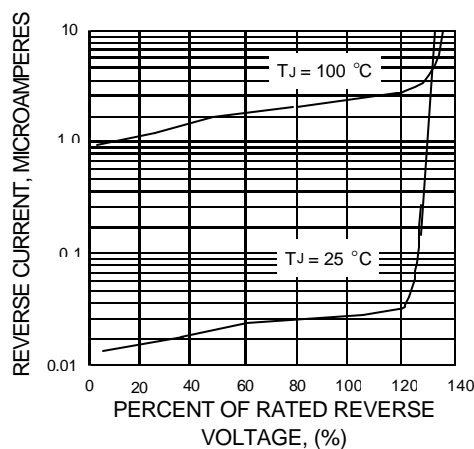
**FIG.2 - DERATING CURVE  
FOR OUTPUT RECTIFIED CURRENT  
B250 C1000 - B380 C1000**



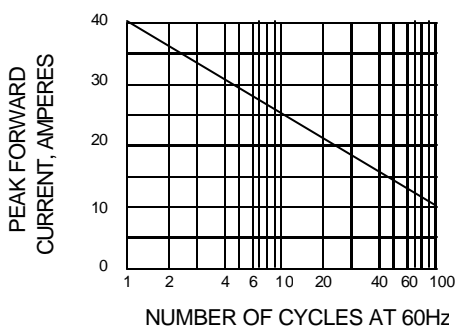
**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 - MAXIMUM NON-REPETITIVE  
PEAK FORWARD CURRENT**



**FIG.6 - TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT**

