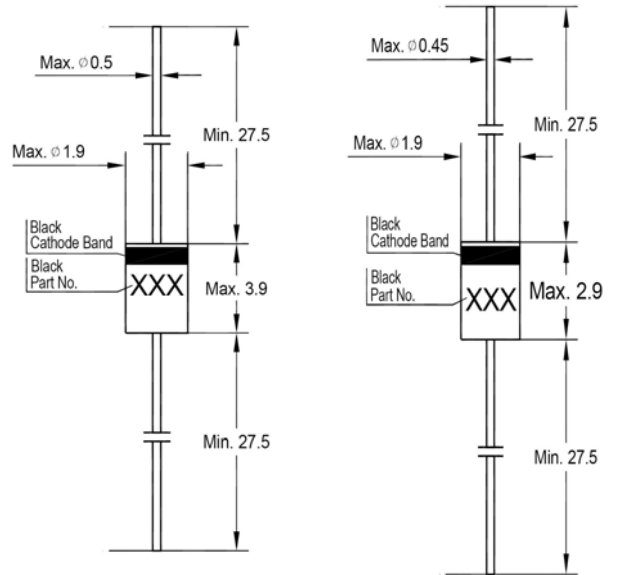


1N4148

Silicon Epitaxial Planar Switching Diode

FEATURES

- ◆ High-speed switching
- ◆ This diode is also available in MiniMELF case
With the type designation LL4148



Glass Case DO-35
Dimensions in mm

Glass Case DO-34
Dimensions in mm

Absolute Maximum Ratings (Ta = 25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	at t = 1 s	0.5
		at t = 1 ms	1
		at t = 1 μ s	4
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	200	°C
Storage Temperature Range	T_{stg}	- 65 to + 200	°C

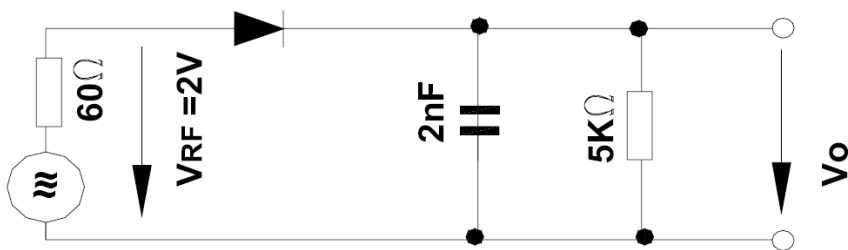
¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

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Characteristics at Ta = 25°C

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	-	1	V
Leakage Current				
at $V_R = 20 \text{ V}$	I_R	-	25	nA
at $V_R = 75 \text{ V}$	I_R	-	5	μA
at $V_R = 20 \text{ V}, T_j = 150^\circ\text{C}$	I_R	-	50	μA
Reverse Breakdown Voltage				
at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	100	-	V
at $I_R = 5 \mu\text{A}$	$V_{(BR)R}$	75	-	V
Capacitance				
at $V_R = 0, f = 1 \text{ MHz}$	C_{tot}	-	4	pF
Voltage Rise when Switching ON				
tested with 50 mA Forward Pulses	V_{fr}	-	2.5	V
$t_p = 0.1 \text{ s}$, Rise Time < 30 ns, $f_p = 5 \text{ to } 100 \text{ KHz}$				
Reverse Recovery Time				
at $I_F = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$, $V_R = 6 \text{ V}$, $R_L = 100 \Omega$	t_{rr}	-	4	ns
Thermal Resistance Junction to Ambient Air	R_{thA}	-	0.35 ¹⁾	K/mW
Rectification Efficiency at $f = 100 \text{ MHz}$, $V_{RF} = 2 \text{ V}$	η_v	0.45	-	-

