


# 1N4448W

**Reverse Voltage 100 Volts Forward Current - 0.25Ampere**

## 1. Description

FAST SWITCHING DIODES

## 2. Features

- Small Package
- Low Reverse Current
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion

## 3. Application

- High frequency rectifier
- Signal switching

## 4. Mechanical Data

- Case : JEDEC SOD-123 molded plastic body
- Terminals : Plated leads solderable per MILSTD-750, Method 2026
- Polarity : Polarity symbols marked on case
- Marking: T5

## 5. Absolute Maximum Ratings($T_A$=25°C unless otherwise noted)

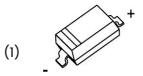
| | | | |
|---|---|---|---|
| Non-Repetitive Peak Reverse Voltage | $V_{RM}$ | 100 | V |
| Peak Repetitive Peak Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 75 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Peak forward surge current (Pulse width=1 s) | $I_{FM}$ | 500 | mA |
| Average forward current | $I_O$ | 250 | mA |
| Non-Repetitive Peak Forward Surge Current @t=1us | $I_{FSM}$ | 2.0 | A |
| Power Dissipation | Pd | 500 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 250 | °C/W |
| Operation Junction and Storage Temperature Range | $T_J$ $T_{stg}$ | -55~+150 | °C |



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## 6. Pinning information

| Pin | Symbol | Description | Simplified outline | Equivalent Circuit | Marking | Package |
|---|---|---|---|---|---|---|
| 1 | - | Cathode |   |   | T5 | SOD-123 |
| 2 | + | Anode | | | | |

## 7. Characteristics($T_A$=25°C unless otherwise noted)

| Parameter | Symbols | Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Forward voltage | $V_{F1}$ | $I_F$=5mA | 0.62 | — | 0.72 | V |
| | $V_{F2}$ | $I_F$=10mA | — | — | 0.855 | V |
| | $V_{F3}$ | $I_F$ =100mA | — | — | 1.0 | V |
| | $V_{F4}$ | $I_F$=150mA | — | — | 1.25 | V |
| Reverse current | $I_{R1}$ | $V_R$=75V | — | — | 2.5 | μA |
| | $I_{R2}$ | $V_R$=20V | — | — | 25 | nA |
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R$ =10μA | 75 | — | — | V |
| Capacitance between terminals | $C_T$ | $V_R$=0V , f=1.0MHz | — | — | 4 | pF |
| Reverse recovery time | $t_{rr}$ | $I_F$=$I_R$=10mA<br>$I_{rr}$=0.1 ×$I_R$ , $R_L$=100Ω | — | — | 4 | ns |

