

SCHOTTKY BARRIER RECTIFIERS

Features

- ◆ Low forward voltage drop
- ◆ Guard ring construction for transient protection
- ◆ High conductance
- ◆ Also available in lead free version

SOD-323



Mechanical Data

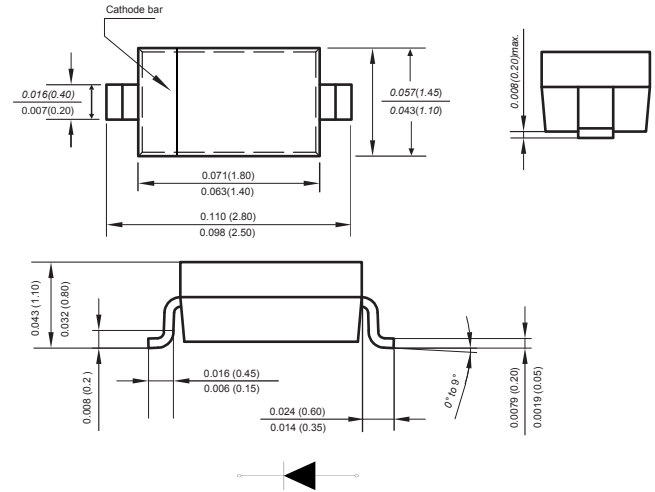
Case: JEDEC SOD-323 molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Weight : 0.00019 ounce, 0.00548 grams

Marking: B0520WS:SD, B0530WS:SE, B0540WS:SF



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

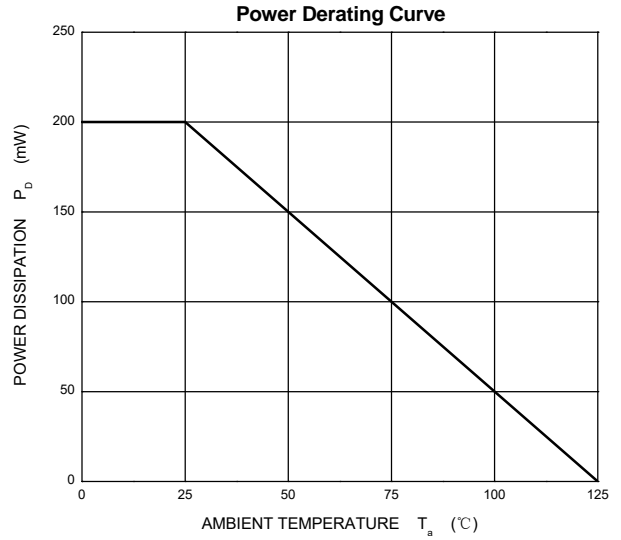
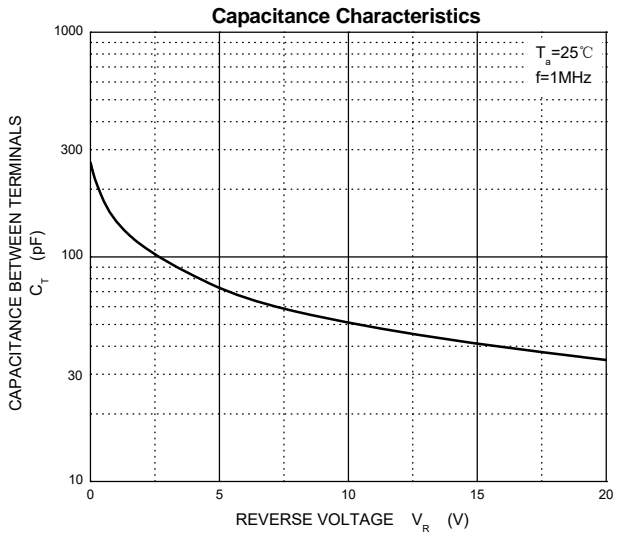
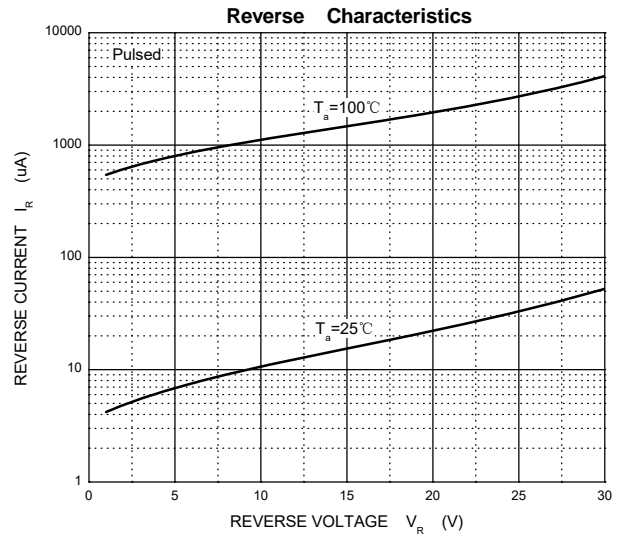
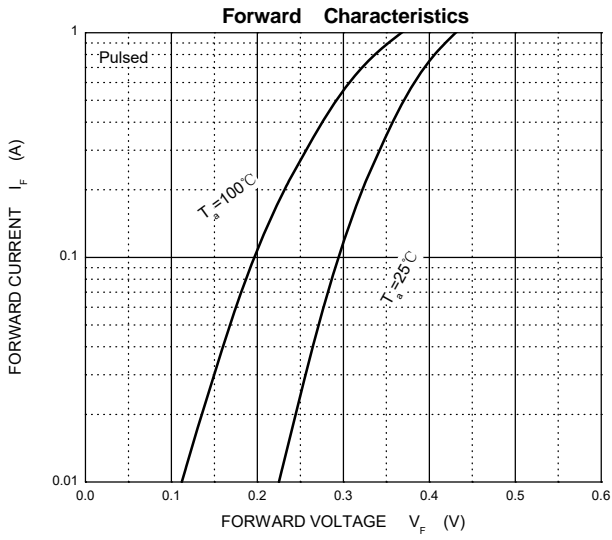
| Parameter | Symbols | B0520WS | B0530WS | B0540WS | Units |
|--|-----------------|------------|---------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | |
| Average rectified output current | I_o | 0.5 | | | A |
| Non-repetitive Peak Forward Surge Current at 8.3ms | I_{FSM} | 22 | | | A |
| Typical Thermal Resistance (1) | $R_{\theta JA}$ | 500 | | | °C/W |
| Operating Temperature Range | T_j | -55 ~ +125 | | | °C |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | °C |

