

Fast Switching Diodes

Features

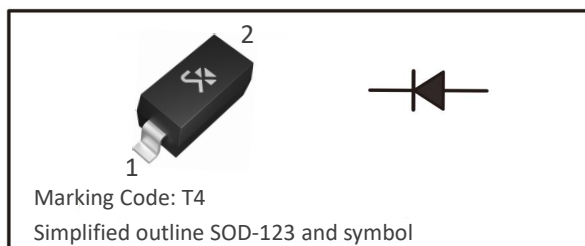
- For surface mounted applications
- Fast reverse recovery time
- Ideal for automated placement

Mechanical Data

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

PINNING

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



Absolute Maximum Ratings@T_a = 25°C unless otherwise specified

| Parameter | Symbol | 1N4148W | Unit |
|---|-----------------------------------|----------|------|
| 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 | 0.5 | A |
| | at 1ms | 1 | A |
| | at 1us | 4 | A |
| Total Power Dissipation | P _{tot} | 400 | mW |
| Typical Thermal Resistance ⁽¹⁾ | R _{θJA} | 280 | °C/W |
| | R _{θJC} | 100 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55~+150 | °C |

(1)P.C.B. mounted with 5*5mm copper pad areas

Electrical Characteristics@T_a = 25 °C, unless specified otherwise

| Parameter | Symbol | Test Condition | 1N4148W | Unit |
|------------------------------|--------------------|--|---------|------|
| Reverse Breakdown Voltage | V _{(BR)R} | I _R =1μA | 100 | V |
| Maximum Forward Voltage | V _F | I _F =1mA | 0.715 | V |
| | | I _F =10mA | 0.855 | V |
| | | I _F =50mA | 1.00 | V |
| | | I _F =150mA | 1.25 | V |
| Peak Reverse Current | I _R | V _R =20V, T _J =25°C | 0.025 | μA |
| | | V _R =75V, T _J =25°C | 1 | μA |
| Typical Junction Capacitance | C _J | V _R =0V, f=1MHz | 2 | pF |
| Maximum Revers Recovery Time | t _{rr} | I _F =I _R =10mA, I _{rr} =0.1*I _R , R _L =100Ω | 4 | ns |