## 8.Typical Characterisitics

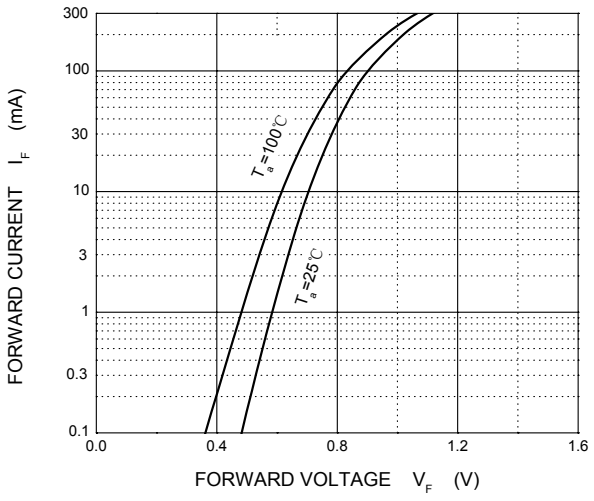



Figure 1. Forward Characteristics

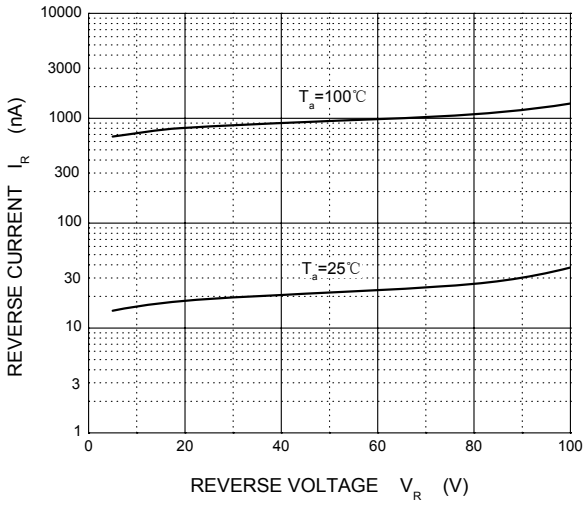



Figure 2. Reverse Characteristics

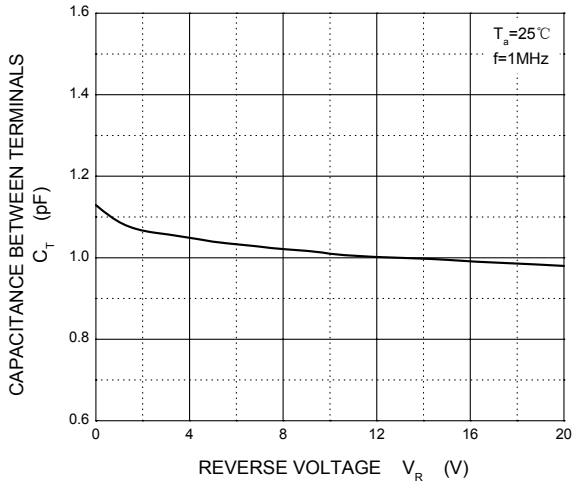



Figure 3. Capacitance Characteristics

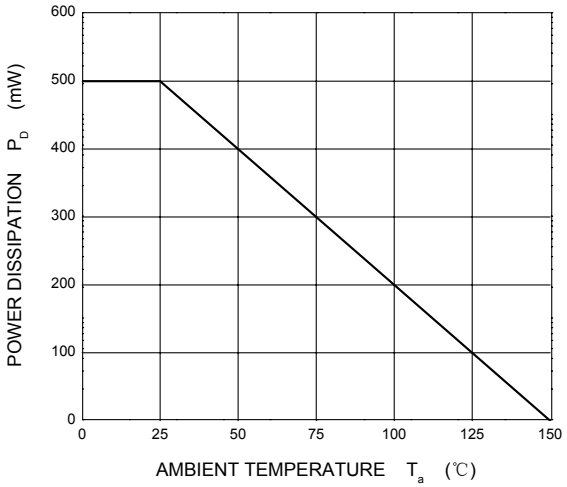
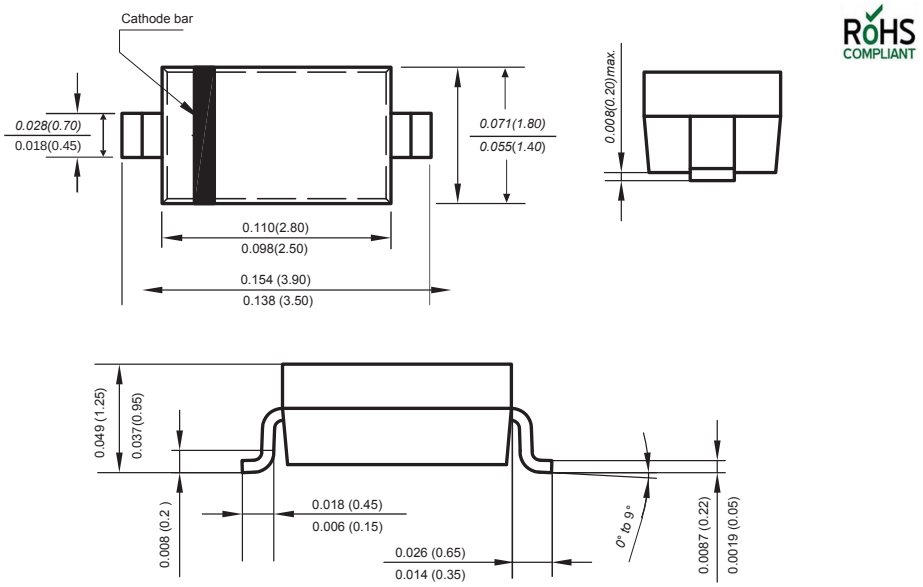



Figure 4. Power Derating Curve

The curve above is for reference only.

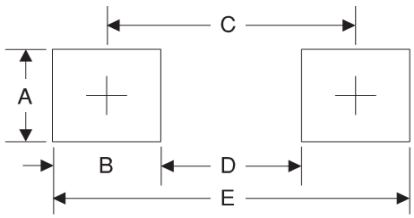
## 9. Outline Drawing

SOD-123 Package Outline Dimensions




Dimensions in inches and (millimeters)

## 10. Suggested Pad Layout




| Symbol | Unit (mm) | Unit (inch) |
|---|---|---|
| A | 1.2 | 0.047 |
| B | 1.2 | 0.047 |
| C | 3.2 | 0.126 |
| D | 2.0 | 0.079 |
| E | 4.4 | 0.173 |

## 11.Important Notice and Disclaimer

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