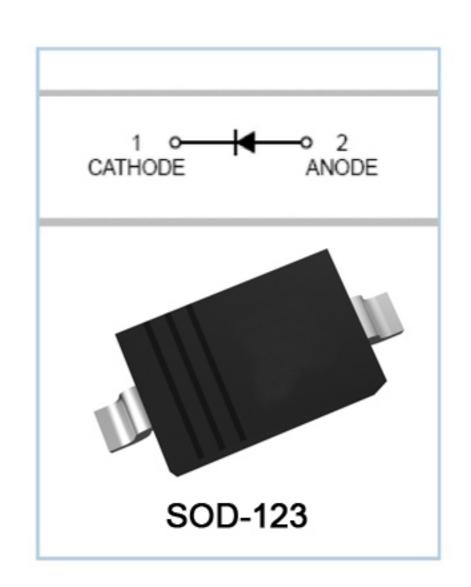


## Fast switching Diode

### **FEATURES**

- Fast Switching Speed.
- Surface Mount Package Ideally Suited For Automatic Insertion.
- For General Purpose Switching Applications
- High Conductance



#### **APPLICATIONS**

Surface mount fast switching diode

#### ORDERING INFORMATION

| Type No. | Marking | Package Code |  |  |
|----------|---------|--------------|--|--|
| 1N4448W  | T5      | SOD-123      |  |  |

# MAXIMUM RATING @ Ta=25℃ unless otherwise specified

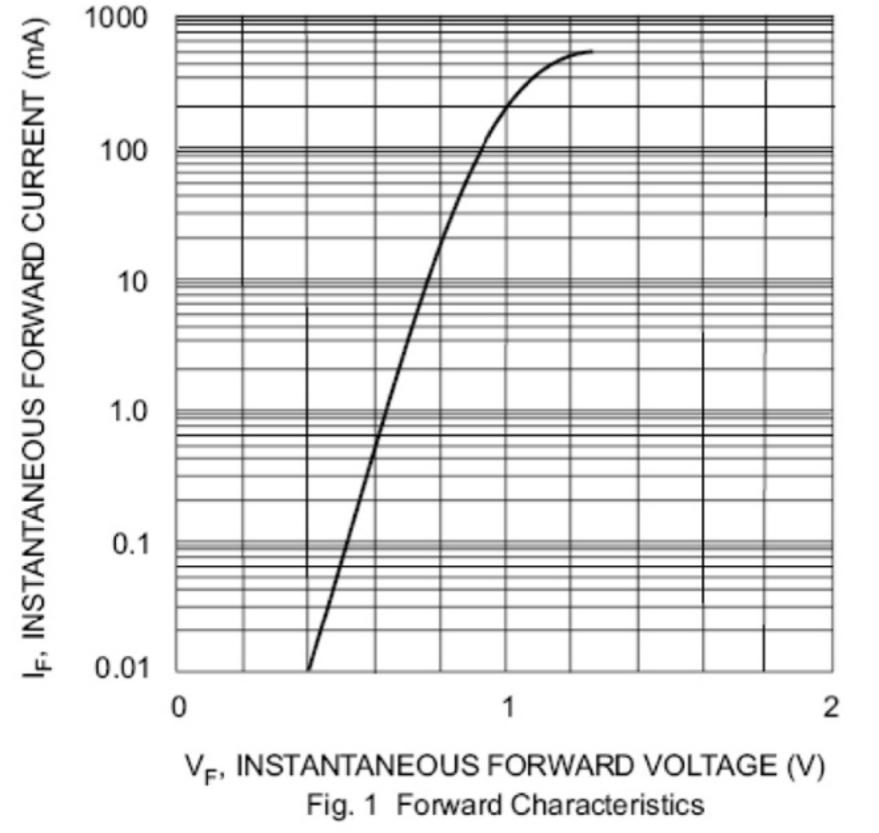
| Characteristic                                      | Symbol              | Value      | Unit                   |
|---|---------------------|------------|------------------------|
| Non-Repetitive Peak Reverse Voltage                 | $V_{RM}$            | 100        | V                      |
| Peak Repetitive Reverse Voltage                     | $V_{RRM}$           | 75         | V                      |
| Working Peak Reverse Voltage                        | V <sub>RWM</sub>    |            |                        |
| DC Reverse Voltage                                  | V <sub>R</sub>      |            |                        |
| RMS Reverse Voltage                                 | V <sub>R(RMS)</sub> | 53         | V                      |
| Forward Continuous Current                          | I <sub>FM</sub>     | 500        | mA                     |
| Average Rectified Output Current                    | Io                  | 250        | mA                     |
| Non-Repetitive Peak Forward Surge Current @t=1.0 µs | I <sub>FSM</sub>    | 4.0        | Α                      |
| @t=1.0 s  |                     | 2.0        |                        |
| Power Dissipation                                   | P <sub>d</sub>      | 350        | mW                     |
| Thermal Resistance Junction to Ambient Air          | R <sub>0JA</sub>    | 357        | °C/W                   |
| Operating and Storage Temperature Rage              | $T_j, T_{STG}$      | -65 to+150 | $^{\circ}\!\mathbb{C}$ |

