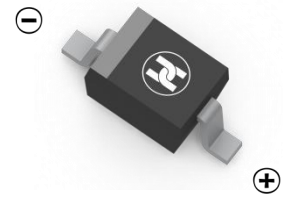


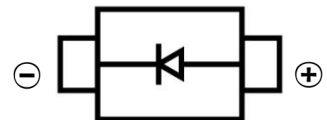
SCHOTTKY BARRIER DIODE

**FEATURES**

- Low Forward Voltage
- Fast Switching
- Surface Mount device
- For Low Current Rectifier Circuits Applications



**SOD-323**



**MECHANICAL DATA**

- Case: SOD-323
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.005 grams (approximate)

**MARKING:JV**

**MAXIMUM RATINGS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| Parameter                                                        | Symbol          | Value     | Unit               |
|------------------------------------------------------------------|-----------------|-----------|--------------------|
| DC Reverse Voltage                                               | $V_R$           | 30        | V                  |
| Forward Current                                                  | $I_F$           | 200       | mA                 |
| Repetitive Peak Forward Current                                  | $I_{FRM}$       | 300       | mA                 |
| Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$ | $I_{FSM}$       | 0.6       | A                  |
| Power Dissipation                                                | $P_D$           | 200       | mW                 |
| Thermal Resistance From Junction To Ambient                      | $R_{\theta JA}$ | 635       | $^\circ\text{C/W}$ |
| Junction Temperature                                             | $T_J$           | 150       | $^\circ\text{C}$   |
| Storage Temperature                                              | $T_{STG}$       | -55 ~+150 | $^\circ\text{C}$   |

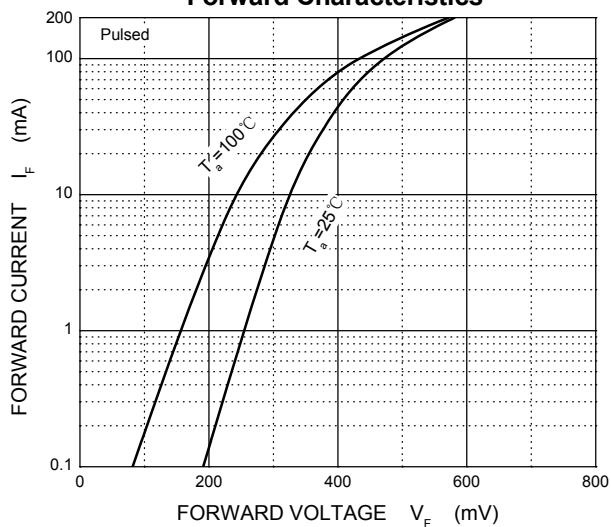
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

| Parameter                       | Symbol      | Min | Typ  | Max  | Unit          | Conditions                                  |
|---------------------------------|-------------|-----|------|------|---------------|---------------------------------------------|
| Reverse breakdown voltage       | $V_{(BR)R}$ | 30  |      |      | V             | $I_R = 10 \mu\text{A}$                      |
| Forward voltage                 | $V_F$       |     | 0.22 | 0.24 | V             | $I_F = 0.1 \text{ mA}$                      |
|                                 |             |     | 0.29 | 0.32 |               | $I_F = 1.0 \text{ mA}$                      |
|                                 |             |     | 0.35 | 0.40 |               | $I_F = 10 \text{ mA}$                       |
|                                 |             |     | 0.41 | 0.5  |               | $I_F = 30 \text{ mA}$                       |
|                                 |             |     | 0.52 | 0.8  |               | $I_F = 100 \text{ mA}$                      |
| Reverse voltage leakage current | $I_R$       |     | 0.5  | 2    | $\mu\text{A}$ | $V_R = 25 \text{ V}$                        |
| Diode capacitance               | $C_D$       |     | 7.6  | 10   | pF            | $V_R = 1 \text{ V}, f = 1.0 \text{ MHz}$    |
| Reverse recovery time           | $T_{rr}$    |     |      | 5    | nS            | $I_F = 10 \text{ mA}, I_R = 1.0 \text{ mA}$ |

