## SURFACE MOUNT LOW LEAKAGE DIODE

### FEATURES

- Surface Mount Package Ideally Suited for Automatic Insertion
- Low Leakage Current
- Fast Switching Speed
- High Reverse Breakdown Voltage

### MECHANICAL DATA

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:16mg/0.00056oz

### PINNING

| PIN | DESCRIPTION |
|---|---|
| 1 | Cathode |
| 2 | Anode |


Simplified outline SOD-123 and symbol

**Absolute Maximum Ratings at 25 °C**

| Parameter | Symbols | BAV3004W | Units |
|---|---|---|---|
| Peak Repetitive Reverse Voltage | $V_{RRM}$ | 350 | V |
| Working Peak Reverse Voltage DC Blocking Voltage | $V_{RWM}$ $V_R$ | 300 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 212 | V |
| Forward Continuous Current | $I_{FM}$ | 225 | mA |
| Repetitive Peak Forward Current | $I_{FRM}$ | 625 | mA |
| Non-reptitive Peak Forward Surge Current at 1s<br>at 1 us | $I_{FSM}$ | 1<br>4 | A |
| Total Power Dissipation | $P_{tot}$ | 400 | mW |
| Typical Thermal Resistance (1) | $R_{\theta JA}$ | 500 | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | °C |

( 1 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

**Characteristics at $T_a$ = 25 °C**

| Parameter | Symbols | BAV3004W | Units |
|---|---|---|---|
| Reverse BreakdownVoltage at $I_R$=100μA | $V_{(BR)R}$ | 350 | V |
| Maximum Forward Voltage at 20 m A<br>at 100 m A<br>at 200 m A | $V_F$ | 0.87<br>1.00<br>1.25 | V |
| Maximum DC Reverse Current $T_a$ = 25 °C<br>at Rated DC Blocking Voltage $T_a$ =100 °C | $I_R$ | 0.1<br>15 | μA |
| Typical Junction Capacitance<br>at $V_R$=0V, f=1MHz | $C_j$ | 5 | pF |
| Maximum Reverse Recovery Time (1) | $t_{rr}$ | 50 | ns |

( 1 ) Measured with IF = 0.5 A, IR = 1 A, Irr = 0.25 A

**Fig.1 Power Derating Curve**

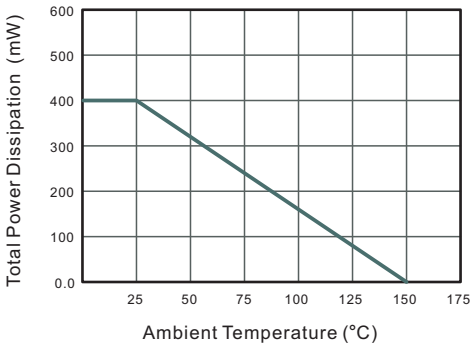



**Fig.2 Typical Reverse Characteristics**

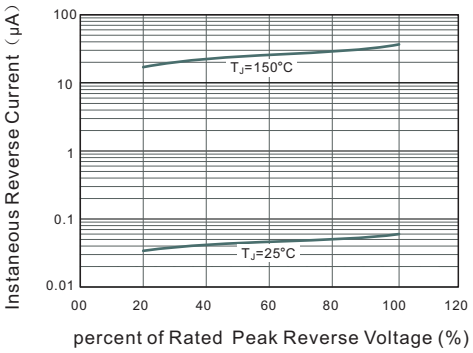



**Fig.3 Typical Instaneous Forward Characteristics**

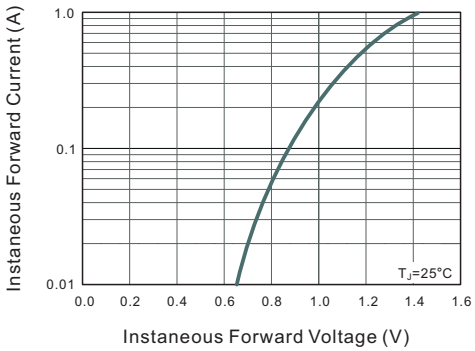
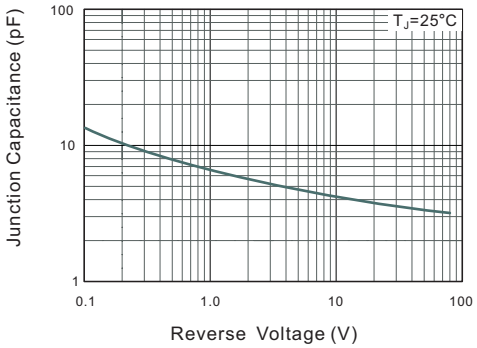


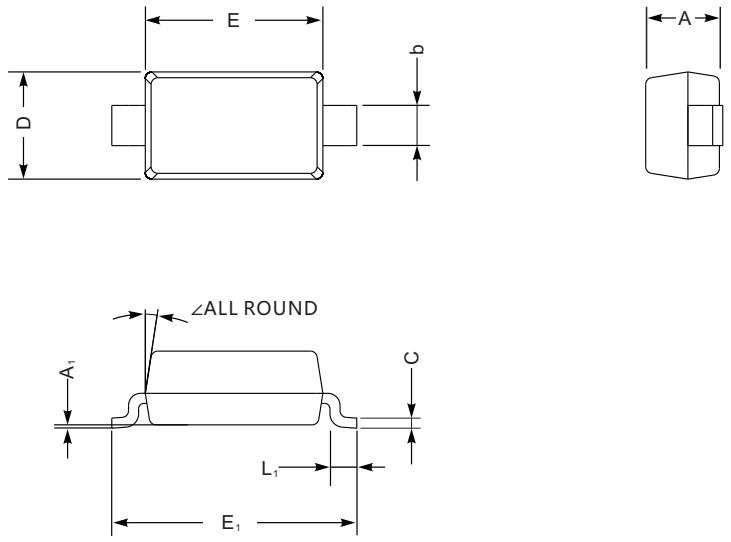

**Fig.4 Typical Junction Capacitance**



## PACKAGE OUTLINE

**Plastic surface mounted package; 2 leads**

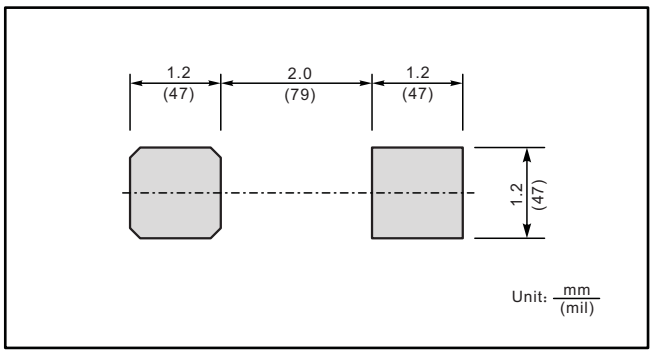
SOD-123




SOD-123 mechanical data

| UNIT | | A | C | D | E | $E_1$ | $L_1$ | b | $A_1$ | ∠ |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.3 | 0.22 | 1.8 | 2.8 | 3.9 | 0.45 | 0.7 | 0.2 | 9° |
| | min | 0.9 | 0.09 | 1.5 | 2.5 | 3.6 | 0.25 | 0.5 | — | |
| mil | max | 51 | 8.7 | 71 | 110 | 154 | 18 | 28 | 8 | |
| | min | 35 | 3.5 | 59 | 98 | 142 | 10 | 20 | — | |

### The recommended mounting pad size




### Marking

| Type number | Marking code |
|---|---|
| BAV3004W | 4P |

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