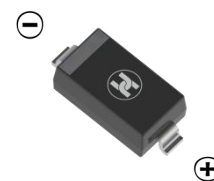
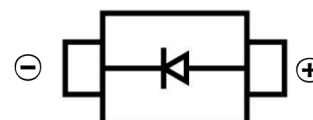


**SCHOTTKY BARRIER DIODE****FEATURES**

- Low Forward Voltage
- Fast Switching Time
- Low Reverse Capacitance
- Small Surface Mount device
- PN Junction Guard Ring for Transient and ESD Protection

**SOD-123****MECHANICAL DATA**

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.005 grams (approximate)

**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

| Parameter                                   | Symbol              | Value     | Unit |
|---------------------------------------------|---------------------|-----------|------|
| Peak Reverse Voltage                        | V <sub>R</sub>      | 70        | V    |
| RMS Reverse Voltage                         | V <sub>R(RMS)</sub> | 49        | V    |
| MAX Forward current                         | I <sub>FM</sub>     | 15        | mA   |
| Power Dissipation                           | P <sub>D</sub>      | 250       | mW   |
| Thermal Resistance From Junction To Ambient | R <sub>θJA</sub>    | 300       | °C/W |
| Junction Temperature                        | T <sub>J</sub>      | 125       | °C   |
| Storage Temperature                         | T <sub>STG</sub>    | -55 ~+150 | °C   |

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

| Parameter                       | Symbol          | Min | Typ | Max  | Unit | Conditions                                                                                         |
|---------------------------------|-----------------|-----|-----|------|------|----------------------------------------------------------------------------------------------------|
| Reverse voltage                 | V <sub>R</sub>  | 70  |     |      | V    | I <sub>R</sub> =10μA                                                                               |
| Forward voltage                 | V <sub>F</sub>  |     |     | 0.41 | V    | I <sub>F</sub> =1mA                                                                                |
|                                 |                 |     |     | 1.0  |      | I <sub>F</sub> =15mA                                                                               |
| Reverse voltage leakage current | I <sub>R</sub>  |     |     | 200  | nA   | V <sub>R</sub> =50V                                                                                |
| Reverse recovery time           | T <sub>RR</sub> |     |     | 1.0  | nS   | I <sub>F</sub> =I <sub>R</sub> =200mA, I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω |

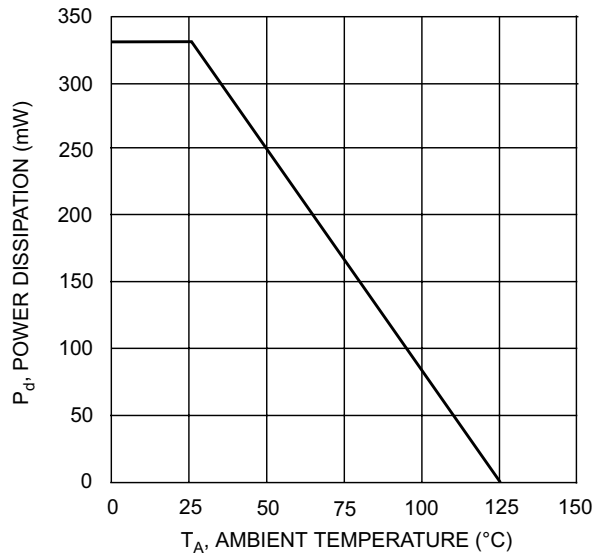
**SCHOTTKY BARRIER DIODE****Typical Characteristics**

