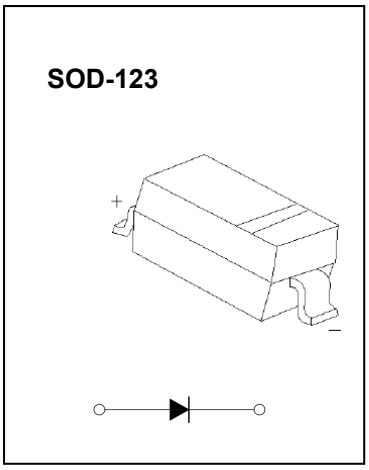
# SOD-123 Plastic-Encapsulate Diodes




## FEATURES

Fast Switching Speed
Surface Mount Package Ideally Suited for Automatic Insertion
For General Purpose Switching Applications
High Conductance

**MARKING:** T7

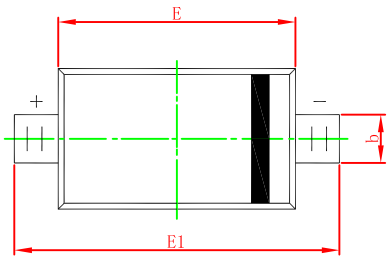
### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25℃

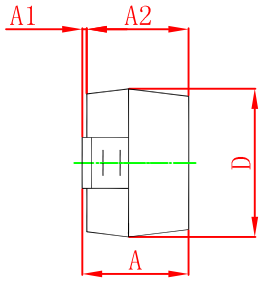
| Parameter | Symbol | Limit | Unit |
|---|---|---|---|
| **Non-Repetitive Peak Reverse Voltage** | $V_{RM}$ | 100 | V |
| **Peak Repetitive Peak Reverse Voltage**<br>**Working Peak Reverse Voltage**<br>**DC Blocking Voltage** | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 75 | V |
| **RMS Reverse Voltage** | $V_{R(RMS)}$ | 53 | V |
| **Forward Continuous Current** | $I_{FM}$ | 500 | mA |
| **Average Rectified Output Current** | $I_O$ | 250 | mA |
| **Peak Forward Surge Current @t=1.0μs**<br>**@t =1.0s** | $I_{FSM}$ | 4.0<br>1.5 | A |
| **Power Dissipation** | Pd | 500 | mW |
| **Thermal Resistance Junction to Ambient** | $R_{\theta JA}$ | 250 | ℃/W |
| **Storage Temperature and Junction Temperature** | $T_{STG}/T_j$ | -55~+150 | ℃ |

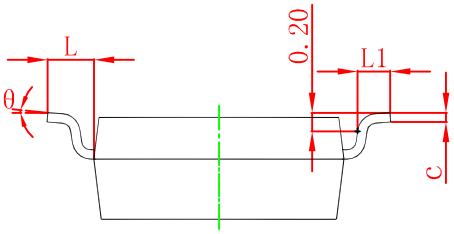
### Electrical Ratings @Ta=25℃

| Parameter | Symbol | Min | Typ | Max | Unit | Conditions |
|---|---|---|---|---|---|---|
| **Reverse Breakdown Voltage** | $V_{(BR)R}$ | 75 | | | V | $I_R$=10μA |
| **Forward Voltage** | $V_{F1}$ | 0.62 | | 0.72 | V | $I_F$=5mA |
| | $V_{F2}$ | | | 0.855 | V | $I_F$=10mA |
| | $V_{F3}$ | | | 1.0 | V | $I_F$=100mA |
| | $V_{F4}$ | | | 1.25 | V | $I_F$=150mA |
| **Reverse Current** | $I_{R1}$ | | | 2.5 | μA | $V_R$=75V |
| | $I_{R2}$ | | | 25 | nA | $V_R$=20V |
| **Capacitance Between Terminals** | $C_T$ | | | 4 | pF | $V_R$=0V,f=1MHz |
| **Reverse Recovery Time** | $t_{rr}$ | | | 4 | ns | $I_F$=$I_R$=10mA<br>Irr=0.1X$I_R$,$R_L$=100Ω |

## SOD-123 Package Outline Dimensions

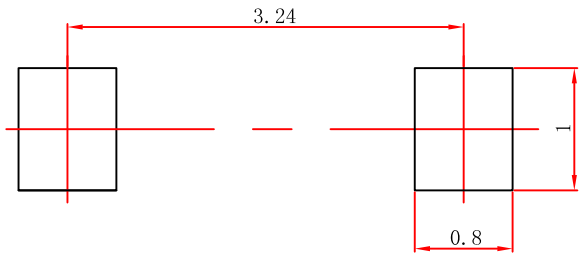



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| 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 | 0.500 REF | | 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.