

SD103AWS...SD103CWS

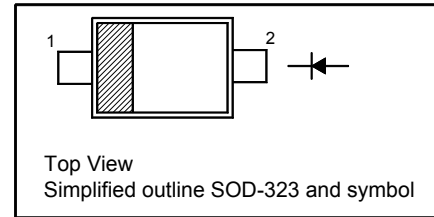
Surface Mount Schottky Barrier Diodes

Features

- Low forward voltage

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit | |
|--|----------------|---------------|------------------|---|
| Peak Repetitive Reverse Voltage | V_{RRM} | SD103AWS | 40 | V |
| | | SD103BWS | 30 | |
| | | SD103CWS | 20 | |
| Reverse Voltage | V_R | SD103AWS | 40 | V |
| | | SD103BWS | 30 | |
| | | SD103CWS | 20 | |
| Average Forward Rectified Current | $I_{F(AV)}$ | 350 | mA | |
| Non-Repetitive Peak Forward Surge Current at $t = 1 \text{ s}$ | I_{FSM} | 2 | A | |
| Power Dissipation | P_{tot} | 200 | mW | |
| Operating Junction and Storage Temperature Range | T_j, T_{stg} | - 65 to + 125 | $^\circ\text{C}$ | |

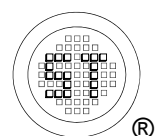
Thermal Characteristics

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------|--------------------|
| Typical Thermal Resistance - Junction to Ambient ¹⁾ | $R_{\theta JA}$ | 500 | $^\circ\text{C/W}$ |

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Min. | Typ. | Max. | Unit | |
|--|-------------|----------|------|------|------|---------------|
| Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$ | $V_{(BR)R}$ | SD103AWS | 40 | - | - | V |
| | | SD103BWS | 30 | - | - | |
| | | SD103CWS | 20 | - | - | |
| Reverse Leakage Current at $V_R = 30 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 10 \text{ V}$ | I_R | SD103AWS | - | - | 5 | μA |
| | | SD103BWS | - | - | 5 | |
| | | SD103CWS | - | - | 5 | |
| Forward Voltage at $I_F = 20 \text{ mA}$ at $I_F = 200 \text{ mA}$ | V_F | - | - | 0.37 | V | |
| | | - | - | 0.6 | | |
| Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$ | C_T | - | 20 | - | pF | |
| Reverse Recovery Time at $I_F = I_R = 200 \text{ mA}$, $t_{rr} = 0.1 I_R$, $R_L = 100 \Omega$ | t_{rr} | - | 10 | - | ns | |



