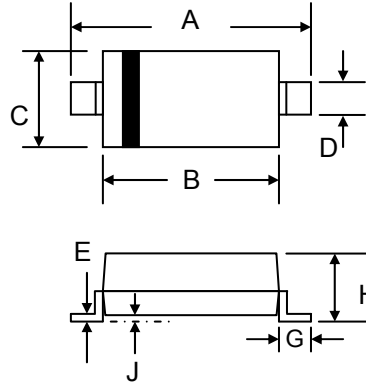


## Features

- Low Forward Voltage
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



| SOD-123              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 3.60 | 3.90 |
| B                    | 2.50 | 2.80 |
| C                    | 1.40 | 1.80 |
| D                    | 0.30 | 0.78 |
| E                    | —    | 0.25 |
| G                    | 0.15 | —    |
| H                    | 0.95 | 1.35 |
| J                    | —    | 0.15 |
| All Dimensions in mm |      |      |

## Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

## Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic  | Symbol         | SD103AW     | SD103BW | SD103CW | Unit             |
|---|----------------|-------------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage                               | $V_{RRM}$      | 40          | 30      | 20      | V                |
| Working Peak Reverse Voltage                                  | $V_{RWM}$      |             |         |         |                  |
| DC Blocking Voltage   | $V_R$          |             |         |         |                  |
| Forward Continuous Current                                    | $I_F$          | 350         |         |         | mA               |
| Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{s}$ | $I_{FSM}$      | 1.5         |         |         | A                |
| Operating and Storage Temperature Range                       | $T_J, T_{STG}$ | -55 to +125 |         |         | $^\circ\text{C}$ |

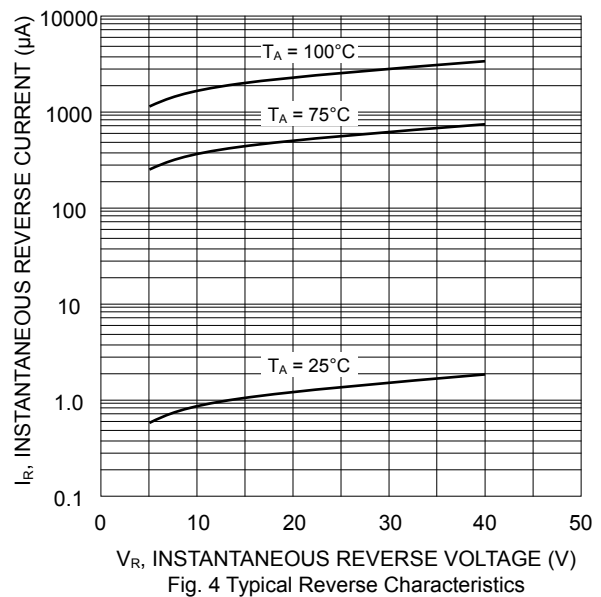
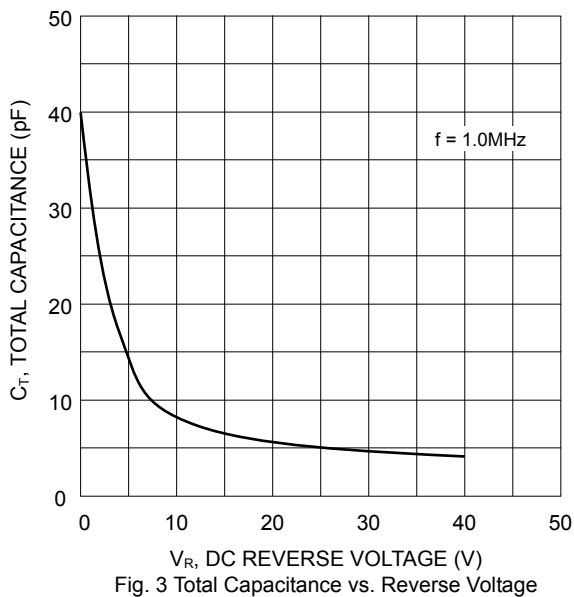
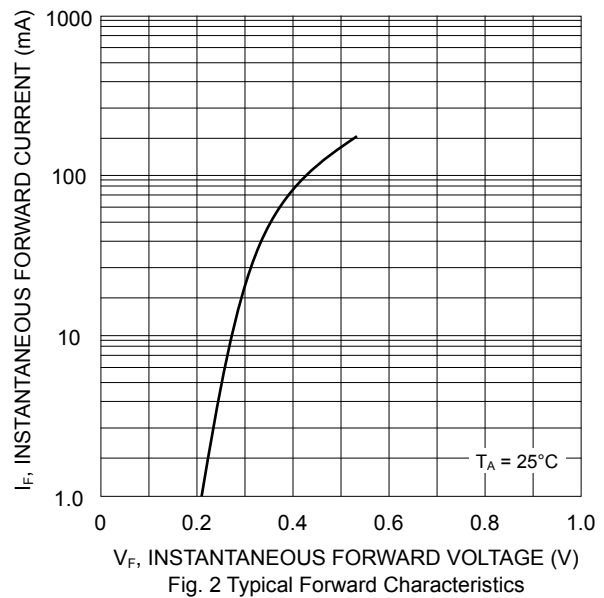
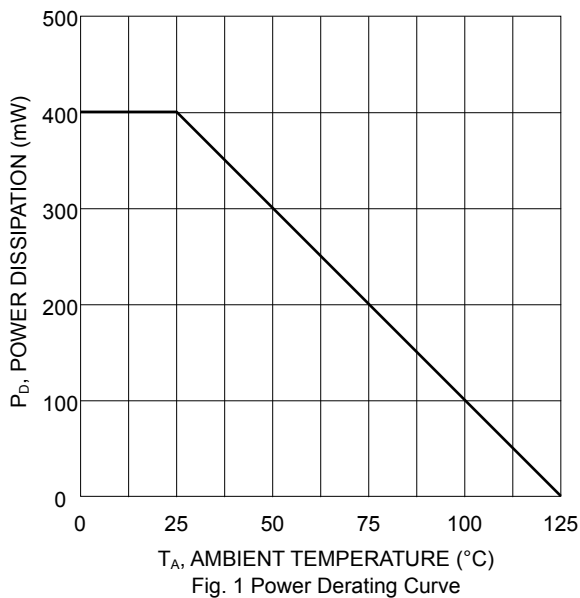
## Thermal Characteristics

