

SD103AX

Schottky Barrier Diode

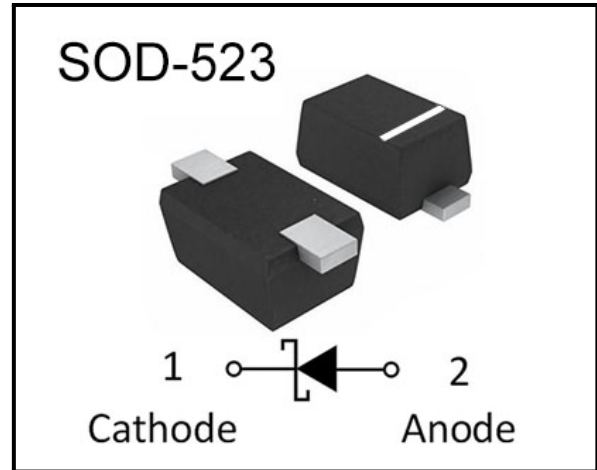
Features

- Low forward voltage drop
- Guard Ring Construction for Transient Protection.
- Negligible Reverse Recovery Time.
- Low Reverse Capacitance.

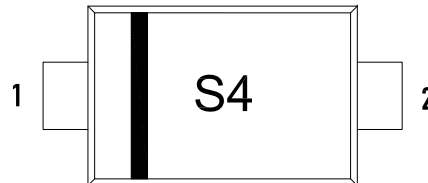
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-523 Plastic Package

Package



Marking



Ordering information

| Order code | Package | Marking | Base qty | Delivery mode |
|------------|---------|---------|----------|---------------|
| SD103AX | SOD-523 | S4 | 3K | Tape and reel |

Maximum Ratings (@T_A=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|---------------------|--|-------------|-------|
| V _{RM} | Non-repetitive Peak Reverse Voltage | 40 | V |
| V _{R(RM)} | Peak Repetitive Peak Reverse Voltage | | |
| V _{R(WM)} | Working Peak Reverse Voltage | | |
| V _R | DC Blocking Voltage | 28 | V |
| V _{R(RMS)} | RMS Reverse Voltage | 350 | mA |
| I _{FM} | Forward Continuous Current | 2.0 | A |
| I _{FSM} | Non-repetitive Peak Forward Surge Current @8.3mS | 150 | mW |
| P _D | Power Dissipation | 667 | °C/ W |
| R _{θJA} | Typical thermal resistance | -40 to +125 | °C |
| T _j | Operating junction Temperature Range | -50 to +150 | °C |
| T _{STG} | Storage temperature Range | | |

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Electrical Characteristics(@T_A=25°C unless otherwise noted)

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Unit |
|-------------------|---------------------------------|--|------|------|------|------|
| V _(BR) | Reverse breakdown voltage | I _R =1mA | 40 | – | – | V |
| I _R | Reverse voltage leakage current | V _R =30V | – | – | 5 | μA |
| | | V _R =20V | – | – | 2 | |
| | | V _R =10V | – | – | 1 | |
| V _F | Forward voltage | I _F =1mA | – | 0.27 | – | V |
| | | I _F =5mA | – | 0.32 | – | |
| | | I _F =20mA | – | – | 0.37 | |
| | | I _F =200mA | – | – | 0.6 | |
| C _j | Type junction capacitance | V _R = 0V, f=1MHZ | – | 50 | – | pF |
| T _{rr} | Reverse recovery time | I _F =I _R = 200mA, I _{rr} =0.1X I _R , R _L =100Ω | – | 10 | – | nS |



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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Forward Characteristics

