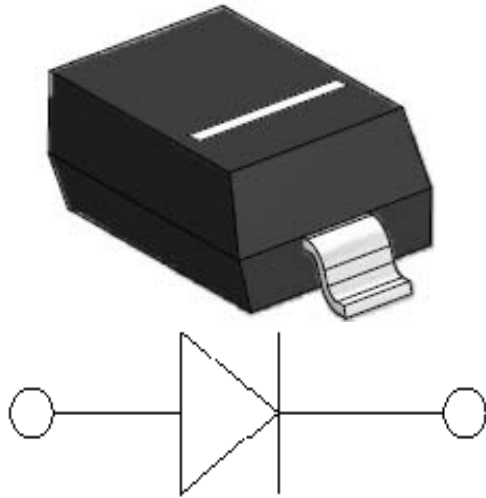


## High Speed Switching Diode



### Features

- $V_R$  75V
- $I_{FAV}$  250mA

### Typical Applications

- Extreme fast switches

### Mechanical Data

- **Package:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** T5

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER                    | SYMBOL     | UNIT                      | Conditions           | VALUE       |
|------------------------------|------------|---------------------------|----------------------|-------------|
| DC Blocking Voltage          | $V_R$      | V                         | $I_R=100\mu\text{A}$ | 75          |
| Peak forward surge current   | $I_{FSM}$  | A                         | $t_p=1\mu\text{s}$   | 2           |
| Average forward current      | $I_{FAV}$  | mA                        |                      | 250         |
| Power dissipation            | $P_{tot}$  | mW                        |                      | 200         |
| Thermal Resistance           | $R_{thJA}$ | $^\circ\text{C}/\text{W}$ |                      | 625         |
| Maximum junction temperature | $T_j$      | $^\circ\text{C}$          |                      | -55 to +150 |
| Storage temperature range    | $T_{stg}$  | $^\circ\text{C}$          |                      | -55 to +150 |

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER                     | SYMBOL   | UNIT          | Conditions                                      | VALUE |
|-------------------------------|----------|---------------|---|-------|
| Maximum Forward voltage       | VF       | V             | $I_F=5.0\text{mA}$                              | 0.720 |
|                               |          |               | $I_F=10\text{mA}$                               | 0.855 |
|                               |          |               | $I_F=100\text{mA}$                              | 1     |
|                               |          |               | $I_F=150\text{mA}$                              | 1.25  |
| Maximum Reverse current       | IR       | nA            | $V_R=20\text{V}$                                | 25    |
|                               |          | $\mu\text{A}$ | $V_R=25\text{V}, T_J=150^\circ\text{C}$         | 30    |
|                               |          | nA            | $V_R=75\text{V}$                                | 200   |
|                               |          | $\mu\text{A}$ | $V_R=75\text{V}, T_J=150^\circ\text{C}$         | 50    |
| Minimum Breakdown voltage     | $V_R$    | V             | $I_R=1\mu\text{A}$                              | 75    |
| Maximum Diode capacitance     | $C_D$    | pF            | $V_R=V_F=0\text{V}, f=1\text{MHz}$              | 4     |
| Maximum Reverse recovery time | $t_{rr}$ | ns            | $I_F=10\text{mA}, I_{rr}=0.1I_R, R_L=100\Omega$ | 4     |



# 1N4448WS

## Ordering Information (Example)

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| 1N4448WS     | F2           | Approximate 0.004 | 3000                 | 30000                   | 120000                     | 7" reel       |

