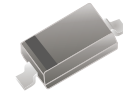


1N4148WS-HF

RoHS Device

Halogen Free

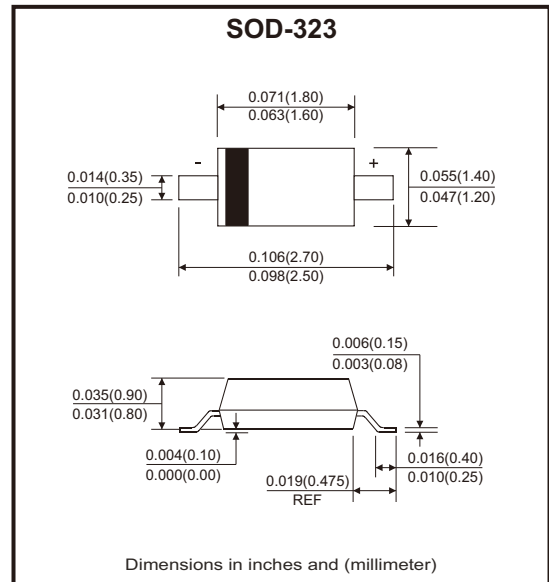


Features

- Fast switching device ($T_{rr} < 4.0\text{nS}$).
- Power dissipation of 200mW.
- High stability and high reliability.
- Low reverse leakage.

Mechanical data

- Case: SOD-323, molded plastic.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.



Circuit Diagram



Maximum Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------------|--------------------|
| Reverse voltage | V_R | 75 | V |
| Peak reverse voltage | V_{RM} | 100 | V |
| Power dissipation | P_D | 200 | mW |
| Average rectified current | I_o | 150 | mA |
| Non-repetitive peak forward current | I_{FM} | 300 | mA |
| Peak forward surge current @ $t_p=1\mu\text{s}$, $T_A=25^\circ\text{C}$ | I_{FSM} | 2 | A |
| Thermal resistance from junction to ambient | $R_{\theta JA}$ | 625 | $^\circ\text{C/W}$ |
| Working inverse voltage | W_{IV} | 75 | V |
| Operating junction temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Note: Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------|--|----------|-----------|-----|-------|---------|
| Breakdown voltage | $I_R = 100\mu A$ $I_R = 5\mu A$ | B_V | 100 75 | | | V |
| Reverse leakage current | $V_R = 20V$ | I_R | | | 25 | nA |
| | $V_R = 75V$ | | | | 1 | μA |
| Forward voltage | $I_F = 1.0mA$ | V_F | | | 0.715 | V |
| | $I_F = 10mA$ | | | | 0.855 | |
| | $I_F = 50mA$ | | | | 1.00 | |
| | $I_F = 150mA$ | | | | 1.25 | |
| Capacitance | $V_R = 0V, f = 1 MHz$ | C_T | | | 2 | pF |
| Reverse recovery time | $I_F = I_R = 10mA, R_L = 100\Omega$ $I_{rr} = 0.1 \times I_R$ | T_{RR} | | | 4 | nS |

Rating and Characteristic Curves (1N4148WS-HF)

