

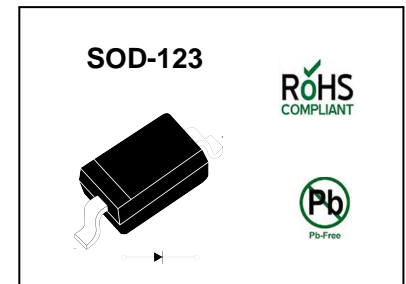
### Silicon Epitaxial Planar Switching Diode

#### Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications

#### PINNING

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



#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter   | Symbol          | Value         | Unit               |
|---|-----------------|---------------|--------------------|
| Repetitive Reverse Voltage  | $V_{RRM}$       | 85            | V                  |
| Average Rectified Forward Current   | $I_{F(AV)}$     | 200           | mA                 |
| Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1 s<br>Pulse Width = 1 $\mu\text{s}$ | $I_{FSM}$       | 0.5<br>4      | A                  |
| Power Dissipation   | $P_{tot}$       | 250           | mW                 |
| Thermal Resistance Junction to Ambient  | $R_{\theta JA}$ | 833           | $^\circ\text{C/W}$ |
| Junction Temperature  | $T_j$           | 150           | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_{stg}$       | - 55 to + 150 | $^\circ\text{C}$   |

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Parameter  | Symbol    | Min.      | Max.                    | Unit                |
|--|-----------|-----------|-------------------------|---------------------|
| Breakdown Voltage<br>at $I_R = 5 \mu\text{A}$<br>at $I_R = 100 \mu\text{A}$                                    | $V_R$     | 75<br>100 | -<br>-                  | V<br>V              |
| Forward Voltage<br>at $I_F = 1\text{mA}$<br>$I_F = 10\text{mA}$<br>$I_F = 50\text{mA}$<br>$I_F = 150\text{mA}$ | $V_F$     | -         | 0.9<br>1<br>1.1<br>1.25 | V                   |
| Reverse Current<br>at $V_R = 20\text{V}$<br>at $V_R = 75\text{V}$  | $I_R$     | -<br>-    | 25<br>1                 | nA<br>$\mu\text{A}$ |
| Diode Capacitance<br>at $V_R = 0\text{V}$ , $f = 1\text{MHz}$  | $C_{tot}$ | -         | 4                       | pF                  |
| Reverse Recovery Time<br>at $I_{rr} = 0.1 \times I_R$ , $I_F = I_R = 10\text{mA}$ , $R_L = 100\Omega$          | $t_{rr}$  | -         | 3                       | ns                  |

Typical Characteristics

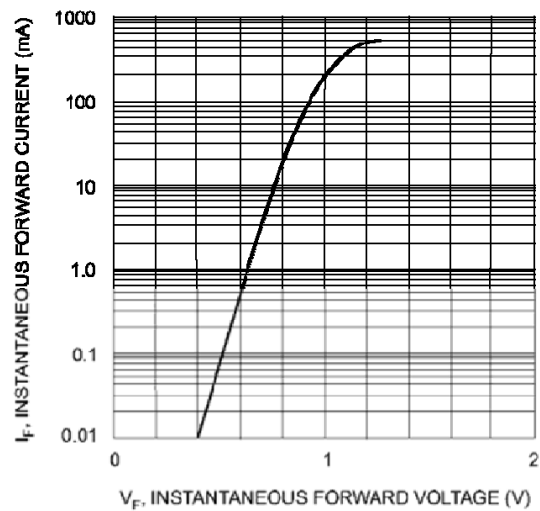


Fig. 1 Forward Characteristics

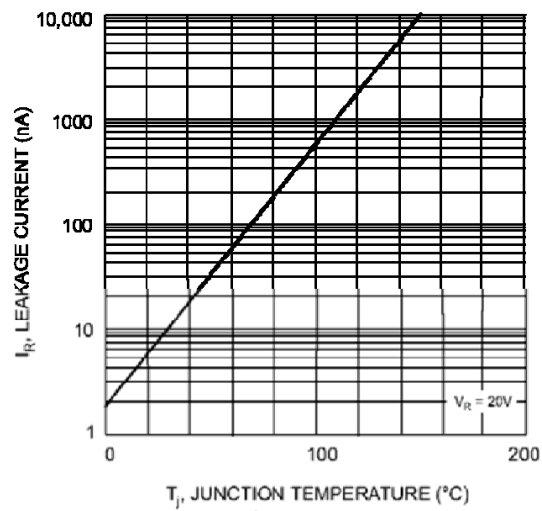
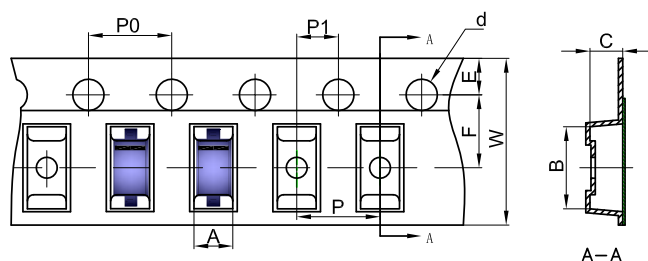