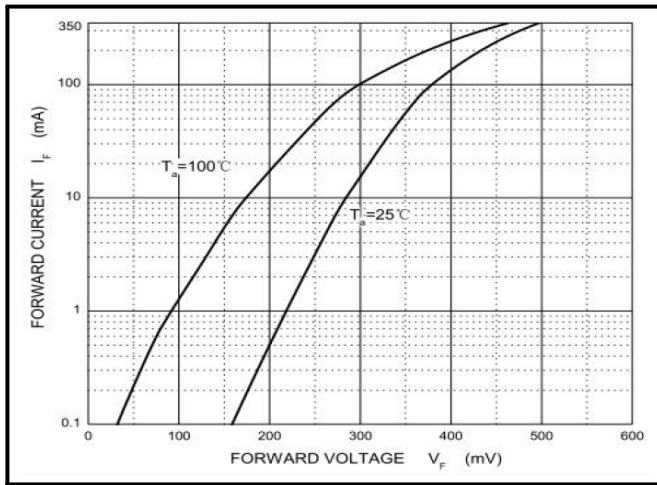


Figure 2: Reverse Characteristics

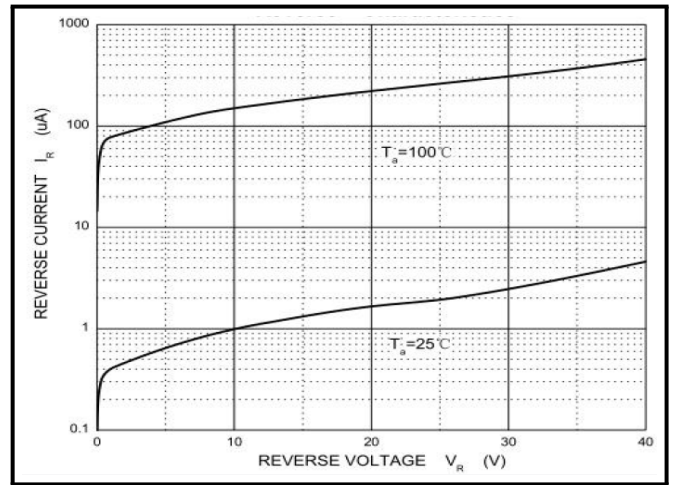


Figure 3: Capacitance Characteristics

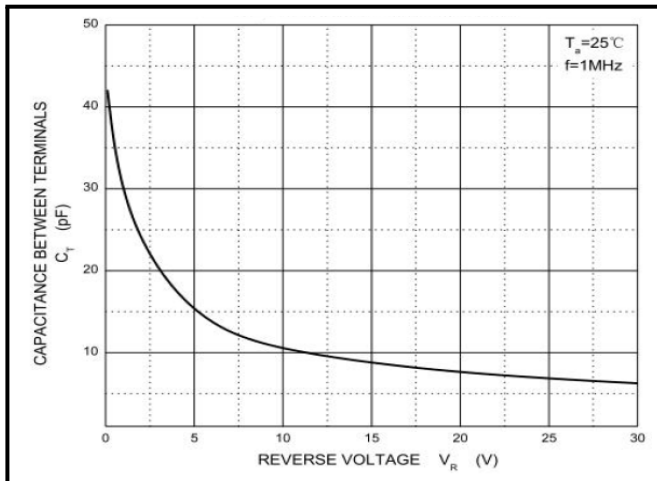
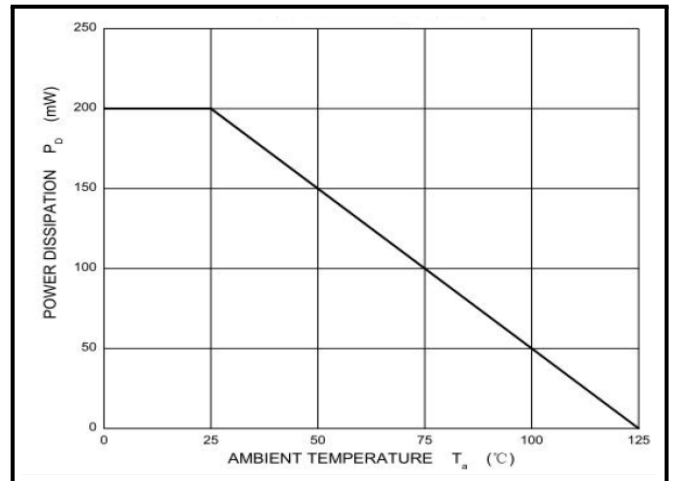


