



**THE DATASHEET OF  
1N4448WT/R**



## 1N4448W SURFACE MOUNT FAST SWITCHING DIODE

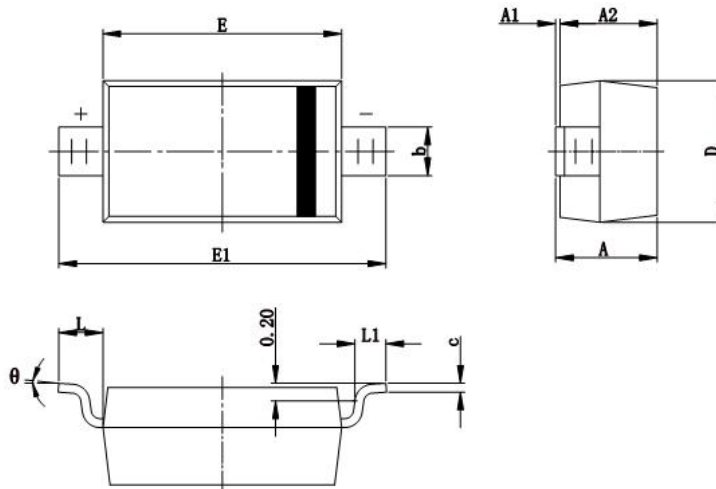
### Features:

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching Application
- Plastic Material –UL Recognition Flammability Classification 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### 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: T5

### Mechanical Dimensions: In mm / Inches



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.050                     | 1.250 | 0.041                | 0.049 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 1.050                     | 1.150 | 0.041                | 0.045 |
| b      | 0.450                     | 0.650 | 0.018                | 0.026 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| E      | 2.600                     | 2.800 | 0.102                | 0.110 |
| E1     | 3.550                     | 3.850 | 0.140                | 0.152 |
| L      | 0.500 REF                 |       | 0.020 REF            |       |
| L1     | 0.250                     | 0.450 | 0.010                | 0.018 |
| θ      | 0°                        |       | 8°                   |       |

### SOD-123(CJ)

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

**Ordering Information:**

| Device  | Package          | Shipping       |
|---------|------------------|----------------|
| 1N4448W | SOD-123(Pb-Free) | 3000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

