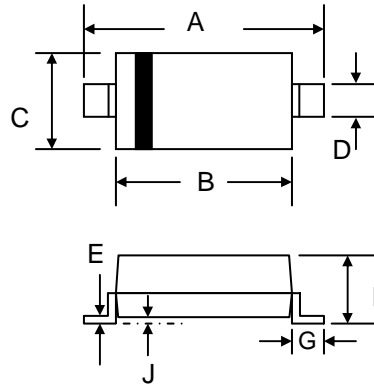


## SURFACE MOUNT FAST SWITCHING DIODE

### Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



| SOD-323              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.30 | 2.75 |
| B                    | 1.60 | 1.80 |
| C                    | 1.15 | 1.35 |
| D                    | 0.25 | 0.40 |
| E                    | 0.09 | 0.18 |
| G                    | 0.20 | 0.40 |
| H                    | 0.80 | 1.00 |
| J                    | —    | 0.12 |
| 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: 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          | 1N4148WS                      | Unit               |
|--|-----------------|-------------------------------|--------------------|
| Non-Repetitive Peak Reverse Voltage                          | $V_{RM}$        | 100                           | V                  |
| Peak Repetitive Reverse Voltage                              | $V_{RRM}$       | 75                            | V                  |
| Working Peak Reverse Voltage                                 | $V_{RWM}$       |                               |                    |
| DC Blocking Voltage  | $V_R$           |                               |                    |
| RMS Reverse Voltage  | $V_{R(RMS)}$    | 53                            | V                  |
| Forward Continuous Current (Note 1)                          | $I_{FM}$        | 300                           | mA                 |
| Average Rectified Output Current (Note 1)                    | $I_O$           | 150                           | mA                 |
| Non-Repetitive Peak Forward Surge Current                    | $I_{FSM}$       | @ $t = 1.0\mu\text{s}$<br>2.0 | A                  |
|  |                 | @ $t = 1.0\text{s}$<br>1.0    |                    |
| Power Dissipation (Note 1)                                   | $P_d$           | 200                           | mW                 |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 625                           | K/W                |
| Operating and Storage Temperature Range                      | $T_j, T_{STG}$  | -65 to +150                   | $^{\circ}\text{C}$ |

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

| Characteristic  | Symbol   | 1N4148WS | Unit          |
|---|----------|----------|---------------|
| Forward Voltage Drop @ $I_F = 10\text{mA}$                          | $V_{FM}$ | 1.0      | V             |
| Peak Reverse Leakage Current @ $V_R = 75\text{V}$                   | $I_{RM}$ | 2.5      | $\mu\text{A}$ |
| Junction Capacitance ( $V_R = 0\text{V DC}$ , $f = 1.0\text{MHz}$ ) | $C_j$    | 2.0      | pF            |
| Reverse Recovery Time (Note 2)                                      | $t_{rr}$ | 4.0      | nS            |

Note: 1. Valid provided that terminals are kept at ambient temperature.  
 2. Measured with  $I_F = I_R = 10\text{mA}$ ,  $I_{RR} = 0.1 \times I_R$ ,  $R_L = 100\Omega$ .

