



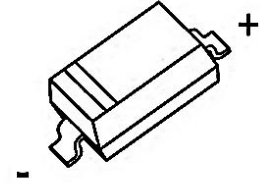
# BAV19W~BAV21W

## SWITCUING DIODE

SOD-123

### FEATURES

- \*Fast Switching Speed
- \*Low Reverse Current
- \*Surface Mount Package Ideally Suited for Automatic Insertion
- \*For General Purpose Switching Applications



### MARKING

| BAV19W | BAV20W | BAV21W |
|--------|--------|--------|
|        |        |        |

The marking bar indicates the cathode  
Solid dot = Green molding compound device,  
if none, the normal device.

### ABSOLUTE MAXIMUM RATINGS (TC=25°C, unless otherwise specified)

| SYMBOL                            | PARAMETER   | VALUE      |        |        | UNIT |
|-----------------------------------|---|------------|--------|--------|------|
|                                   |   | BAV19W     | BAV20W | BAV21W |      |
| V <sub>RM</sub>                   | Non-Repetitive Peak Reverse Voltage                 | 120        | 200    | 250    | V    |
| V <sub>RRM</sub>                  | Peak Repetitive Peak Reverse Voltage                | 100        | 150    | 200    | V    |
| V <sub>RWM</sub>                  | Working Peak Reverse Voltage                        |            |        |        |      |
| V <sub>R(RMS)</sub>               | RMS Reverse Voltage                                 | 71         | 106    | 141    |      |
| I <sub>O</sub>                    | Average Rectified Output Current                    | 200        |        |        | mA   |
| I <sub>FSM</sub>                  | Non-Repetitive Peak Forward Surge Current(tp=8.3ms) | 2.0        |        |        | A    |
| P <sub>d</sub>                    | Power Dissipation                                   | 500        |        |        | mW   |
| R <sub>θJA</sub>                  | Thermal Resistance from Junction to Ambient(Note 1) | 250        |        |        | °C/W |
| T <sub>j</sub> , T <sub>stg</sub> | Operation Junction and Storage Temperature Range    | -55 to 150 |        |        | °C   |

### ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless otherwise noted)

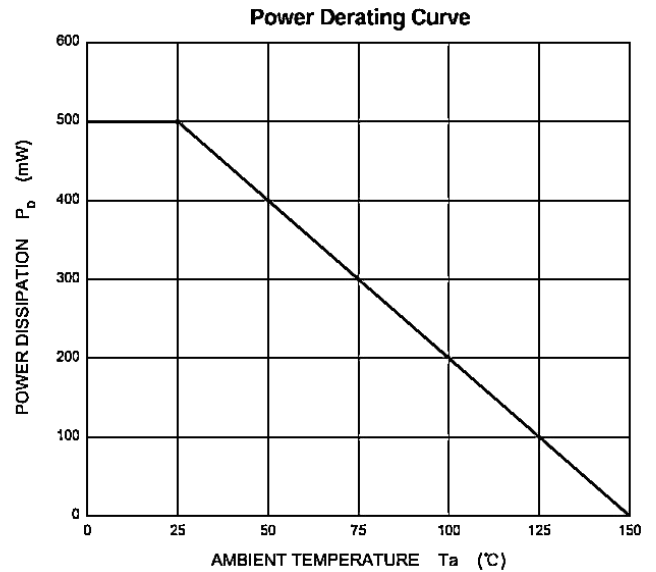
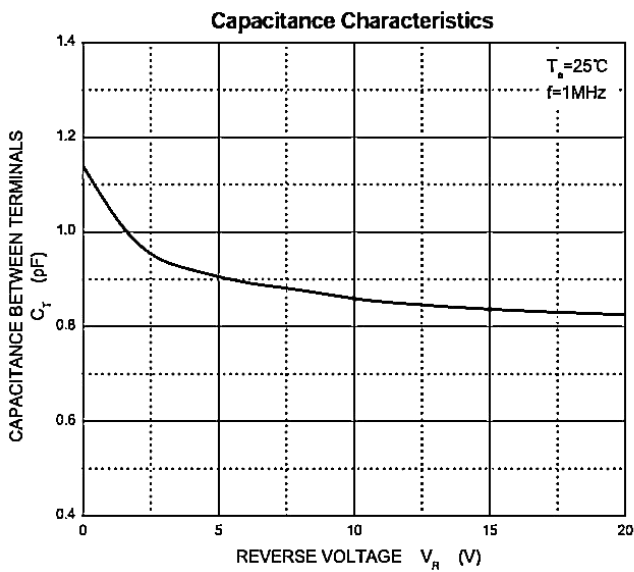
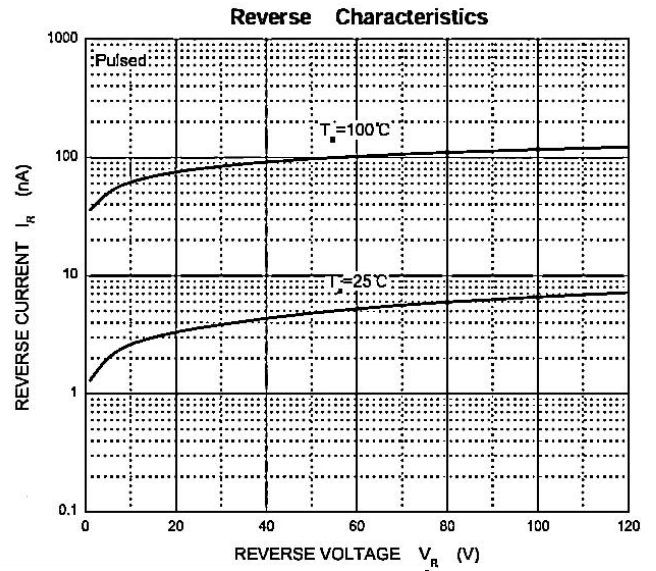
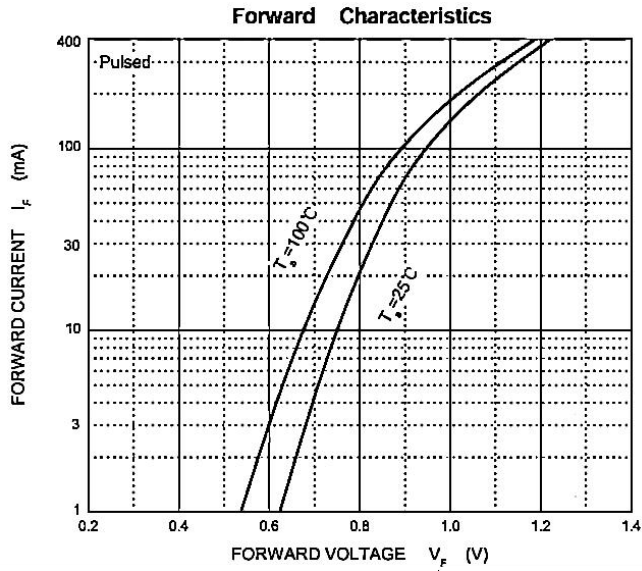
| PARAMETER                     | SYMBOL           | TEST CONDITIONS   | MIN | TYP | MAX  | UNIT |
|-------------------------------|------------------|---|-----|-----|------|------|
| Forward current               | I <sub>R</sub>   | V <sub>R</sub> =100V    BAV19W  |     |     | 0.1  | μA   |
|                               |                  | V <sub>R</sub> =150V    BAV20W  |     |     | 0.1  |      |
|                               |                  | V <sub>R</sub> =200V    BAV21W  |     |     | 0.1  |      |
| Reverse voltage               | V <sub>F</sub>   | I <sub>F</sub> =100mA   |     |     | 1    | V    |
|                               |                  | I <sub>F</sub> =200mA   |     |     | 1.25 |      |
| Capacitance between terminals | C <sub>tot</sub> | V <sub>R</sub> =0V, f=1MHz  |     |     | 5    | pF   |
| Reverse recovery time         | t <sub>rr</sub>  | I <sub>F</sub> =I <sub>R</sub> =10mA<br>I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω |     |     | 50   | ns   |



