

# BR600 - BR610

**PRV : 50 - 1000 Volts**  
**Io : 6.0 Amperes**

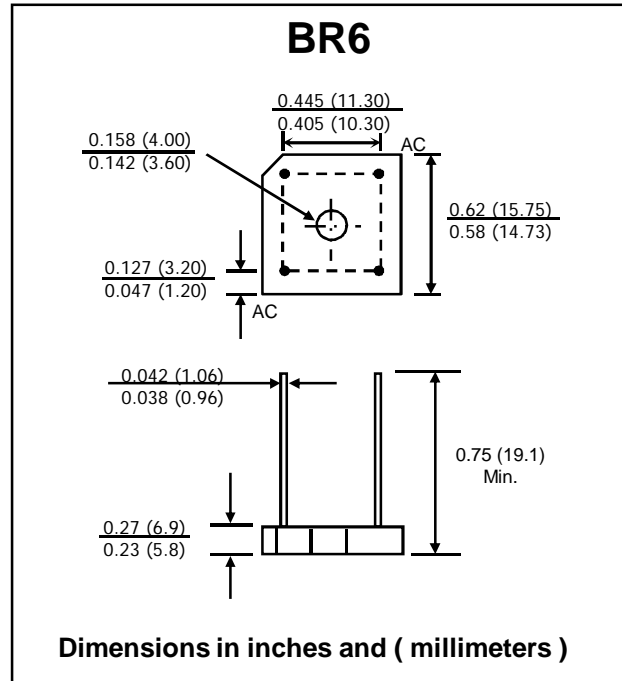
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* Rated isolation-voltage 2000 V<sub>AC</sub>
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL - STD 202 , Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 3.6 grams

# SILICON BRIDGE RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

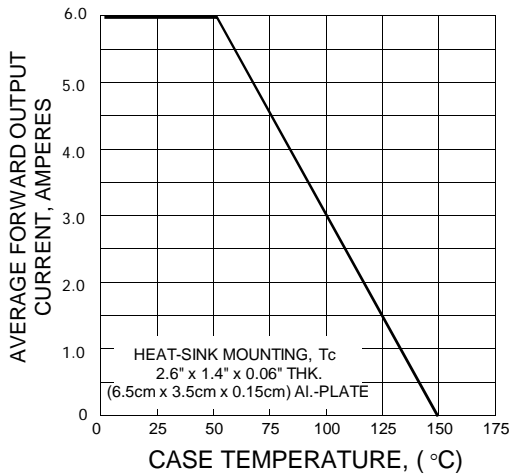
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	BR600	BR601	BR602	BR604	BR606	BR608	BR610	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current T <sub>c</sub> =50°C	I <sub>F(AV)</sub>	6.0							A
Peak Forward Surge Current, Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	200							A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	64							A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> =3 A.	V <sub>F</sub>	1.0							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta = 25 °C I <sub>R</sub>	10							μA
	Ta = 100 °C I <sub>R(H)</sub>	200							μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	8.0							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 40 to + 150							°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150							°C

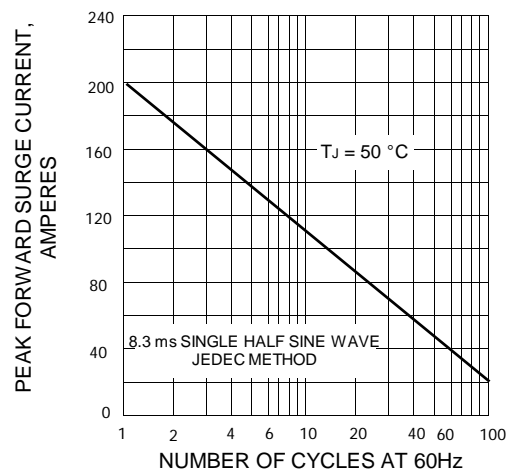
**Note :** (1) Thermal Resistance from junction to case with units mounted on a 2.6" x 1.4" x 0.06" THK (6.5cm.x 3.5cm.x 0.15cm.) Al. Plate. Heatsink.

**RATING AND CHARACTERISTIC CURVES ( BR600 - BR610 )**

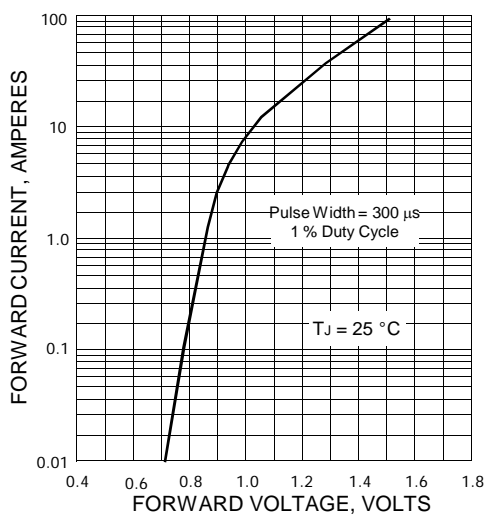
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