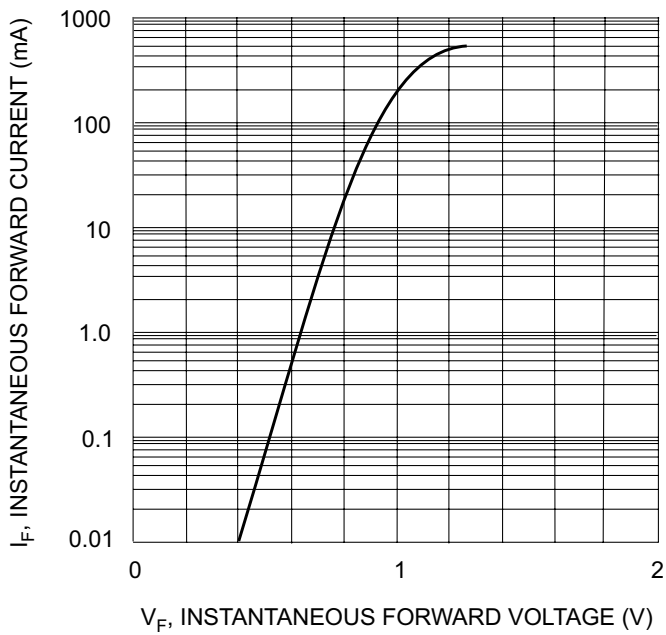


Fig. 1 Forward Characteristics

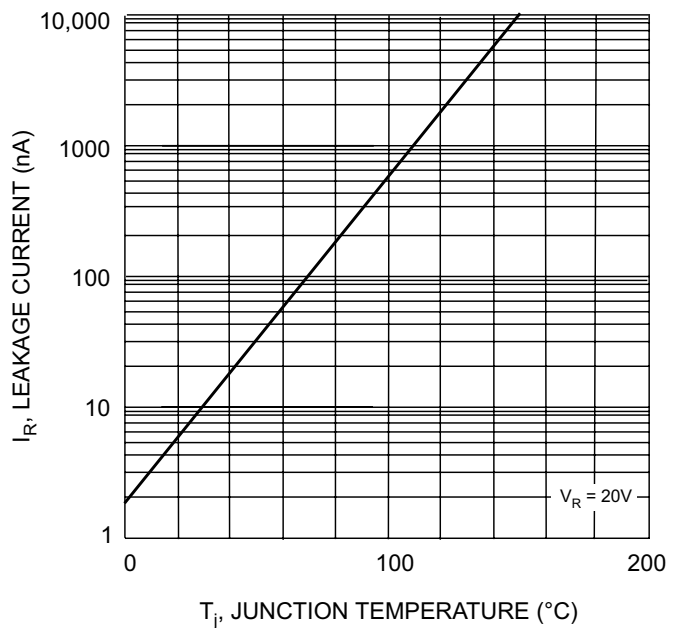


Fig. 2 Leakage Current vs Junction Temperature

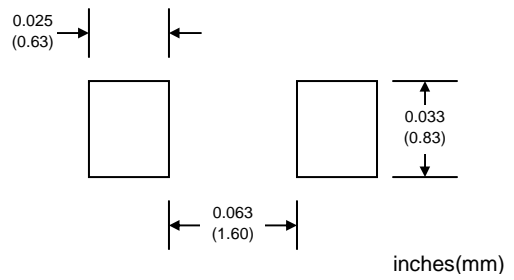
## MARKING INFORMATION



xx = Device Code, See Table Below

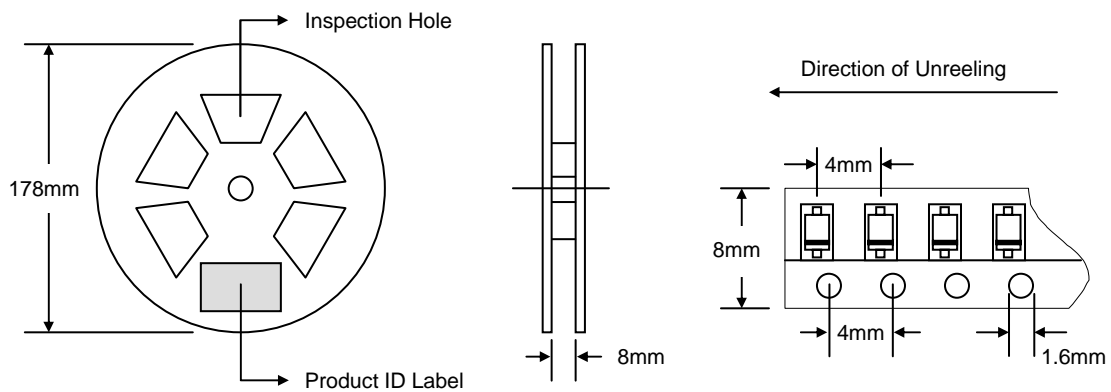
| Mfg Site | Device Code |
|----------|-------------|
| TW Plant | A2          |
| CN Plant | T4          |

## 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        | 7.0                       |

**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 |
|-------------|--------------|-------------------|
| 1N4148WS-T1 | SOD-323      | 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, 1N4148WS-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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*We power your everyday.*