

# TAITRON

components incorporated

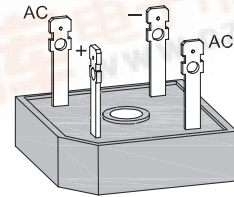
## 15.0A SINGLE-PHASE BRIDGE RECTIFIER

### TB1505 -TB1510

### 15.0A Single-Phase Bridge Rectifier

#### Features

- High forward surge current capability
- Ideal for printed circuit board
- High temperature soldering guaranteed:  
260°C/10 seconds, 5 lbs (2.3kg) tension
- RoHS Compliant



TB35



#### Mechanical Data

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| <b>Case:</b>              | Molded plastic body with Metal Heat Sink        |
| <b>Polarity:</b>          | Polarity symbols marked on case                 |
| <b>Terminals:</b>         | Plated 0.25" (6.35mm) lug                       |
| <b>Mounting Position:</b> | Thru hole for #10 screw, 20 in -lbs. torque max |
| <b>Weight:</b>            | 0.53 ounce, 15 grams                            |

#### Maximum Ratings & Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbols               | Description                                                | TB1505      | TB151 | TB152 | TB154 | TB156 | TB158 | TB1510 | Unit               |
|-----------------------|------------------------------------------------------------|-------------|-------|-------|-------|-------|-------|--------|--------------------|
| <b>VRRM</b>           | Max. recurrent peak reverse voltage                        | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                  |
| <b>VRMS</b>           | Max. RMS voltage                                           | 35          | 70    | 140   | 280   | 420   | 560   | 700    | V                  |
| <b>VDC</b>            | Max. DC blocking voltage                                   | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                  |
| <b>IO(AV)</b>         | Max. average forward rectified current @ $T_C=55^{\circ}C$ | 15.0        |       |       |       |       |       |        | A                  |
| <b>IFSM</b>           | Peak forward surge current (Note 1)                        | 300         |       |       |       |       |       |        | A                  |
| <b>I<sup>2</sup>t</b> | Rating for Fusing ( $t < 8.3ms$ )                          | 373         |       |       |       |       |       |        | A <sup>2</sup> sec |
| <b>VISO</b>           | Isolation Voltage from case to lugs                        | 2500        |       |       |       |       |       |        | V                  |
| <b>Cj</b>             | Typical Capacitance Junction(per element)(Note 2)          | 300         |       |       |       |       |       |        | pF                 |
| <b>TJ</b>             | Operating junction temperature range                       | -65 to +150 |       |       |       |       |       |        | °C                 |
| <b>TSTG</b>           | Storage Temperature Range                                  | -65 to +150 |       |       |       |       |       |        | °C                 |

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| Symbol                  | Description                                              | TB1505 | TB151 | TB152 | TB154 | TB156 | TB158 | TB1510 | Unit  |
|-------------------------|----------------------------------------------------------|--------|-------|-------|-------|-------|-------|--------|-------|
| <b>V<sub>F</sub></b>    | Maximum Instantaneous Forward Voltage Drop Per Leg@7.5 A | 1.1    |       |       |       |       |       |        | V     |
| <b>I<sub>R</sub></b>    | Maximum DC Reverse Current<br>Rated DC Blocking Voltage  | 10.0   |       |       |       |       |       |        | uA    |
|                         |                                                          | 500    |       |       |       |       |       |        | uA    |
| <b>R<sub>θ-JC</sub></b> | Maximum Thermal Resistance (Note 3)                      | 2.0    |       |       |       |       |       |        | ° C/W |

### NOTES:

1. 8.3ms single half sine-wave superimposed on rated load (JEDEC method).
2. Measured at 1MHz and applied reverse voltage of 4.0Volts D.C.
3. Thermal resistance junction to case mounted on heat sink.

## Typical Characteristics Curves

Fig.1- Typical Forward Current Derating Curve

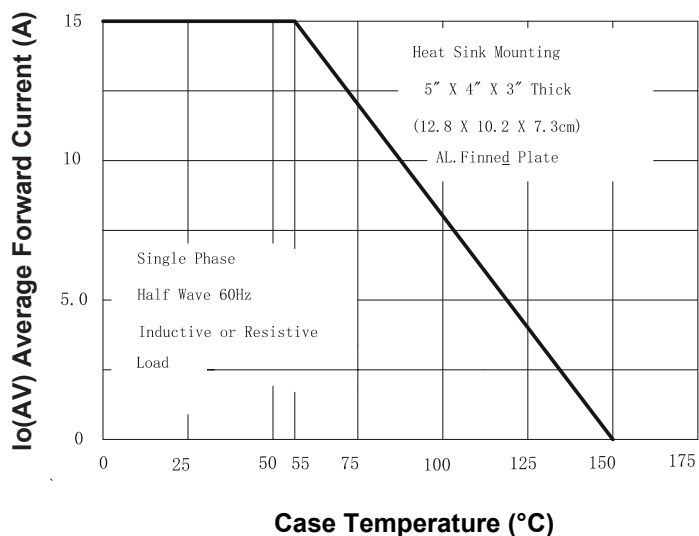
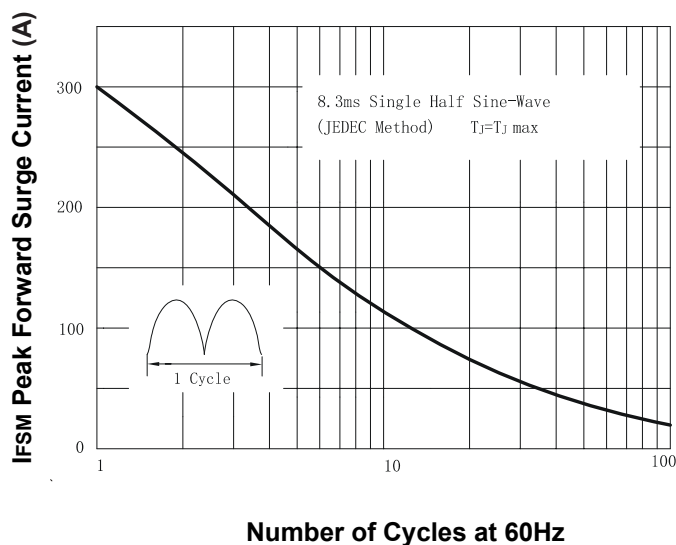


