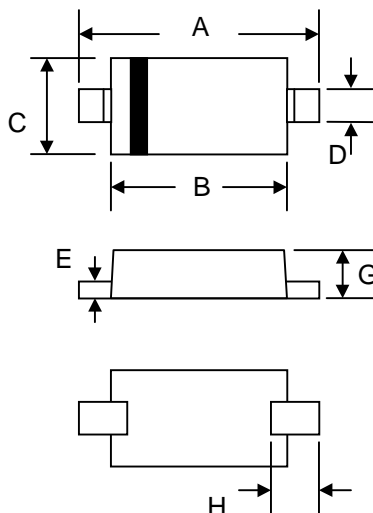


# SD103AWS – SD103CWS

## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



| SOD-323              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.30 | 2.70 |
| B                    | 1.75 | 1.95 |
| C                    | 1.15 | 1.35 |
| D                    | 0.25 | 0.35 |
| E                    | 0.05 | 0.15 |
| G                    | 0.70 | 0.95 |
| H                    | 0.30 | —    |
| All Dimensions in mm |      |      |

### Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)
- Marking: SD103AWS S6  
SD103BWS S7  
SD103CWS S8

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

| Characteristic   | Symbol   | SD103AWS    | SD103BWS | SD103CWS | Unit |
|--|--|-------------|----------|----------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 40          | 30       | 20       | V    |
| Forward Continuous Current (Note 1)  | I <sub>F</sub>   | 350         |          |          | mA   |
| Non-Repetitive Peak Forward Surge Current @ t < 1.0s                                   | I <sub>FSM</sub>                                       | 2.0         |          |          | A    |
| Power Dissipation (Note 1)   | P <sub>d</sub>   | 200         |          |          | mW   |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1)                           | R <sub>θJA</sub>                                       | 625         |          |          | °C/W |
| Operating and Storage Temperature Range  | T <sub>j</sub> , T <sub>STG</sub>                      | -55 to +125 |          |          | °C   |

### Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

| Characteristic  | Symbol              | All Types      | Unit | Test Condition  |
|---|---------------------|----------------|------|---|
| Reverse Breakdown Voltage<br>SD103AWS<br>SD103BWS<br>SD103CWS | V <sub>(BR)</sub> R | 40<br>30<br>20 | V    | @ I <sub>R</sub> = 10μA, t <sub>p</sub> < 300μs   |
| Forward Voltage Drop  | V <sub>FM</sub>     | 0.37<br>0.60   | V    | @ I <sub>F</sub> = 20mA<br>@ I <sub>F</sub> = 200mA   |
| Peak Reverse Leakage Current                                  | I <sub>RM</sub>     | 5.0            | μA   | @ Rated DC Blocking Voltage   |
| Typical Junction Capacitance                                  | C <sub>j</sub>      | 50             | pF   | V <sub>R</sub> = 0V, f = 1.0MHz   |
| Typical Reverse Recovery Time                                 | t <sub>rr</sub>     | 10             | nS   | I <sub>F</sub> = I <sub>R</sub> = 200mA<br>I <sub>RR</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω |

Note: 1. Valid provided that terminals are kept at ambient temperature.

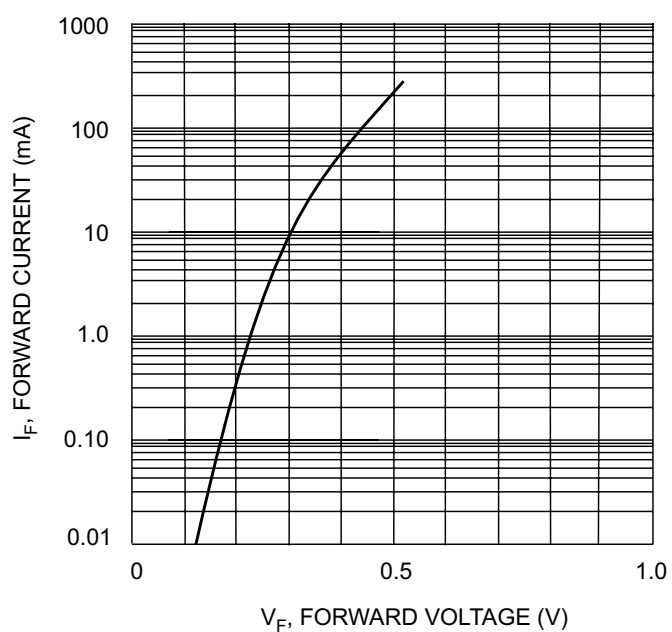


Fig. 1 Typical Forward Characteristics

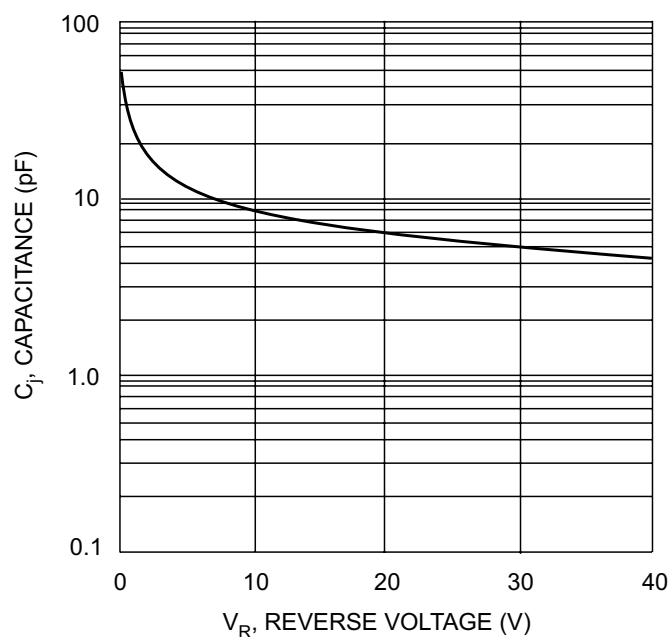


Fig. 2 Typ. Junction Capacitance vs Reverse Voltage

## ORDERING INFORMATION

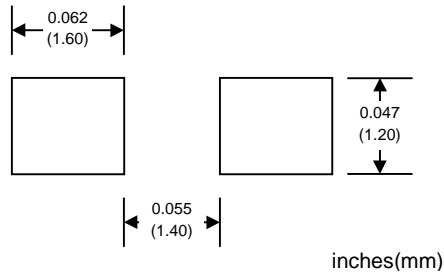
| Product No.♦       | Package Type | Shipping Quantity |
|--------------------|--------------|-------------------|
| <b>SD103AWS-T1</b> | SOD-323      | 3000/Tape & Reel  |
| SD103AWS-T3        | SOD-323      | 10000/Tape & Reel |
| <b>SD103BWS-T1</b> | SOD-323      | 3000/Tape & Reel  |
| SD103BWS-T3        | SOD-323      | 10000/Tape & Reel |
| <b>SD103CWS-T1</b> | SOD-323      | 3000/Tape & Reel  |
| SD103CWS-T3        | SOD-323      | 10000/Tape & Reel |

Products listed in **bold** are WTE **Preferred** devices.

♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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