Typical Characteristics

Fig.1 Power Derating Curve

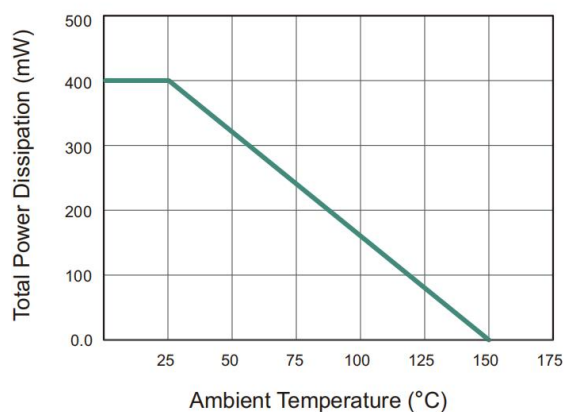


Fig.2 Typical Reverse Characteristics

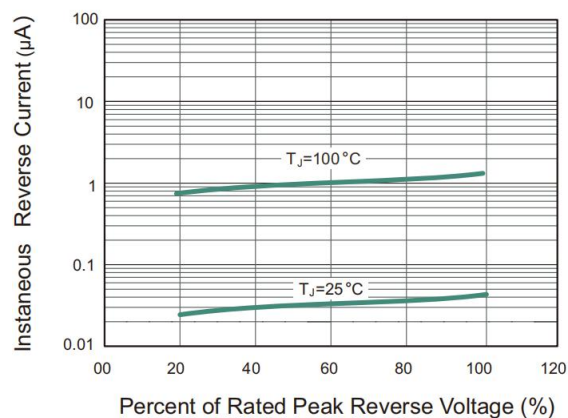


Fig.3 Typical Instantaneous Forward Characteristics

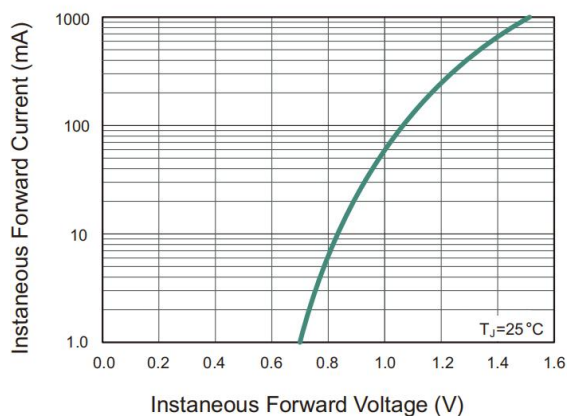
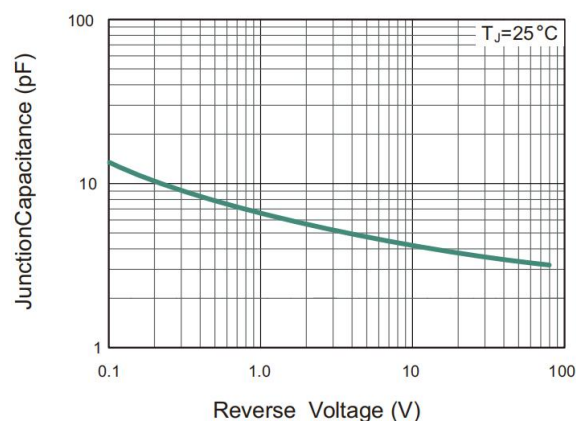


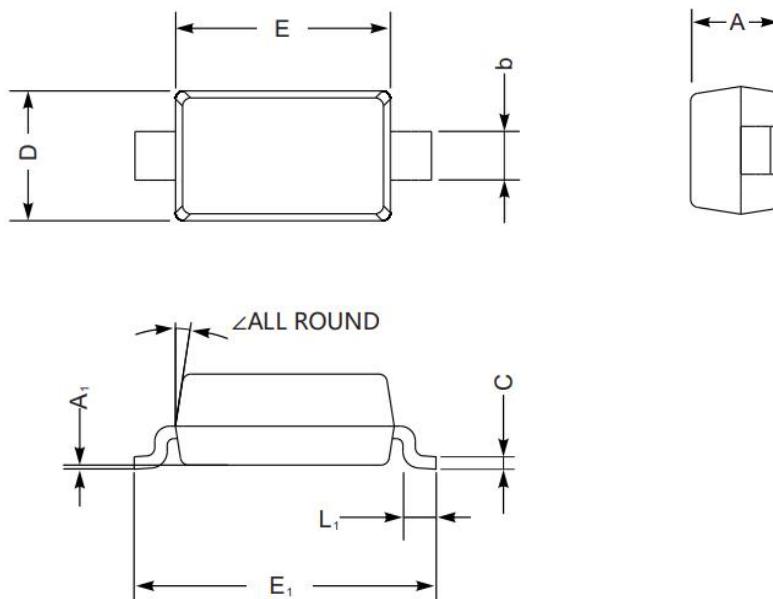
Fig.4 Typical Junction Capacitance



Package Information

SOD-123

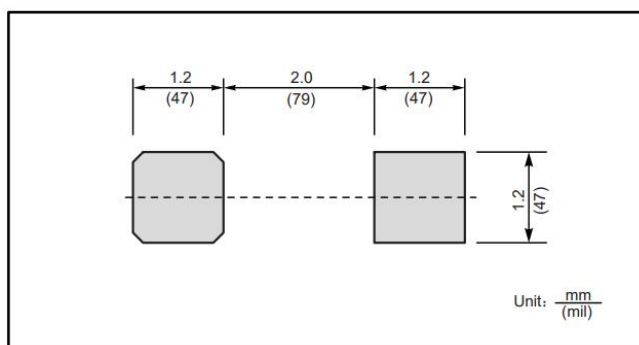
Dimensions in mm



SOD-123 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 | |
| | min | 35 | 3.5 | 59 | 98 | 142 | 10 | 20 | — | |

The recommended mounting pad size



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