Fig.2-Max. Non-repetitive Peak Forward Surge Current



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Fig.3- Typical Instantaneous Forward Characteristics

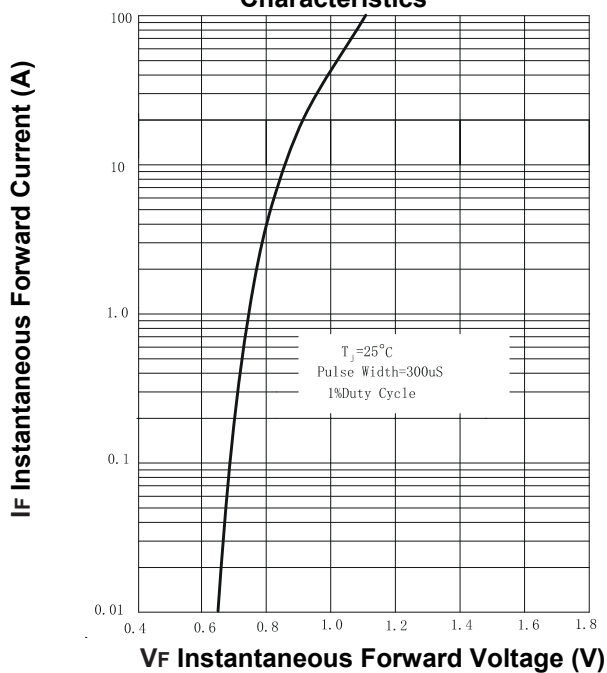


Fig.4- Typical Reverse Characteristics

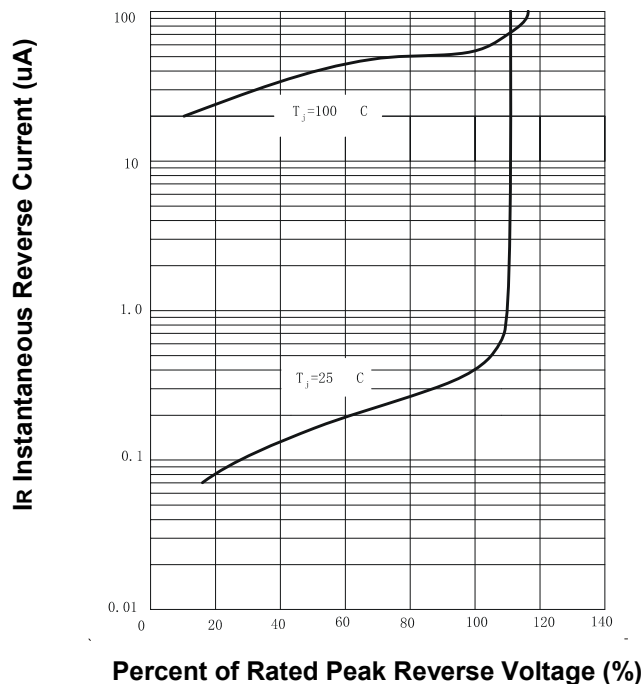
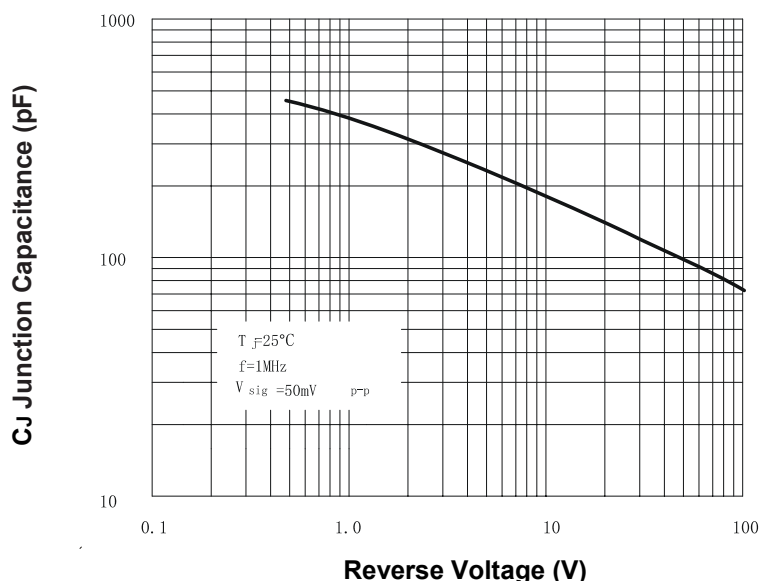
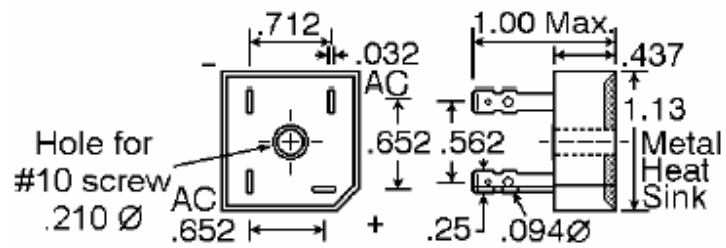


Fig.5-Typical junction capacitance



**TB1505 -TB1510**

**TB35**



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