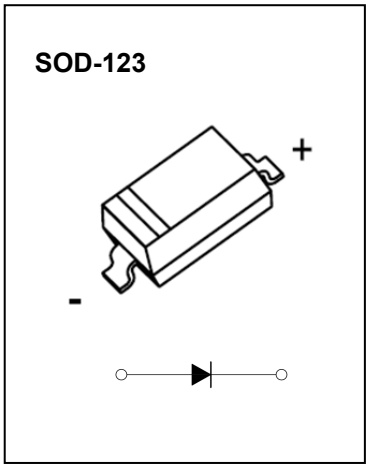
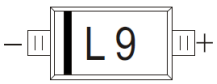
# SOD-123 Plastic-Encapsulate Diodes

## FEATURES

- Low Forward Voltage Drop
- Fast Switching
- Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version




**MARKING: L9**



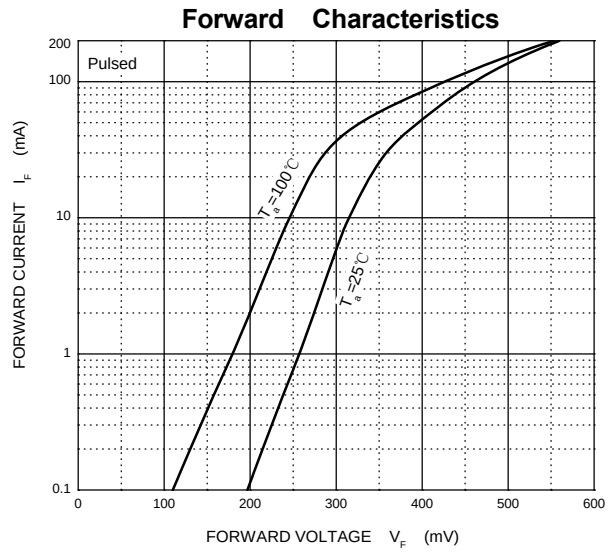

## Maximum Ratings @Ta=25℃

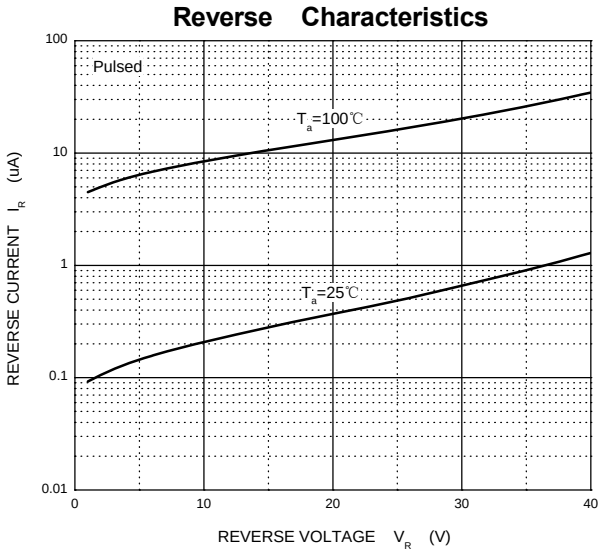
| Parameter | Symbol | Limit | Unit |
|---|---|---|---|
| DC blocking voltage<br>RMS reverse voltage | $V_R$<br>$V_{R(RMS)}$ | 30<br>21 | V |
| Average rectified output current | Io | 100 | mA |
| Forward continuous current | $I_F$ | 200 | mA |
| Repetitive peak forward current | $I_{FRM}$ | 300 | mA |
| Non-repetitive Peak Forward Surge Current @t=8.3ms | $I_{FSM}$ | 600 | mA |
| Power dissipation | Pd | 500 | mW |
| Thermal resistance junction to ambient | $R_{\theta JA}$ | 200 | ℃/W |
| Junction temperature | $T_J$ | 125 | ℃ |
| Storage temperature range | $T_{STG}$ | -55~+150 | ℃ |