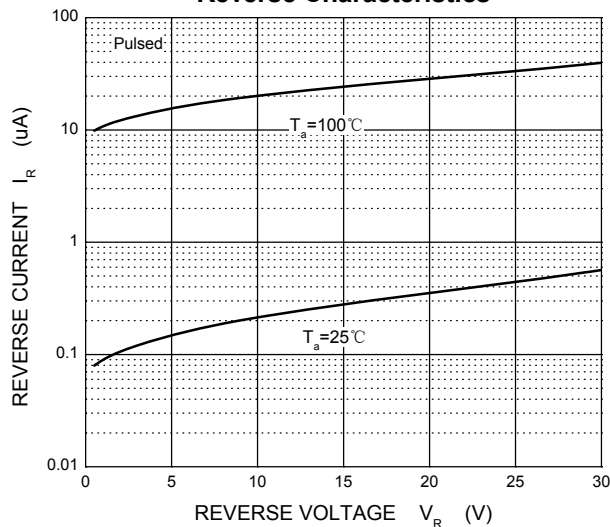
SCHOTTKY BARRIER DIODE

Typical Characteristics

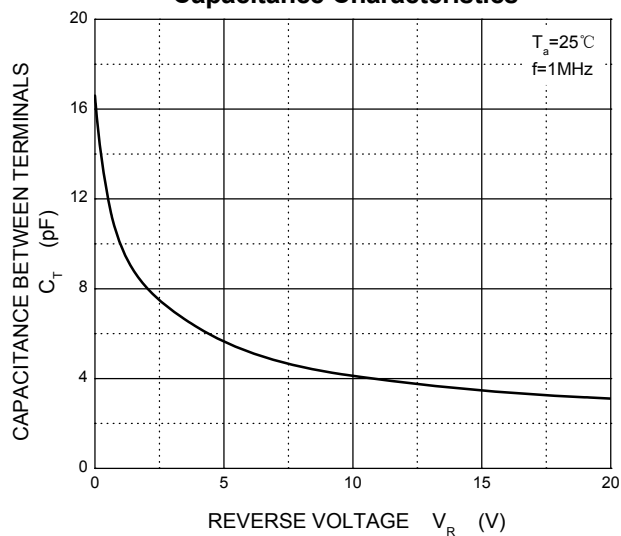
Forward Characteristics



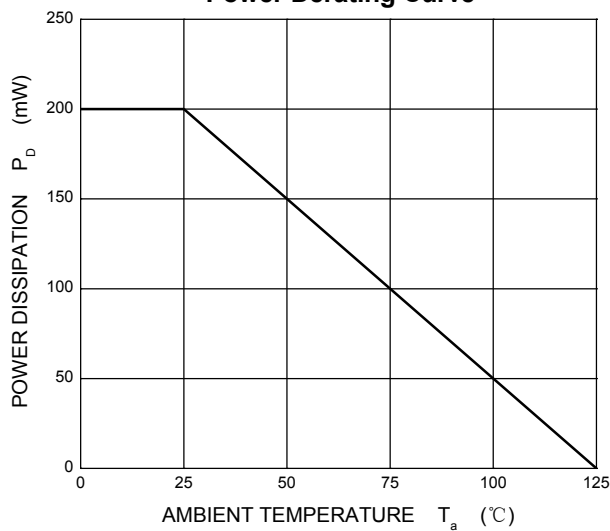
Reverse Characteristics



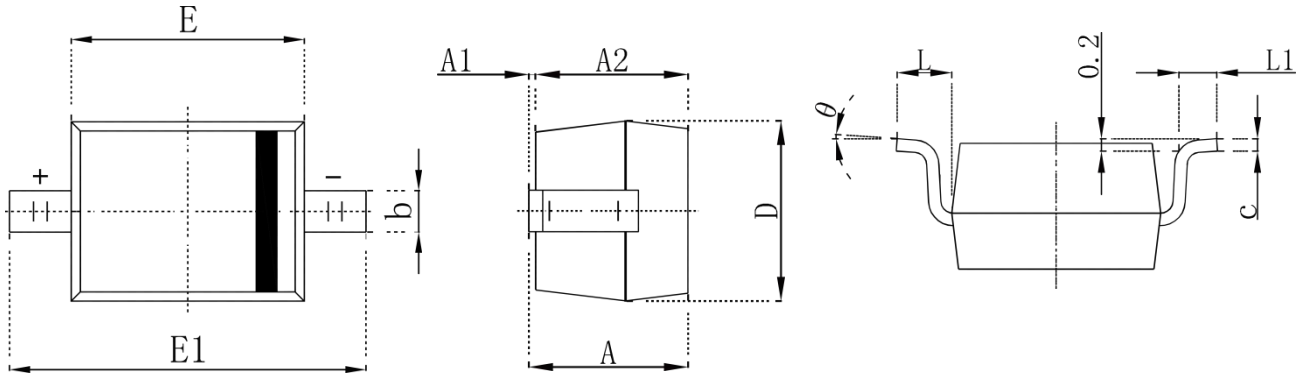
Capacitance Characteristics



Power Derating Curve

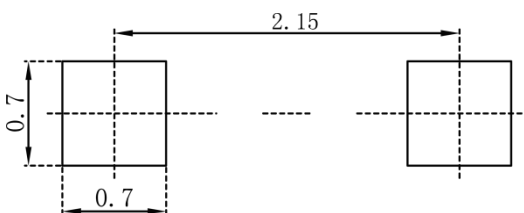


**SOD-323 Package Outline Dimensions**



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      |                           | 1.000 |                      | 0.039 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.800                     | 0.900 | 0.031                | 0.035 |
| b      | 0.250                     | 0.350 | 0.010                | 0.014 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E      | 1.600                     | 1.800 | 0.063                | 0.071 |
| E1     | 2.250                     | 2.750 | 0.100                | 0.108 |
| L      | 0.475 REF                 |       | 0.019 REF            |       |
| L1     | 0.250                     | 0.400 | 0.010                | 0.016 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

