

1N4148WS SURFACE MOUNT FAST SWITCHING DIODE



Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- Small Package
- For General Purpose Switching Application
- Terminals finish: Tin Lead-free plated
- “-A” is an AEC-Q101 qualified device
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOD-323, Molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.04 grams(approx)

Maximum Ratings @T_A=25°C unless otherwise specified

| Characteristic | Symbol | Limits | Unit |
|--|---------------------------------|-------------|------|
| Non- Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 75 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Forward Continuous Current(Note 1) | I_F | 300 | mA |
| Average Rectified Output Current(Note 1) | I_O | 150 | mA |
| Non-Repetitive Peak Forward Surge Current @t=1.0us @t=1.0s | I_{FSM} | 2.0 1.0 | A |
| Power Dissipation(Note 1) | P_D | 200 | mW |
| Typical Thermal Resistance, Junction to Ambient(Note 1) | $R_{\theta JA}$ | 625 | °C/W |
| Junction and Storage Temperature Range | T_J, T_{STG} | -65 to +150 | °C |

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

Electrical Characteristics @T_A=25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Units | Test Condition |
|--------------------------|-----------------|-----|-------------------------------|-------|--|
| Forward Voltage* | V _{FM} | - | 0.715 0.855 1.0 1.25 | V | @I _F =1.0mA @I _F =10mA @I _F =50mA @I _F =150mA |
| Reverse Leakage Current* | I _{RM} | - | 2.5 | uA | @V _R =75V |
| Capacitance | C _T | - | 2 | pF | V _R =0V, f=1.0MHz |
| Reverse Recovery Time | t _{rr} | - | 4 | ns | I _F =I _R =10mA I _{rr} =0.1XI _R , R _L =100Ω |

* Pulse width < 300 μs, duty cycle < 2%

Ratings and Characteristics Curves

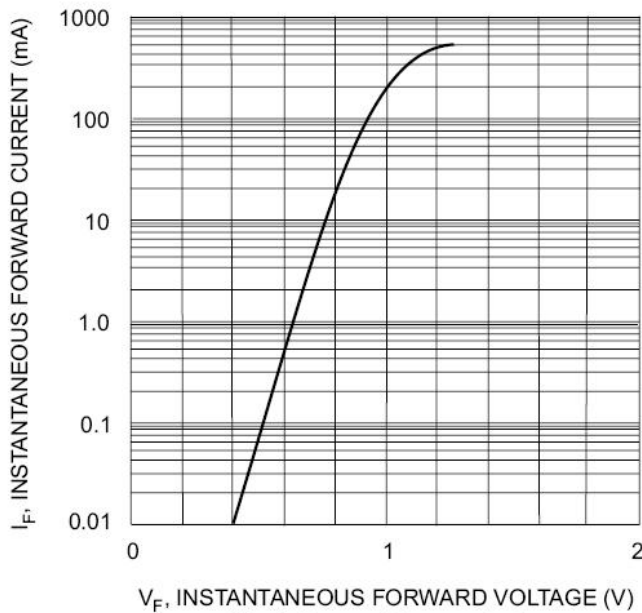


Fig. 1 Forward Characteristics

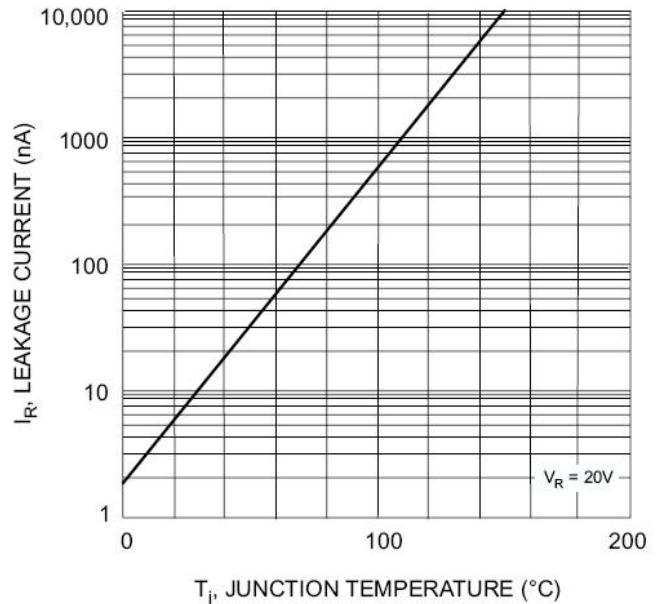


Fig. 2 Leakage Current vs Junction Temperature

Ordering Information

| Device | Package | Shipping |
|------------|---------|----------------|
| 1N4148WS | SOD-323 | 3000pcs / reel |
| 1N4148WSTR | SOD-323 | 3000pcs / reel |

