Micro Commercial Components
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# 1N4148W

## High Speed Switching Diode 500mW

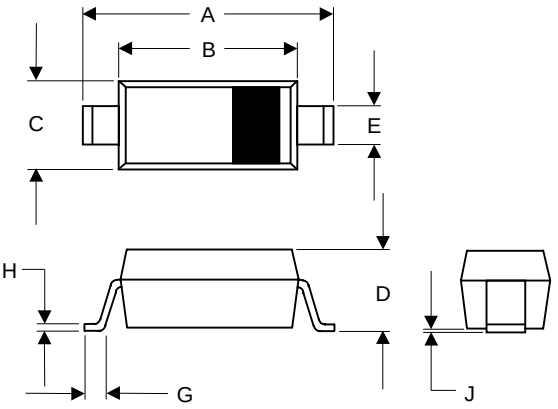
## Features

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

## Mechanical Data

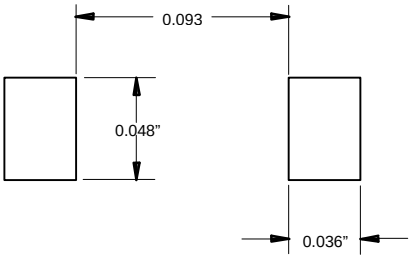
- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Indicated by Cathode Band
- Weight: 0.01 grams ( approx.)

## SOD123




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .140 | .152 | 3.55 | 3.85 | |
| B | .100 | .112 | 2.55 | 2.85 | |
| C | .055 | .071 | 1.40 | 1.80 | |
| D | ----- | .053 | ----- | 1.35 | |
| E | .012 | .031 | 0.30 | .78 | |
| G | .006 | ----- | 0.15 | ----- | |
| H | ----- | .01 | ----- | .25 | |
| J | ----- | .006 | ----- | .15 | |

SUGGESTED SOLDER PAD LAYOUT




### Maximum Ratings @ 25°C Unless Otherwise Specified

| Characteristic | Symbol | Value | Unit |
|---|---|---|---|
| Non-Repetitive Peak Reverse Volt. | $V_{RM}$ | 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 |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Forward Continuous Current(Note1) | $I_{FM}$ | 300 | mA |
| Average Rectified Output Current | Io | 150 | mA |
| Non-Repetitive Peak @ t<=1.0s<br>Forward Surge Current @ t=10us | $I_{FSM}$ | 2<br>1 | A<br>A |
| Power Dissipation(Note 1) | Pd | 500 | mW |
| Thermal Resistance(Note 1) | R | 315 | K/W |
| Operation/Storage Temp. Range | Tj, $T_{STG}$ | -55 to +150 | °C |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Charateristic | Symbol | Max | Unit | Test Cond. |
|---|---|---|---|---|
| Maximum Forward Voltage Drop | $V_{FM}$ | 0.715<br>0.855<br>1<br>1.25 | V | $I_F$=1.0mA<br>$I_F$=10mA<br>$I_F$=50mA<br>$I_F$=150mA |
| Maximum Peak Reverse Current | $I_{RM}$ | 5.0<br>50<br>25 | uA<br>uA<br>nA | $V_R$=75V Tj=25°C<br>$V_R$=25V Tj=150°C<br>$V_R$=20V |
| Junction Capacitance | Cj | 4 | pF | $V_R$=0V, f=1.0MHz |
| Reverse Recovery Time | $t_{rr}$ | 4 | ns | $I_F$=$I_R$=50mA, $I_{rr}$=0.1$I_R$, $R_L$=100 OHM |

**Note**: 1. Valid provided that terminals are kept at ambient temperature

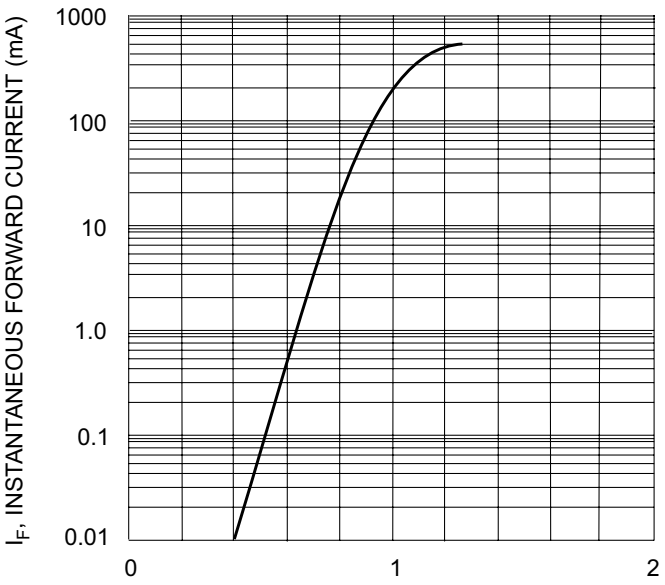



Fig. 1 Forward Characteristics

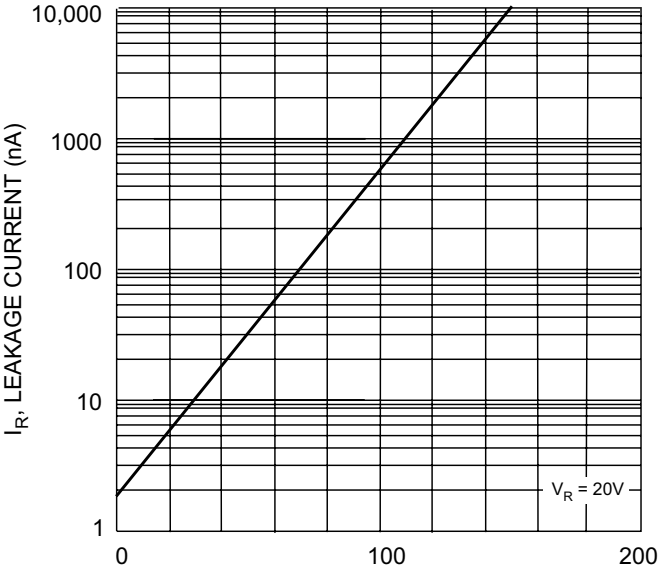



Fig. 2 Leakage Current vs Junction Temperature