



# BAW56TB,BAV70TB,BAV99TB,BAL99TB

## SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100Volt **POWER** 200mWatt

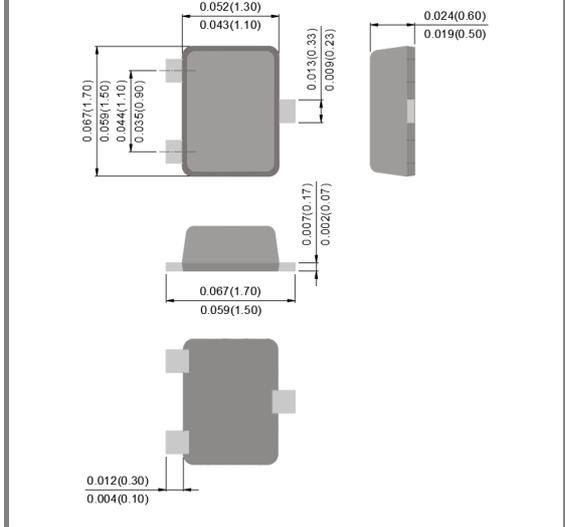
**SOT-523 Dimension** **Unit: inch(mm)**

### FEATURES

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case : SOT-523, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.002 grams



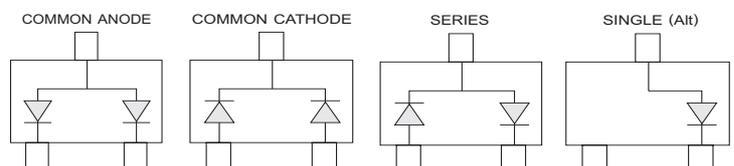
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

| PARAMETER   | SYMBOL          | BAW56TB  | BAV70TB        | BAV99TB            | BAL99TB     | UNITS   |
|---|-----------------|--|----------------|--------------------|-------------|---------|
| Marking Code  |                 | LB   | LC             | LD                 | LF          |         |
| Reverse Voltage   | $V_R$           | 75   |                |                    |             | V       |
| Peak Reverse Voltage  | $V_{RM}$        | 100  |                |                    |             | V       |
| Rectified Current (Average), Half Wave Rectification with Resistive Load and $f \geq 50$ Hz | $I_o$           | Single Diode<br>150  |                | Double Diode<br>75 |             | mA      |
| Peak Forward Surge Current,1.0us  | $I_{FSM}$       | 4.0  |                |                    |             | A       |
| Power Dissipation Derate Above 25°C   | $P_{TOT}$       | 200  |                |                    |             | mW      |
| Maximum Forward Voltage   | $V_F$           | 0.715 @ $I_F=0.001A$<br>0.855 @ $I_F=0.01A$<br>1.0 @ $I_F=0.05A$<br>1.25 @ $I_F=0.15A$ |                |                    |             | V       |
| Maximum DC Reverse Current at 25V<br>75V  | $I_R$           | 0.03<br>2.5  |                |                    |             | $\mu A$ |
| Maximum Junction Capacitance( Notes 1)  | $C_J$           | 1.5  |                |                    |             | pF      |
| Maximum Reverse Recovery Time (Notes 2)   | $T_{RR}$        | 4.0  |                |                    |             | ns      |
| Typical Maximum Thermal Resistance  | $R_{\theta JA}$ | 833  |                |                    |             | °C / W  |
| Junction Temperature Range  | $T_J$           | -55 to +150  |                |                    |             | °C      |
| Circuit Figure  |                 | Common Anode   | Common Cathode | Series             | Single(Alt) |         |

**NOTE:**

1.  $C_J$  at  $V_R=0$ ,  $f=1MHZ$
2. From  $I_F=10mA$  to  $I_R=1mA$ ,  $V_R=6Volts$ ,  $R_L=100\Omega$





