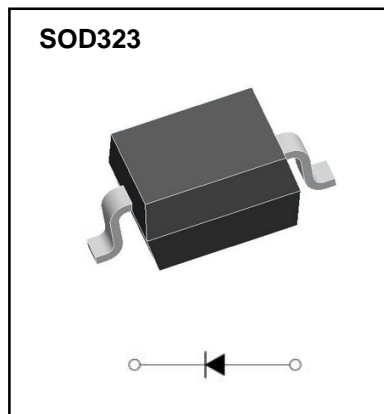


SOD323 Plastic-Encapsulate Diodes

Schottky Rectifier

Features

- Extremely Fast Switching Speed
- Low Forward Voltage



Marking

- S1

Limiting Values (Absolute Maximum Rating)

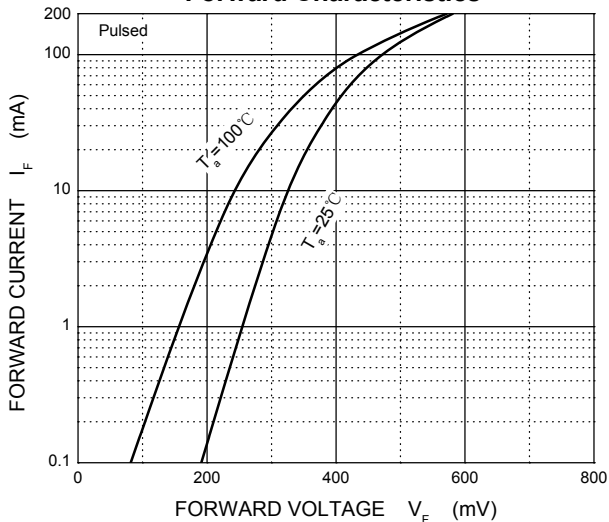
| Parameter | Symbol | Limit | Unit |
|--|-----------------|----------|------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 30 | V |
| DC Blocking Voltage | V_R | 21 | V |
| Average Rectified Output Current | I_O | 100 | mA |
| Forward Continuous Current | I_F | 200 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 300 | mA |
| Non-repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 600 | mA |
| Power Dissipation | P_D | 200 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 500 | °C/W |
| Junction Temperature | T_J | 125 | °C |
| Storage Temperature Range | T_{STG} | -55~+150 | °C |

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

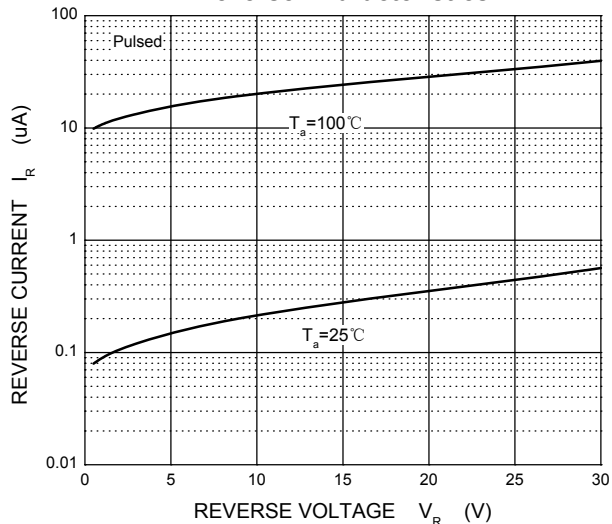
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|-------------------------------|------------|--|-----|-----|------|---------------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R=100\mu\text{A}$ | 30 | | | V |
| Forward voltage | V_{F1} | $I_F=0.1\text{mA}$ | | | 240 | mV |
| | V_{F2} | $I_F=1.0\text{mA}$ | | | 320 | mV |
| | V_{F3} | $I_F=10\text{mA}$ | | | 400 | mV |
| | V_{F4} | $I_F=30\text{mA}$ | | | 500 | mV |
| | V_{F5} | $I_F=100\text{mA}$ | | | 1000 | mV |
| Reverse current | I_R | $V_R=25\text{V}$ | | | 2.0 | μA |
| Reverse recovery time | t_{rr} | $I_F=10\text{mA}$, $I_R=10\text{mA}$ to 1mA , $R_L=100\Omega$ | | | 5.0 | ns |
| Capacitance between terminals | C_T | $V_R=1\text{V}$, $f=1\text{MHz}$ | | | 10 | pF |

