

## BR2500 - BR2510

## SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

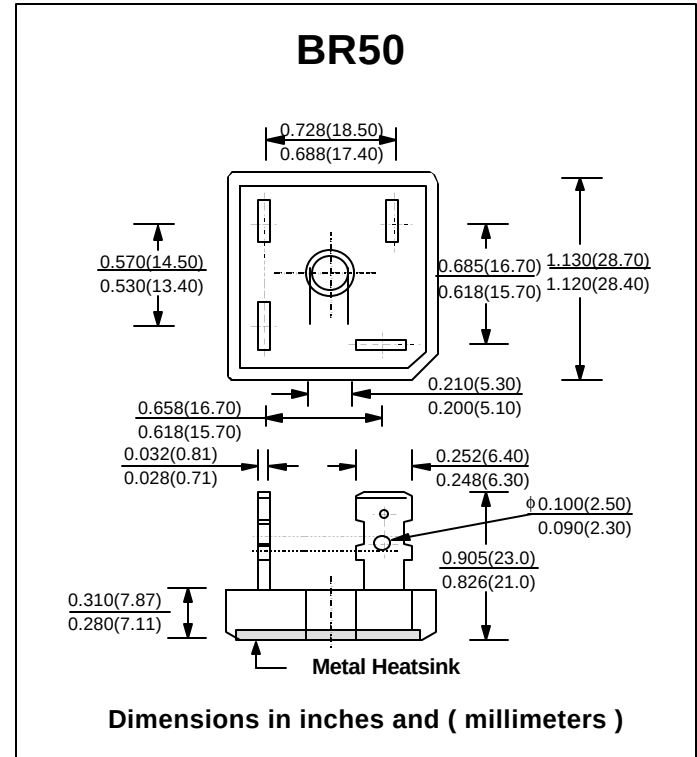
**I<sub>o</sub> : 25 Amperes**

### 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 : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-O 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



### 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             | BR2500        | BR2501 | BR2502 | BR2504 | BR2506 | BR2508 | BR2510 | 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> | 25            |        |        |        |        |        |        | Amps.            |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>   | 300           |        |        |        |        |        |        | Amps.            |
| Current Squared Time at t < 8.3 ms.                                                        | I <sup>2</sup> t   | 375           |        |        |        |        |        |        | A <sup>2</sup> S |
| Maximum Forward Voltage per Diode at I <sub>F</sub> = 12.5 Amp.                            | V <sub>F</sub>     | 1.1           |        |        |        |        |        |        | Volts            |
| Maximum DC Reverse Current<br>Ta = 25 °C<br>at Rated DC Blocking Voltage<br>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>   | 1.45          |        |        |        |        |        |        | °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               |

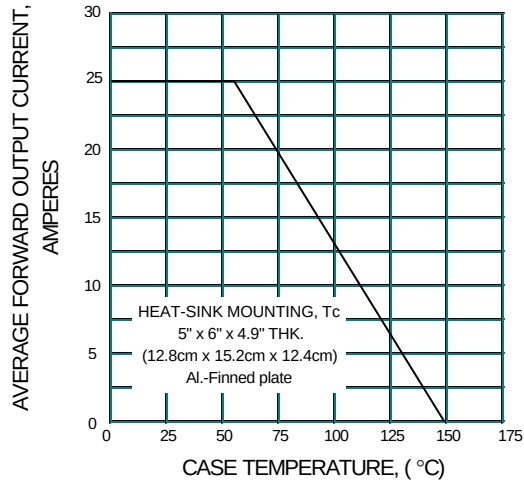
### Notes :

1. Thermal Resistance from junction to case with units mounted on a 5" x 6" x 4.9" (12.8cm.x 15.2cm.x 12.4cm.) Al.-Finned Plate

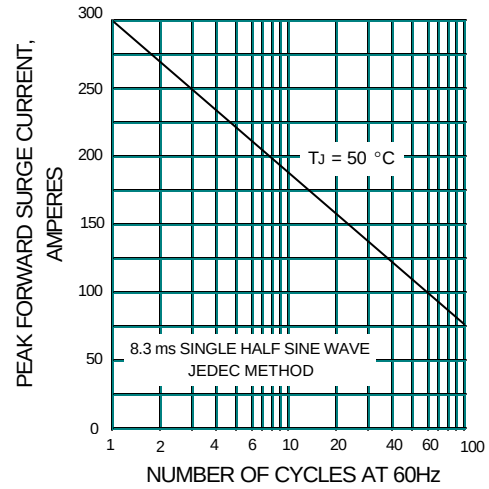
**UPDATE : APRIL 23, 1998**

## RATING AND CHARACTERISTIC CURVES ( BR2500 - BR2510 )

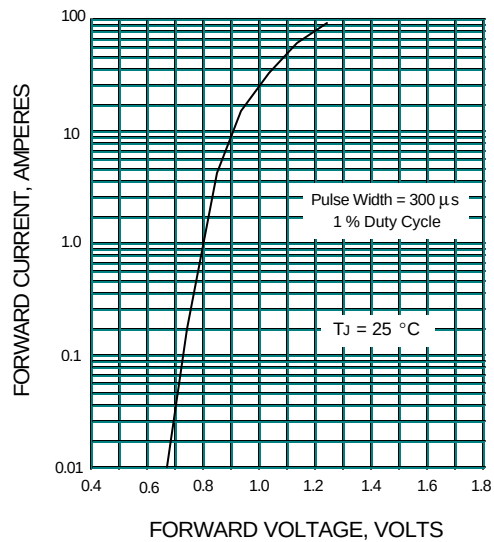
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

