

# 1N4148W

**PRV : 100 Volts**  
**I<sub>O</sub> : 150 mA**

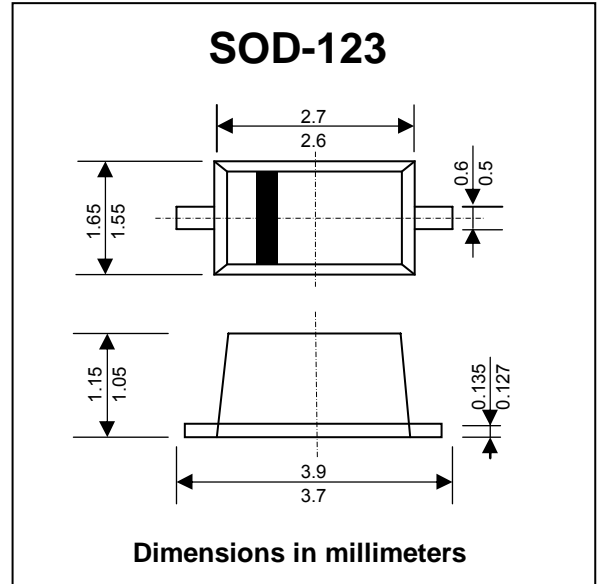
## FEATURES :

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

## MECHANICAL DATA :

- \* Case : SOD-123 plastic Case
- \* Weight : approx. 0.01 g
- \* Marking Code : " W1"

## SMALL SIGNAL FAST SWITCHING DIODE



## MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Rectified Current Half Wave Rectification with Resist. Load, $f \geq 50$ Hz	$I_{F(AV)}$	150 <sup>(1)</sup>	mA
Surge Forward Current at $t < 1$ s and $T_j = 25$ °C	$I_{FSM}$	500	mA
Power Dissipation	$P_{tot}$	400 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	450 <sup>(1)</sup>	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{STG}$	-65 to + 150	°C

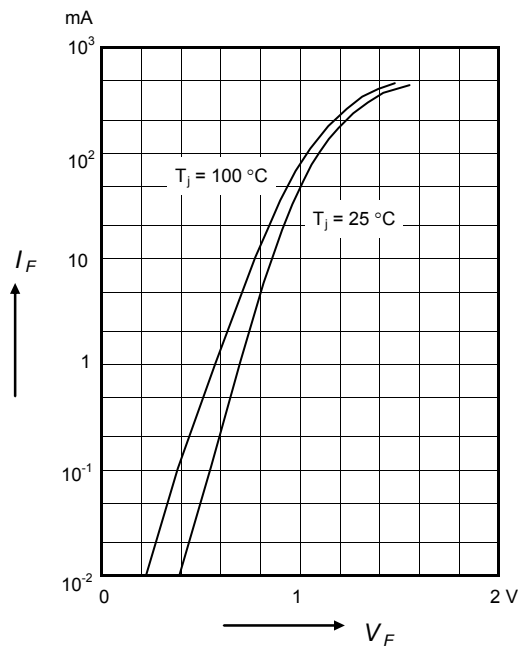
## ELECTRICAL CHARACTERISTICS (Rating at $T_a = 25$ °C unless otherwise specified)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	$I_F = 10$ mA	$V_F$	-	-	1.0	V
Leakage Current	at $V_R = 20$ V	$I_R$	-	-	25	nA
	at $V_R = 75$ V	$I_R$	-	-	5	μA
	at $V_R = 20$ 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 < 30 ns, $f_p = 5$ 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	$\eta_v$	0.45	-	-	-