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Characteristics at $T_a = 25\text{ °C}$

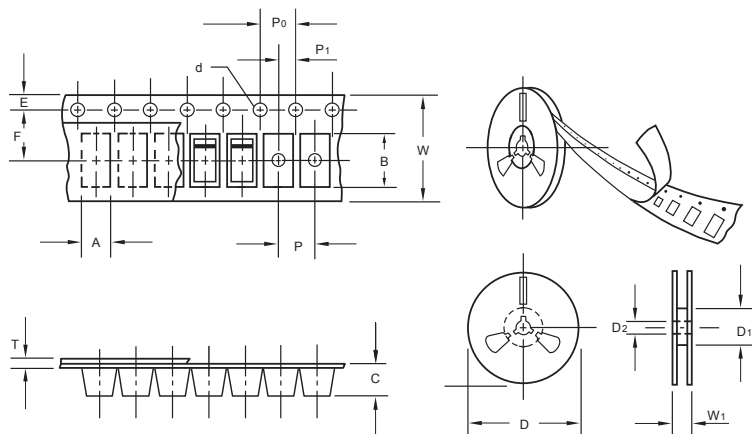
| Parameter | Symbols | B0520WS | B0530WS | B0540WS | Units |
|----------------------------------|---------|---------|---------|---------|-------|
| Maximum Forward Voltage at I_f | V_F | at 0.1A | 0.33 | 0.36 | V |
| | | at 0.5A | 0.39 | 0.45 | |
| | | at 1.0A | — | — | |
| Peak Reverse Current at V_R | I_R | at 10V | 75 | — | uA |
| | | at 15V | — | 75 | |
| | | at 20V | 250 | 100 | |
| | | at 30V | — | 500 | |
| | | at 40V | — | — | |

Typical Characteristics



The curve above is for reference only.

Packing information



unit:mm

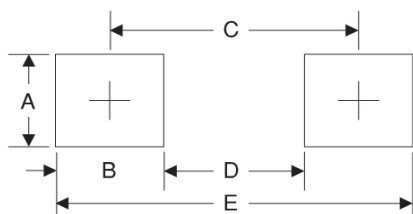
| Item | Symbol | Tolerance | SOD-323 |
|--------------------------|----------------|-----------|---------|
| Carrier width | A | 0.1 | 2.1 |
| Carrier length | B | 0.1 | 4.0 |
| Carrier depth | C | 0.1 | 1.60 |
| Sprocket hole | d | 0.05 | 1.55 |
| 7" Reel outside diameter | D | 2.0 | 178.00 |
| 7" Reel inner diameter | D ₁ | min | 50.0 |
| Feed hole diameter | D ₂ | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 3.50 |
| Punch hole pitch | P | 0.1 | 4.00 |
| Sprocket hole pitch | P ₀ | 0.1 | 4.00 |
| Embossment center | P ₁ | 0.1 | 2.00 |
| Overall tape thickness | T | 0.1 | 0.25 |
| Tape width | W | 0.3 | 8.15 |
| Reel width | W ₁ | 1.0 | 10.5 |

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (m/m) | BOX (pcs) | INNER BOX (m/m) | REEL DIA. (m/m) | CARTON SIZE (m/m) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---------|-----------|------------|-------------------------|-----------|-----------------|-----------------|-------------------|--------------|---------------------------|
| SOD-323 | 7" | 3,000 | 4.0 | 45,000 | 210*208*203 | 178 | 430*430*235 | 180,000 | |

Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 0.7 | 0.028 |
| B | 0.7 | 0.028 |
| C | 2.15 | 0.085 |
| D | 1.45 | 0.071 |
| E | 2.85 | 0.112 |