

1N4148W T4

FEATURES

- For surface mounted applications
- Fast reverse recovery time
- Ideal for automated placement

PINNING

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

MECHANICAL DATA

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz



Simplified outline SOD-123 and symbol

Absolute Maximum Ratings at 25 °C

| Parameter | Symbols | 1N4148W T4 | Units |
|--|----------------|---------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 100 | V |
| Maximum RMS voltage | V_{RMS} | 75 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 150 | mA |
| Non-repetitive Peak Forward Surge Current at 1s at 1ms at 1us | I_{FSM} | 0.5 1 4 | A |
| Total Power Dissipation | P_{tot} | 400 | mW |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | °C |

Characteristics at $T_a = 25^\circ\text{C}$

| Parameter | Symbols | 1N4148W T4 | Units |
|--|-------------|--------------------------------|---------------|
| Reverse Breakdown Voltage at $I_R=1\mu\text{A}$ | $V_{(BR)R}$ | 75 | V |
| Maximum Forward Voltage at 1 mA at 10 mA at 50 mA at 150 mA | V_F | 0.715 0.855 1.00 1.25 | V |
| Peak Reverse Current at $V_R=20\text{V}$ $T_j=25^\circ\text{C}$ at $V_R=75\text{V}$ $T_j=25^\circ\text{C}$ at $V_R=25\text{V}$ $T_j=150^\circ\text{C}$ at $V_R=75\text{V}$ $T_j=150^\circ\text{C}$ | I_R | 0.025 1 30 50 | μA |
| Typical Junction Capacitance $f=1\text{MHz}, V_R=0\text{V}$ | C_j | 2 | pF |
| Maximum Reverse Recovery Time ⁽¹⁾ | t_{rr} | 4 | ns |

(1) Measured with $I_F=I_R=10\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$

Fig.1 Power Derating Curve

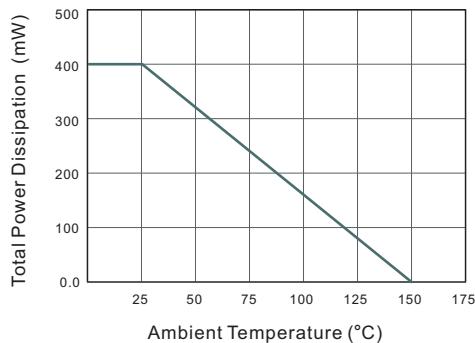


Fig.2 Typical Reverse Characteristics

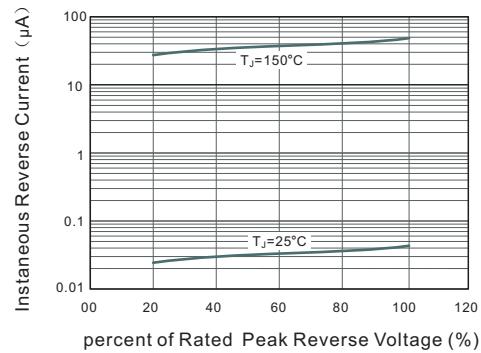


Fig.3 Typical Instantaneous Forward Characteristics

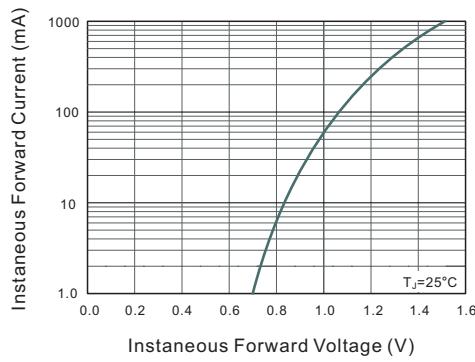
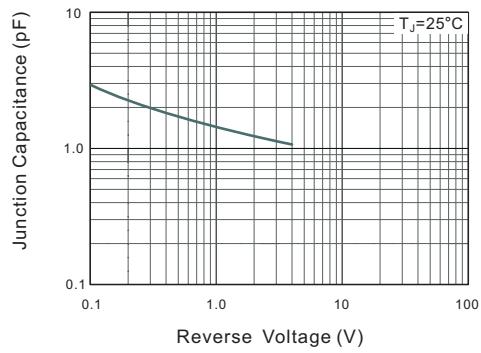


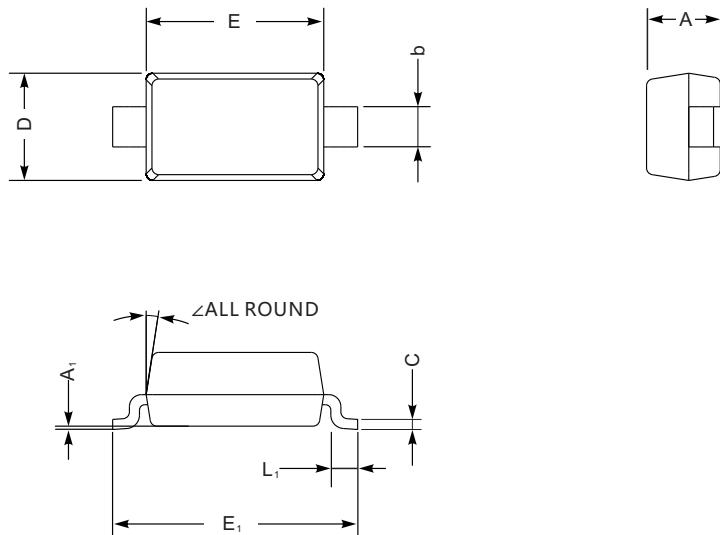
Fig.4 Typical Junction Capacitance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

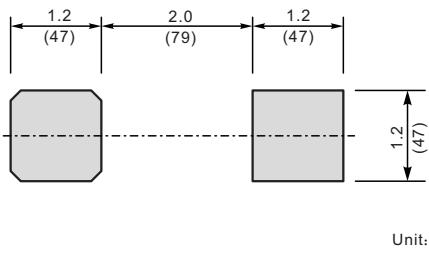
SOD-123



SOD-123W mechanical data

| UNIT | | A | C | D | E | E ₁ | L ₁ | b | A ₁ | ∠ |
|------|-----|-----|------|-----|-----|----------------|----------------|-----|----------------|----|
| mm | max | 1.3 | 0.22 | 1.8 | 2.8 | 3.9 | 0.45 | 0.7 | 0.2 | 9° |
| | min | 0.9 | 0.09 | 1.5 | 2.5 | 3.6 | 0.25 | 0.5 | — | |
| mil | max | 51 | 8.7 | 71 | 110 | 154 | 18 | 28 | 8 | 9° |
| | min | 35 | 3.5 | 59 | 98 | 142 | 10 | 20 | — | |

The recommended mounting pad size



Unit: $\frac{\text{mm}}{(\text{mil})}$

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