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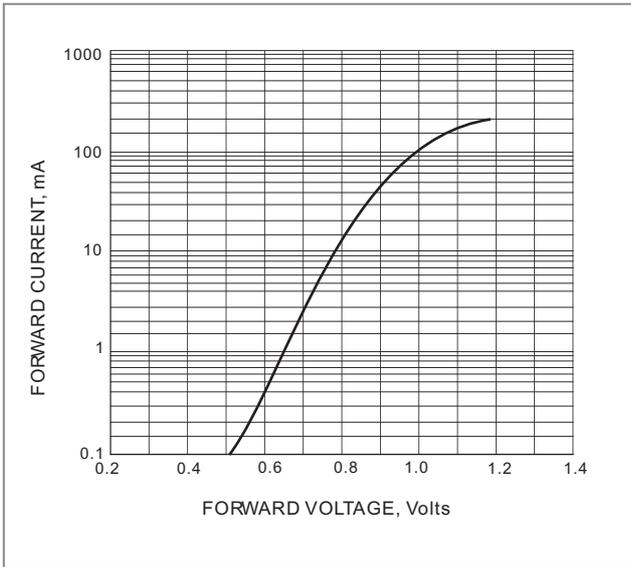


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

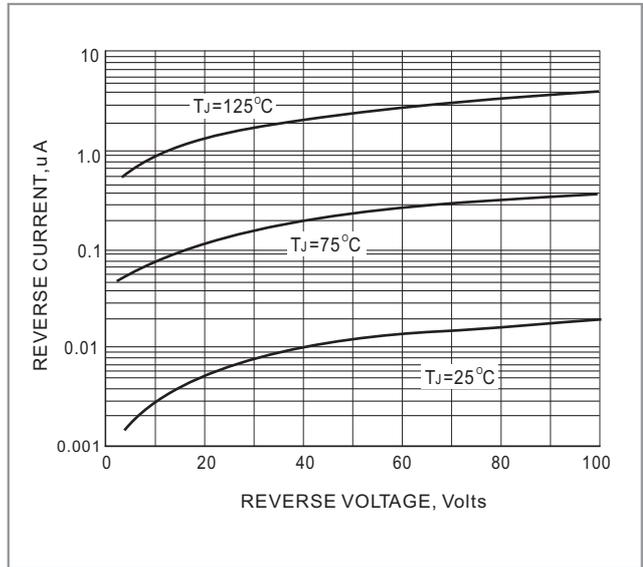


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

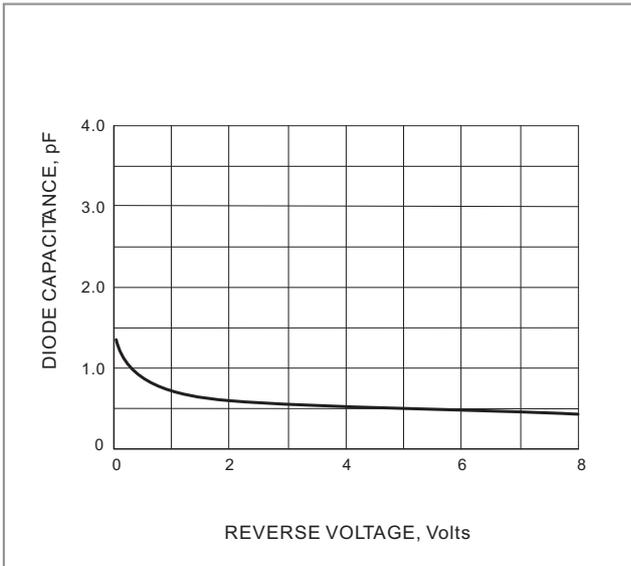


FIG. 3 TYPICAL JUNCTION CAPACITANCE

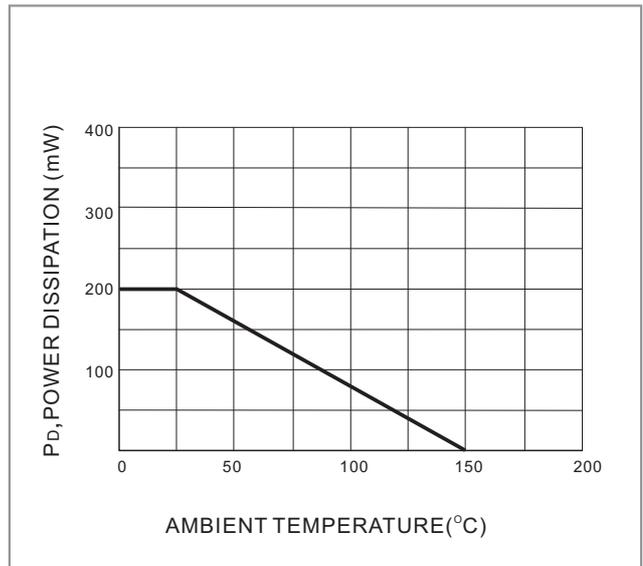
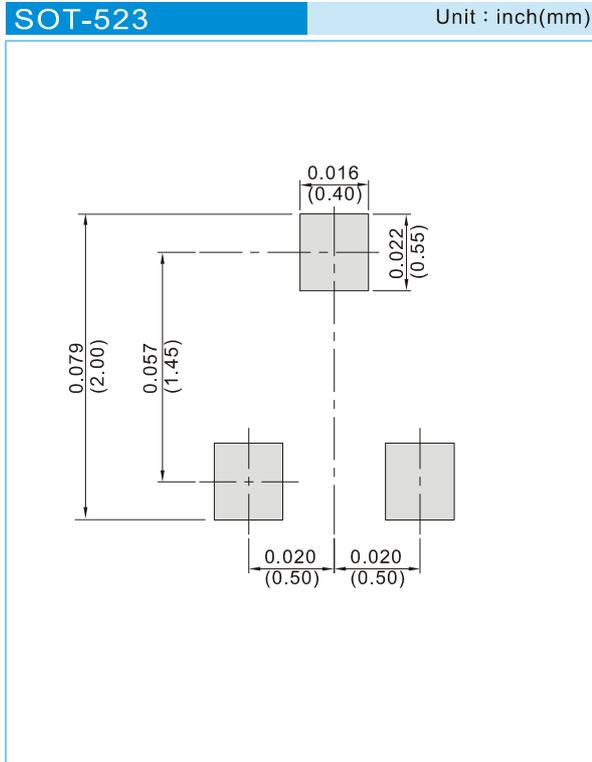


FIG. 4 POWER DERATING CURVE



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 4K per 7" plastic Reel



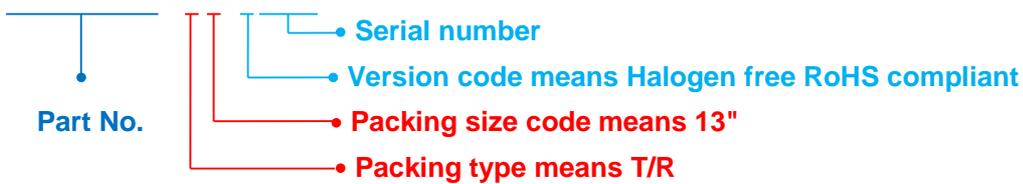
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Part No.\_packing code\_Version

BAW56TB\_R1\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code <b>XX</b>               |                         |                                     |                         | Version Code <b>X</b>          |                         | Serial number<br><b>XXXX</b>             |
|--------------------------------------|-------------------------|-------------------------------------|-------------------------|--------------------------------|-------------------------|--|
| Packing type                         | 1 <sup>st</sup><br>Code | Packing size code                   | 2 <sup>nd</sup><br>Code | HSF Level                      | 1 <sup>st</sup><br>Code | 2 <sup>nd</sup> ~5 <sup>th</sup><br>Code |
| Tape and Ammunition Box (T/B)        | <b>A</b>                | N/A                                 | <b>0</b>                | Halogen free<br>RoHS compliant | <b>0</b>                | serial<br>number                         |
| Tape and Reel (T/R)                  | <b>R</b>                | 7"                                  | <b>1</b>                | RoHS compliant                 | <b>1</b>                | serial<br>number                         |
| Bulk Packing (B/P)                   | <b>B</b>                | 13"                                 | <b>2</b>                |                                |                         |  |
| Tube Packing (T/P)                   | <b>T</b>                | 26mm                                | <b>X</b>                |                                |                         |  |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>                | 52mm                                | <b>Y</b>                |                                |                         |  |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>                | PANASERT T/B<br>CATHODE UP (PBCU)   | <b>U</b>                |                                |                         |  |
| FORMING                              | <b>F</b>                | PANASERT T/B<br>CATHODE DOWN (PBCD) | <b>D</b>                |                                |                         |  |



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