Fig. 2 Leakage Current vs Junction Temperature

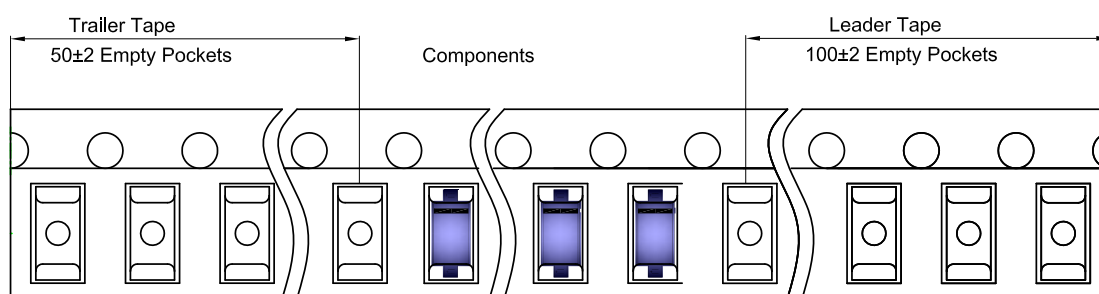
### SOD-123 Tape and Reel

#### SOD-123 Embossed Carrier Tape

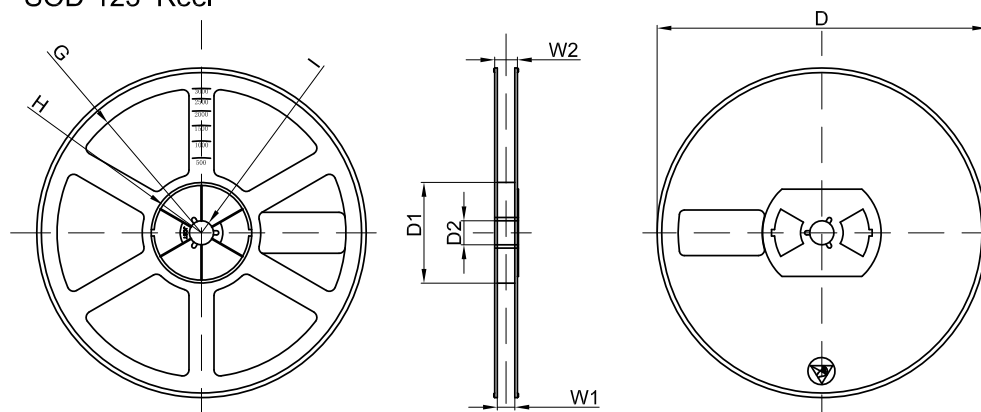


| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-123                      | 1.85 | 3.95 | 1.57 | Ø1.55 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

#### SOD-123 Tape Leader and Trailer

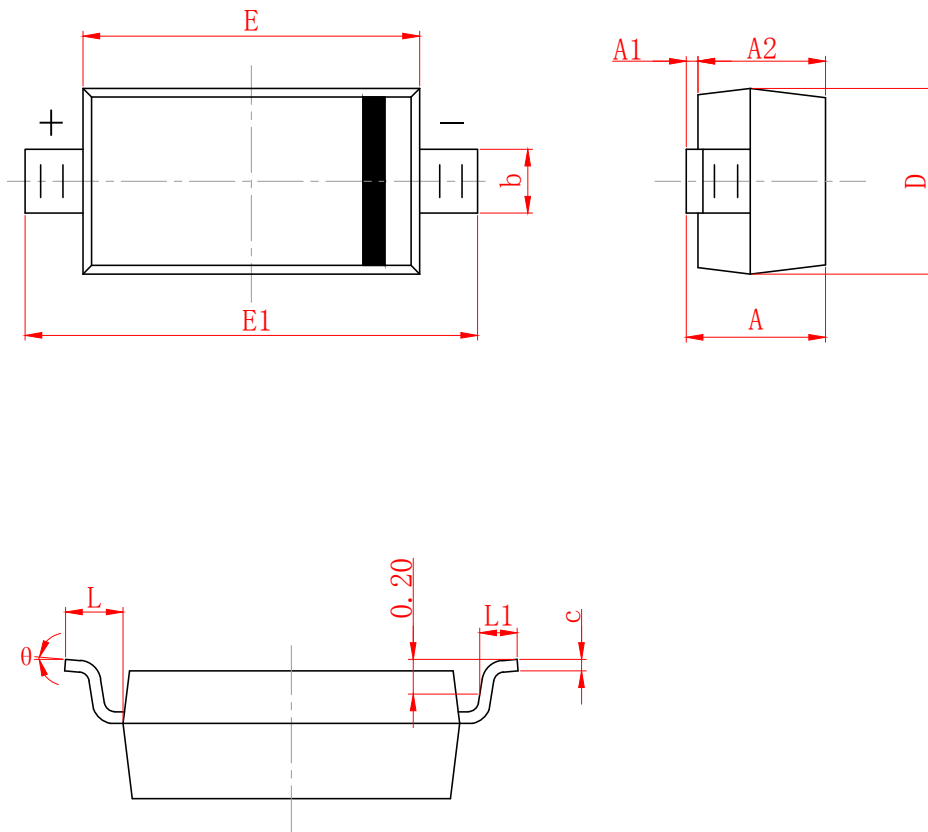


#### SOD-123 Reel



| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 7" Dia                       | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL     | Reel Size | Box        | Box Size(mm) | Carton      | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch    | 45,000 pcs | 203×203×195  | 180,000 pcs | 438×438×220     |          |



| SYMBOL | MILLIMETER  |       |
|--------|-------------|-------|
|        | MIN         | MAX   |
| A      | 1.050       | 1.250 |
| A1     | 0.000       | 0.100 |
| A2     | 1.050       | 1.150 |
| b      | 0.450       | 0.650 |
| c      | 0.008       | 0.150 |
| D      | 1.500       | 1.700 |
| E      | 2.600       | 2.800 |
| E1     | 3.550       | 3.850 |
| L      | 0.500 (REF) |       |
| L1     | 0.250       | 0.450 |
| θ      | 0°          | 8°    |

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