## Characteristics (Typical)

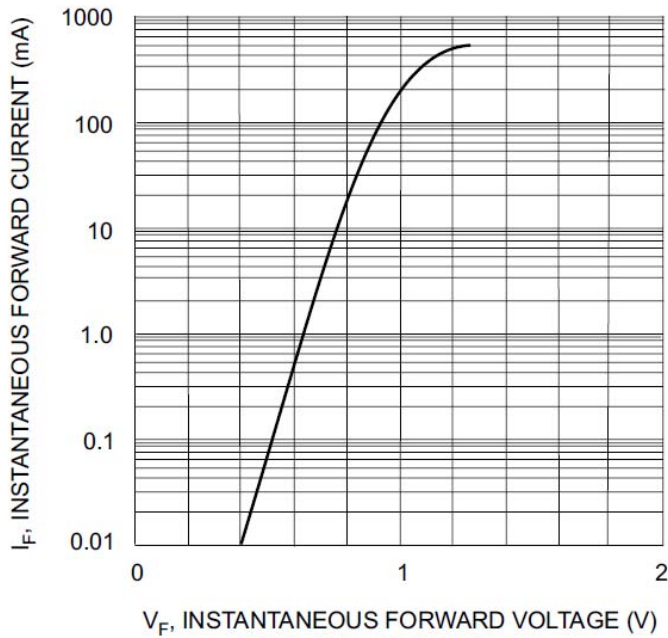


Fig. 1 Forward Characteristics

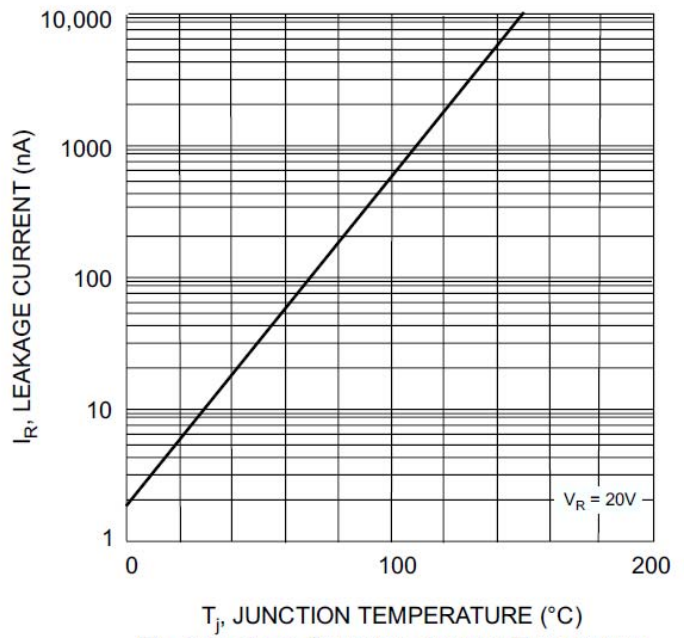
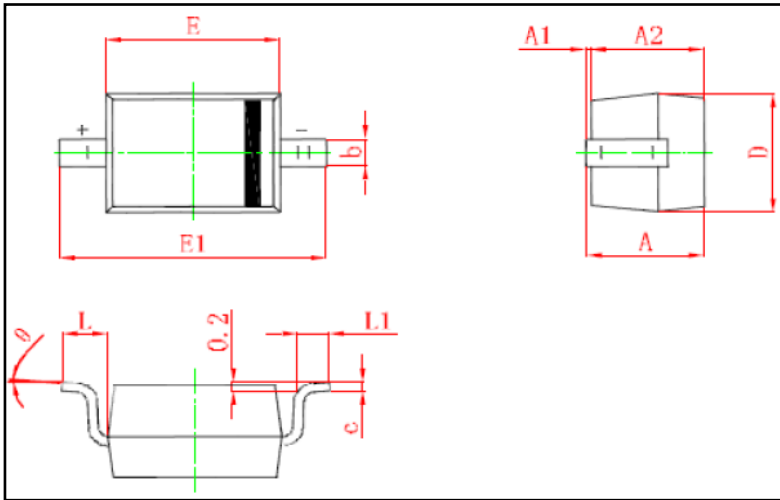


Fig. 2 Leakage Current vs Junction Temperature



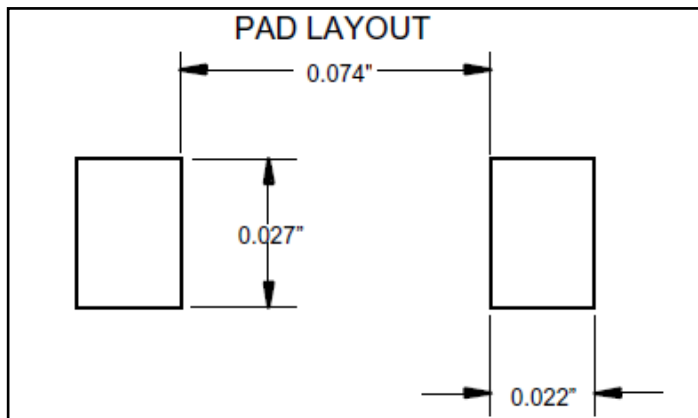
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## ■ Outline Dimensions



| Symbol   | Min. (mm) | Max. (mm) |
|----------|-----------|-----------|
| A        |           | 1.000     |
| A1       | 0.000     | 0.100     |
| A2       | 0.800     | 0.900     |
| b        | 0.250     | 0.400     |
| c        | 0.080     | 0.150     |
| D        | 1.200     | 1.400     |
| E        | 1.600     | 1.800     |
| E1       | 2.500     | 2.700     |
| L        | 0.475REF  |           |
| L1       | 0.250     | 0.400     |
| $\theta$ | 0°        | 8°        |

## ■ Soldering Footprint



Unit: inches



# 1N4448WS

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