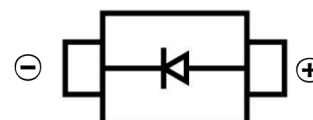


**SCHOTTKY BARRIER DIODE****FEATURES**

- Low Forward Voltage
- High conductance
- Small Surface Mount device
- PN Junction Guard Ring for Transient and ESD Protection

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

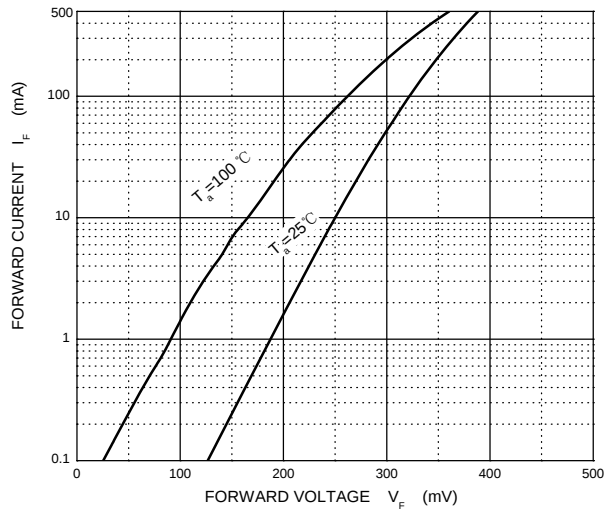
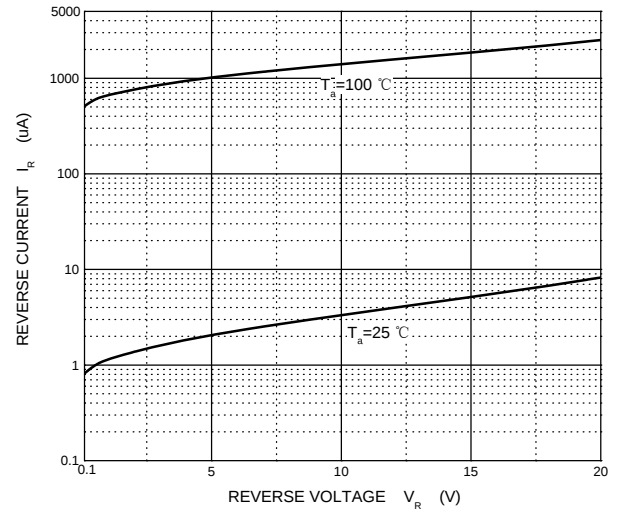
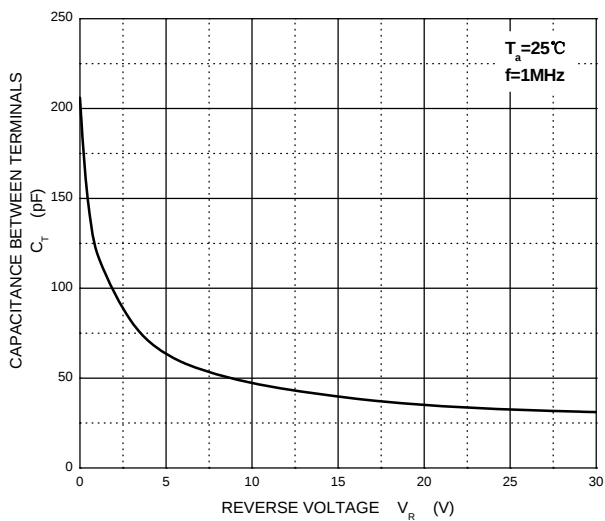
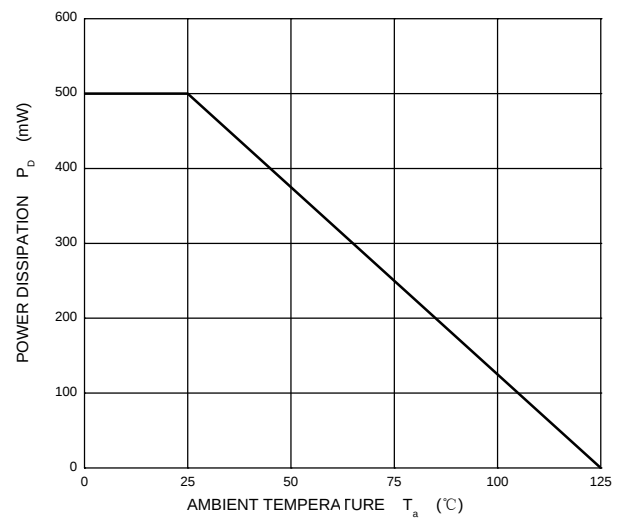
- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.005 grams (approximate)

