

**SURFACE MOUNT  
SCHOTTKY BARRIER DIODE**

**REVERSE VOLTAGE – 20 to 40 Volts  
FORWARD CURRENT – 0.35 Ampere**

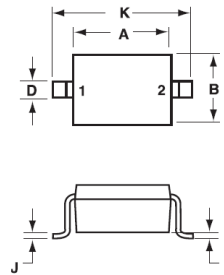
**FEATURES**

- Extremely low VF drop
- Guard Ring Construction for Transient protection
- Negligible Reverse Recovery Time

**MECHANICAL DATA**

- Case: SOD-123 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

**SOD-123**



| SOD-123                  |         |      |
|--------------------------|---------|------|
| Dim.                     | Min.    | Max. |
| A                        | 2.55    | 2.85 |
| B                        | 1.40    | 1.80 |
| C                        | 0.95    | 1.35 |
| D                        | 050     | 0.70 |
| E                        | 0.3 REF |      |
| H                        | ---     | 0.1  |
| J                        | ---     | 0.15 |
| K                        | 3.55    | 3.85 |
| Dimensions in millimeter |         |      |

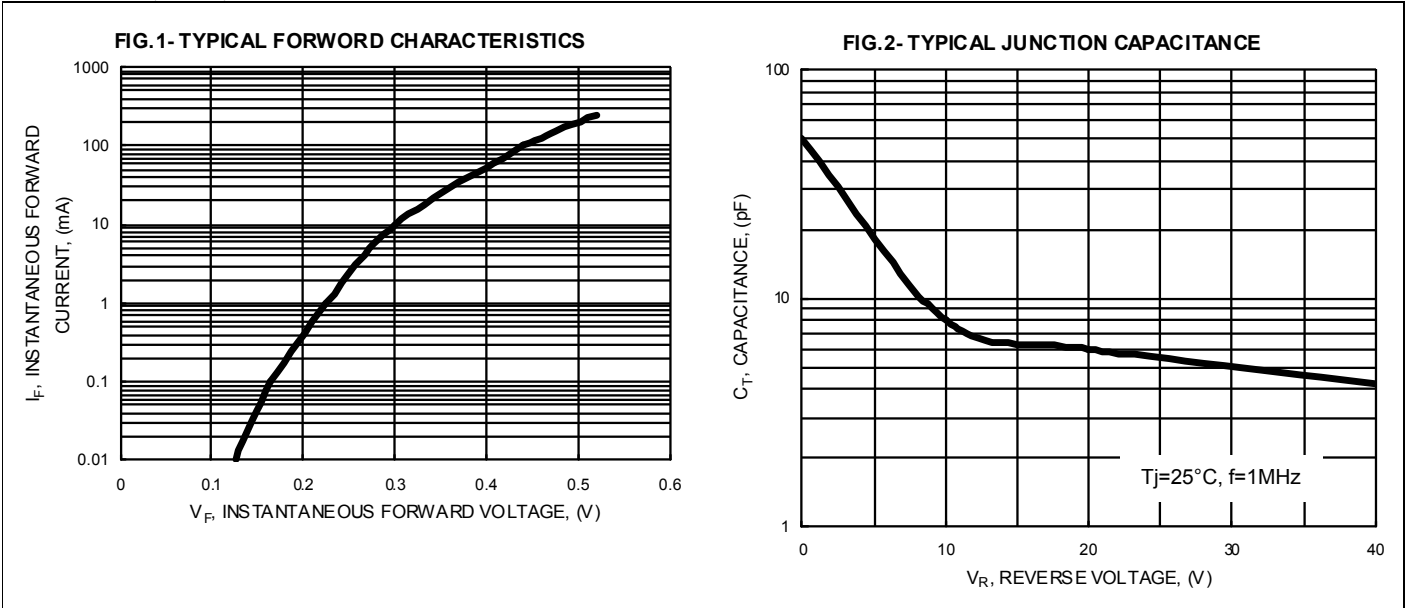
**Maximum Ratings & Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

| Characteristic   | Symbol           | SD103AW  | SD103BW | SD103CW | Units |
|--|------------------|----------|---------|---------|-------|
| Repetitive Peak reverse voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RM</sub>  | 40       | 30      | 20      | V     |
| RMS Reverse Voltage  | V <sub>R</sub>   | 28       | 21      | 14      |       |
| Forward Continuous Current   | I <sub>FM</sub>  | 350      |         |         | mA    |
| Non-Repetitive Peak Forward Surge Current @t<1.0s                                      | I <sub>FSM</sub> | 1.5      |         |         | A     |
| Power Dissipation  | P <sub>D</sub>   | 400      |         |         | mW    |
| Thermal Resistance Junction to Ambient   | R <sub>θJA</sub> | 313      |         |         | °C/W  |
| Operating Temperature Range  | T <sub>J</sub>   | 125      |         |         | °C    |
| Storage Temperature Range  | T <sub>STG</sub> | -65~+125 |         |         | °C    |

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

| Characteristic  | Test Condition  | Symbol          | SD103AW       | SD103BW       | SD103CW       | Unit |
|---|---|-----------------|---------------|---------------|---------------|------|
| Reverse Breakdown Voltage                               | I <sub>R</sub> = 100uA  | V <sub>BR</sub> | 40            | 30            | 20            | V    |
| Maximum Forward Voltage                                 | I <sub>F</sub> = 20mA<br>I <sub>F</sub> = 200mA   | V <sub>F</sub>  | 370<br>600    |               |               | mV   |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | V <sub>R</sub> = 30V<br>V <sub>R</sub> = 20V<br>V <sub>R</sub> = 10V                    | I <sub>R</sub>  | 5<br>--<br>-- | --<br>5<br>-- | --<br>--<br>5 | uA   |
| Typical Diode Capacitance                               | V <sub>R</sub> = 0V, f=1MHz   | C <sub>D</sub>  | 50            |               |               | pF   |
| Reverse Recovery time                                   | I <sub>rr</sub> =20mA,<br>I <sub>R</sub> =I <sub>F</sub> =200mA<br>R <sub>L</sub> =100Ω | trr             | 10            |               |               | nS   |

**RATING AND CHARACTERISTIC CURVES**  
**SD103AW, BW, CW**



**Device Marking :**

| Device P/N | Marking | Equivalent Circuit Diagram |
|------------|---------|----------------------------|
| SD103AW    | S4      |                            |
| SD103BW    | S5      |                            |
| SD103CW    | S6      |                            |

## **Important Notice and Disclaimer**

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## New Marking Rule Notification

Range: In order to have well management in process control, the new marking rule is applied to small signal device including Switching Diode, Transistor and Schottky Diode.

Package: SOD-123 / SOD-323 / SOD-523