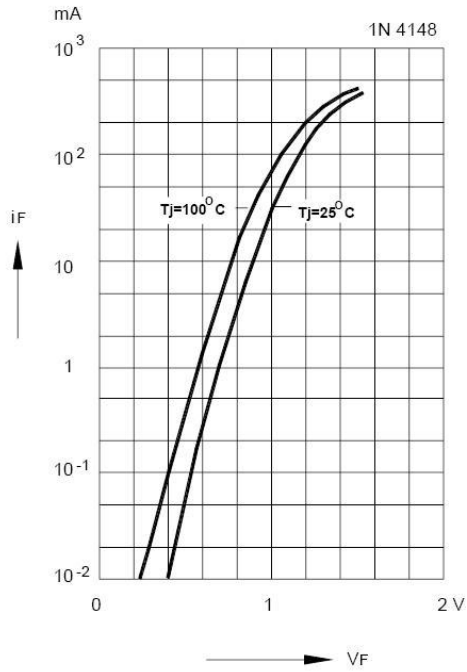
¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.



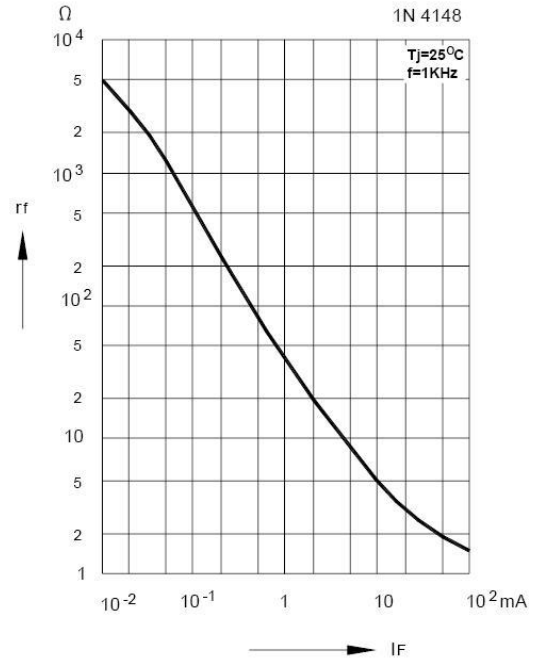
Rectification Efficiency Measurement Circuit

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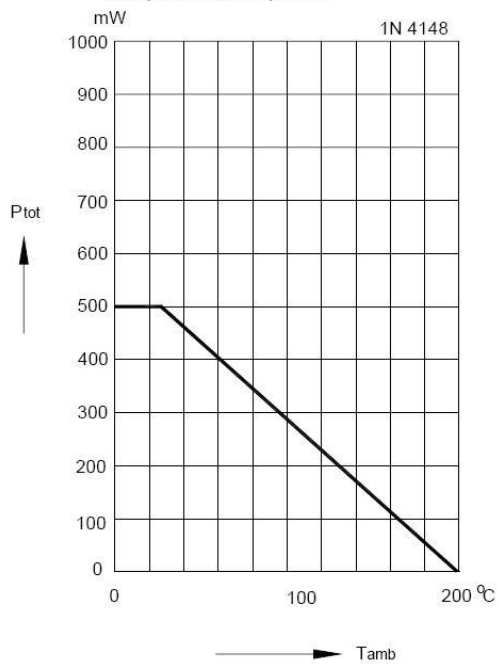
Forward characteristics



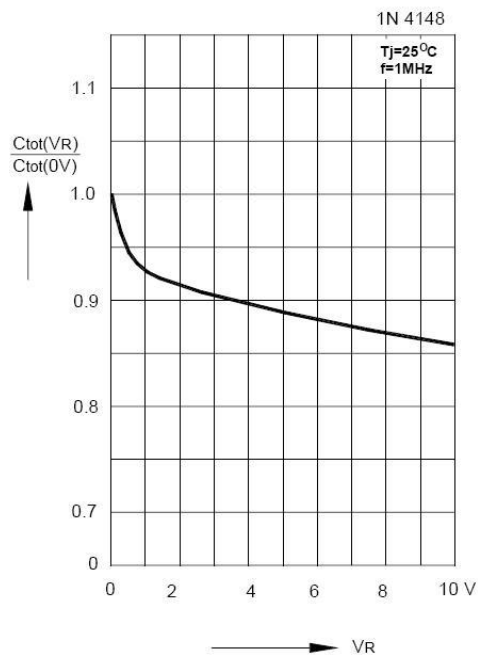
Dynamic forward resistance versus forward current



