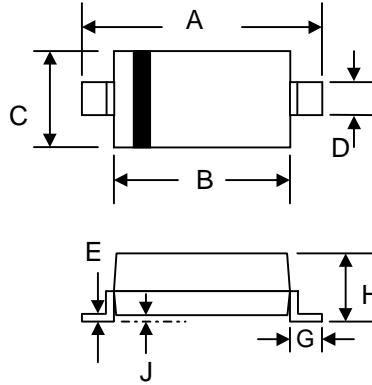


SURFACE MOUNT FAST SWITCHING DIODE

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-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: A2

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

| Characteristic | Symbol | Value | Unit |
|---|---------------------------------|-------------|------------------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 75 | V |
| 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 @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$ | I_{FSM} | 2.0 1.0 | A |
| Power Dissipation (Note 1) | P_d | 410 | mW |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 315 | 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 | Value | Unit |
|---|----------|-----------|---------------------|
| Forward Voltage Drop @ $I_F = 10\text{mA}$ | V_{FM} | 1.0 | V |
| Peak Reverse Leakage Current @ $V_R = 20\text{V}$ @ $V_R = 75\text{V}$ | I_{RM} | 25 5.0 | nA μA |
| Typical 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 $I_F = I_R = 10\text{mA}$, $I_{RR} = 0.1 \times I_R$, $R_L = 100\Omega$.

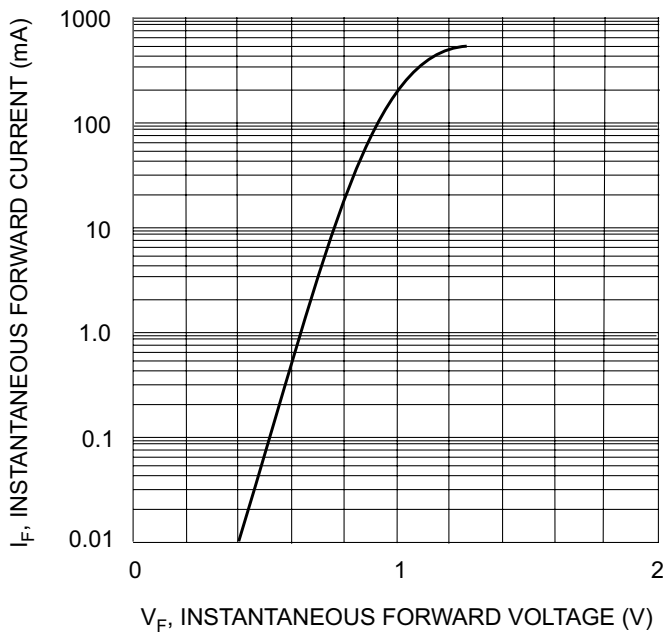


Fig. 1 Forward Characteristics

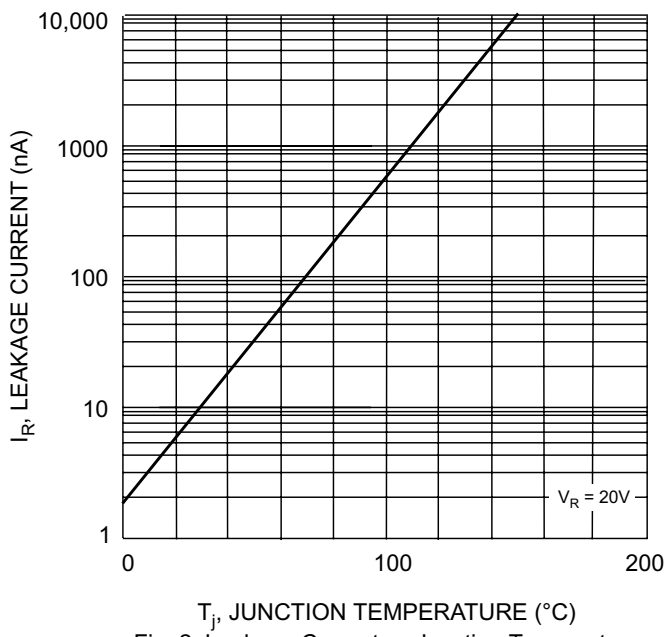


Fig. 2 Leakage Current vs Junction Temperature

ORDERING INFORMATION

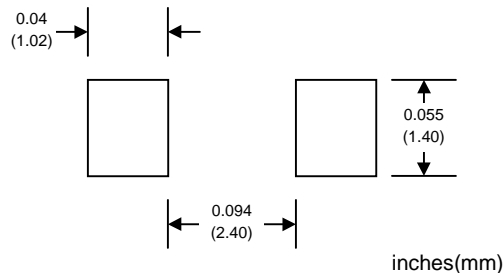
| Product No.♦ | Package Type | Shipping Quantity |
|-------------------|--------------|-------------------|
| 1N4148W-T1 | SOD-123 | 3000/Tape & Reel |
| 1N4148W-T3 | SOD-123 | 10000/Tape & Reel |

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



Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

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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