

# BR1000 - BR1010

# SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

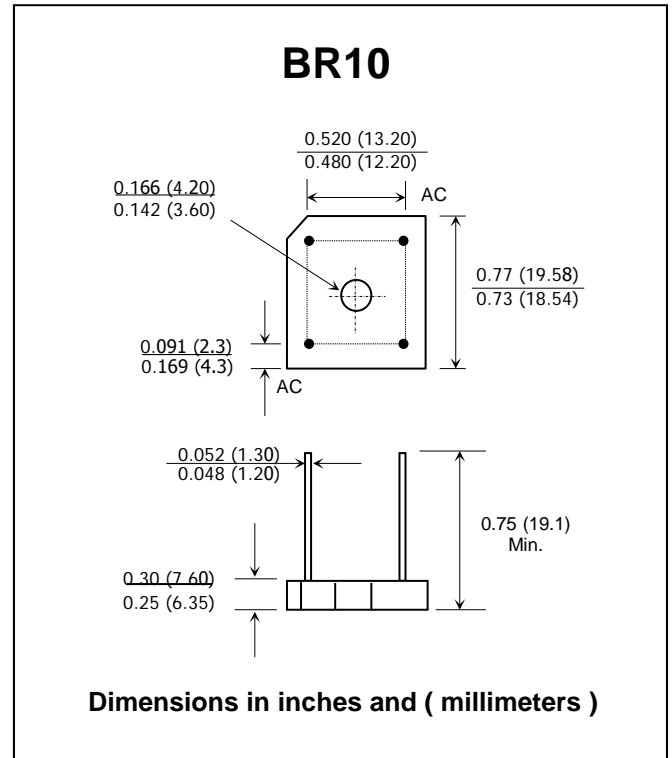
**Io : 10 Amperes**

**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Rated isolation-voltage 2000 V<sub>AC</sub>
- \* Ideal for printed circuit board
- \* **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 : 6.1 grams



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

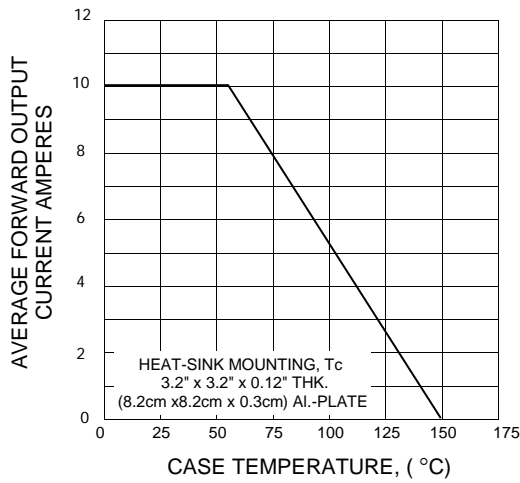
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	BR1000	BR1001	BR1002	BR1004	BR1006	BR1008	BR1010	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> =55°C	I <sub>F(AV)</sub>	10							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	160							A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 5 A	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>a</sub> = 25 °C	I <sub>R</sub>							μA
	T <sub>a</sub> = 100 °C	I <sub>R(H)</sub>							μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	2.5							°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

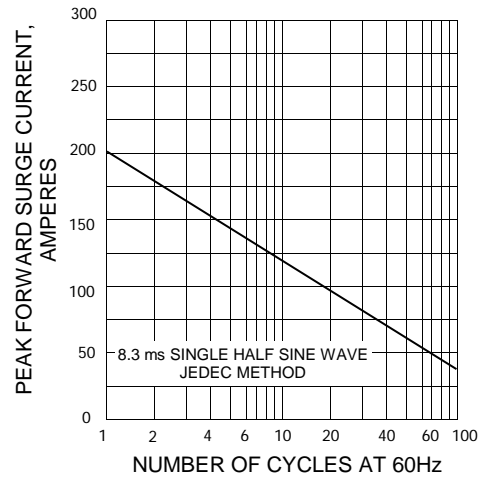
**Note :**  
 1. Thermal Resistance from junction to case with units mounted on a 3.2" x 3.2" x 0.12" (8.2cm.x 8.2cm.x 0.3cm.) Al.-Finned Plate.

**RATING AND CHARACTERISTIC CURVES ( BR1000 - BR1010 )**

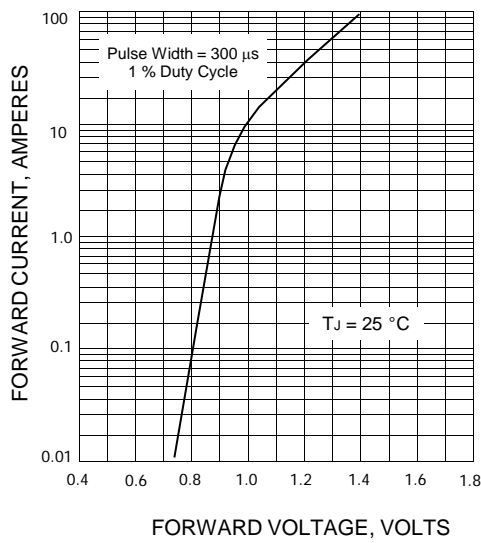
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