Typical Characteristics

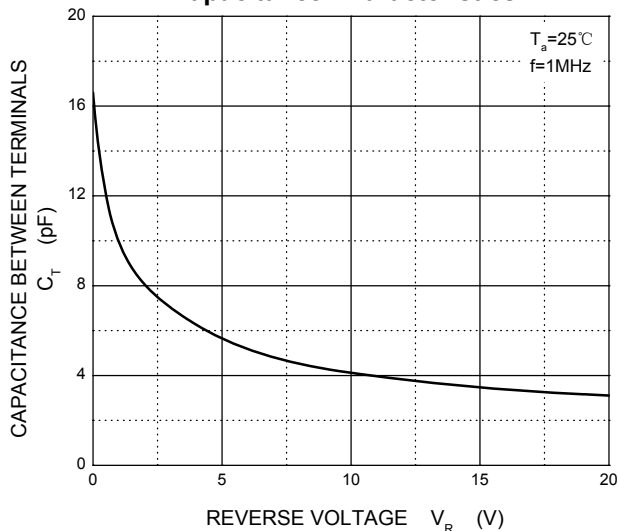
Forward Characteristics



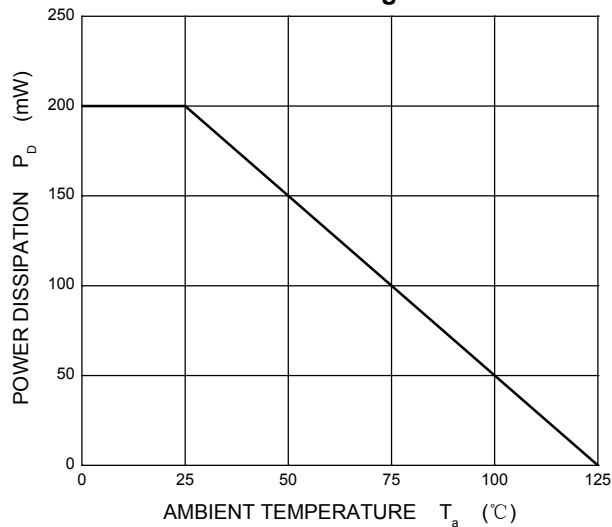
Reverse Characteristics



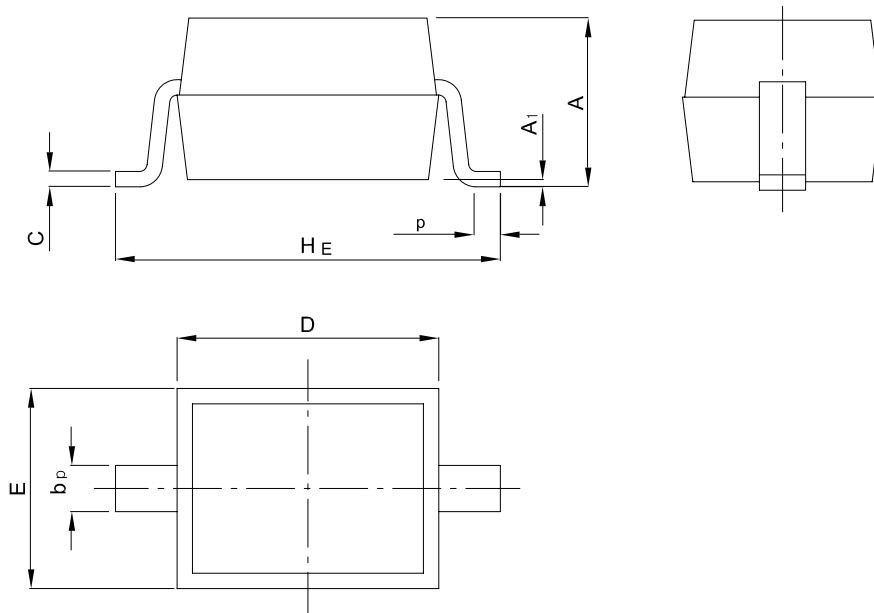
Capacitance Characteristics



Power Derating Curve

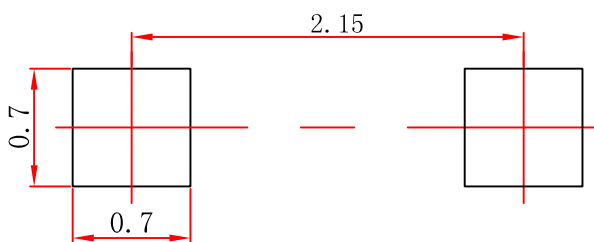


SOD323 Package Outline Dimensions



| UNIT | A | bp | C | D | E | HE | A1 | Lp |
|------|------|------|------|------|------|------|------|------|