Fig. 1 Power Derating Curve

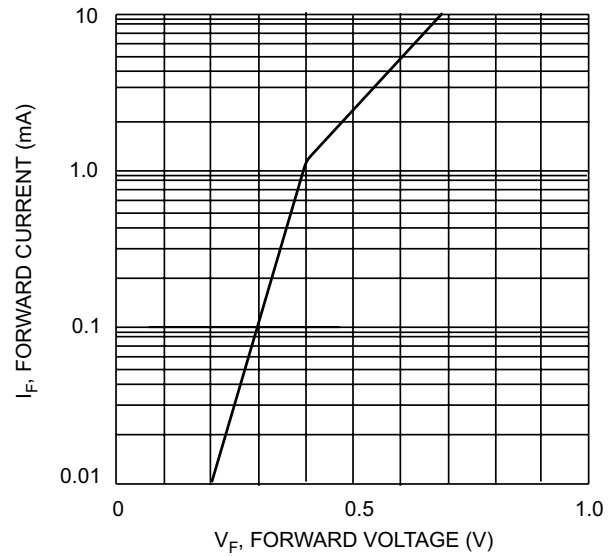


Fig. 2 Typical Forward Characteristics

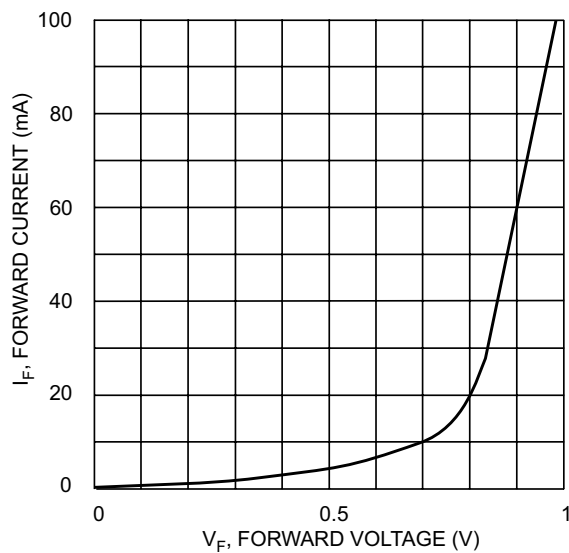


Fig. 3 Typical Forward Characteristics

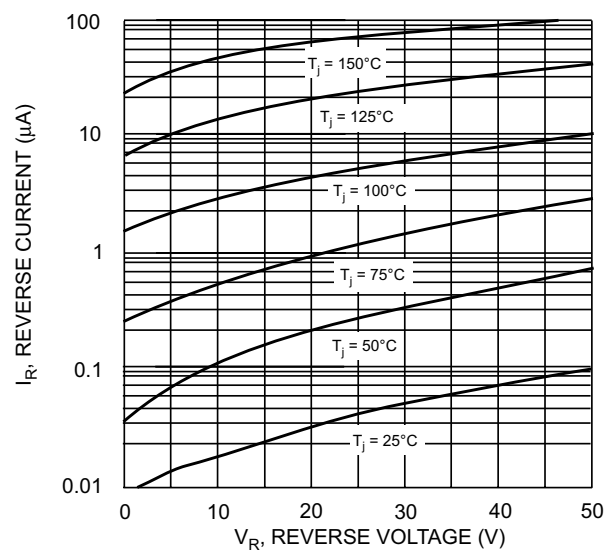


Fig. 4 Typical Reverse Characteristics

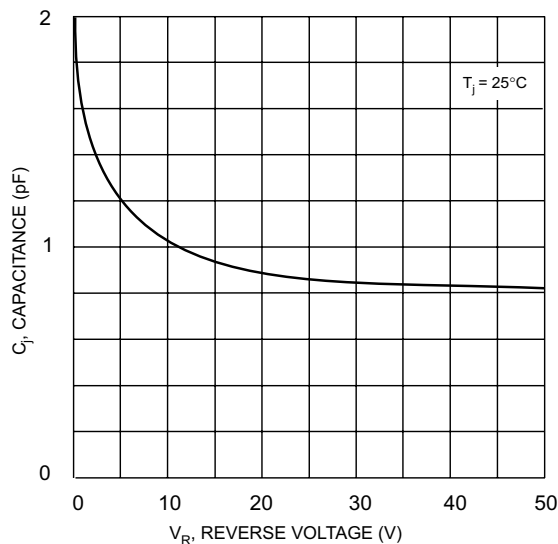
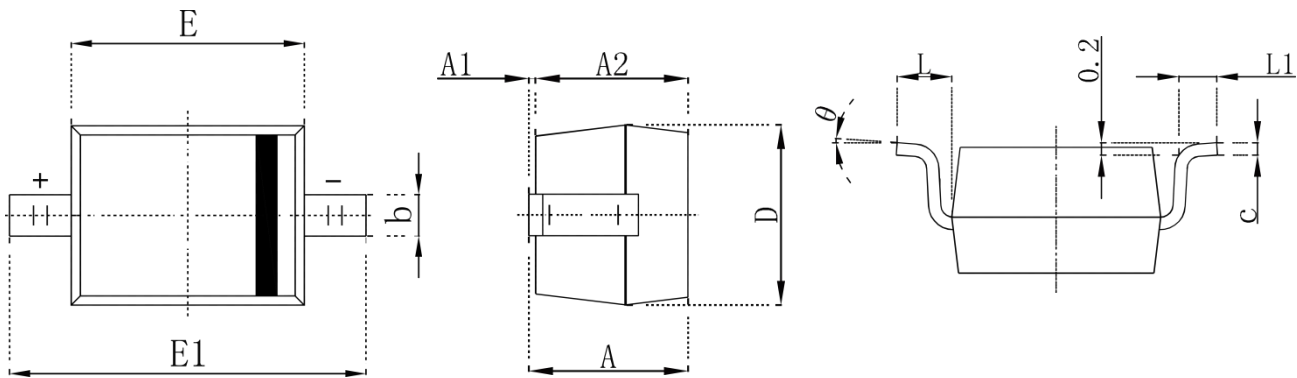


Fig. 5 Typ. Junction Capacitance vs Reverse Voltage

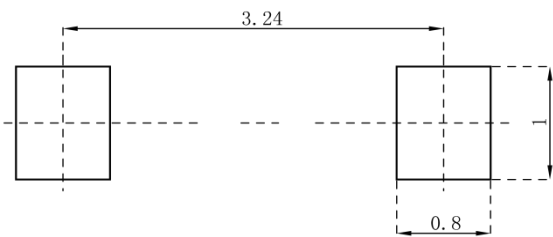
SCHOTTKY BARRIER DIODE

SOD-123 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 1.050                     | 1.250 | 0.041                | 0.049 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 1.050                     | 1.150 | 0.041                | 0.045 |