| Characteristic                                   | Symbol   | SD103AW | SD103BW | SD103CW | Unit               |
|--|----------|---------|---------|---------|--------------------|
| Power Dissipation (Note 1)                       | $P_D$    | 400     |         |         | mW                 |
| Thermal Resistance, Junction to Ambient (Note 1) | $R_{JA}$ | 300     |         |         | $^\circ\text{C/W}$ |

Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

## Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic   | Symbol     | SD103AW      | SD103BW | SD103CW | Unit          |
|--|------------|--------------|---------|---------|---------------|
| Min. Reverse Breakdown Voltage @ $I_R = 10\mu\text{A}$   | $V_{(BR)}$ | 40           | 30      | 20      | V             |
| Max. Forward Voltage Drop @ $I_F = 20\text{mA}$<br>@ $I_F = 200\text{mA}$                            | $V_{FM}$   | 0.37<br>0.60 |         |         | V             |
| Peak Reverse Leakage Current @ 80% DC Blocking Voltage   | $I_{RM}$   | 5.0          |         |         | $\mu\text{A}$ |
| Diode Capacitance ( $V_R = 0\text{V}$ , $f = 1.0\text{MHz}$ )  | $C_D$      | 50           |         |         | pF            |
| Reverse Recovery Time ( $I_F = I_R = 200\text{mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\Omega$ ) | $t_{rr}$   | 10           |         |         | nS            |



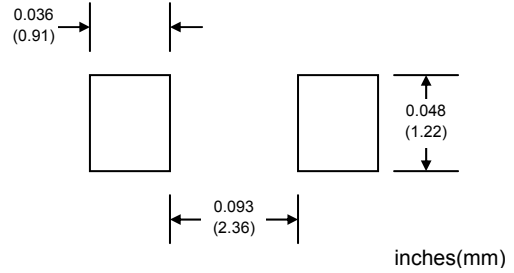
## MARKING INFORMATION



xx = Device Code, See Table Below

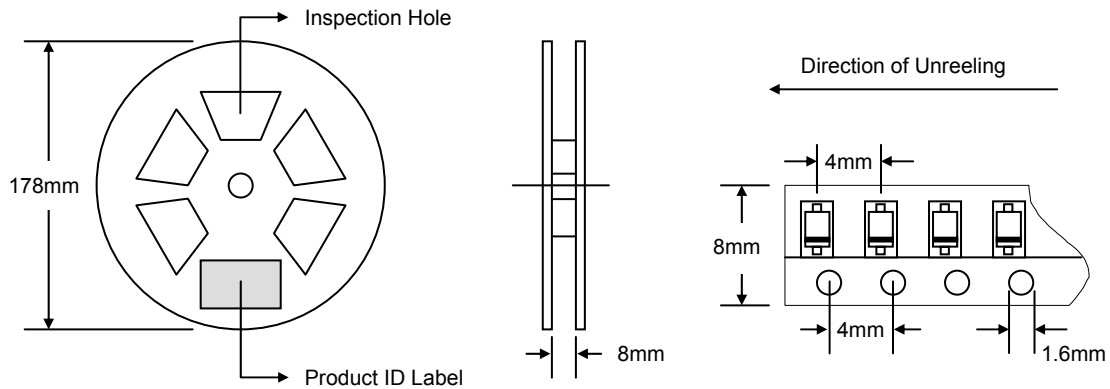
| Mfg Site | SD103AW | SD103BW | SD103CW |
|----------|---------|---------|---------|
| TW Plant | S6      | S7      | S8      |
| CN Plant | S4      | S5      | S6      |

## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL




| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 178                | 3,000          | 187 x 187 x 65                | 15,000         | 390 x 240 x 420            | 150,000        | 10.0                      |

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| SD103AW-T1  | SOD-123      | 3000/Tape & Reel  |
| SD103BW-T1  | SOD-123      | 3000/Tape & Reel  |
| SD103CW-T1  | SOD-123      | 3000/Tape & Reel  |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, SD103AW-T1-LF.**

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*We power your everyday.*