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## SWITCUING DIODE

### TYPICAL CHARACTERISTICS

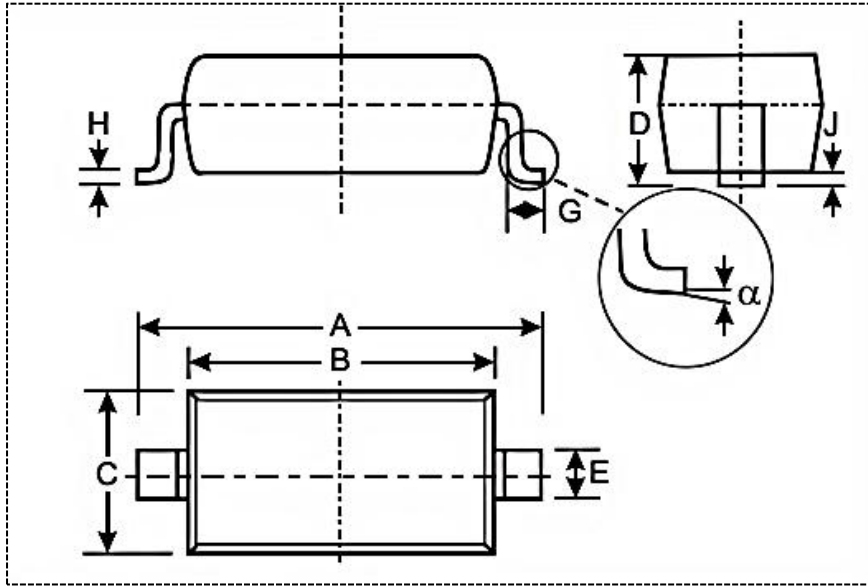




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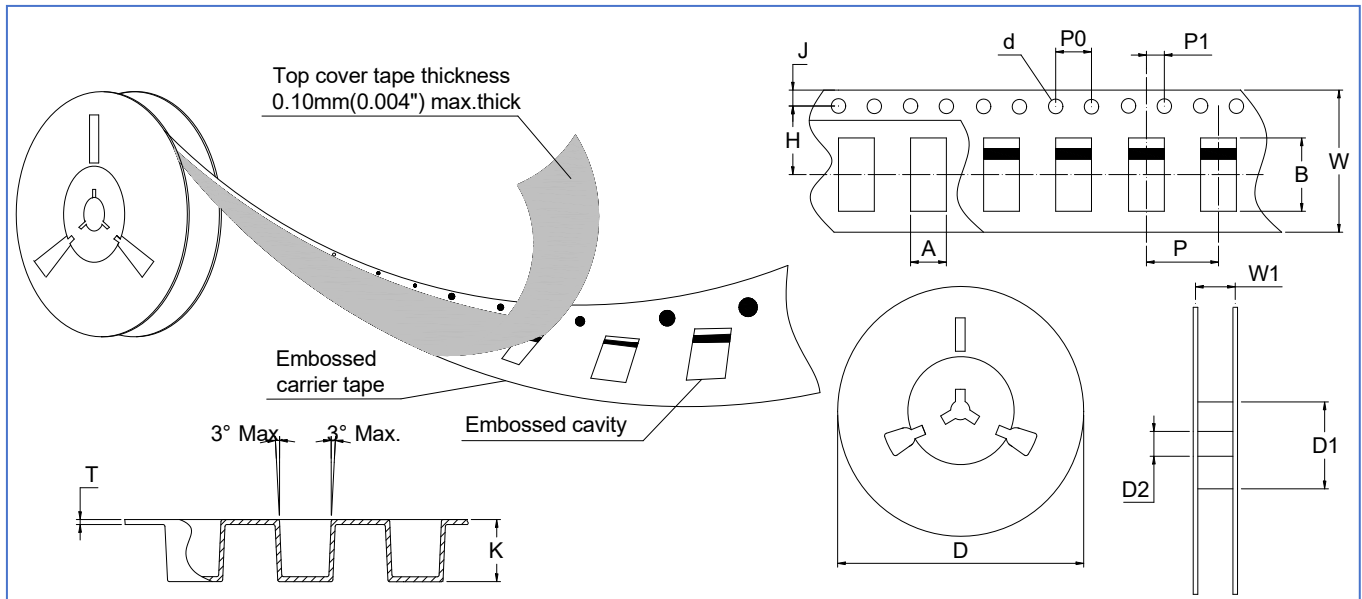
## SWITCUING DIODE

### ■ SOD-123 PACKAGE OUTLINE DIMENSIONS



| SOD-123              |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 3.55         | 3.85 |
| B                    | 2.60         | 2.80 |
| C                    | 1.50         | 1.70 |
| D                    | —            | 1.20 |
| E                    | 0.55 Typical |      |
| G                    | 0.25         | —    |
| H                    | 0.10 Typical |      |
| J                    | —            | 0.10 |
| $\alpha$             | 0°           | 8°   |
| All Dimensions in mm |              |      |

### ■ REEL PACKING



| SYMBOL        | A              | B            | d                | D*                | D1            | D2            | J               | H               | K               | P               | P0              | P1              | T               | W               | W1              |
|---------------|----------------|--------------|------------------|-------------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|               | Max.           | Max.         | Typ.             | /                 | Min.          | Typ.          | Typ.            | Typ.            | Typ.            | Typ.            | Typ.            | Typ.            | Typ.            | Typ.            | Min.            |
| mm(inch)      |                |              |                  |                   |               |               |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>SOD123</b> | 2.1<br>(0.083) | 4<br>(0.157) | Φ1.55<br>(0.061) | 330/178<br>(13/7) | 50<br>(1.969) | 13<br>(0.512) | 1.75<br>(0.069) | 3.50<br>(0.138) | 1.60<br>(0.063) | 4.00<br>(0.157) | 4.00<br>(0.157) | 2.00<br>(0.079) | 0.25<br>(0.010) | 8.15<br>(0.321) | 10.5<br>(0.413) |

\*NOTE: D=13inch Q.TY PER REEL=10K ; D=7inch Q.TY PER REEL=3K