

SOD-523 Plastic-Encapsulate Diodes

1N4148WT FAST SWITCHING DIODES

SOD-523



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 @ $T_A=25^\circ\text{C}$

| Parameter | Symbol | Limits | Unit |
|--|-----------------|------------|------------------|
| Non-Repetitive Peak reverse voltage | V_{RM} | 100 | V |
| Peak Repetitive Peak reverse voltage | V_{RRM} | 75 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Forward Continuous Current | I_{FM} | 250 | mA |
| Average Rectified Output Current | I_O | 125 | mA |
| Peak forward surge current @=1.0 μs @=1.0s | I_{FSM} | 2.0 1.0 | A |
| Power Dissipation | P_d | 150 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 625 | K/W |
| Junction temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage temperature | T_{STG} | -65~+150 | $^\circ\text{C}$ |

Electrical Ratings @ $T_A=25^\circ\text{C}$

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

Typical Characteristics

1N4148WT

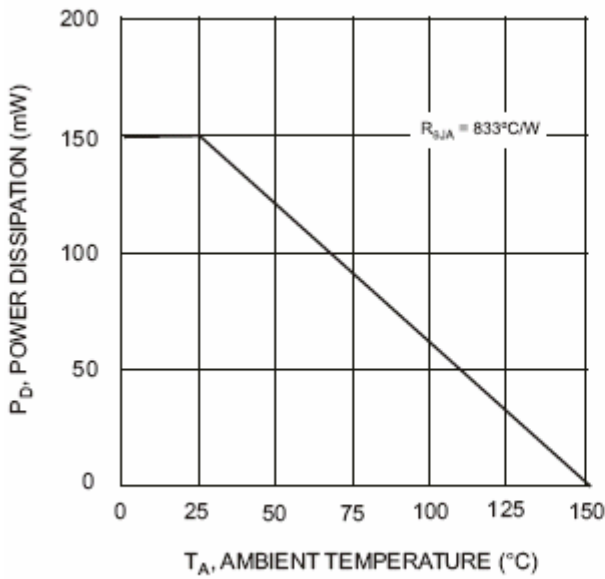


Fig. 1 Derating Curve

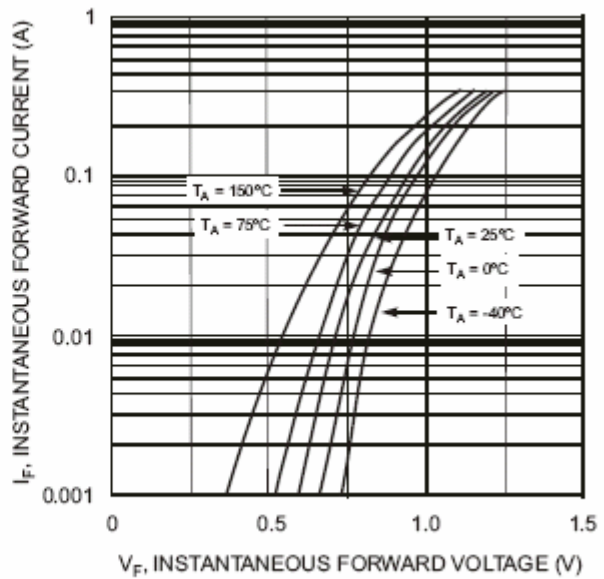


Fig. 2 Forward Characteristics

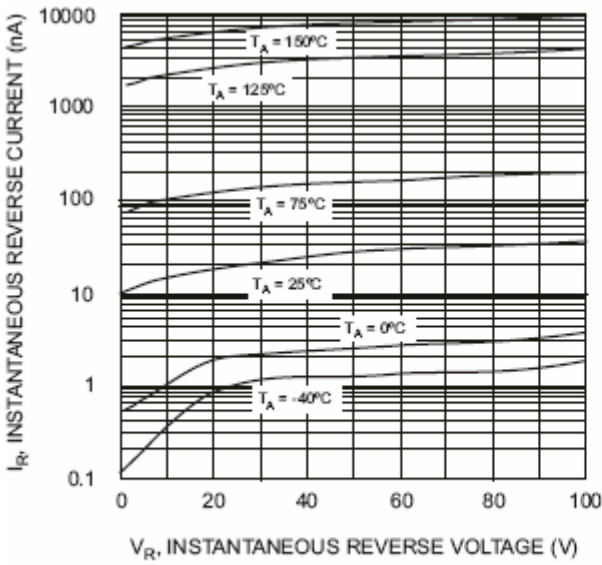


Fig. 3 Typical Reverse Characteristics

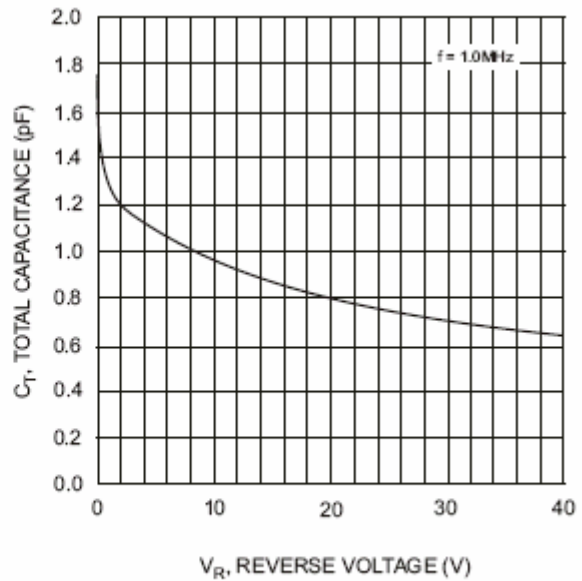


Fig. 4 Typical Capacitance vs. Reverse Voltage