



# B40D-B500D

Silicon Bridge Rectifiers

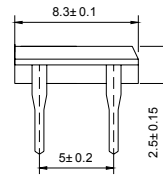
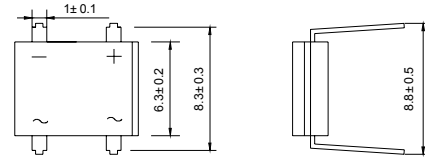
**VOLTAGE RANGE: 80 --- 1000 V**

**CURRENT: 1.0 A**

## Features

- ◇ Rating to 1000V PRV
- ◇ Surge overload rating to 40 Amperes peak
- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◇ Solderable per MIL-STD-202 method 208
- ◇ Glass passivated chip junctions
- ◇ Plastic material has UL flammability classification 94V-O
- ◇ Polarity symbols molded on body
- ◇ Weight: 0.016 ounces, 0.45 grams

## DB - 1



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		B40D	B80D	B125D	B250D	B380D	B500D	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	80	160	250	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	56	112	175	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	80	160	250	600	800	1000	V
Maximum average forward Output current @ $T_A=25^{\circ}C$	$I_{F(AV)}$	1.0						A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load	$I_{FSM}$	40						A
Maximum instantaneous forward voltage at 1.0 A	$V_F$	1.1						V
Maximum reverse current @ $T_J=25^{\circ}C$ at rated DC blocking voltage @ $T_J=125^{\circ}C$	$I_R$	10.0 0.5						$\mu A$ mA
Operating junction temperature range	$T_J$	- 55 ---- + 150						$^{\circ}C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150						$^{\circ}C$

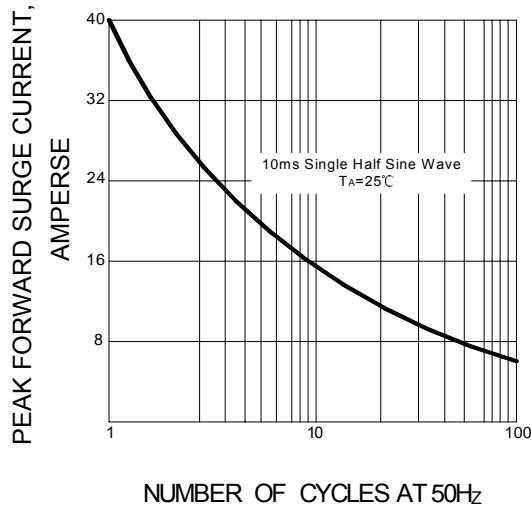
## Thermal Characteristics

Typical thermal resistance per leg (Note1)	$R_{\theta JA}$	66	$^{\circ}C/W$
	$R_{\theta JC}$	28	
	$R_{\theta JL}$	27	
Operating junction temperature range	$T_J$	- 55 ---- + 150	$^{\circ}C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150	$^{\circ}C$

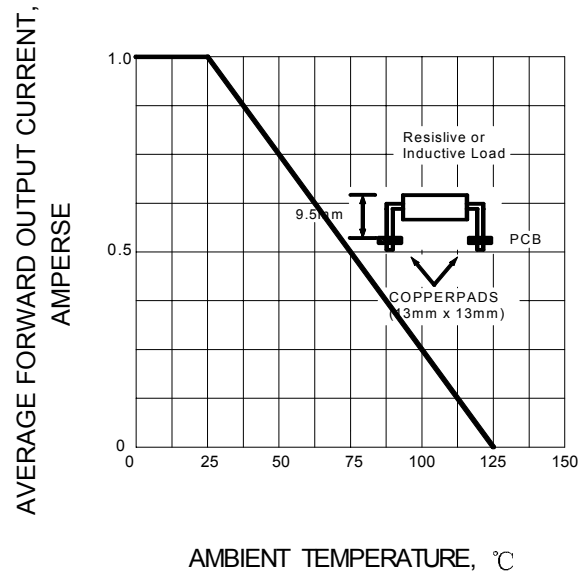
Note 1: Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

## Ratings AND Characteristic Curves

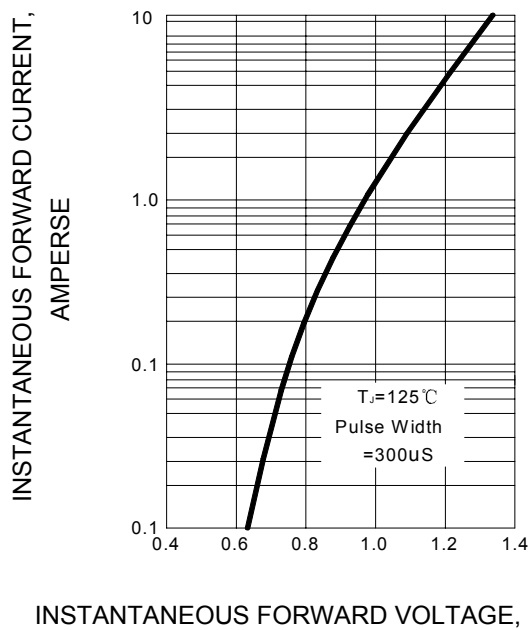
**FIG.1 – PEAK FORWARD SURGE CURRENT**



**FIG.2 – FORWARD DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**

