



1N4148WS-AU

SURFACE MOUNT SWITCHING DIODES

Voltage

100 V

Power

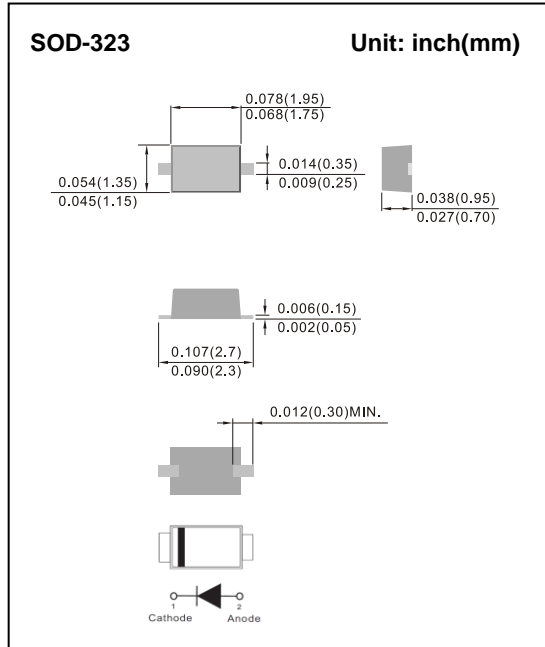
250mW

Features

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: SOD-323, plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.00014 ounces, 0.0041 grams



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | 1N4148WS-AU | UNIT |
|--|--------------------------|-------------|--------------------|
| Marking code | - | A2 | - |
| Reverse voltage | V_R | 75 | V |
| Maximum dc blocking voltage | V_{DC} | 75 | V |
| Peak reverse voltage | V_{RM} | 100 | V |
| RMS voltage | V_{RMS} | 50 | V |
| Maximum average forward current at $T_A=25^\circ\text{C}$ | $I_{F(AV)}$ | 200 | mA |
| Peak forward surge current | I_{FSM} | 0.001ms | 4 |
| | | 10ms | 1.5 |
| | | 1s | 0.5 |
| Power dissipation derate above 25°C | P_D | 250 | mW |
| Maximum forward voltage | V_F | 0.715@1mA | V |
| | | 0.855@10mA | |
| | | 1@50mA | |
| | | 1.25@150mA | |
| Maximum dc reverse current at rated dc blocking voltage | I_R | 0.025@20V | μA |
| | | 2.5@75V | |
| Junction capacitance Measured at 1MHz and applied $V_R=0\text{V}$ | C_J | 1.5 | pF |
| Maximum reverse recovery time | (Note 3) T_{RR} | 4 | ns |
| Typical thermal resistance | (Note 1) $R_{\theta JA}$ | 500 | $^\circ\text{C/W}$ |
| | (Note 2) $R_{\theta JA}$ | 650 | |
| | (Note 4) $R_{\theta JC}$ | 280 | |
| | (Note 4) $R_{\theta JL}$ | 400 | |
| Operating and storage temperature range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |

Note : 1. Mounted on a FR4, single-sided copper, with 50 x 15mm PCB.

2. Mounted on a FR4, single-sided copper, with mini pad.

3. From $I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{Volts}$, $R_L=100\Omega$.

4. Mounted on a FR-4 PCB, single-sided copper, mini pad, with 100cm^2 copper pad area.



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TYPICAL CHARACTERISTIC CURVES