| b      | 0.450                     | 0.650 | 0.018                | 0.026 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| E      | 2.600                     | 2.800 | 0.102                | 0.110 |
| E1     | 3.550                     | 3.850 | 0.140                | 0.152 |
| L      | 0.500REF                  |       | 0.020 REF            |       |
| L1     | 0.250                     | 0.450 | 0.010                | 0.018 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

SOD-123 Suggested Pad Layout



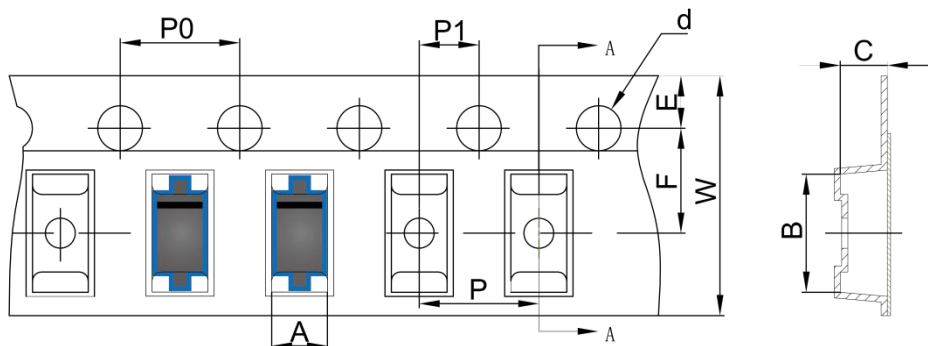
**Note:**

- 1.Controlling dimension: in millimeters
- 2.General tolerance: ±0.05mm
- 3.The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE

