



FEATURES

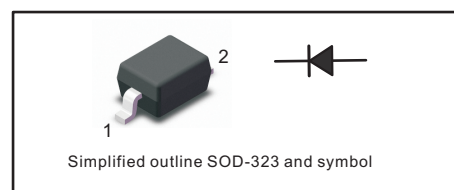
- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

PINNING

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



Absolute Maximum Ratings at 25 °C

| Parameter | Symbols | 1N4148WS | Units |
|---|----------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 100 | V |
| Maximum RMS voltage | V_{RMS} | 75 | V |
| Continuous Forward Current | I_F | 300 | mA |
| Non-reptitive Peak Forward Surge Current at 1ms | I_{FSM} | 4 | A |
| Total Power Dissipation | P_{tot} | 400 | mW |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | °C |

Characteristics at $T_a = 25\text{ °C}$

| Parameter | Symbols | 1N4148WS | Units |
|--|---------------------|---------------------------------------|---------|
| Reverse Breakdown Voltage at $I_R = 1\mu A$ | $V_{(BR)R}$ | 75 | V |
| Maximum Forward Voltage at 1 mA at 10 mA at 50 mA at 150 mA at 300 mA | V_F | 0.715 0.855 1.00 1.25 1.5 | V |
| Peak Reverse Current at $V_R = 20V$ $T_j = 25\text{ °C}$ at $V_R = 75V$ $T_j = 25\text{ °C}$ at $V_R = 25V$ $T_j = 150\text{ °C}$ at $V_R = 75V$ $T_j = 150\text{ °C}$ | I_R | 0.025 1 30 50 | μA |
| Typical Junction Capacitance $f = 1MHz, V_R = 4V$ | C_j | 5 | pF |
| Maximum Reverse Recovery Time ⁽¹⁾ | t_{rr} Typical | 8 | ns |

(1) Measured with $I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A$



Fig.1 Power Derating Curve

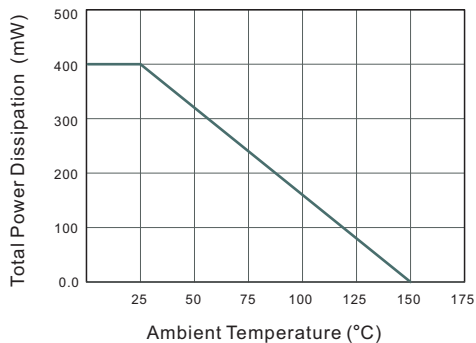


Fig.2 Typical Reverse Characteristics

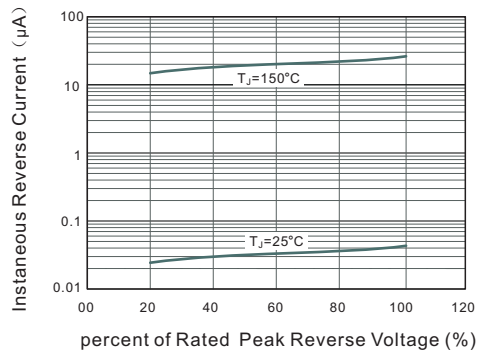


Fig.3 Typical Instantaneous Forward Characteristics

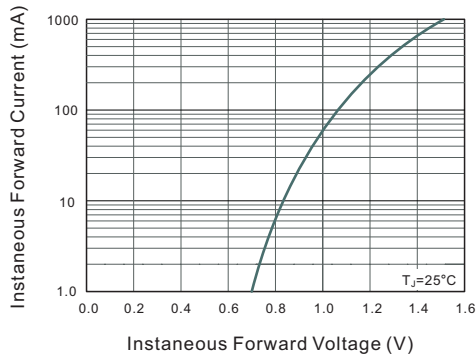
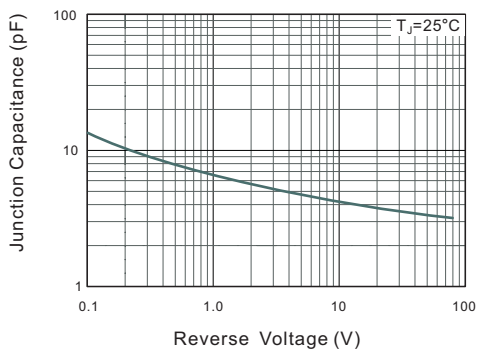


Fig.4 Typical Junction Capacitance

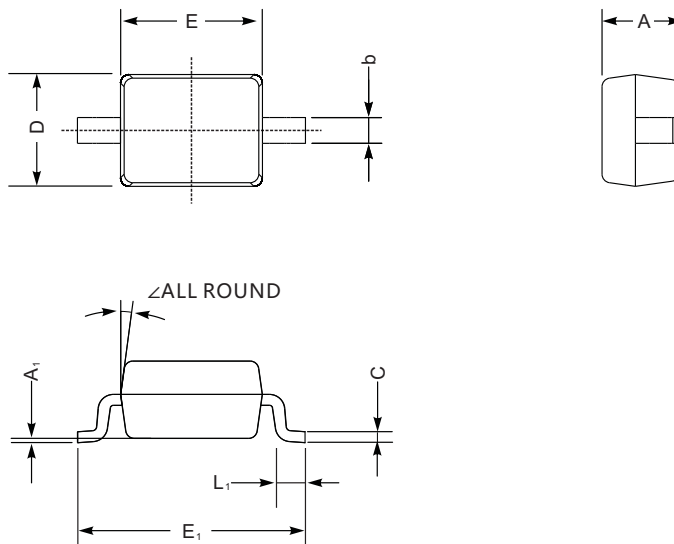




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

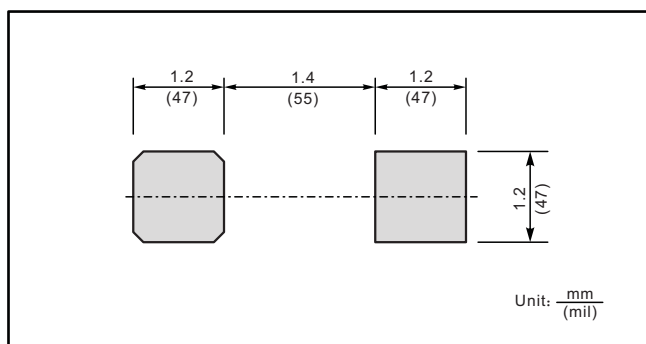
SOD-323



SOD-323 mechanical data

| UNIT | | A | C | D | E | E ₁ | b | L ₁ | A ₁ | ∠ |
|------|-----|-----|------|-----|-----|----------------|------|----------------|----------------|----|
| mm | max | 1.1 | 0.15 | 1.4 | 1.8 | 2.75 | 0.4 | 0.45 | 0.2 | 9° |
| | min | 0.8 | 0.08 | 1.2 | 1.4 | 2.55 | 0.25 | 0.2 | — | |
| mil | max | 43 | 5.9 | 55 | 70 | 108 | 16 | 16 | 8 | |
| | min | 32 | 3.1 | 47 | 63 | 100 | 9.8 | 7.9 | — | |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| 1N4148WS | T4 |