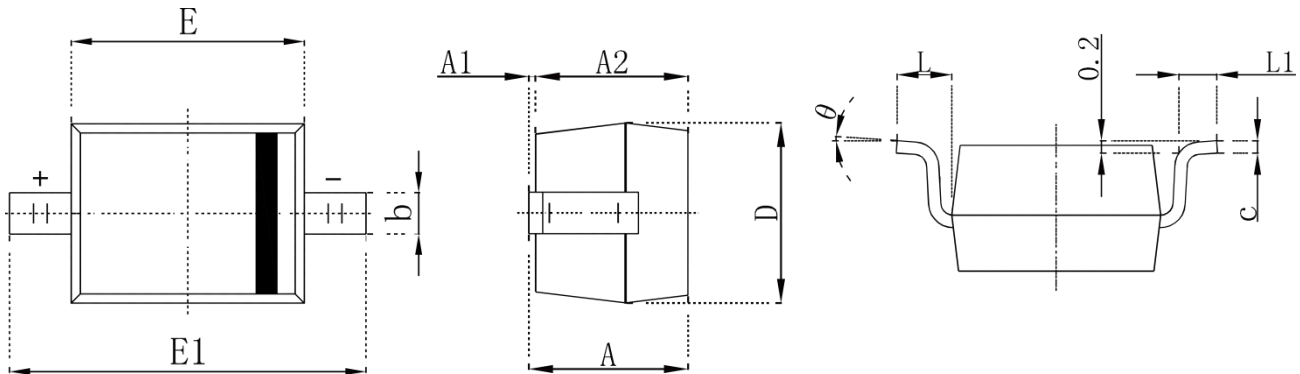
**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

| Parameter                                              | Symbol              | Value     | Unit |
|--------------------------------------------------------|---------------------|-----------|------|
| Peak Reverse Voltage                                   | V <sub>R</sub>      | 20        | V    |
| RMS Reverse Voltage                                    | V <sub>R(RMS)</sub> | 14        | V    |
| Average rectified output current                       | I <sub>O</sub>      | 500       | mA   |
| Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms | I <sub>FSM</sub>    | 5.5       | A    |
| Power Dissipation                                      | P <sub>D</sub>      | 500       | mW   |
| Thermal Resistance From Junction To Ambient            | R <sub>θJA</sub>    | 200       | °C/W |
| Junction Temperature                                   | T <sub>J</sub>      | 125       | °C   |
| Storage Temperature                                    | T <sub>STG</sub>    | -55 ~+150 | °C   |

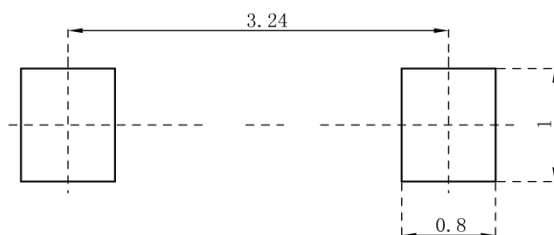
**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

| Parameter                       | Symbol         | Min | Typ | Max  | Unit | Conditions                 |
|---------------------------------|----------------|-----|-----|------|------|----------------------------|
| Forward voltage                 | V <sub>F</sub> |     |     | 0.33 | V    | I <sub>F</sub> =100mA      |
|                                 |                |     |     | 0.39 |      | I <sub>F</sub> =500mA      |
| Reverse voltage                 | V <sub>R</sub> | 20  |     |      | V    | I <sub>R</sub> =250uA      |
| Reverse voltage leakage current | I <sub>R</sub> |     |     | 75   | uA   | V <sub>R</sub> =10V        |
|                                 |                |     |     | 250  |      | V <sub>R</sub> =20V        |
| Diode capacitance               | C <sub>D</sub> |     | 170 |      | pF   | V <sub>R</sub> =1V, f=1MHz |