Electrical Characteristic Curves

Fig 1. Average Current Derating Curve

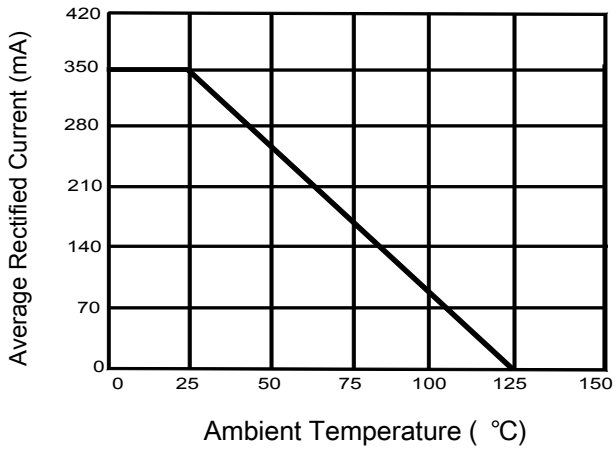


Fig 2. Forward Characteristic Curve

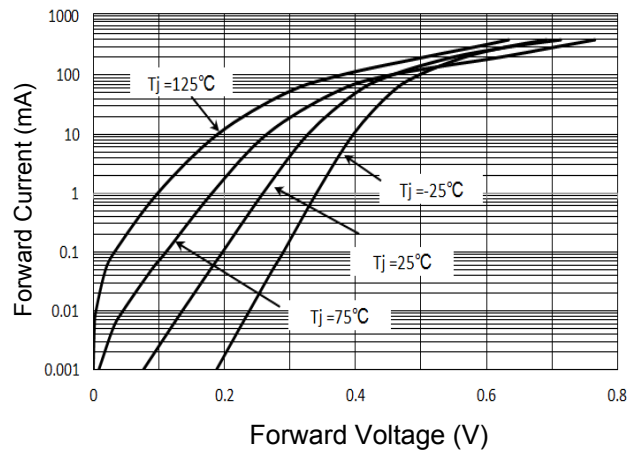


Fig 3. Reverse Characteristic Curve

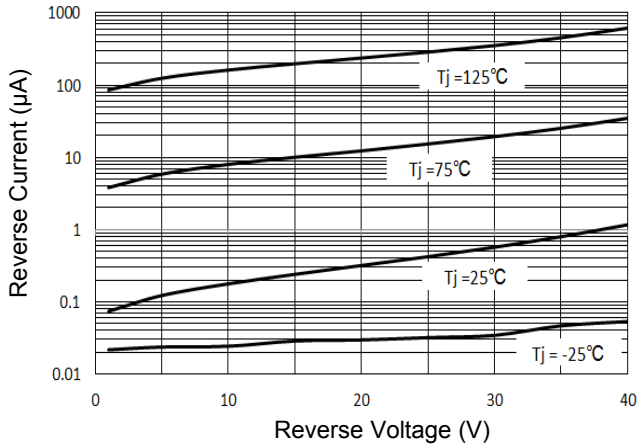
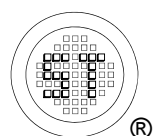
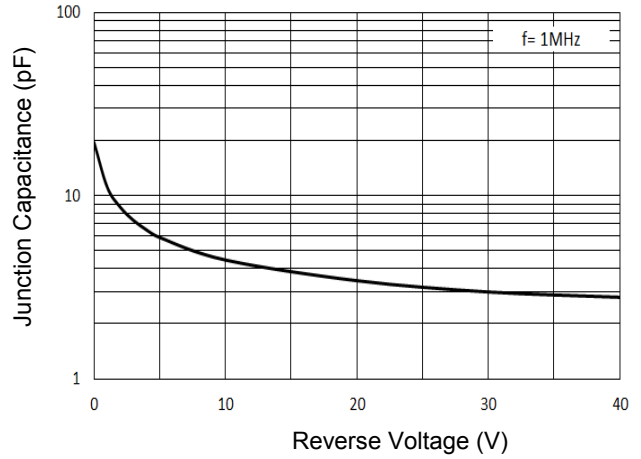


Fig 4. Junction Capacitance

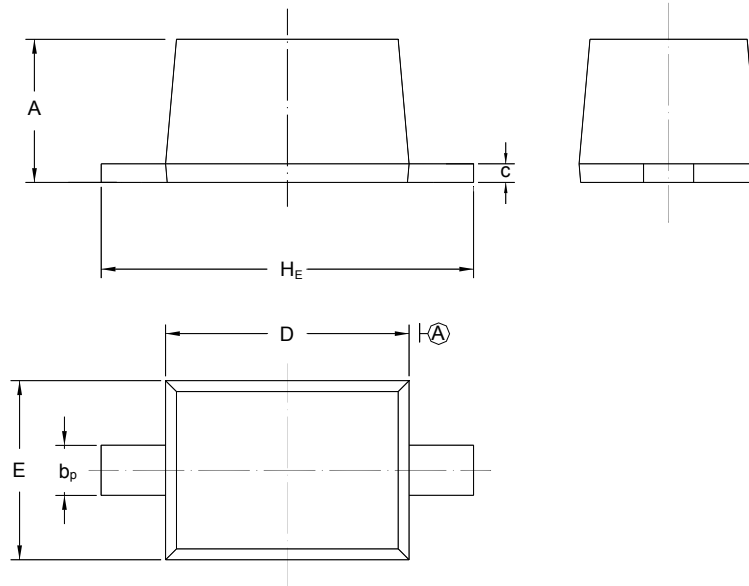


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PACKAGE OUTLINE

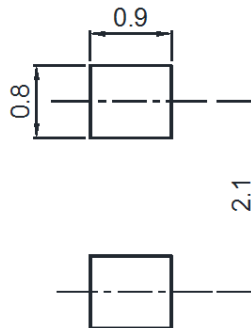
Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A | b_p | C | D | E | H_E |
|------|--------------|--------------|--------------|--------------|--------------|--------------|
| mm | 1.10 0.80 | 0.40 0.25 | 0.15 0.10 | 1.80 1.60 | 1.35 1.15 | 2.80 2.30 |

Recommended Soldering Footprint

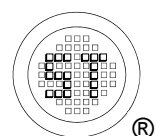


Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|---------|-----------------|-------------|-------------------|-----------|------|---------------------------|
| | | mm | inch | mm | inch | |
| SOD-323 | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

Marking information

" S4 " = Part No.
 " III " = Cathode line
 Font type: Arial



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