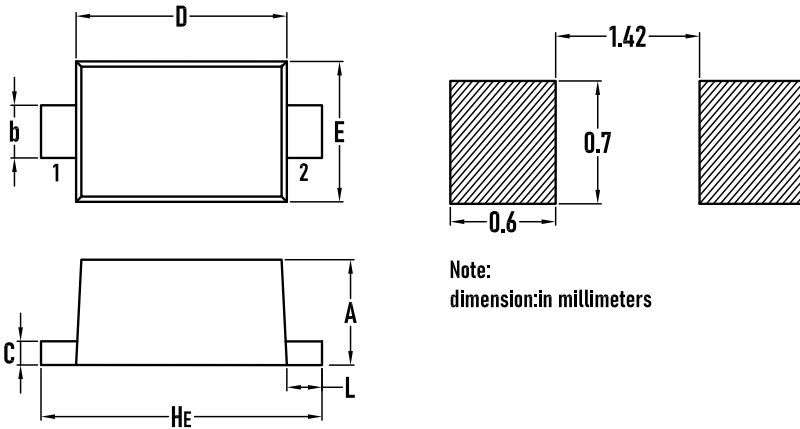
Figure 4: Power Derating Curve



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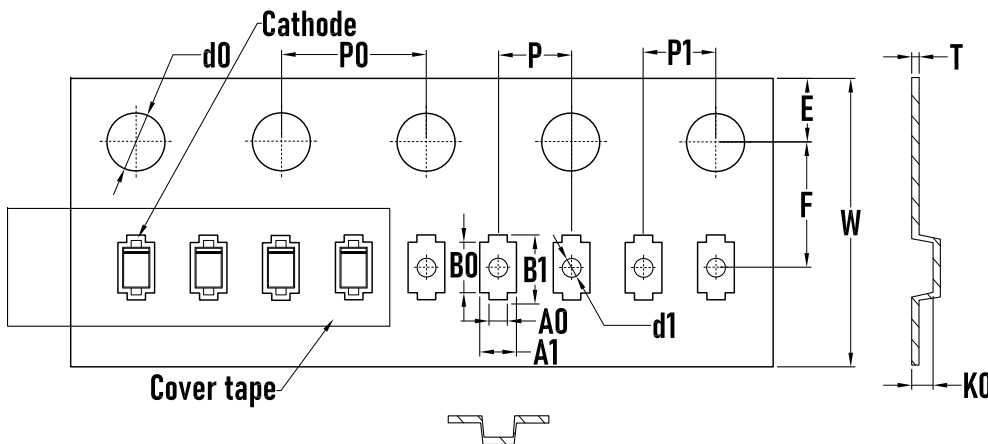
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Outline Drawing - SOD-523



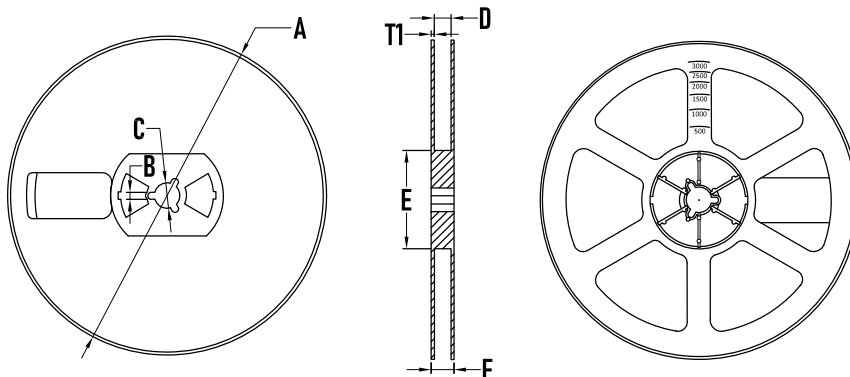
| SYMBOL | MILLIMETER | | INCHES | |
|----------------|------------|------|--------|--------|
| | MIN. | MAX. | MIN. | MAX. |
| A | 0.50 | 0.70 | 0.020 | 0.028 |
| b | 0.25 | 0.35 | 0.010 | 0.014 |
| C | 0.07 | 0.20 | 0.0028 | 0.0079 |
| D | 1.10 | 1.30 | 0.043 | 0.051 |
| E | 0.70 | 0.90 | 0.028 | 0.035 |
| H _E | 1.50 | 1.70 | 0.059 | 0.067 |
| L | 0.15 | 0.25 | 0.006 | 0.010 |

Packaging Tape - SOD-523



| SYMBOL | MILLIMETER |
|--------|------------|
| A0 | 0.50±0.10 |
| A1 | 1.00±0.10 |
| B0 | 1.30±0.10 |
| B1 | 1.80±0.10 |
| d0 | 1.55±0.10 |
| d1 | 0.50±0.05 |
| E | 1.75±0.10 |
| F | 3.50±0.10 |
| K0 | 0.65±0.10 |
| P | 2.00±0.10 |
| P0 | 4.00±0.10 |
| P1 | 2.00±0.10 |
| W | 8.00±0.30 |
| T | 0.2 ±0.05 |

Packaging Reel



| SYMBOL | MILLIMETER |
|----------|------------|
| A | 177.8±0.2 |
| B | 2.7±0.2 |
| C | 13.5±0.2 |
| D | 9.6±0.3 |
| E | 54.5±0.2 |
| F | 12.3±0.3 |
| T1 | 1.0±0.2 |
| Quantity | 3000PCS |

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