**SOD-123 Tape and Reel**

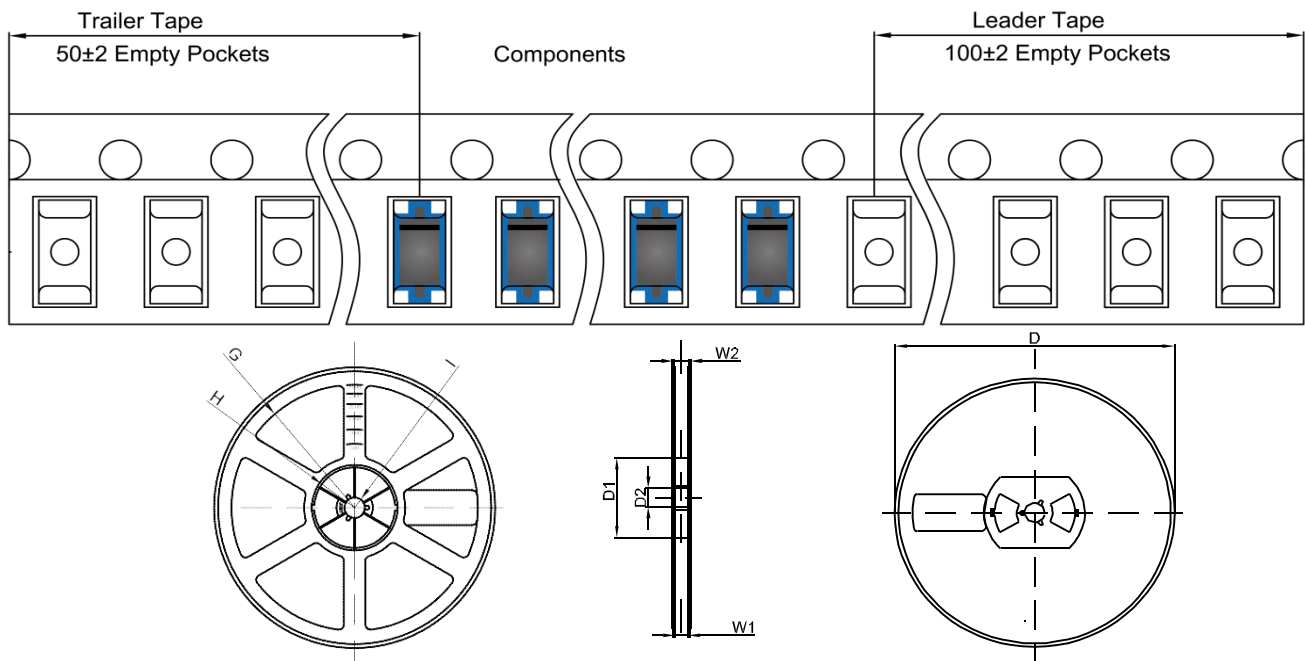
**SOD-123 Embossed Carrier Tape**



**SOD-123 Tape Leader and Trailer**

|           | DIMENSIONS ARE IN MILLIMETER |      |      |       |      |      |      |      |      |      |
|-----------|------------------------------|------|------|-------|------|------|------|------|------|------|
| TYPE      | A                            | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-123   | 1.85                         | 3.95 | 1.57 | Ø1.55 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |
| TOLERANCE | ±0.1                         | ±0.1 | ±0.1 | ±0.1  | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

**SOD-123 Reel**



|             | DIMENSIONS ARE IN MILLIMETER |       |       |     |        |       |      |       |
|-------------|------------------------------|-------|-------|-----|--------|-------|------|-------|
| REEL OPTION | D                            | D1    | D2    | G   | H      | I     | W1   | W2    |
| 7" DIA      | Ø178                         | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 9.50 | 12.30 |
| TOLERANCE   | ±2                           | ±1    | ±1    | ±1  | ±1     | ±1    | ±1   | ±1    |