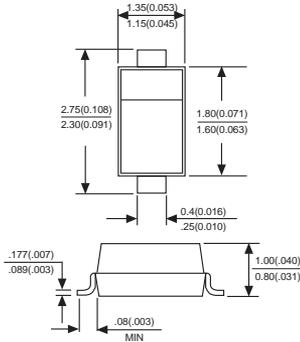




# 1N4148WS

## FAST SWITCHING DIODES

### SOD-323



### FEATURES

- ▶ Fast switching speed
- ▶ Surface mount package ideally suited for automatic insertion
- ▶ For general purpose switching applications
- ▶ High conductance

### MECHANICAL DATA

**Case:** Molded plastic body  
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026  
**Polarity:** Polarity symbols marked on case  
**Marking:** T4

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum ratings and electrical characteristics, Single diode @T<sub>A</sub>=25°C

| PARAMETER  | SYMBOLS            | Limits      | UNITS |
|--|--------------------|-------------|-------|
| Maximum repetitive peak reverse voltage          | V <sub>RRM</sub>   | 100         | V     |
| Maximum RMS voltage                              | V <sub>RMS</sub>   | 75          |       |
| Reverse Breakdown voltage at I <sub>R</sub> =1μA | V <sub>(BR)R</sub> | 75          |       |
| Forward continuous current                       | I <sub>FM</sub>    | 300         | mA    |
| Average rectified output current                 | I <sub>o</sub>     | 150         | mA    |
| Peak forward current @=1.0MS                     | I <sub>FSM</sub>   | 4.0         | A     |
| Power dissipation                                | P <sub>d</sub>     | 400         | mW    |
| Thermal resistance junction to ambient           | R <sub>θJA</sub>   | 250         | °C/W  |
| Junction temperature                             | T <sub>j</sub>     | 125         | °C    |
| Storage temperature                              | T <sub>STG</sub>   | -55 to +150 | °C    |

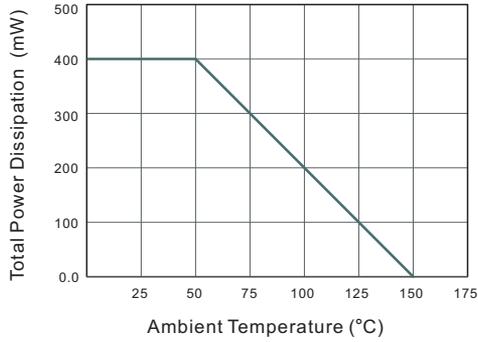
Electrical ratings @T<sub>A</sub>=25°C

| PARAMETER                     | SYMBOLS         | Min. | Typ. | Max.  | Unit | Conditions  |
|-------------------------------|-----------------|------|------|-------|------|---|
| Forward voltage               | V <sub>F1</sub> |      |      | 0.715 | V    | I <sub>F</sub> =1.0mA   |
|                               | V <sub>F2</sub> |      |      | 0.855 | V    | I <sub>F</sub> =10mA  |
|                               | V <sub>F3</sub> |      |      | 1.0   | V    | I <sub>F</sub> =50mA  |
|                               | V <sub>F4</sub> |      |      | 1.25  | V    | I <sub>F</sub> =150mA   |
| Reverse current               | I <sub>R1</sub> |      |      | 0.025 | uA   | at V <sub>R</sub> =20V T <sub>j</sub> =25°C   |
|                               | I <sub>R2</sub> |      |      | 1     | uA   | at V <sub>R</sub> =75V T <sub>j</sub> =25°C   |
|                               | I <sub>R3</sub> |      |      | 30    | uA   | at V <sub>R</sub> =25V T <sub>j</sub> =150°C  |
|                               | I <sub>R4</sub> |      |      | 50    | uA   | at V <sub>R</sub> =75V T <sub>j</sub> =150°C  |
| Capacitance between terminals | C <sub>T</sub>  |      |      | 5     | pF   | V <sub>R</sub> =0V, f=1.0MHz  |
| Reverse recovery time         | t <sub>rr</sub> |      |      | 8     | ns   | I <sub>F</sub> =I <sub>R</sub> =10mA<br>I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω |

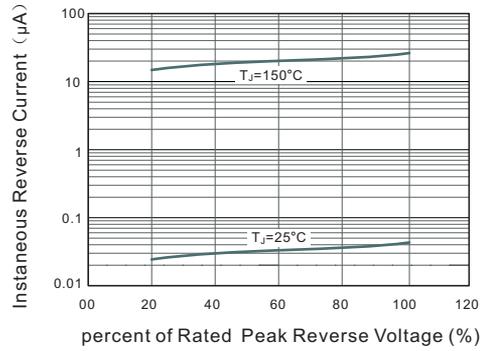


# RATINGS AND CHARACTERISTIC CURVES 1N4148WS

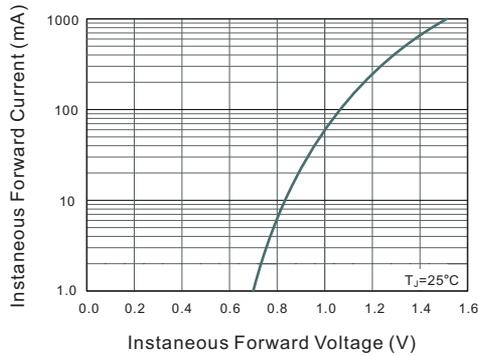
**Fig.1 Forward Current Derating Curve**



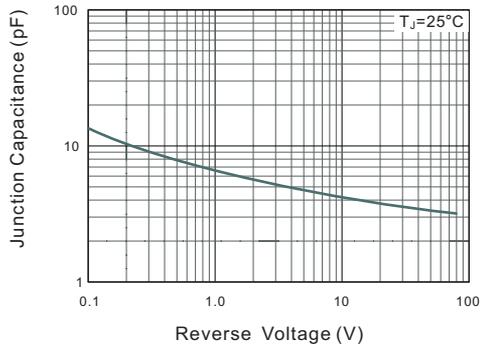
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



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