



# BAV19WS-AU~BAV21WS-AU

## SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 120-250 Volt    **POWER** 200mWatt

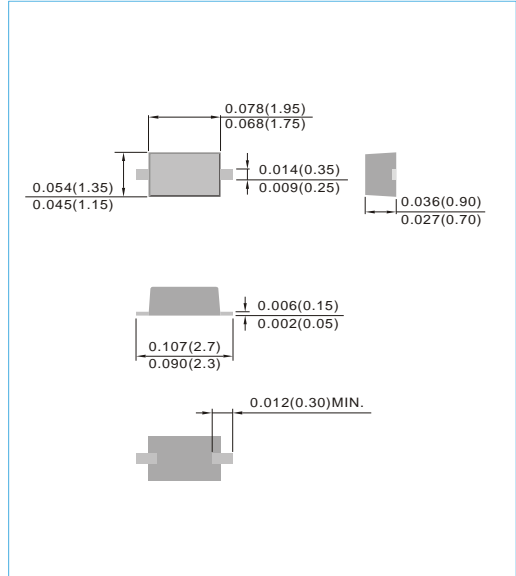
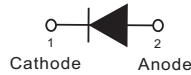
**SOD-323**    Unit : inch(mm)

### FEATURES

- Fast switching speed.
- Surface mount package ideally suited for automatic insertion
- Electrically identical to Standard JEDEC
- High conductance
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

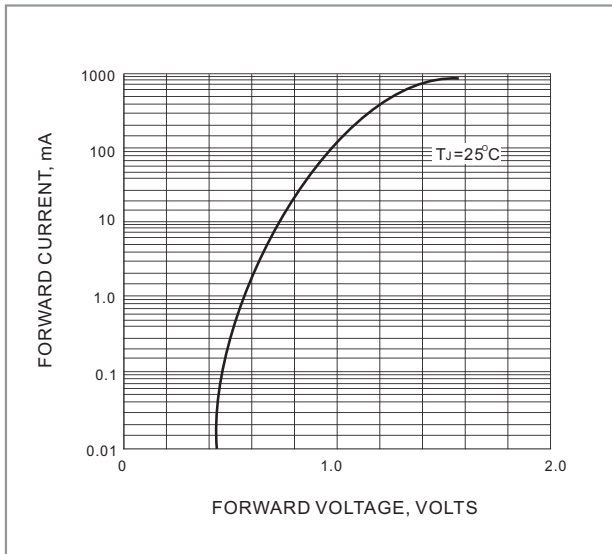
| PARAMETER   | SYMBOL                             | BAV19WS-AU  | BAV20WS-AU | BAV21WS-AU | UNITS                       |
|---|------------------------------------|-------------|------------|------------|-----------------------------|
| Marking Code  |                                    | A8          | A80        | A82        |                             |
| Reverse Voltage   | $V_R$                              | 100         | 150        | 200        | V                           |
| Peak Reverse Voltage  | $V_{RM}$                           | 120         | 200        | 250        | V                           |
| Rectified Current (Average), Half Wave Rectification with Resistive Load and $f \geq 50$ Hz | $I_O$                              | 200         |            |            | mA                          |
| Peak Forward Surge Current, 0.001ms   | $I_{FSM}$                          | 4           |            |            | A                           |
| Power Dissipation Derate Above 25°C   | $P_{TOT}$                          | 200         |            |            | mW                          |
| Maximum Forward Voltage at 0.1A   | $V_F$                              | 1           |            |            | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$              | $I_R$                              | 0.1         |            |            | $\mu\text{A}$               |
| Typical Junction Capacitance (Note 1)   | $C_J$                              | 5           |            |            | pF                          |
| Maximum Reverse Recovery Time (Note 2)  | $T_{RR}$                           | 50          |            |            | ns                          |
| Maximum Thermal Resistance (Note 3)<br>(Note 4)   | $R_{\theta JA}$<br>$R_{\theta JC}$ | 640<br>260  |            |            | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$                     | -55 to +150 |            |            | $^\circ\text{C}$            |

**NOTE :**

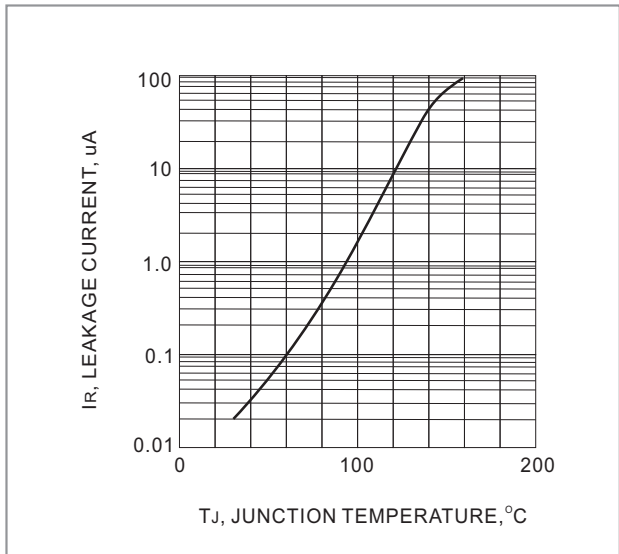
- 1.CJ at  $V_R=0, f=1\text{MHZ}$
- 2.From  $I_F=10\text{mA}$  to  $I_R=1\text{mA}$ ,  $V_R=6\text{Volts}$ ,  $R_L=100\Omega$
- 3.Mounted with minmum recommended pas eize, PC Board FR4
- 4.Mounted on a FR4 PCB, single-sided copper, with  $100\text{cm}^2$  copper pad area



