

# RBV1000D - RBV1010D

# SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

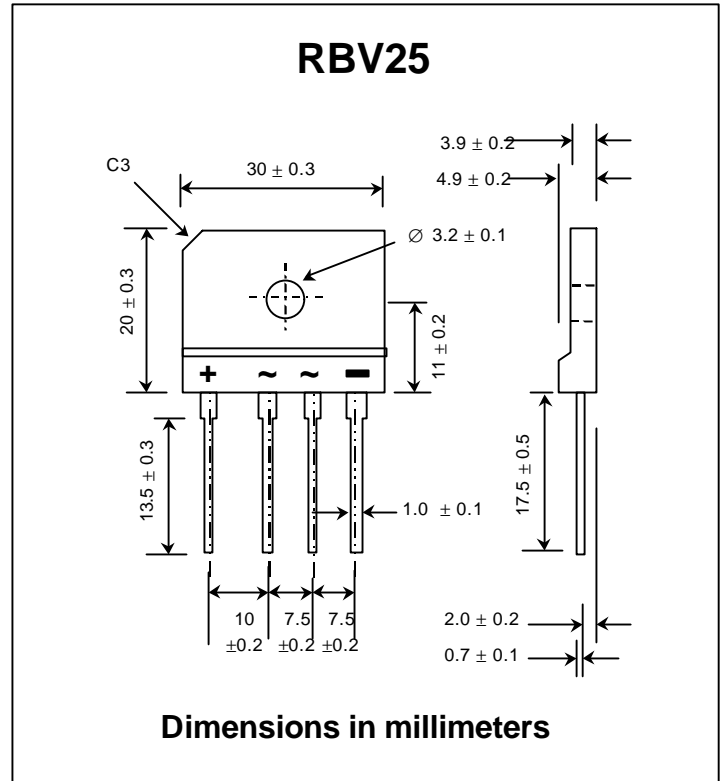
**Io : 10 Amperes**

## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* High case dielectric strength of 2000 V<sub>DC</sub>
- \* Ideal for printed circuit board
- \* Very good heat dissipation

## MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 7.7 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             | RBV 1000D     | RBV 1001D | RBV 1002D | RBV 1004D | RBV 1006D | RBV 1008D | RBV 1010D | UNIT             |
|--|--------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| 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            |           |           |           |           |           |           | 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   | 166           |           |           |           |           |           |           | A <sup>2</sup> S |
| Maximum Forward Voltage per Diode at I <sub>F</sub> = 10 Amps.                             | V <sub>F</sub>     | 1.0           |           |           |           |           |           |           | Volts            |
| Maximum DC Reverse Current Ta = 25 °C  | I <sub>R</sub>     | 10            |           |           |           |           |           |           | μA               |
| at Rated DC Blocking Voltage Ta = 100 °C   | I <sub>R(H)</sub>  | 200           |           |           |           |           |           |           | μA               |
| Typical Thermal Resistance (Note 1)  | R <sub>θJC</sub>   | 2.2           |           |           |           |           |           |           | °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               |

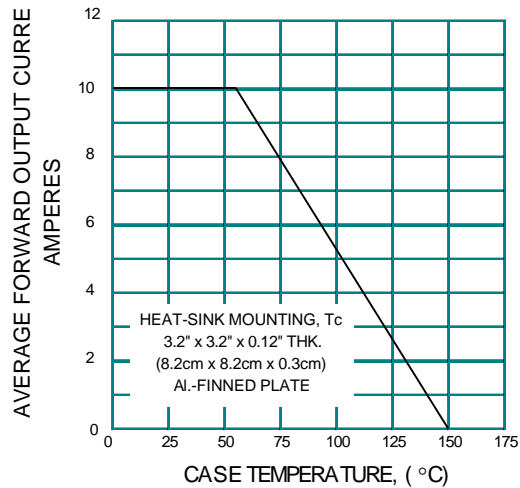
## Notes :

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

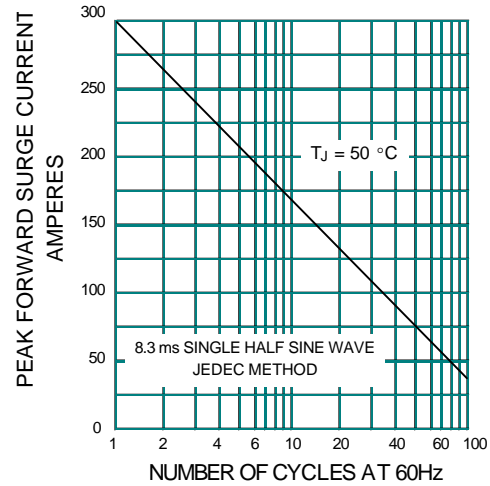
**UPDATE : NOVEMBER 1,1998**

## RATING AND CHARACTERISTIC CURVES ( RBV1000D - RBV1010D )

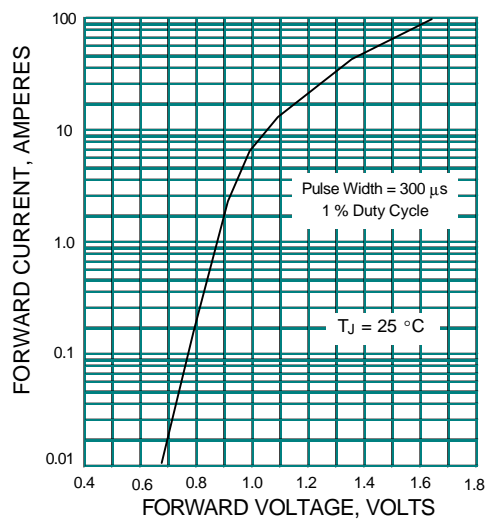
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

