# SOD-123 Plastic-Encapsulate Diode

**1N4148W** FAST SWITCHING Diode


**FEATURES**

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

**MARKING: T4**

**Maximum Ratings and Electrical Characteristics, Single Diode @$T_A$=25℃**

| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| 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 |
| Forward Continuous Current | $I_{FM}$ | 300 | mA |
| Average Rectified Output Current | $I_O$ | 150 | mA |
| Peak forward surge current @=1.0μs<br>@=1.0s | $I_{FSM}$ | 2.0<br>1.0 | A |
| Power Dissipation | Pd | 400 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 315 | ℃/W |
| Junction temperature | $T_j$ | 125 | ℃ |
| Storage temperature | $T_{STG}$ | -65~+150 | ℃ |

**Electrical Ratings @$T_A$=25℃**

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---|---|---|---|---|---|---|
| Forward voltage | $V_{F1}$ | | | 0.715 | V | $I_F$=1mA |
| | $V_{F2}$ | | | 0.855 | V | $I_F$=10mA |
| | $V_{F3}$ | | | 1.0 | V | $I_F$=50mA |
| | $V_{F4}$ | | | 1.25 | V | $I_F$=150mA |
| Reverse current | $I_{R1}$ | | | 1 | μA | $V_R$=75V |
| | $I_{R2}$ | | | 25 | nA | $V_R$=20V |
| Capacitance between terminals | $C_T$ | | | 2 | pF | $V_R$=0V,f=1MHz |
| Reverse Recovery Time | $t_{rr}$ | | | 4 | ns | $I_F$=$I_R$=10mA<br>Irr=0.1X$I_R$,$R_L$=100Ω |

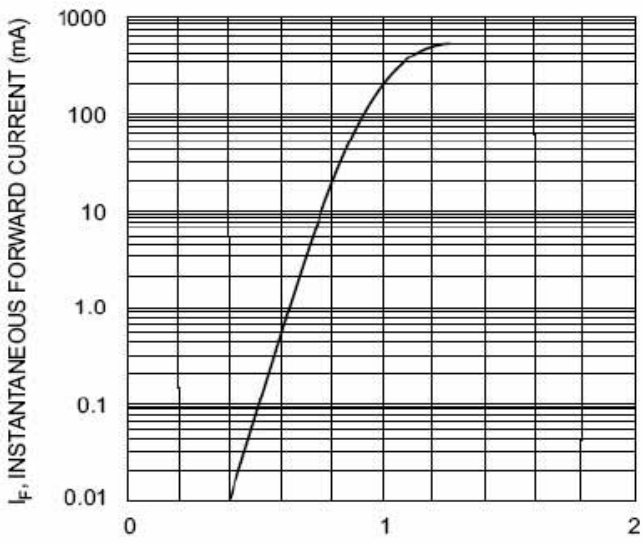


Fig. 1 Forward Characteristics

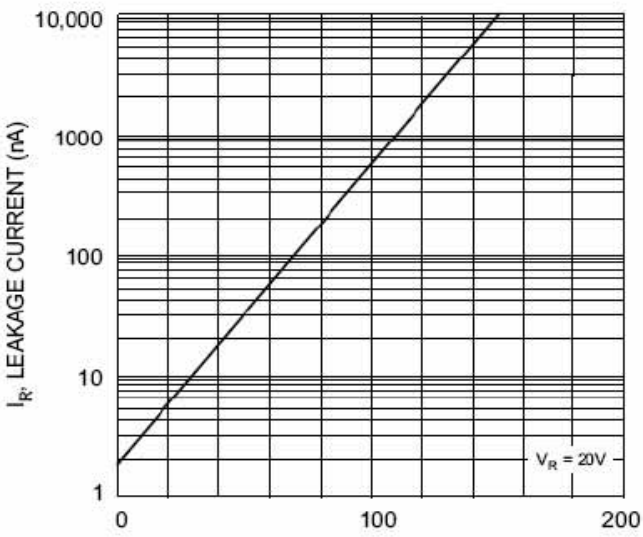


Fig. 2 Leakage Current vs Junction Temperature