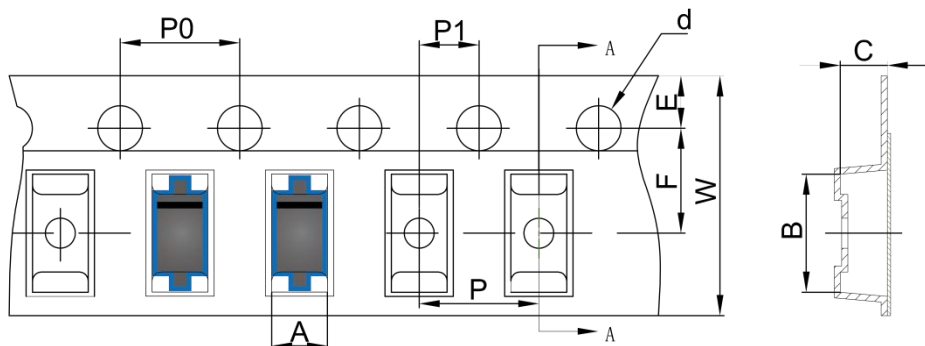
**SCHOTTKY BARRIER DIODE****Typical Characteristics****Forward Characteristics****Reverse Characteristics****Capacitance Characteristics****Power Derating Curve**

**SCHOTTKY BARRIER DIODE****SOD-123 Package Outline Dimensions**

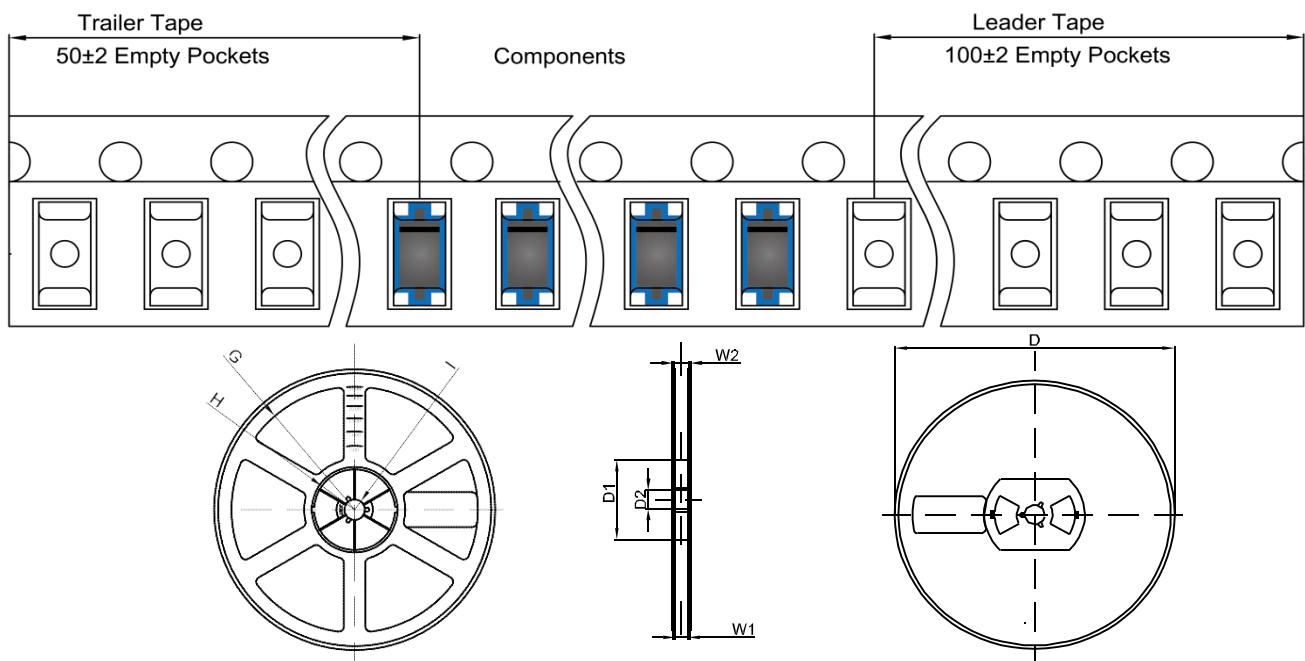
| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min.                      | Max.  | Min.                 | Max.  |
| A        | 1.050                     | 1.250 | 0.041                | 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 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |

**SOD-123 Suggested Pad Layout****Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
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    |