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1N4148W

SMALL SIGNAL FAST SWITCHING DIODE

PRV : 100 Volts
I_O : 150 mA

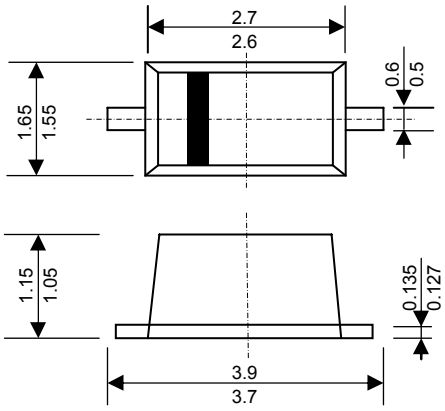
FEATURES :

* 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"

SOD-123



Dimensions in millimeters

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 ≥ 50 Hz	$I_{F(AV)}$	150 [1]	mA
Surge Forward Current at t < 1 s and Tj = 25 °C	I_{FSM}	500	mA
Power Dissipation	P_{tot}	400 [1]	mW
Thermal Resistance Junction to Ambient Air	R_{thJA}	450 [1]	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature Range	T_{STG}	-65 to + 150	°C

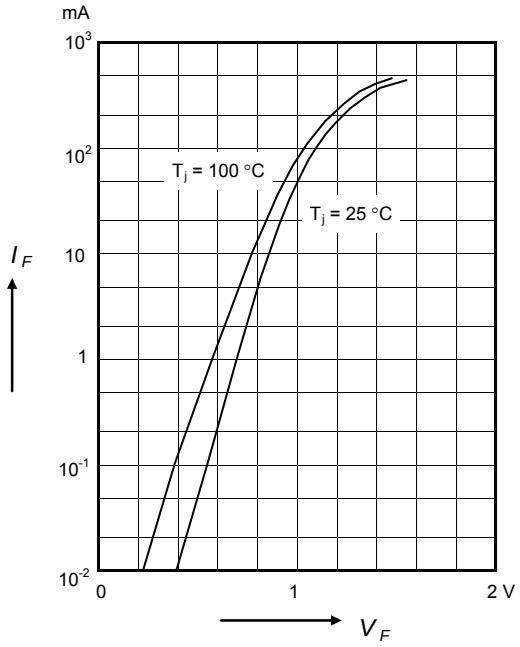
ELECTRICAL CHARACTERISTICS (Rating at Ta = 25 °C unless otherwise specified)

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, Tj = 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	η_v	0.45	-	-	-

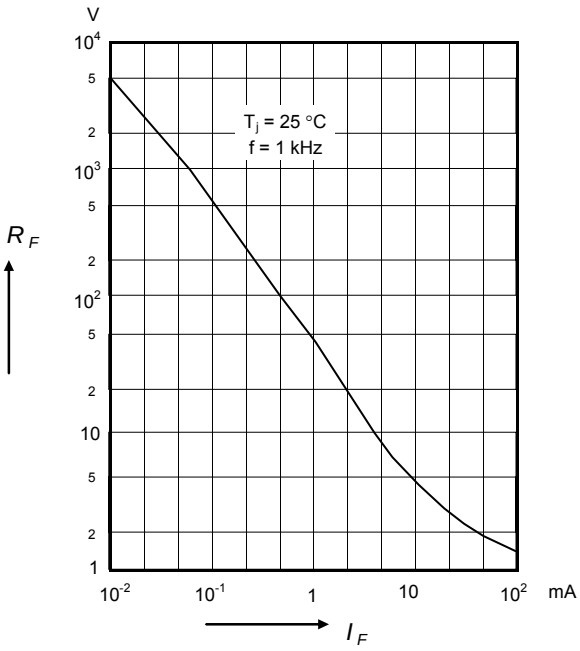
Note : (1) Valid provided that electrodes are kept at ambient temperature

RATINGS AND CHARACTERISTIC CURVES (1N4148W)

Forward charecteristics

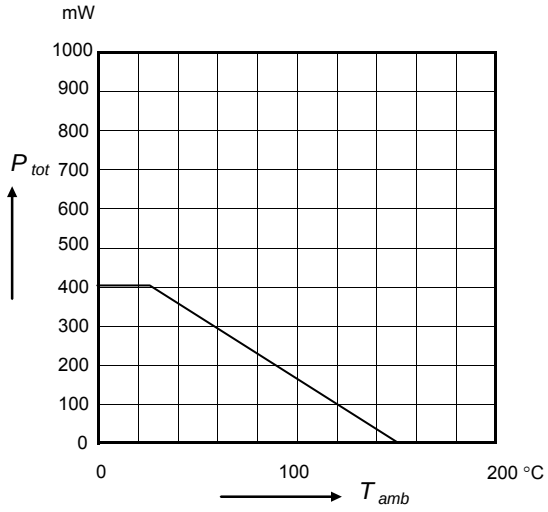


Dynamic forward resistance versus forward current

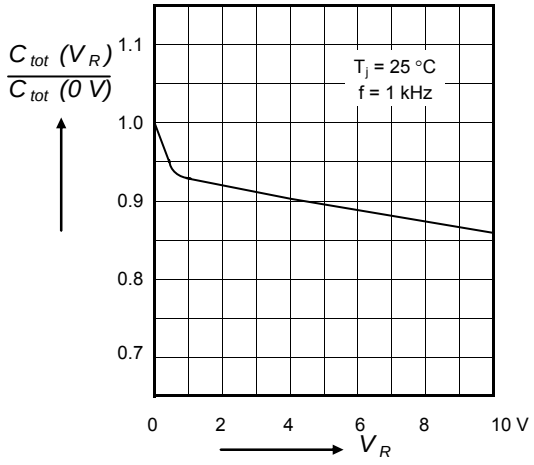


Admissible power dissipation versus ambient temperture

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

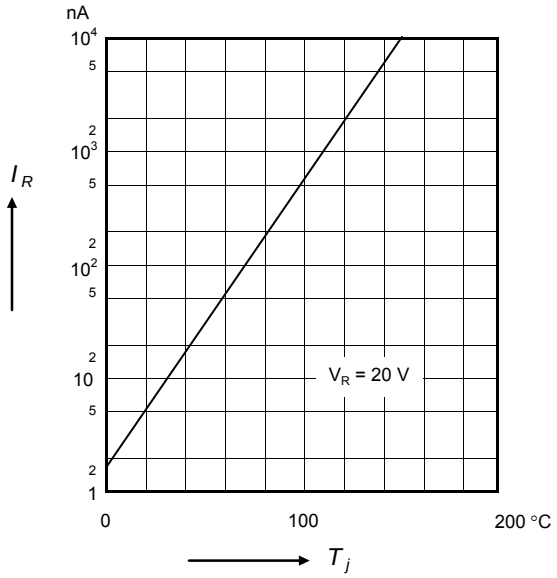


Relative capacitance versus reverse voltage



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 "