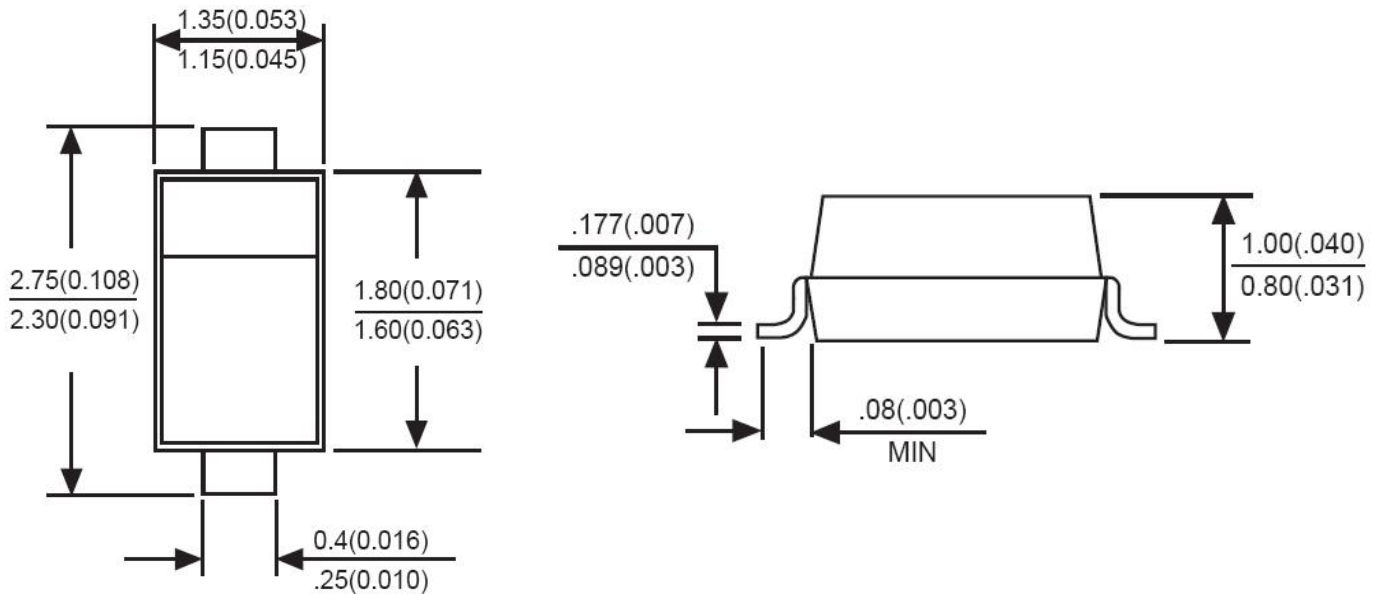
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

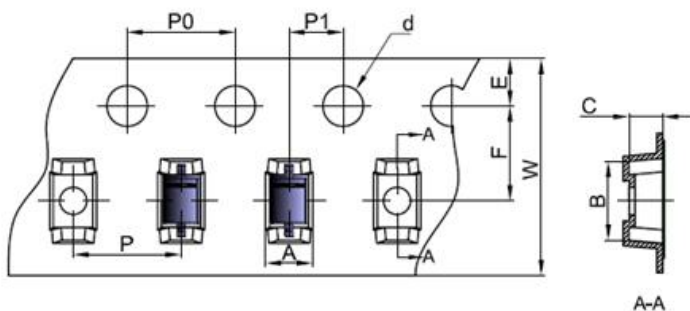


T4 = Marking Code

Mechanical Dimensions SOD-323(Inches/Millimeters)



Carrier Tape Specification SOD-323



| SYMB OL | Millimeters | |
|------------|-------------|------|
| | Min. | Max. |
| B | 2.85 | 2.95 |
| C | 1.20 | 1.30 |
| d | 1.40 | 1.60 |
| E | 1.65 | 1.85 |
| F | 3.40 | 3.60 |
| P | 3.90 | 4.10 |
| P0 | 3.90 | 4.10 |
| P1 | 1.90 | 2.10 |
| W | 7.90 | 8.30 |

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