

# BR5000 - BR5010

PRV : 50 - 1000 Volts

Io : 50 Amperes

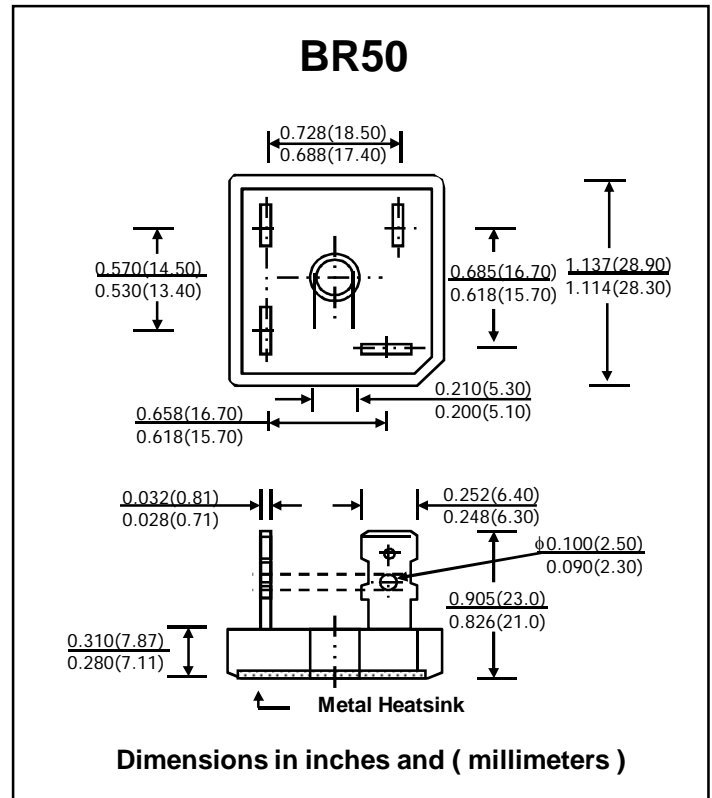
## FEATURES :

- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low reverse current
- \* Low forward voltage drop
- \* Rated isolation-voltage 2000 V<sub>AC</sub>
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-0 rate flame retardant
- \* Terminals : plated .25" (6.35 mm). Faston
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency.
- \* Weight : 17.1 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%.

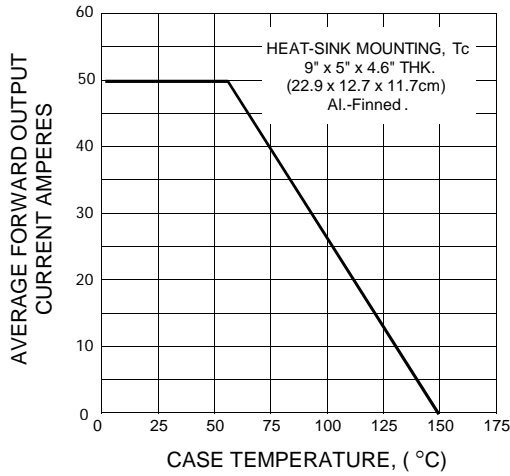
RATING	SYMBOL	BR5000	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current T <sub>c</sub> = 55°C	I <sub>F(AV)</sub>	50							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	500							A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	660							A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> =25 A	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	I <sub>R</sub>	10							μA
	I <sub>R(H)</sub>	200							μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	1							°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 :**

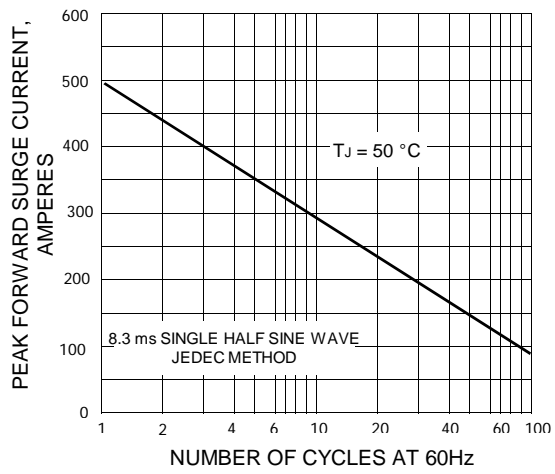
1) Thermal resistance from Junction to Case with units mounted on a 9"x5"x4.6" (22.9x12.7x11.7 cm) Al-Finned Heatsink.

**RATING AND CHARACTERISTIC CURVES (BR5000 - BR5010)**

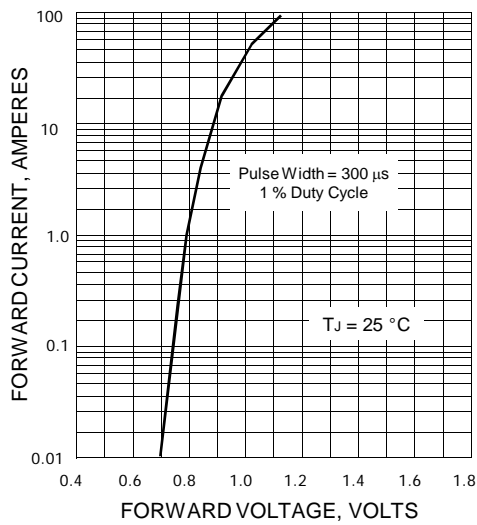
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