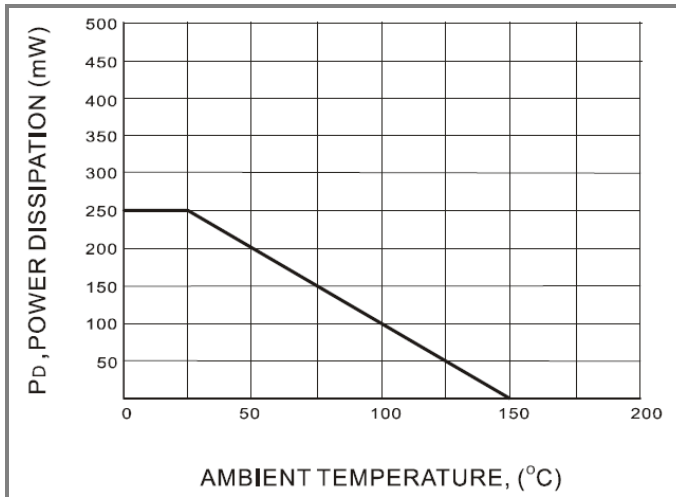


Fig.1 Power Derating Curve

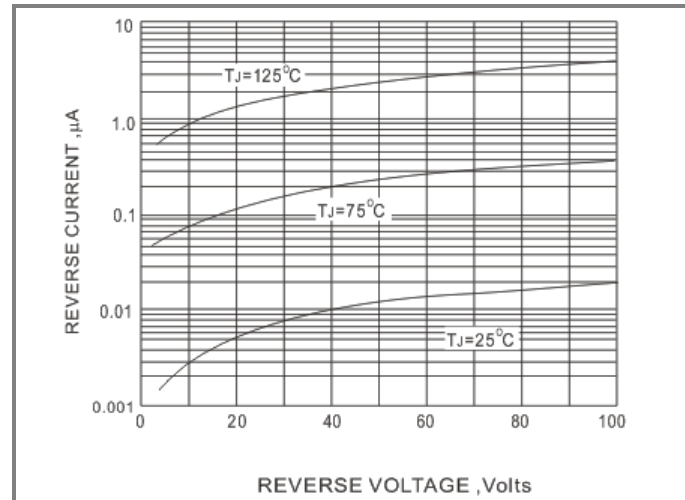


Fig.2 Typical Reverse Characteristics

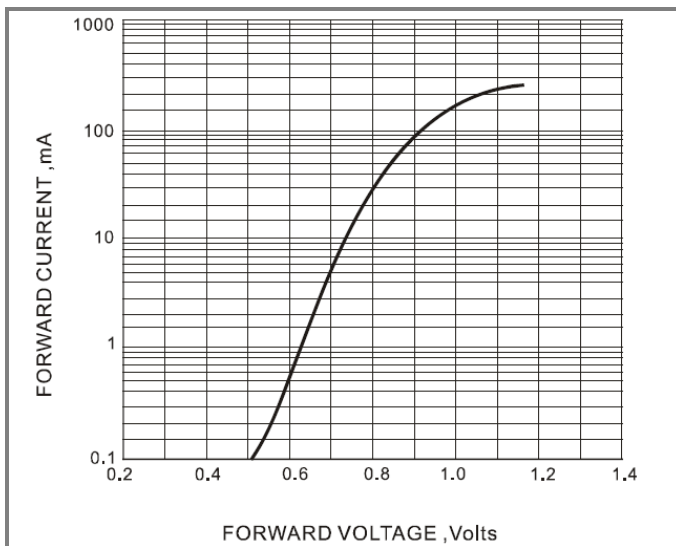


Fig.3 Typical Forward Characteristics

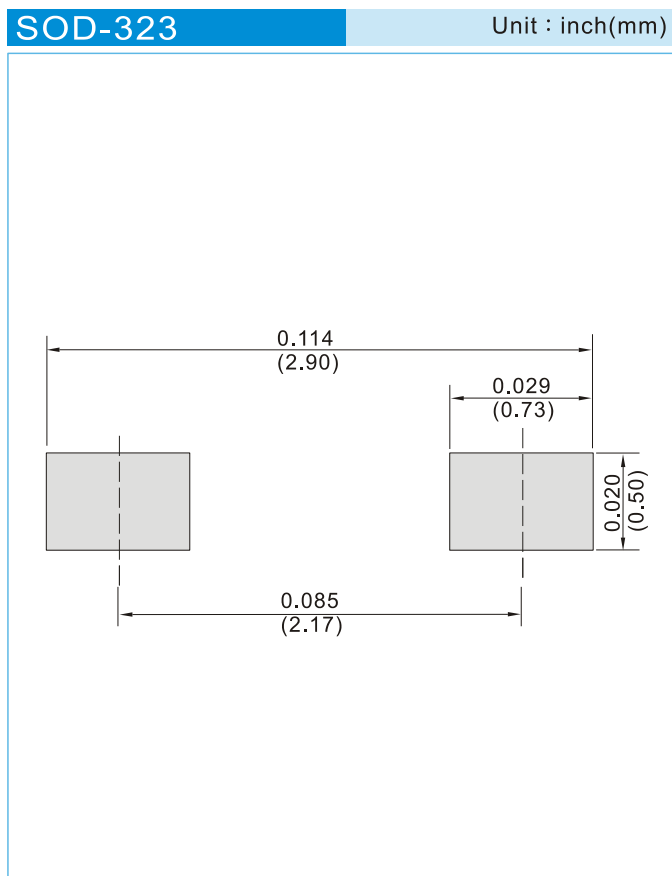


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Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------------|---------|--------------|
| 1N4148WS-AU_R1_000A1 | SOD-323 | 5K pcs / 7" reel | A2 | Halogen free |
| 1N4148WS-AU_R2_000A1 | SOD-323 | 12K pcs / 13" reel | A2 | Halogen free |

Mounting Pad Layout





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