| mm | 1.20 | 0.40 | 0.15 | 1.80 | 1.35 | 2.80 | 0.10 | 0.50 |
| | 0.80 | 0.25 | 0.10 | 1.60 | 1.15 | 2.30 | 0.01 | 0.20 |

SOD323 Suggested Pad Layout



Note:

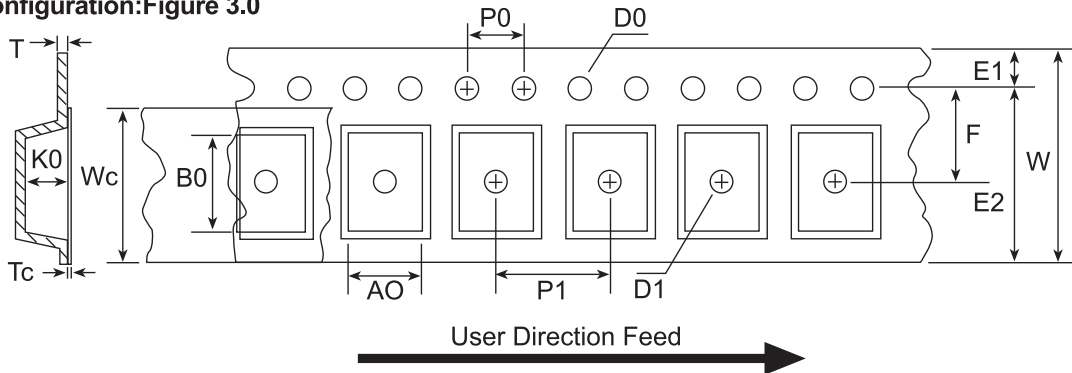
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

Reel Taping Specifications For Surface Mount Devices-SOD323

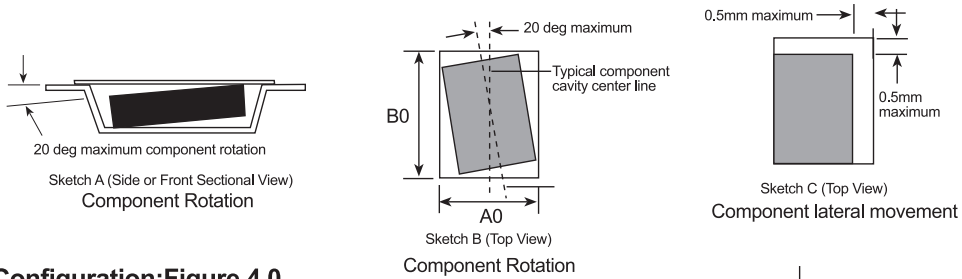
SOD323 Embossed Carrier Tape Configuration: Figure 3.0



