

# 1N4148WS

**PRV : 100 Volts**

**I<sub>o</sub> : 150 mA**

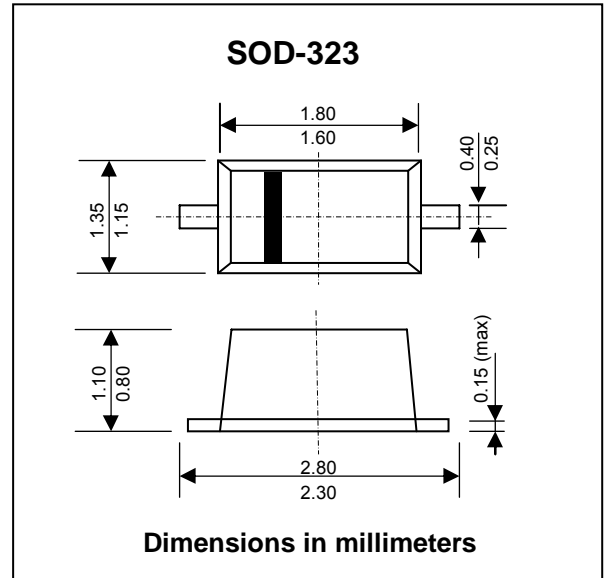
## FEATURES :

- \* Silicon Epitaxial Planar Diode
- \* Fast switching diodes.
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : SOD-323 plastic Case
- \* Weight : approx. 0.004 g
- \* Marking Code : " W2"

## SMALL SIGNAL FAST SWITCHING DIODE



## MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	75	V
Peak Reverse Voltage	V <sub>RM</sub>	100	V
Average Rectified Current Half Wave Rectification with Resistive Load at f ≥ 50 Hz	I <sub>F(AV)</sub>	150 <sup>(1)</sup>	mA
Surge Forward Current at t < 1 s and T <sub>j</sub> = 25 °C	I <sub>FSM</sub>	350	mA
Power Dissipation at T <sub>amb</sub> = 25 °C	P <sub>tot</sub>	200 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air	R <sub>thJA</sub>	650 <sup>(1)</sup>	°C/W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to + 150	°C

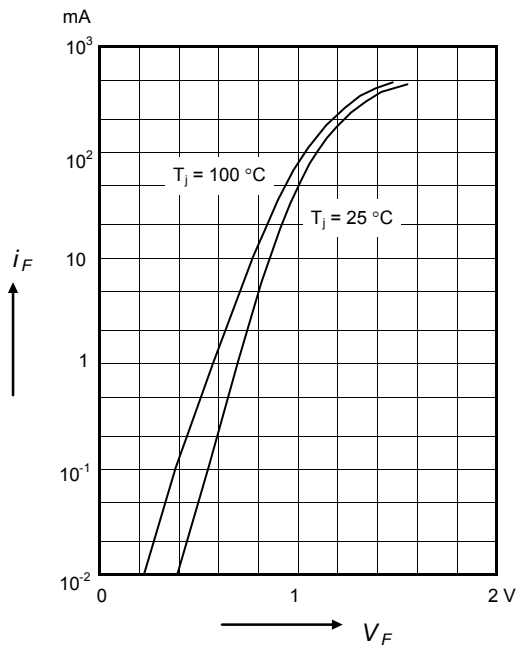
## ELECTRICAL CHARACTERISTICS (Rating at T<sub>a</sub> = 25 °C unless otherwise specified)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	I <sub>F</sub> = 10 mA	V <sub>F</sub>	-	-	1.0	V
Leakage Current	V <sub>R</sub> = 20 V	I <sub>R</sub>	-	-	25	nA
	V <sub>R</sub> = 75 V	I <sub>R</sub>	-	-	5.0	μA
	V <sub>R</sub> = 20 V, T <sub>j</sub> = 150 °C	I <sub>R</sub>	-	-	50	μA
Capacitance	V <sub>F</sub> = V <sub>R</sub> = 0 V	C <sub>tot</sub>	-	-	4	pF
Voltage Rise when Switching On (tested with 50 mA pulses)	t <sub>p</sub> = 0.1 μs, Rise Time < 30ns, f <sub>p</sub> = 5 to 100 kHz	V <sub>fr</sub>	-	-	2.5	V
Reverse Recovery Time	I <sub>F</sub> = 10 mA, I <sub>R</sub> = 1 mA, V <sub>R</sub> = 6 V, R <sub>L</sub> = 100 Ω	T <sub>rr</sub>	-	-	4	ns
Rectification Efficiency	f = 100 MHz, V <sub>RF</sub> = 2 V	η <sub>v</sub>	0.45	-	-	-

