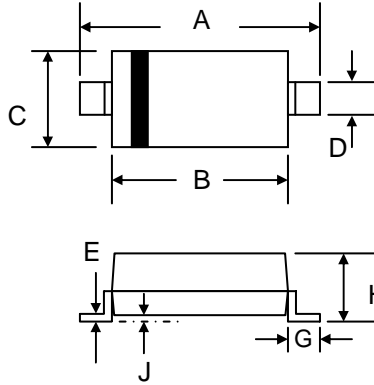


Features

- 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-123 | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 3.6 | 3.9 |
| B | 2.5 | 2.8 |
| C | 1.4 | 1.8 |
| D | 0.5 | 0.7 |
| E | — | 0.2 |
| G | 0.4 | — |
| H | 0.95 | 1.35 |
| J | — | 0.12 |
| 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 (Note 1) | I_F | 350 | | | mA |
| Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{s}$ | I_{FSM} | 2.0 | | | A |
| Power Dissipation | P_d | 410 | | | mW |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 300 | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +125 | | | $^\circ\text{C}$ |

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

| Characteristic | Symbol | All Types | Unit | Test Condition |
|-------------------------------|----------|--------------|---------------|---|
| Forward Voltage Drop | V_{FM} | 0.37 0.60 | V | @ $I_F = 20\text{mA}$ @ $I_F = 200\text{mA}$ |
| Peak Reverse Leakage Current | I_{RM} | 5.0 | μA | @ Rated DC Blocking Voltage |
| Typical Junction Capacitance | C_j | 50 | pF | $V_R = 0\text{V}, f = 1.0\text{MHz}$ |
| Typical Reverse Recovery Time | t_{rr} | 10 | nS | $I_F = I_R = 50\text{mA}$ to 200mA $I_{RR} = 0.1 \times I_R, R_L = 100\Omega$ |

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

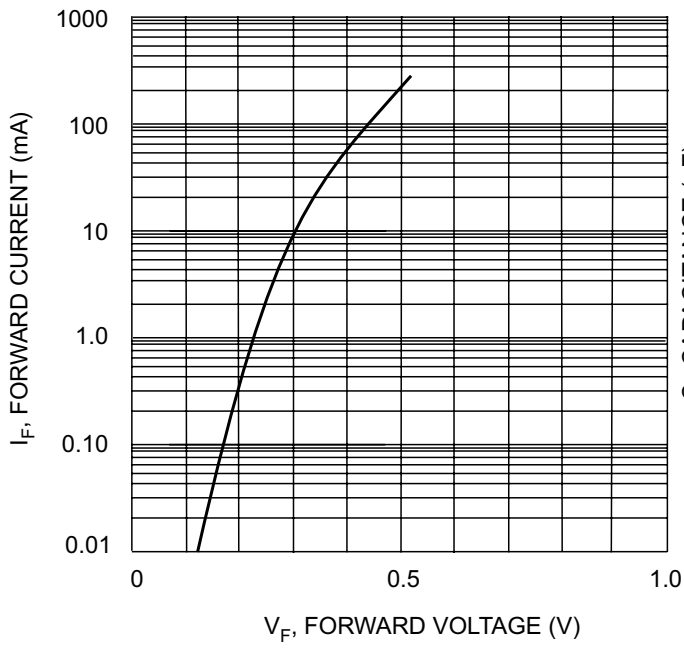


Fig. 1 Typical Forward Characteristics

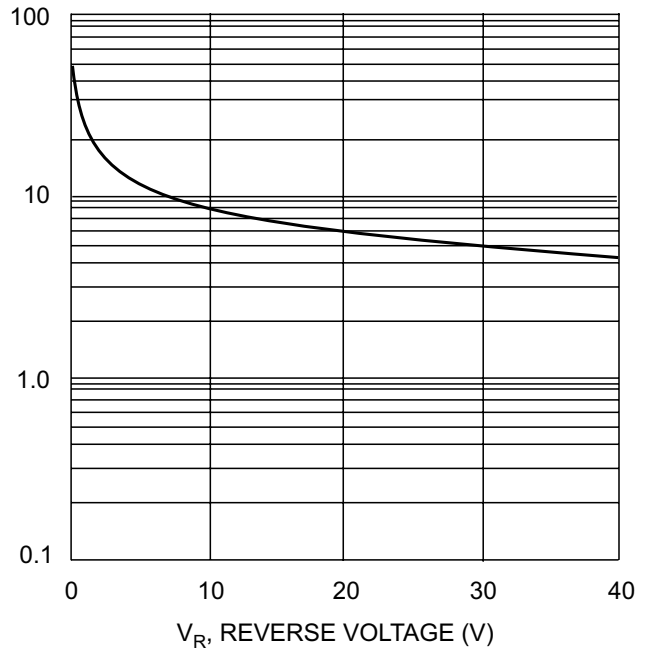


Fig. 2 Typ. Junction Capacitance vs Reverse Voltage

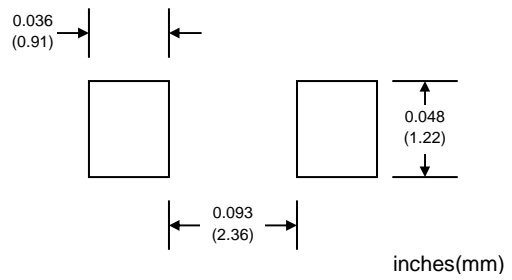
MARKING INFORMATION



xx = Device Code, See Table Below

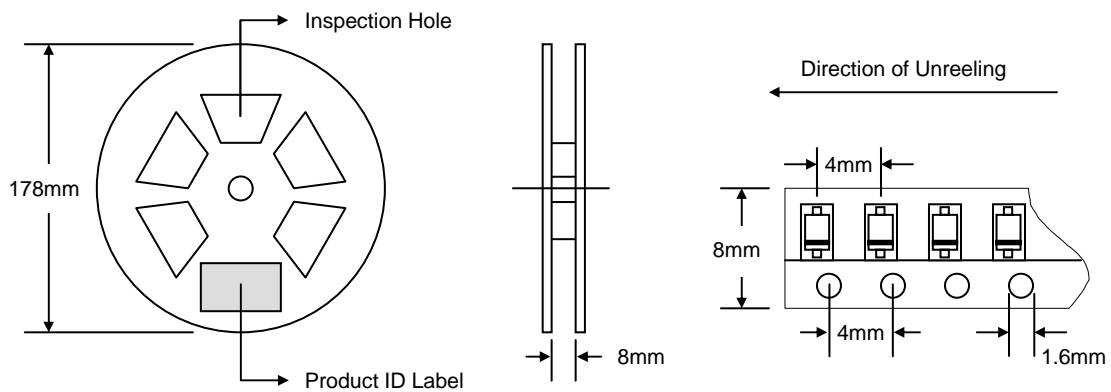
| Mfg Site | SD103AW | SD103BW | SD103CW |
|----------|---------|---------|---------|
| TW Plant | S6 | S7 | S8 |
| CN Plant | S4 | S5 | S6 |

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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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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