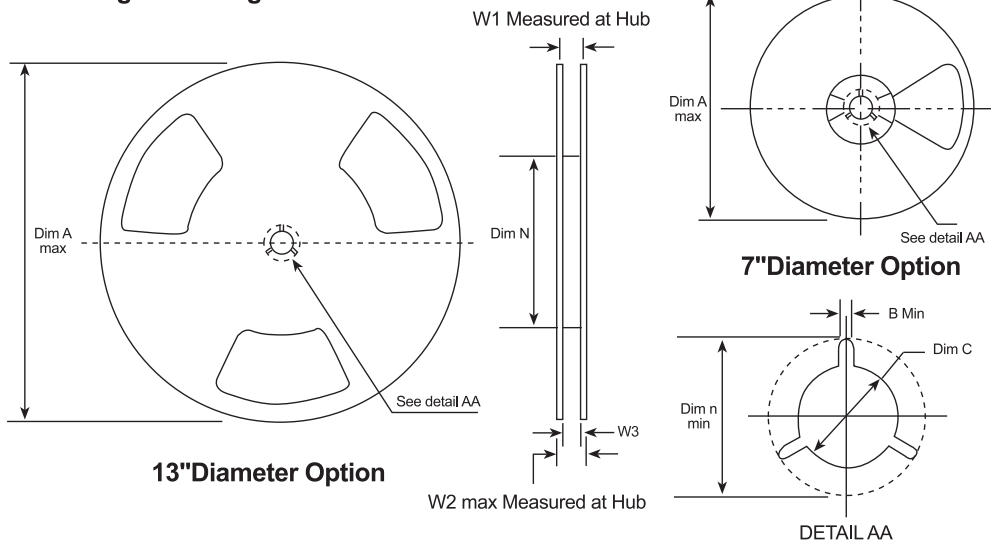
Dimensions are millimeter

| Pkg type | A0 | B0 | W | D0 | D1 | E1 | E2 | F | P1 | P0 | K0 | T | Wc | Tc |
|--------------|-----------------|----------------|---------------|------------------|-------------------|-----------------|-------------|-----------------|----------------|----------------|-----------------|------------------|----------------|-----------------|
| SOD323 (8mm) | 1.46 +/-0.10 | 2.9 +/-0.10 | 8.0 +/-0.3 | 1.50 +/-0.125 | 1.125 +/-0.125 | 1.75 +/-0.10 | 6.25 min | 3.50 +/-0.05 | 4.0 +/-0.10 | 4.0 +/-0.10 | 1.25 +/-0.10 | 0.25 +/-0.020 | 5.2 +/-0.20 | 0.06 +/-0.02 |

Notes: A0, B0 and K0 dimensions are determined with respect to the EW Jeced RS-481 rotational and lateral movement requirements (see sketches A, B and C).



SOD323 Reel Configuration: Figure 4.0



Dimensions are in inches and millimeter

| Type Size | Reel Option | Dim A | Dim B | Dim C | Dim D | Dim N | Dim W1 | Dim W2 | Dim W3 (LSL-USL) |
|-----------|-------------|---------------|--------------|---------------------------------|---------------|-------------|---------------------------------|---------------|-------------------------|
| 8mm | 7" Dia | 7.00 177.8 | 0.059 1.5 | 512+0.020/-0.008 13+0.5/-0.2 | 0.795 20.0 | 2.165 55 | 0.331+0.059/-0.000 8.4+1.5/0 | 0.567 14.4 | 0.311-0.429 7.9-10.9 |
| 8mm | 13" Dia | 13.00 330 | 0.059 1.5 | 512+0.020/-0.008 13+0.5/-0.2 | 0.795 20.0 | 4.00 100 | 0.331+0.059/-0.000 8.4+1.5/0 | 0.567 14.4 | 0.311-0.429 7.9-10.9 |