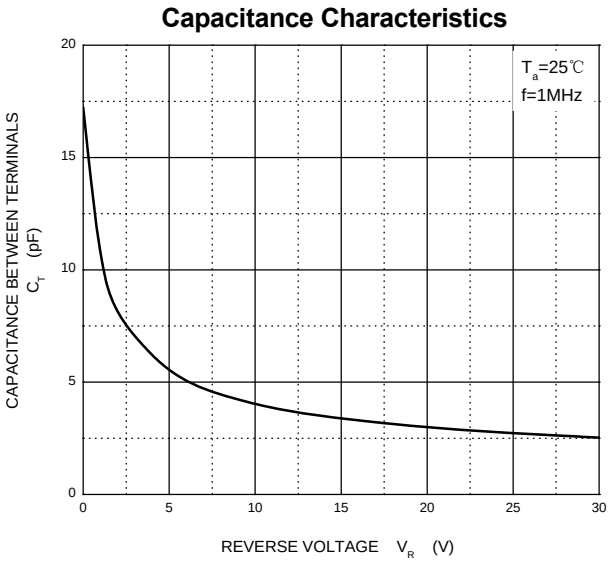
## Electrical Characteristics @Ta=25℃

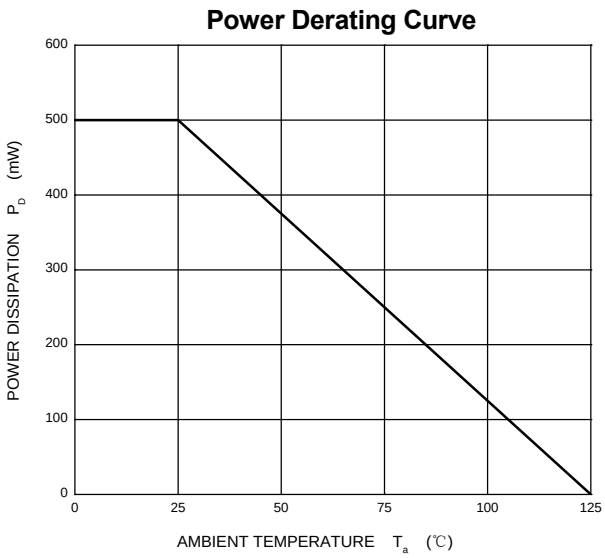
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R$=100μA | 30 | | | V |
| Forward voltage | $V_{F1}$ | $I_F$=0.1mA | | | 240 | mV |
| | $V_{F2}$ | $I_F$=1.0mA | | | 320 | mV |
| | $V_{F3}$ | $I_F$=10mA | | | 400 | mV |
| | $V_{F4}$ | $I_F$=30mA | | | 500 | mV |
| | $V_{F5}$ | $I_F$=100mA | | | 1000 | mV |
| Reverse current | $I_R$ | $V_R$=25V | | | 2.0 | uA |
| Reverse recovery time | $t_{rr}$ | $I_F$=10mA, $I_R$=10mA to 1mA ,<br>$R_L$=100Ω | | | 5.0 | ns |
| Capacitance between terminals | $C_T$ | $V_R$=1V,f=1MHz | | | 10 | pF |

## Typical Characteristics

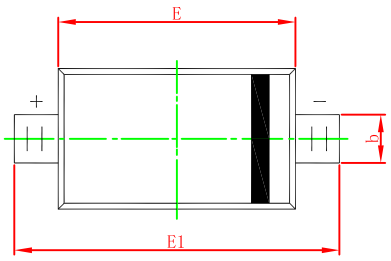


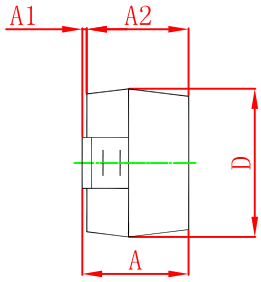



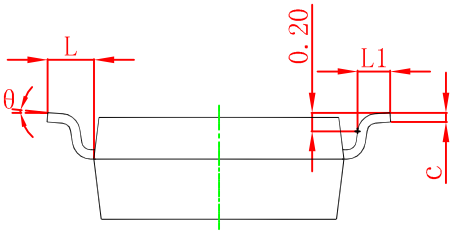



## SOD-123 Package Outline Dimensions

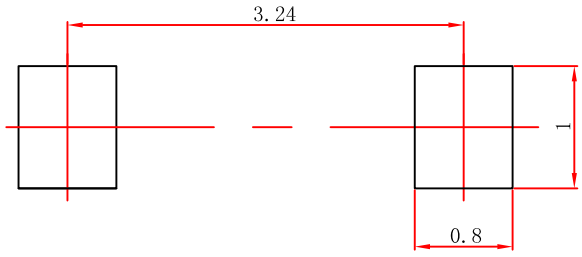



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006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