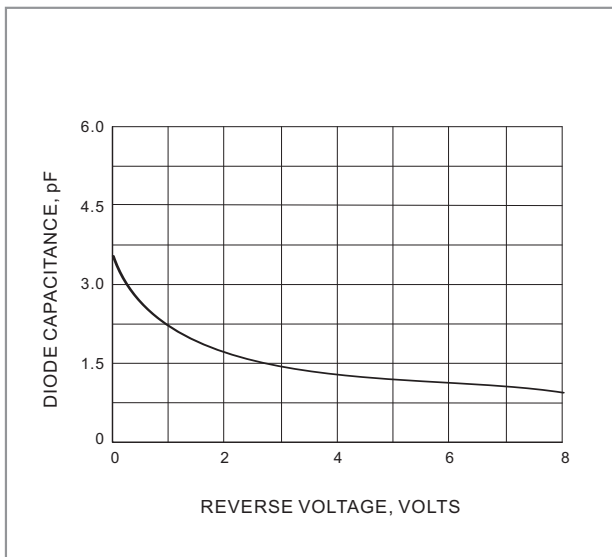
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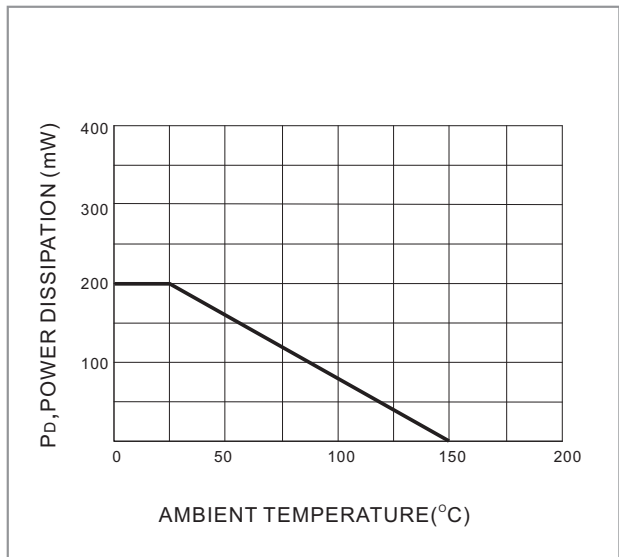
**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**Fig.2 LEAKAGE CURRENT vs JUNCTION TEMPERATURE**



**FIG. 3 TYPICAL JUNCTION CAPACITANCE**



**FIG. 4 POWER DERATING CURVE**

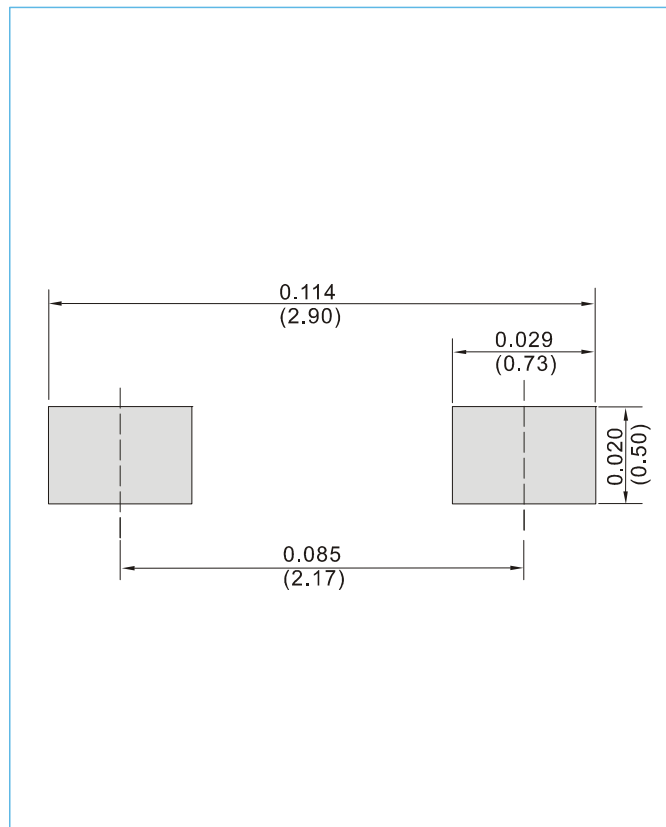


## BAV19WS-AU~BAV21WS-AU

### MOUNTING PAD LAYOUT

SOD-323

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5K per 7" plastic Reel



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### Part No\_packing code\_Version

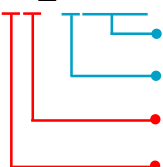
BAV19WS-AU\_R1\_000A1

BAV19WS-AU\_R2\_000A1

For example :

**RB500V-40** **R2** **00001**

Part No.



Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                 | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>               | <b>1</b>             | serial 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 CATHODE UP (PBCU)   | <b>U</b>             |                           |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                           |                      |                                       |



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