

# BR1000 - BR1010

# SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

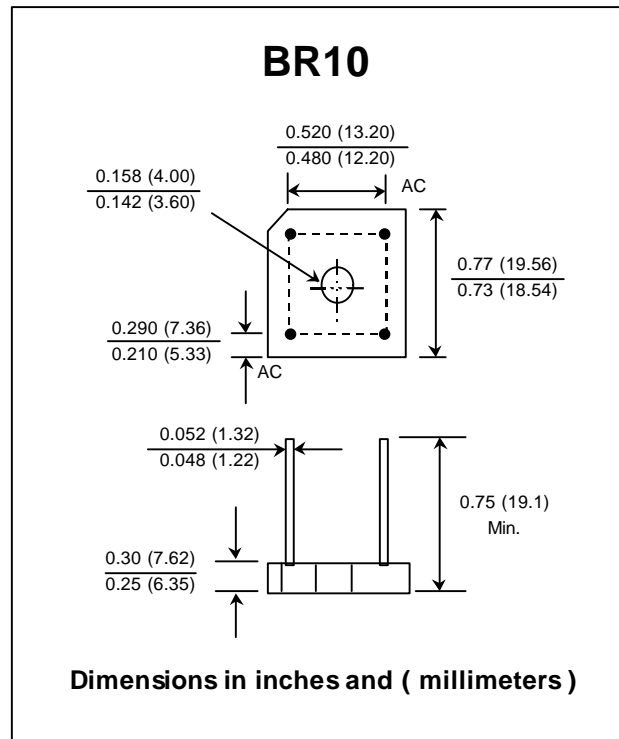
**I<sub>o</sub> : 10 Amperes**

### FEATURES :

- \* High current capability
- \* 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
- \* 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	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Current T <sub>c</sub> =55°C	I <sub>F(AV)</sub>	10							Amp.	
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>					300				Amp.
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 Amp.	V <sub>F</sub>					1.0				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>a</sub> = 25 °C					10				μA
	T <sub>a</sub> = 100 °C					200				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	

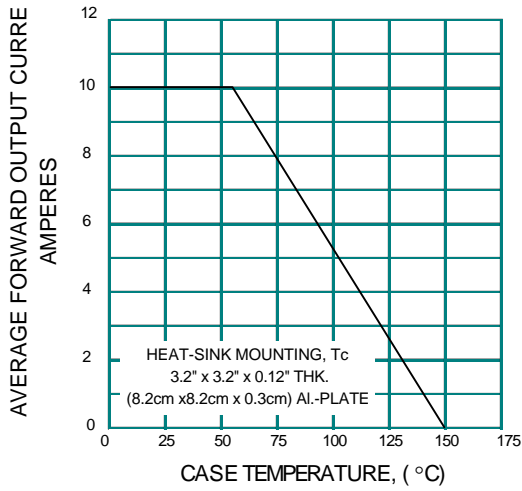
### Notes :

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.

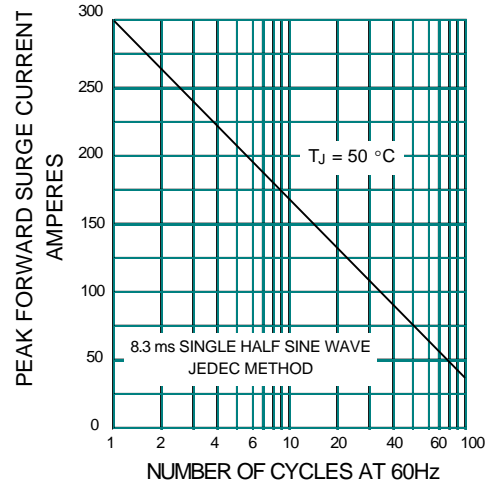
**UPDATE : APRIL 23, 1998**

## RATING AND CHARACTERISTIC CURVES ( BR1000 - BR1010 )

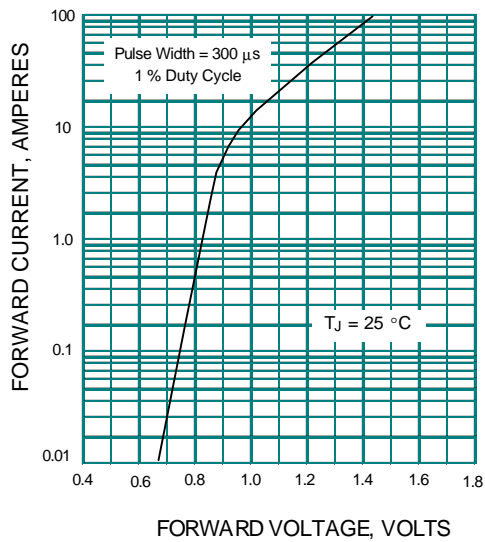
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

