

# RBV3500 - RBV3510

PRV : 50 - 1000 Volts

Io : 35 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 ( Approximaly )

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

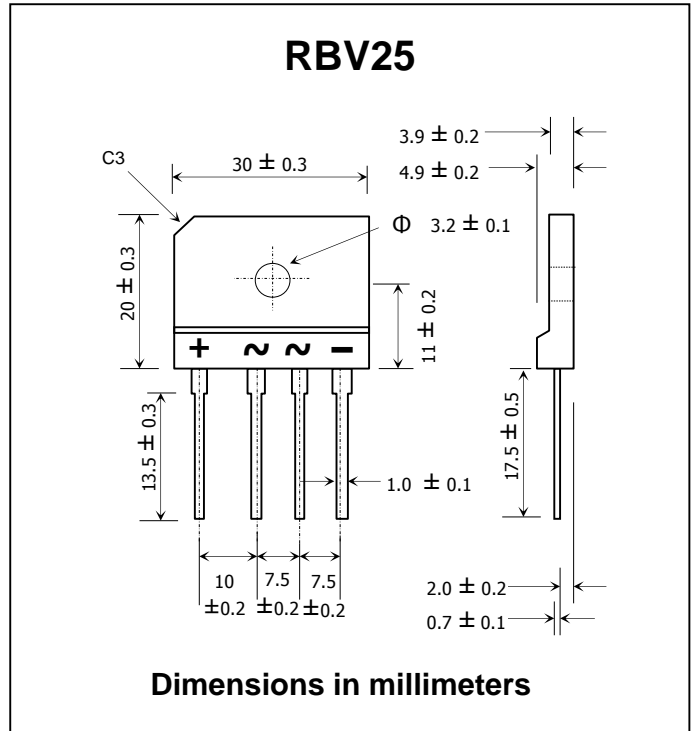
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| RATING  | SYMBOL             | RBV 3500      | RBV 3501 | RBV 3502 | RBV 3504 | RBV 3506 | RBV 3508 | RBV 3510 | 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> | 35            |          |          |          |          |          |          | 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> t   | 660           |          |          |          |          |          |          | A <sup>2</sup> S |
| Maximum Forward Voltage per Diode at I <sub>F</sub> = 17.5 A , T <sub>a</sub> = 25 ° C<br>at I <sub>F</sub> = 17.5 A , T <sub>a</sub> = 125 ° C | V <sub>F</sub>     | 1.1           |          |          |          |          |          |          | V                |
|   |                    | 0.9           |          |          |          |          |          |          |                  |
| Maximum DC Reverse Current T <sub>a</sub> = 25 ° C<br>at Rated DC Blocking Voltage T <sub>a</sub> = 100 ° C                                     | I <sub>R</sub>     | 10            |          |          |          |          |          |          | μA               |
|   | I <sub>R(H)</sub>  | 200           |          |          |          |          |          |          | μA               |
| Mounting Torque (Recommended torque :0.5 N.m)   | TOR                | 0.8           |          |          |          |          |          |          | N.m              |
| Typical Thermal Resistance (Note 1)   | R <sub>θJC</sub>   | 1.5           |          |          |          |          |          |          | °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               |

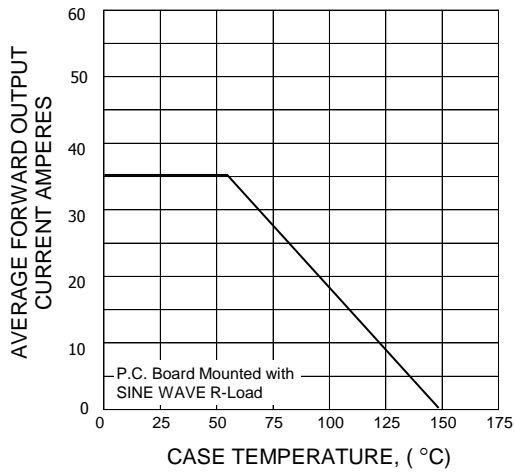
1. Thermal Resistance from junction to case with units mounted on heatsink.

## SILICON BRIDGE RECTIFIERS

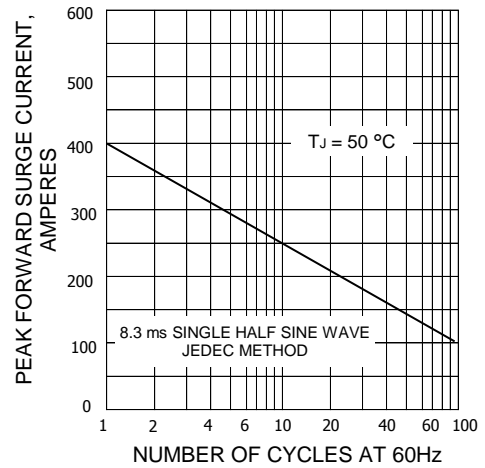


## RATING AND CHARACTERISTIC CURVES ( RBV3500 - RBV3510 )

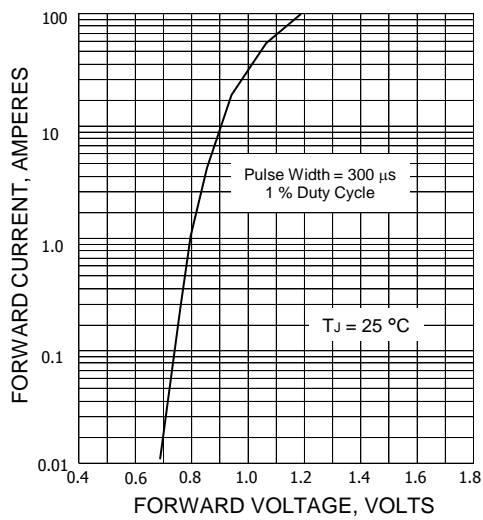
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