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

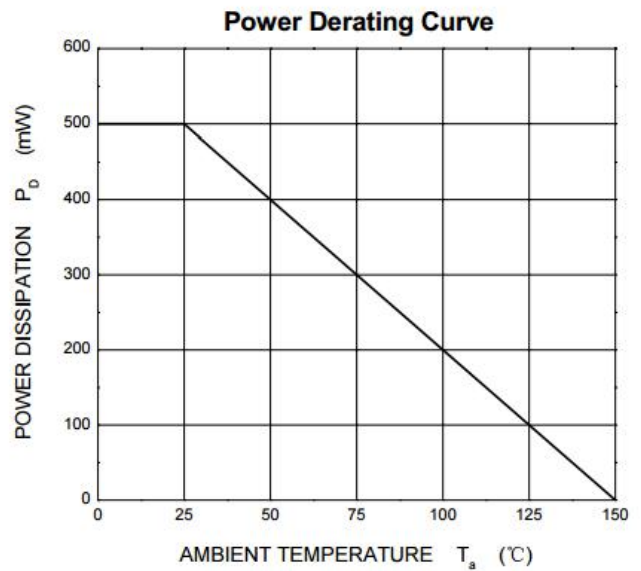
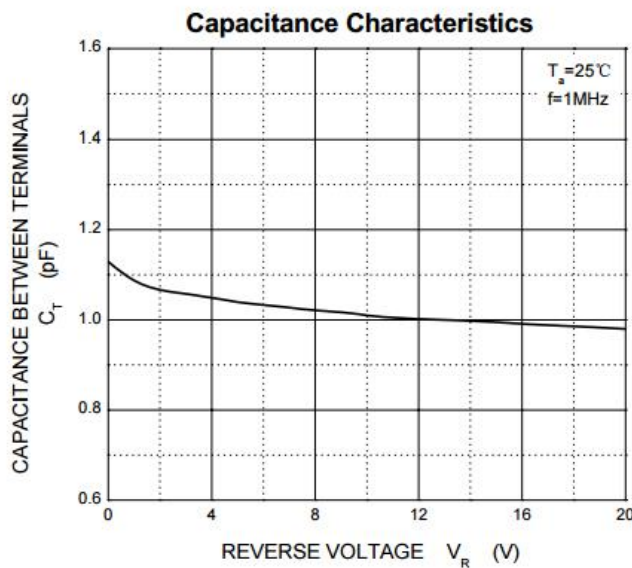
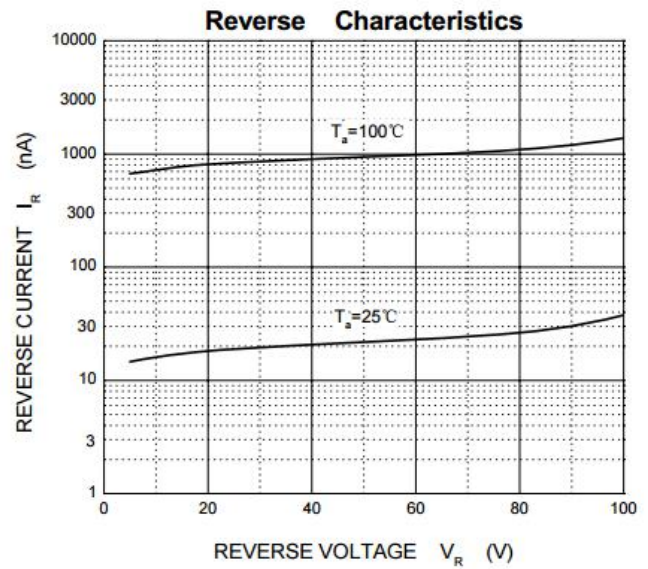
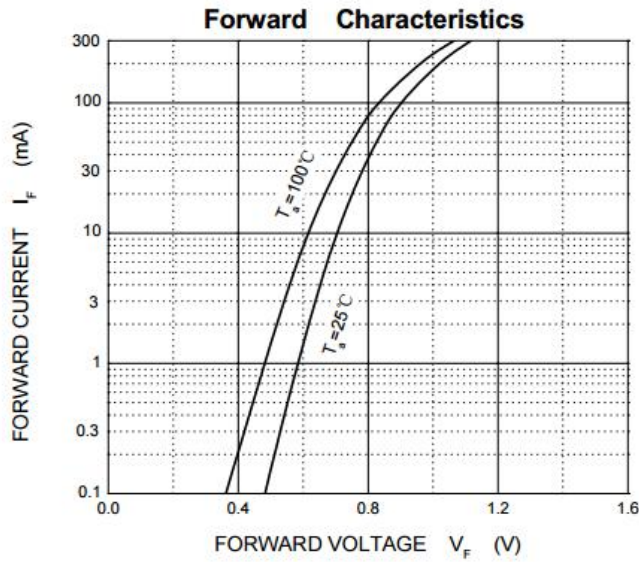
| Characteristic   | Symbol                          | 1N4448W     | Unit               |
|--|---------------------------------|-------------|--------------------|
| Non-Repetitive Peak Reverse Voltage  | $V_{RM}$                        | 100         | V                  |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 75          | V                  |
| RSM Reverse Voltage  | $V_{R(RMS)}$                    | 53          | V                  |
| Forward Continuous Current(Note 1)   | $I_F$                           | 500         | mA                 |
| Average Rectified Output Current(Note 1)   | $I_O$                           | 250         | mA                 |
| Peak Forward Surge Current<br>@ $t=1.0\mu\text{s}$<br>@ $t=1.0\text{s}$                | $I_{FSM}$                       | 4.0<br>2.0  | A                  |
| Power Dissipation(Note 1)  | $P_d$                           | 500         | mW                 |
| Typical Thermal Resistance, Junction to Ambient<br>Air(Note 1)                         | $R_{\theta JA}$                 | 357         | 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   | 1N4448W     | Unit     |
|---|----------|-------------|----------|
| Forward Voltage<br>@ $I_F=5\text{mA}$<br>@ $I_F=10\text{mA}$        | $V_{FM}$ | 0.72<br>1.0 | V        |
| Reverse Leakage Current<br>@ $V_R=20\text{V}$<br>@ $V_R=75\text{V}$ | $I_{RM}$ | 25<br>5.0   | nA<br>uA |
| Junction Capacitance ( $V_R=0\text{V}$ , $f=1.0\text{MHz}$ )        | $C_j$    | 4.0         | 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  $I_F=I_R=10\text{mA}$ ,  $I_{RR}=0.1 \times I_R$ ,  $R_L=100\Omega$

### Typical Characteristics





**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View 1N4448WT/R on WIN SOURCE](#)
-  [SMC Diode Solutions](#) Information

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management