Admissible power dissipation versus ambient temperature
Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature

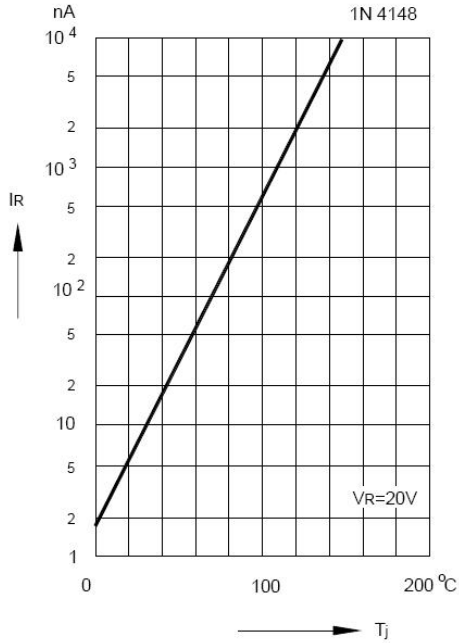


Relative capacitance versus reverse voltage

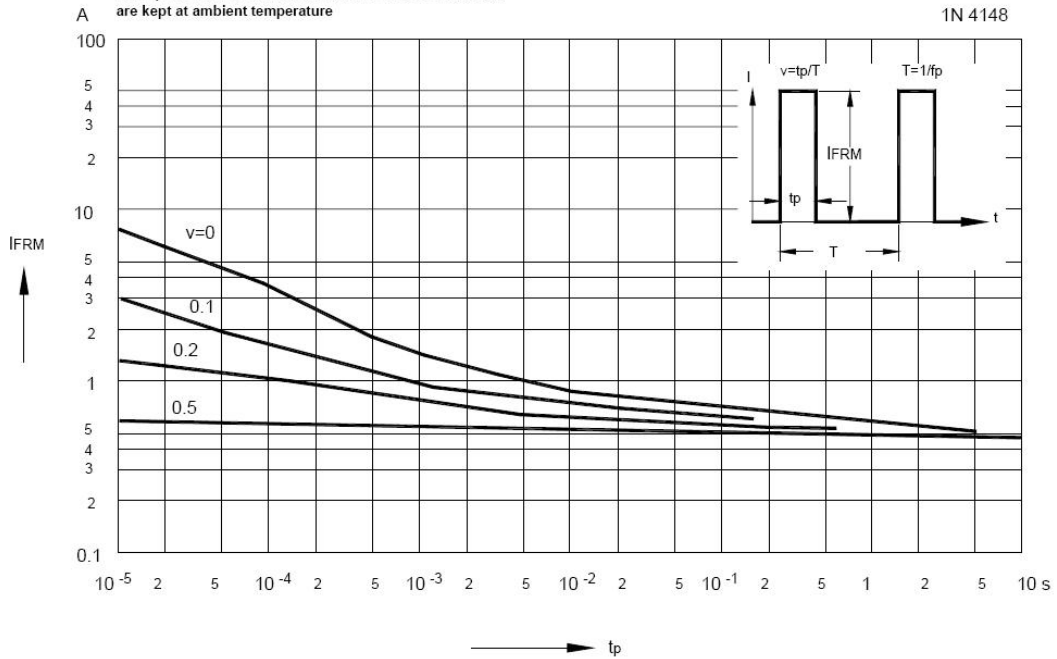


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Leakage current versus junction temperature



Admissible repetitive peak forward current versus pulse duration
Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature



Note: Specifications are subject to change without notice.