

# RBV2500D - RBV2510D SILICON BRIDGE RECTIFIERS

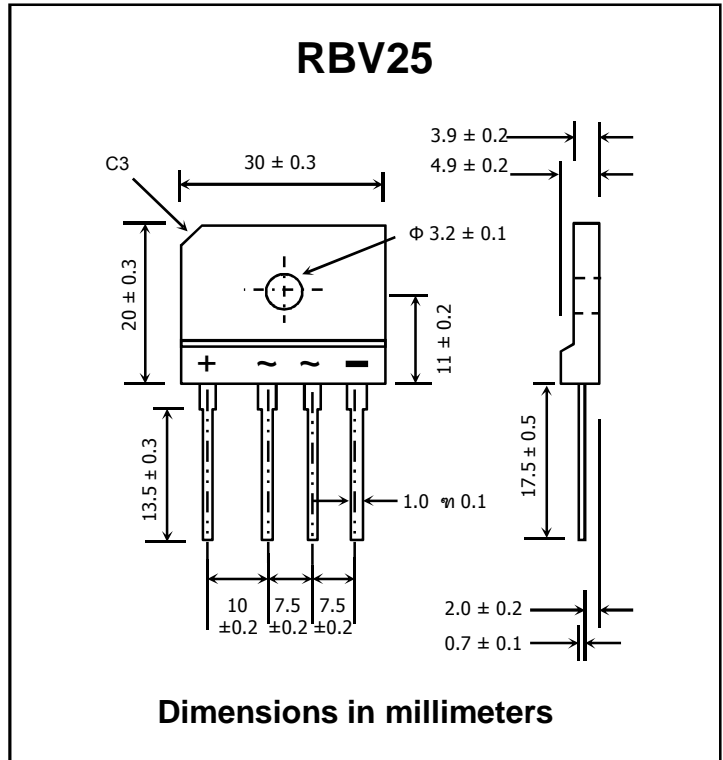
**PRV : 50 - 1000 Volts**  
**Io : 25 Amperes**

**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
- \* Very good heat dissipation
- \* Pb / RoHS Free

**MECHANICAL DATA :**

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-0 rate flame retardant
- \* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 8.17 grams ( Approximally )



**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%.

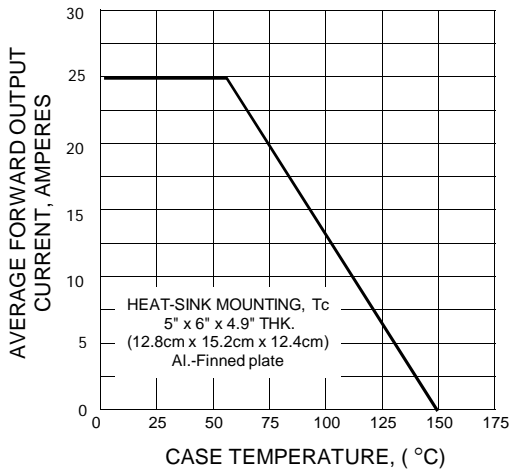
| RATING   | SYMBOL                      | RBV 2500D     | RBV 2501D | RBV 2502D | RBV 2504D | RBV 2506D | RBV 2508D | RBV 2510D | UNIT |                  |
|--|-----------------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------|------------------|
| 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>          | 25            |           |           |           |           |           |           |      | A                |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>            | 400           |           |           |           |           |           |           |      | A                |
| Current Squared Time at t < 8.3 ms.  | I <sup>2</sup> <sub>t</sub> | 375           |           |           |           |           |           |           |      | 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>            | 1.2           |           |           |           |           |           |           |      | °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 :**

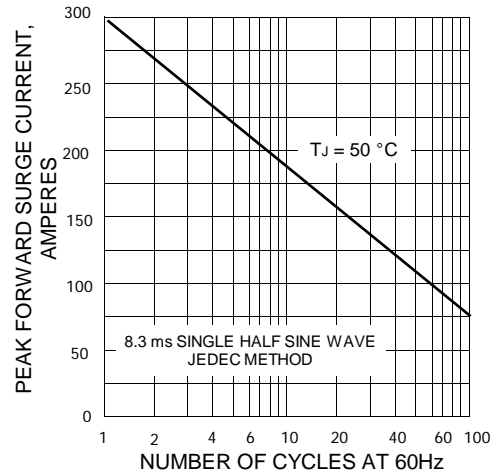
1. Thermal Resistance from junction to case with units mounted on a 5" x 6" x 4.9" (12.8cm.x 15.2cm.x 12.4cm.) Al.-Finned Plate

**RATING AND CHARACTERISTIC CURVES ( RBV2500D - RBV2510D )**

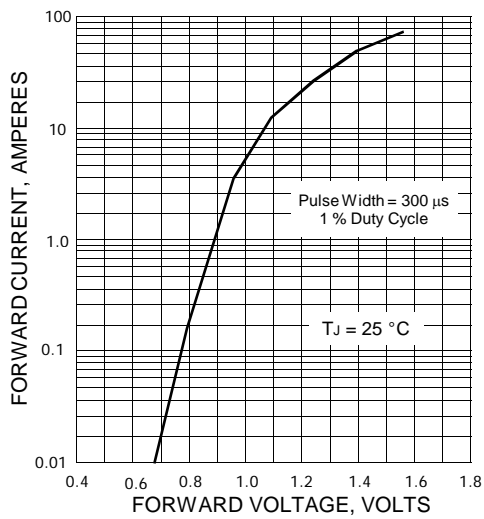
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