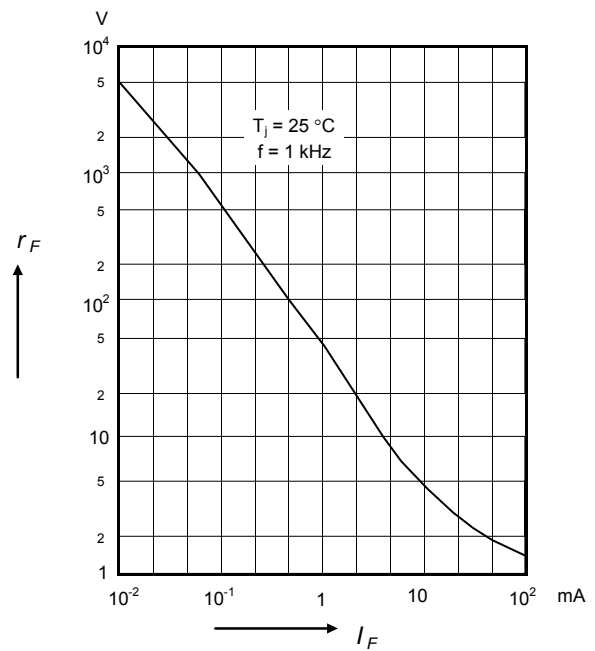
**Note :** (1) Valid provided that electrodes are kept at ambient temperature.

## RATINGS AND CHARACTERISTIC CURVES (1N4148WS)

**Forward characteristics**

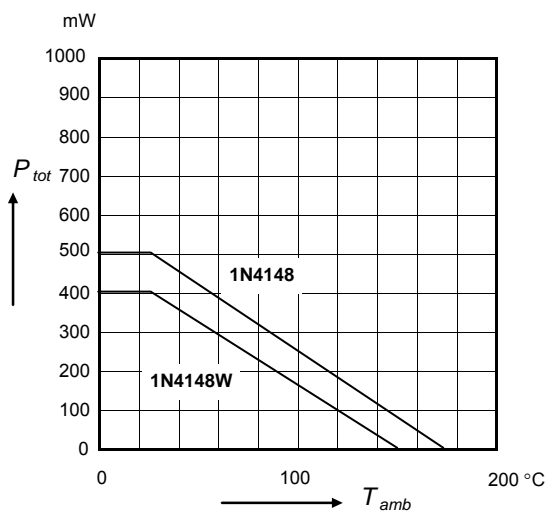


**Dynamic forward resistance versus forward current**

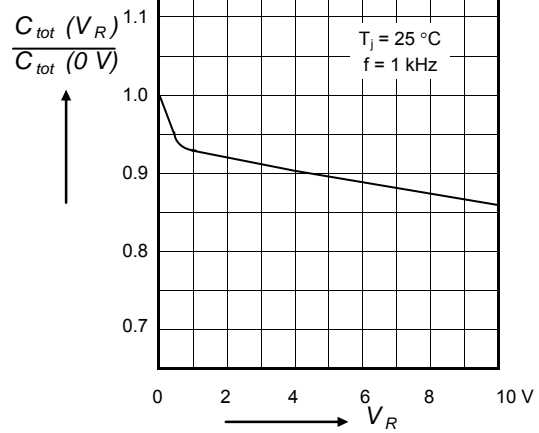


**Admissible power dissipation versus ambient temperature**

For conditions, see footnote in table  
"Absolute Maximum Ratings"

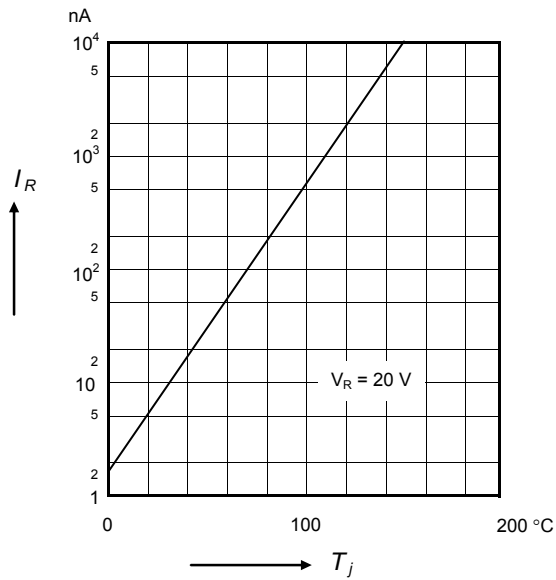


**Relative capacitance versus reverse voltage**



## RATINGS AND CHARACTERISTIC CURVES (1N4148WS)

**Leakage Current versus junction temperature**



**Admissible repetitive peak forward current versus pulse duration**

For conditions, see footnote in table " Absolute Maximum Ratings "

