

1N4148WS

PRV : 100 Volts

I_o : 150 mA

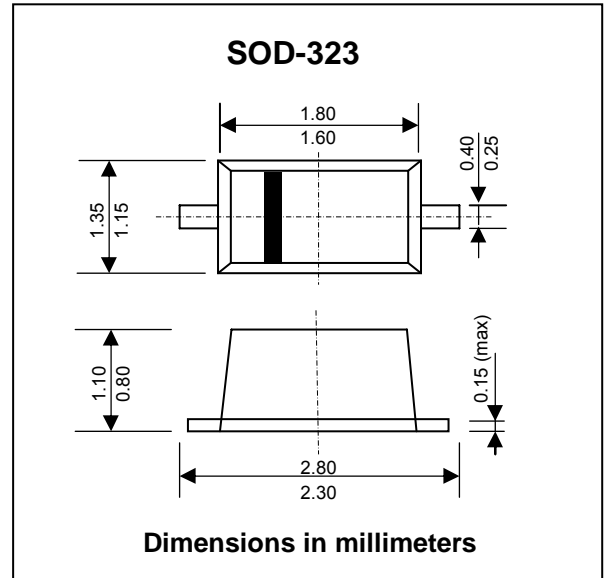
FEATURES :

- * 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_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Average Rectified Current Half Wave Rectification with Resistive Load at $f \geq 50$ Hz	$I_{F(AV)}$	150 ⁽¹⁾	mA
Surge Forward Current at $t < 1$ s and $T_j = 25$ °C	I_{FSM}	350	mA
Power Dissipation at $T_{amb} = 25$ °C	P_{tot}	200 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R_{thJA}	650 ⁽¹⁾	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{STG}	-65 to + 150	°C

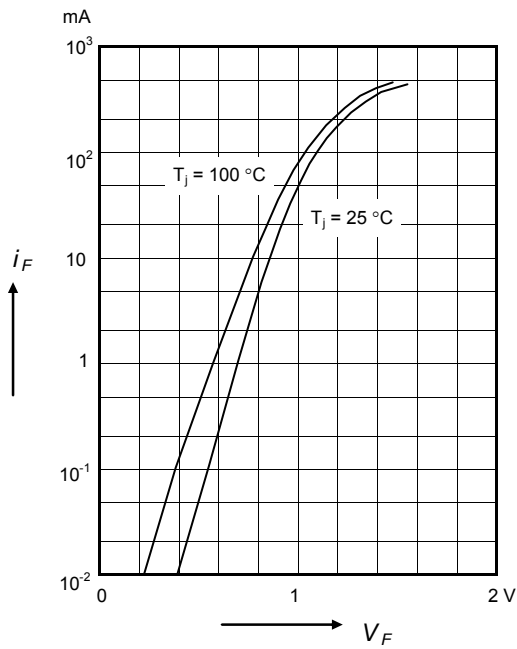
ELECTRICAL CHARACTERISTICS (Rating at $T_a = 25$ °C unless otherwise specified)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	$I_F = 10$ mA	V_F	-	-	1.0	V
Leakage Current	$V_R = 20$ V	I_R	-	-	25	nA
	$V_R = 75$ V	I_R	-	-	5.0	μA
	$V_R = 20$ V, $T_j = 150$ °C	I_R	-	-	50	μA
Capacitance	$V_F = V_R = 0$ V	C_{tot}	-	-	4	pF
Voltage Rise when Switching On (tested with 50 mA pulses)	$t_p = 0.1$ μs, Rise Time < 30ns, $f_p = 5$ to 100 kHz	V_{fr}	-	-	2.5	V
Reverse Recovery Time	$I_F = 10$ mA, $I_R = 1$ mA, $V_R = 6$ V, $R_L = 100$ Ω	T_{rr}	-	-	4	ns
Rectification Efficiency	$f = 100$ MHz, $V_{RF} = 2$ V	η_v	0.45	-	-	-