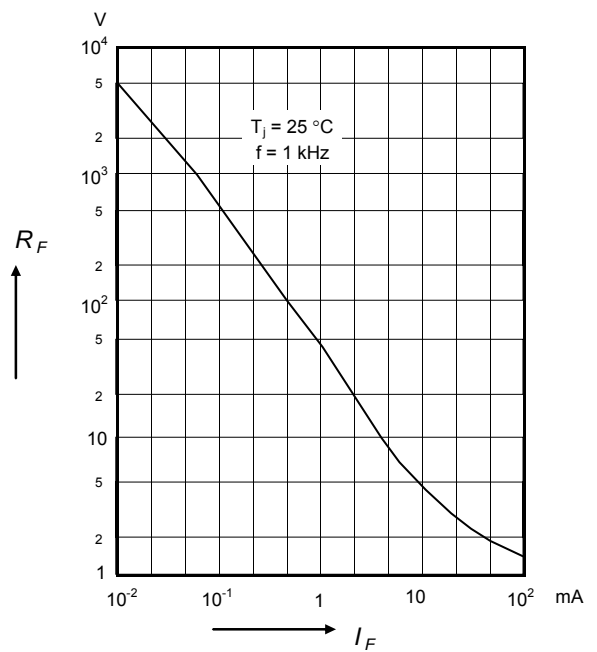
**Note :** (1) Valid provided that electrodes are kept at ambient temperature

## RATINGS AND CHARACTERISTIC CURVES (1N4148W)

### Forward characteristics

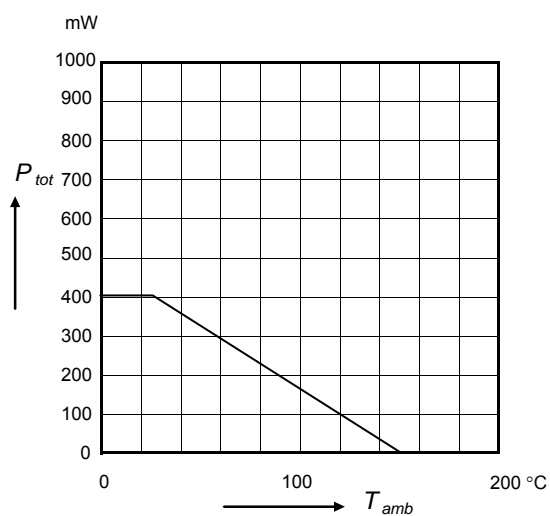


### Dynamic forward resistance versus forward current

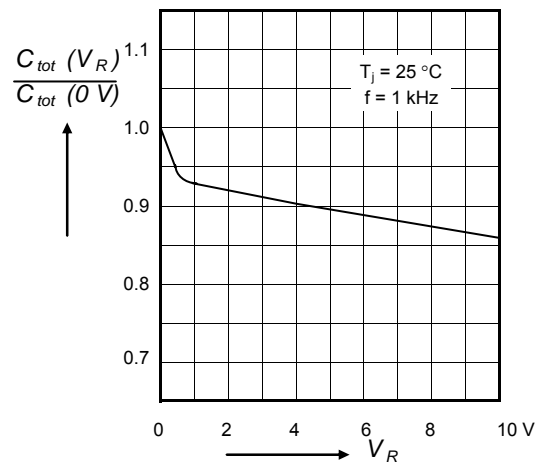


### Admissible power dissipation versus ambient temperature

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

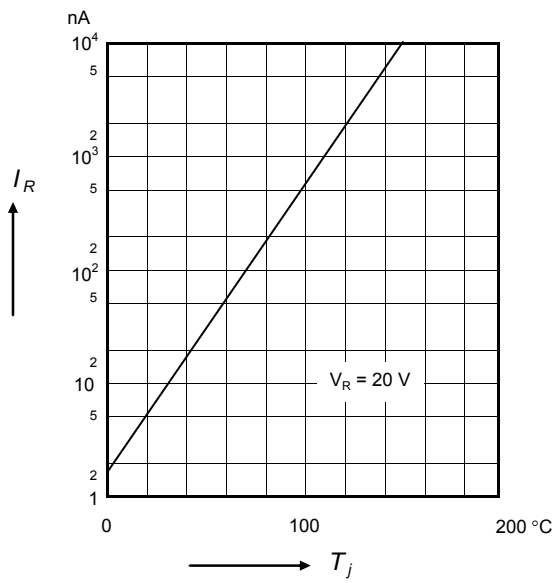


### Relative capacitance versus reverse voltage



## RATINGS AND CHARACTERISTIC CURVES (1N4148W)

**Leakage Current versus junction temperature**



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

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