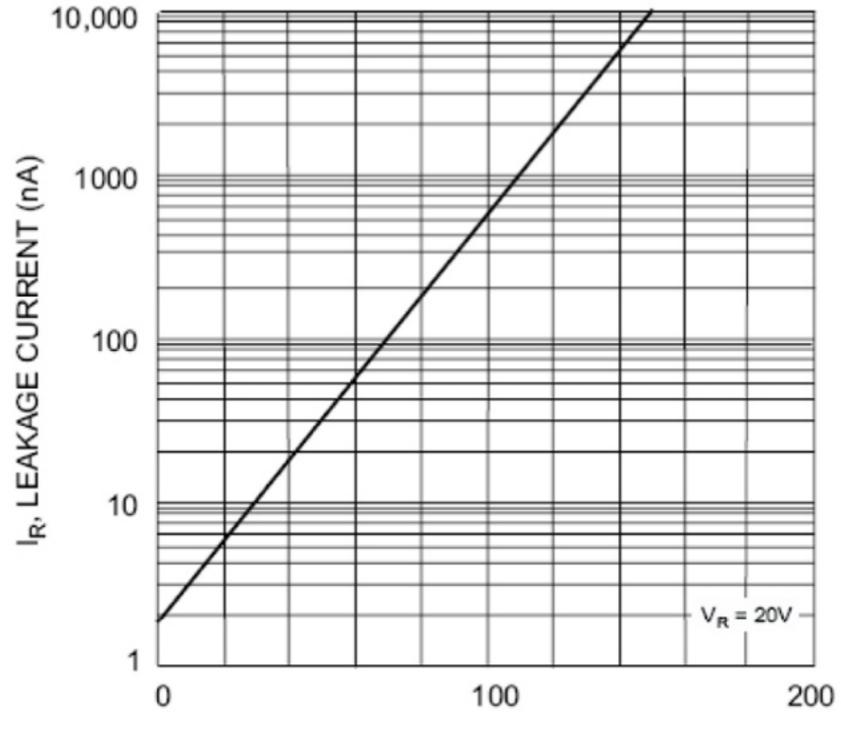


# ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

| Characteristic            | Symbol          | Min  | Max   | Unit | Test Condition  |
|---------------------------|-----------------|------|-------|------|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$     | 75   | -     | V    | I <sub>R</sub> =1.0μA   |
| Forward Voltage           | V <sub>F1</sub> | 0.62 | 0.72  | V    | I <sub>F</sub> =5mA   |
|                           | V <sub>F2</sub> |      | 0.855 |      | I <sub>F</sub> =10mA  |
|                           | $V_{F3}$        |      | 1.0   |      | I <sub>F</sub> =100mA   |
|                           | V <sub>F4</sub> |      | 1.25  |      | I <sub>F</sub> =150mA   |
| Reverse Current           | I <sub>R1</sub> | -    | 2.5   | μΑ   | V <sub>R</sub> =75V   |
|                           | I <sub>R2</sub> |      | 25    | nA   | V <sub>R</sub> =20V   |
| Capacitance between       | Ст              | -    | 4.0   | pF   | V <sub>R</sub> =0,f=1.0MHz                                      |
| terminals                 |                 |      |       |      |   |
| Reverse Recovery Time     | t <sub>rr</sub> | -    | 4.0   | ns   | $I_F = I_R = 10 \text{mA},$                                     |
|                           |                 |      |       |      | $I_F=I_R=10\text{mA},$<br>$I_{rr}=0.1\times I_R, R_L=100\Omega$ |

# TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



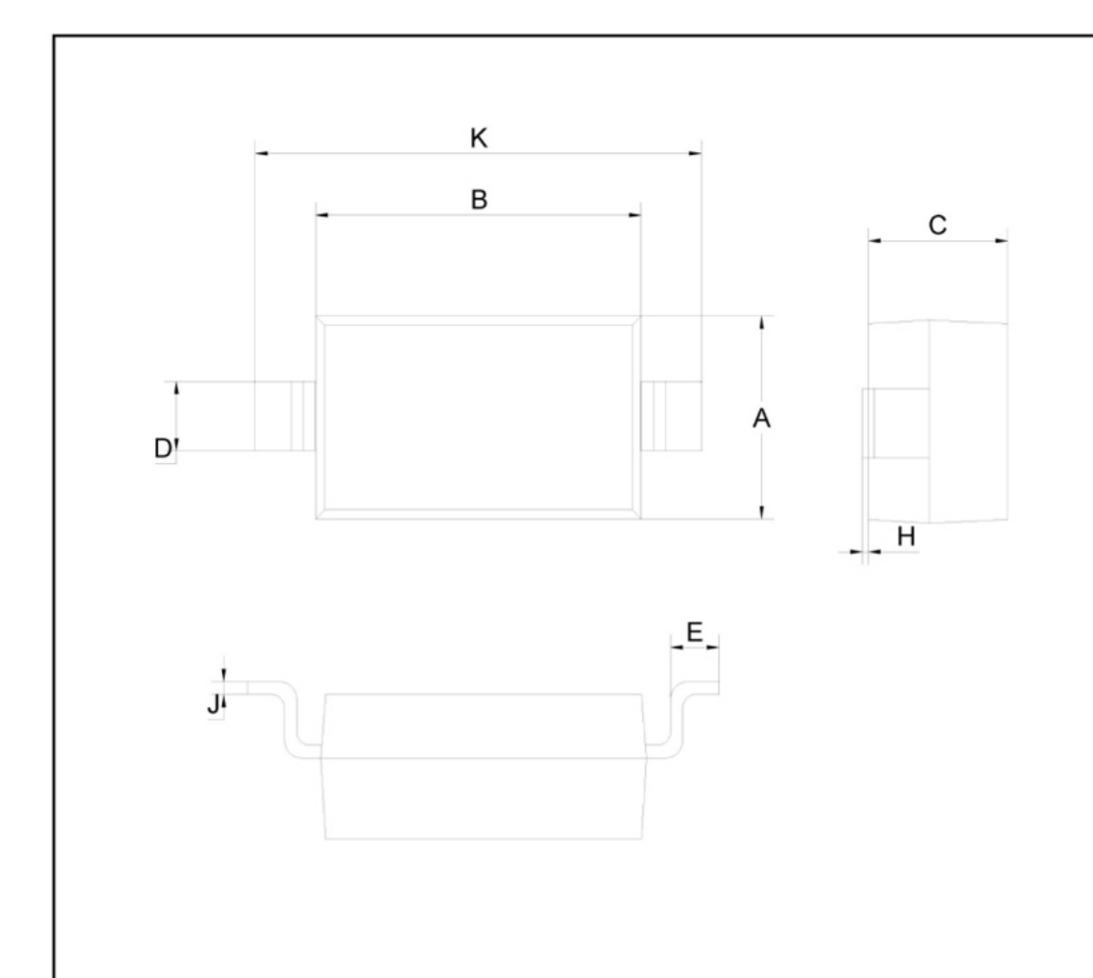


 $T_{j}$ , JUNCTION TEMPERATURE (°C) Fig. 2 Leakage Current vs Junction Temperature



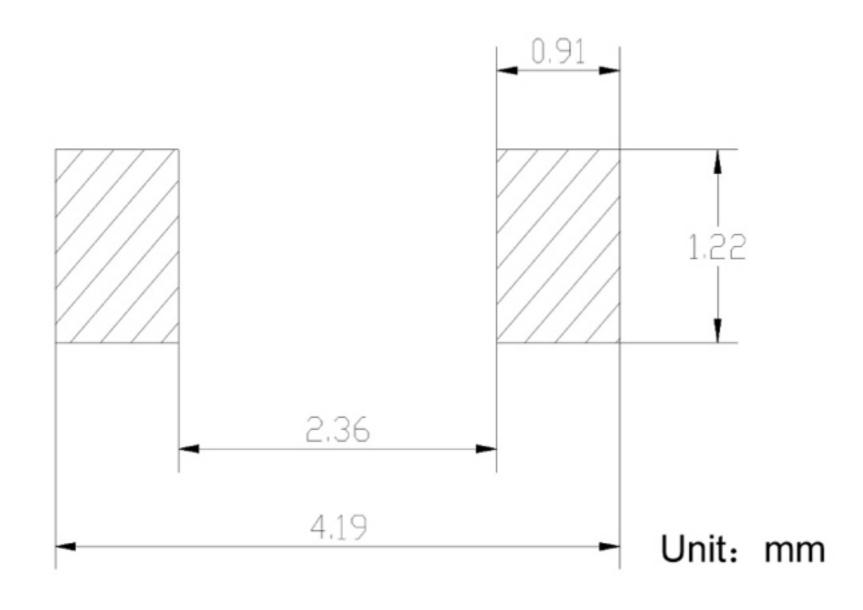
# PACKAGE OUTLINE

#### Plastic surface mounted package



| SOD-123              |              |      |  |
|----------------------|--------------|------|--|
| Dim                  | Min          | Max  |  |
| A                    | 1.4          | 1.8  |  |
| В                    | 2.55 2.85    |      |  |
| С                    | 1.15 Typical |      |  |
| D                    | 0.5          | 0.6  |  |
| Е                    | 0.3          | 0.4  |  |
| Н                    | 0.02 0.10    |      |  |
| J                    | 0.1 Typical  |      |  |
| K                    | 3.55         | 3.85 |  |
| All Dimensions in mm |              |      |  |

# **SOLDERING FOOTPRINT**



# PACKAGE INFORMATION

| Device  | Package | Shipping       |
|---------|---------|----------------|
| 1N4448W | SOD-123 | 3000/Tape&Reel |

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