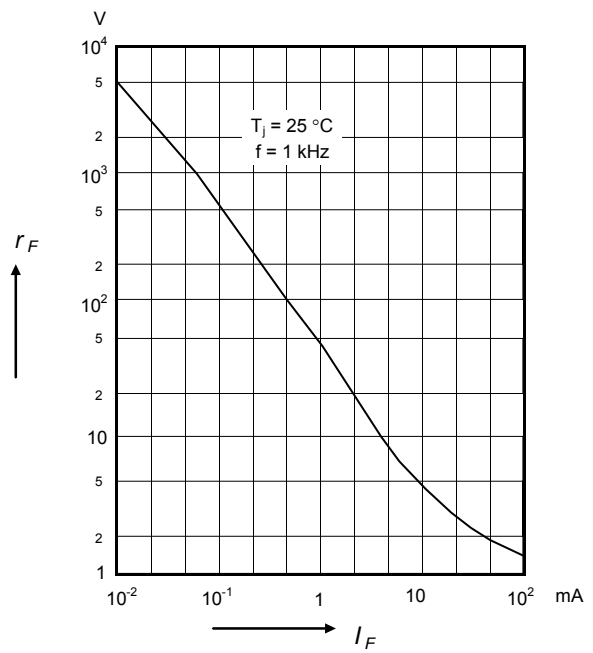
Note : (1) Valid provided that electrodes are kept at ambient temperature.

RATINGS AND CHARACTERISTIC CURVES (1N4148WS)

Forward characteristics

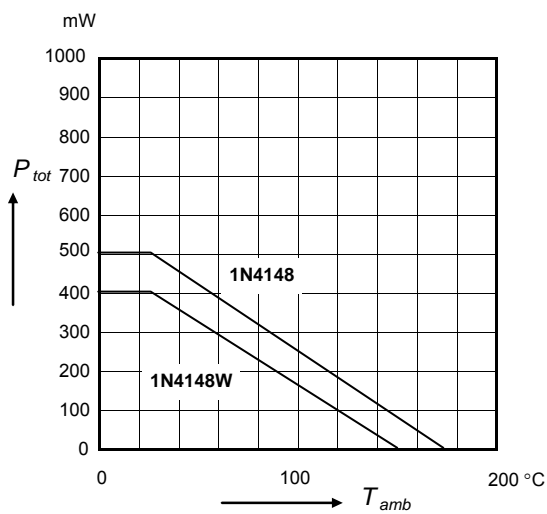


Dynamic forward resistance versus forward current

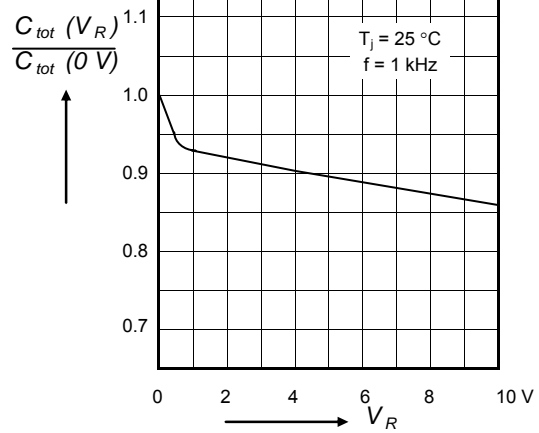


Admissible power dissipation versus ambient temperature

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

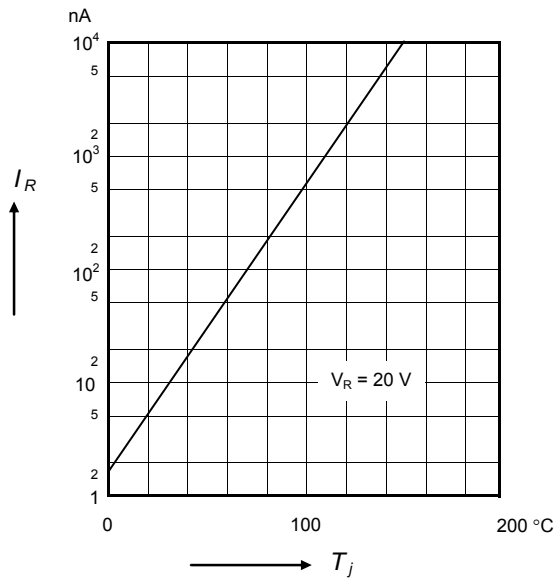


Relative capacitance versus reverse voltage



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 "