Fig.1 - Forward Characteristics

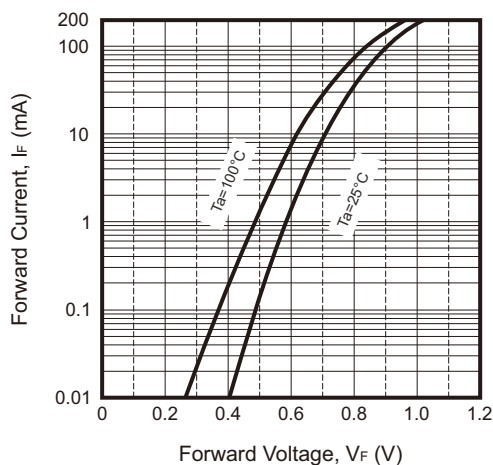


Fig.2 - Reverse Characteristics

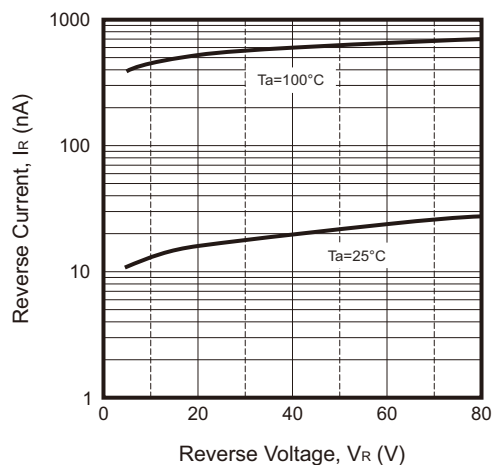


Fig.3 - Capacitance Characteristics

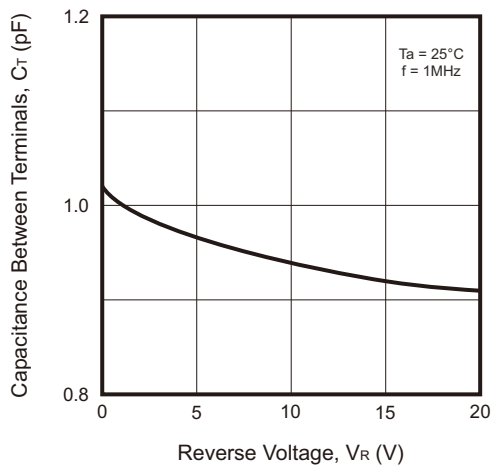
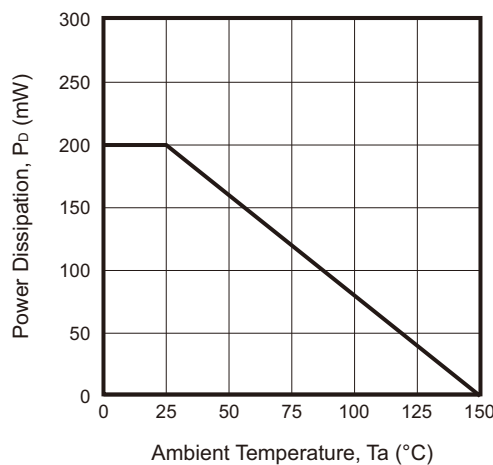
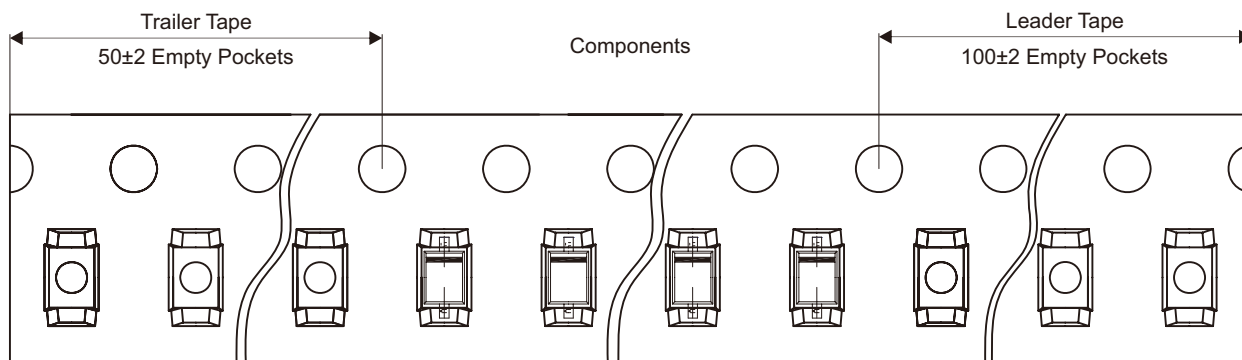
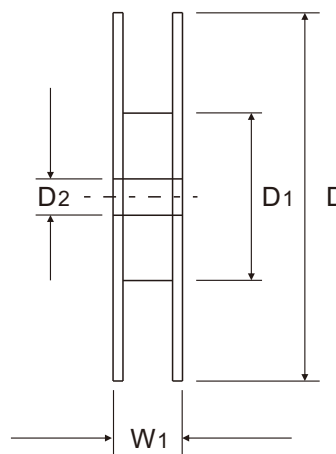
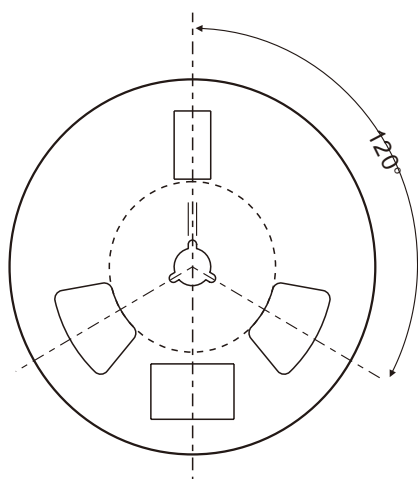
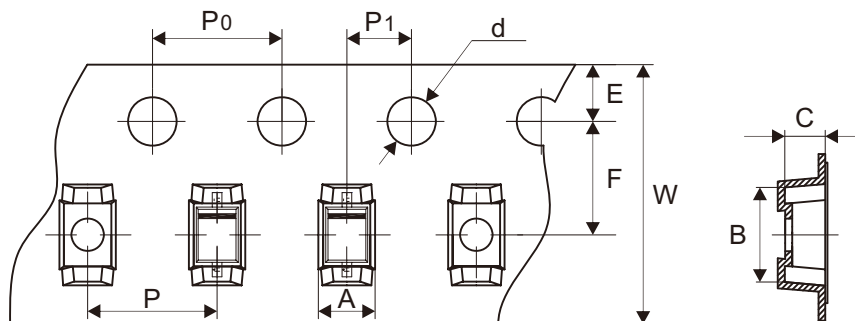


Fig.4 - Power Derating Curve



Reel Taping Specification



| SOD-323 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.46 ± 0.05 | 2.90 ± 0.05 | 1.25 ± 0.05 | 1.50 + 0.10 | 178.00 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.057 ± 0.002 | 0.114 ± 0.002 | 0.049 ± 0.002 | 0.059 + 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOD-323 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 + 0.30 - 0.10 | 12.30 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.315 + 0.012 - 0.004 | 0.484 ± 0.039 |

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

Marking Code

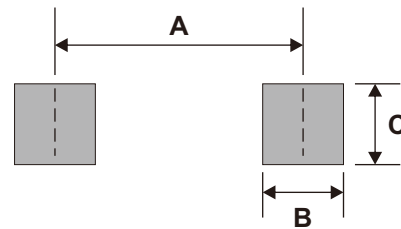
| Part Number | Marking Code |
|-------------|--------------|
| 1N4148WS-HF | T4 |



█ = Cathode band

Suggested PAD Layout

| SIZE | SOD-323 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 2.15 | 0.085 |
| B | 0.70 | 0.028 |
| C | 0.70 | 0.028 |



Note: 1. The pad layout is for reference purposes only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOD-323 | 3,000 | 7 |