

1N4148W

PRV : 100 Volts
I_O : 150 mA

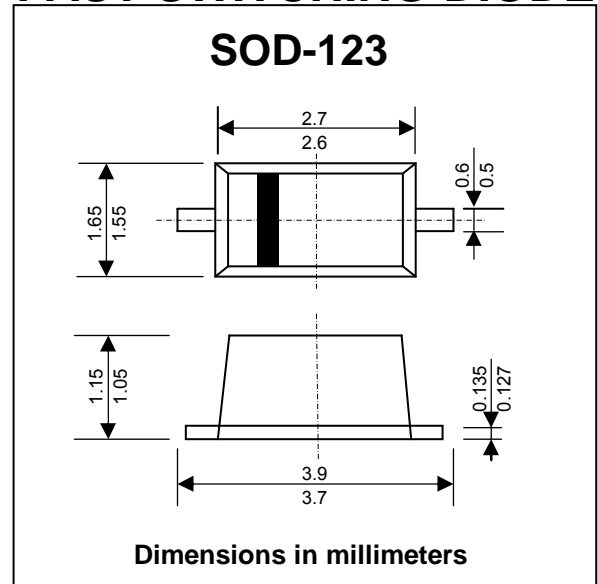
FEATURES :

- * 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"

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 ≥ 50 Hz	I _{F(AV)}	150 ⁽¹⁾	mA
Surge Forward Current at t < 1 s and T _j = 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	T _j	150	°C
Storage Temperature Range	T _{STG}	-65 to + 150	°C

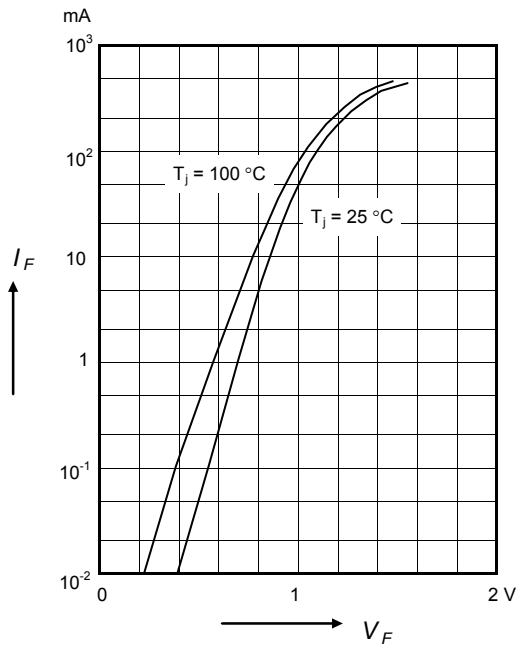
ELECTRICAL CHARACTERISTICS (Rating at T_a = 25 °C unless otherwise specified)

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	η _v	0.45	-	-	-

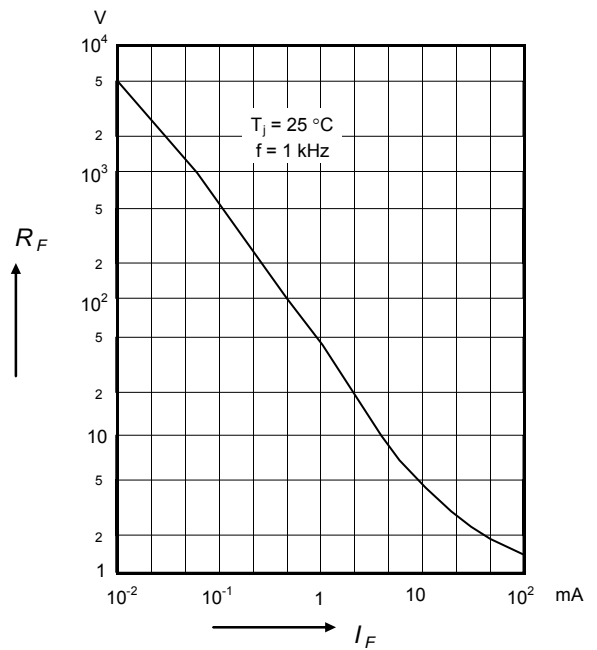
Note : (1) Valid provided that electrodes are kept at ambient temperature

RATINGS AND CHARACTERISTIC CURVES (1N4148W)

Forward characteristics

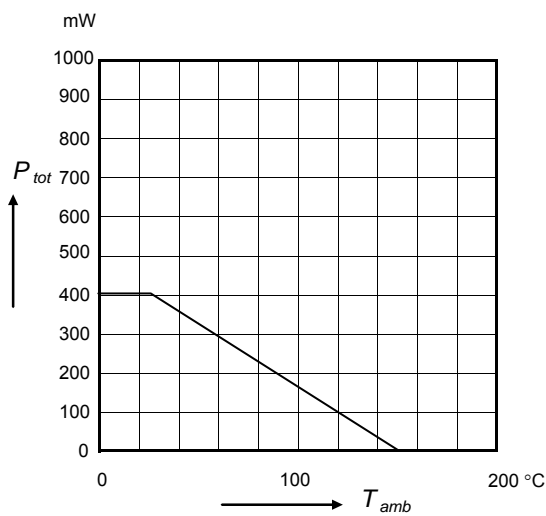


Dynamic forward resistance versus forward current

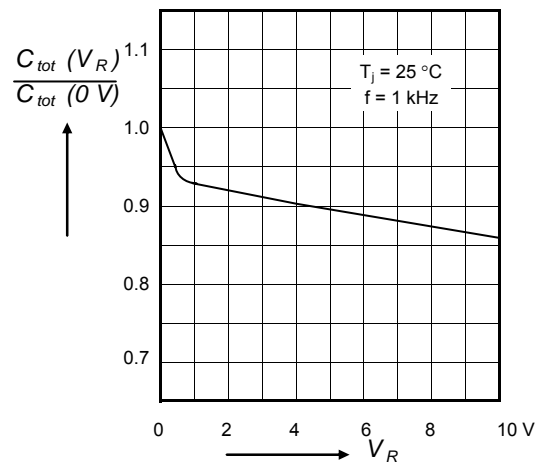


Admissible power dissipation versus ambient temperature

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

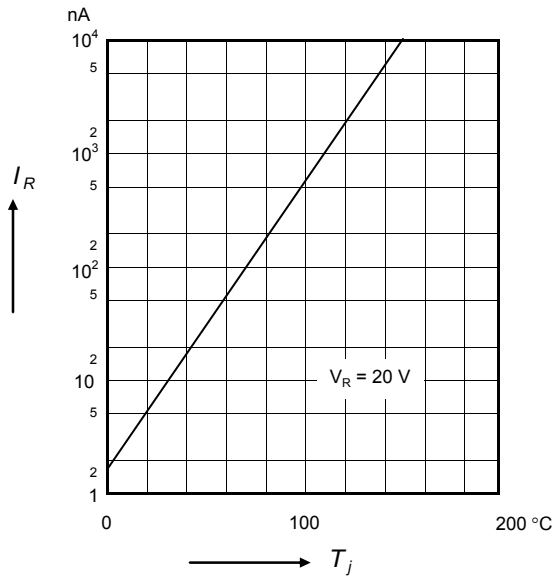


Relative capacitance versus reverse voltage



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 "