**SOD-323 Suggested Pad Layout**



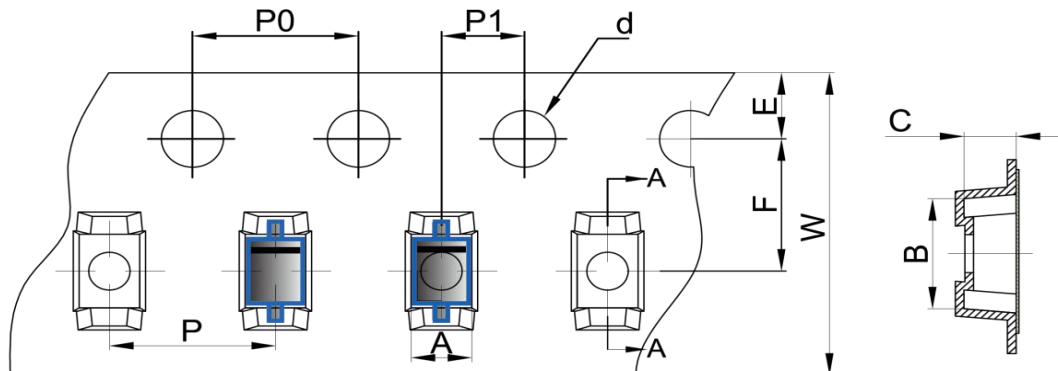
**Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE

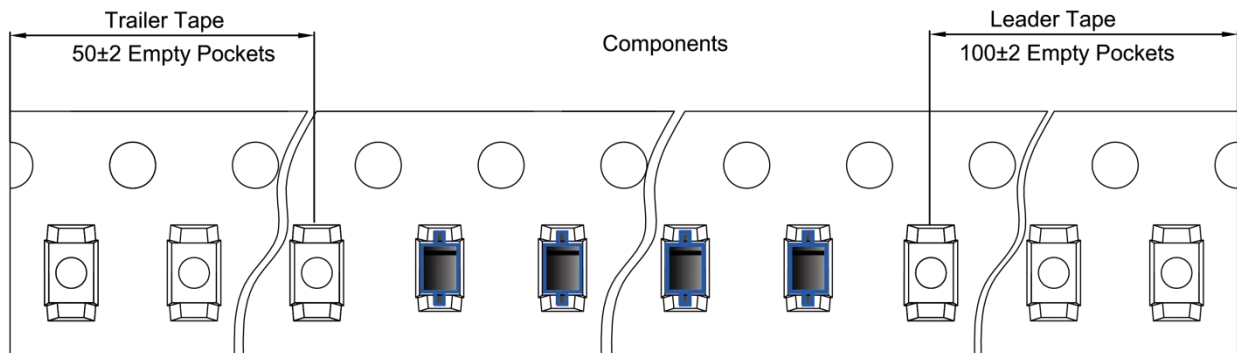
**SOD-323 Tape and Reel**

**SOD-323 Embossed Carrier Tape**

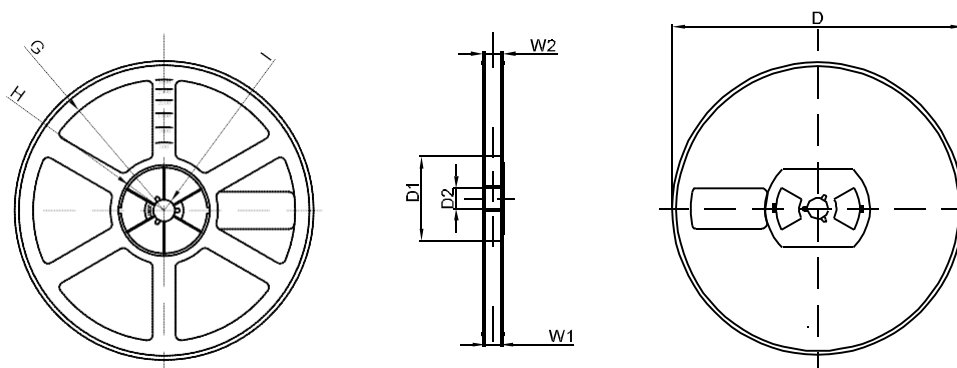


| DIMENSIONS ARE IN MILLIMETER |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| TYPE                         | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-323                      | 1.48 | 3.3  | 1.25 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8    |
| TOLERANCE                    | ±0.1 | ±0.1 | ±0.1 | ±0.1  | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

**SOD-323 Tape Leader and Trailer**



**SOD-323 Reel**



| DIMENSIONS ARE IN MILLIMETER |      |       |       |     |        |       |      |       |
|------------------------------|------|-------|-------|-----|--------|-------|------|-------|
| REEL OPTION                  | D    | D1    | D2    | G   | H      | I     | W1   | W2    |
| 7" DIA                       | Ø178 | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 9.50 | 12.30 |
| TOLERANCE                    | ±2   | ±1    | ±1    | ±1  | ±1     | ±1    | ±1   | ±1    |