



1N4148

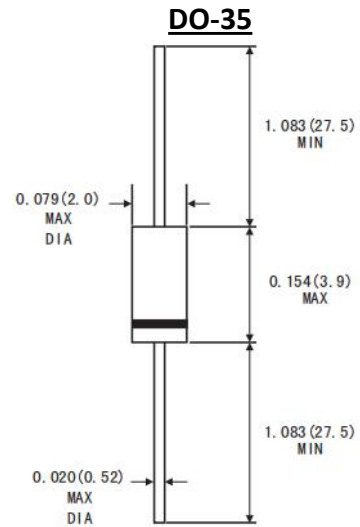
Silicon Epitaxial Planar Switching Diode

Features

This diode is also available in MiniMELF case with the type designation LL4148

Mechanical Data

- Case: DO-35
- Polarity: Color band denotes cathode end.
- Through-Hole Device Type Mounting



Dimensions in inches and (millimeters)

Maximum Ratings & 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 Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5 1 4	A
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.



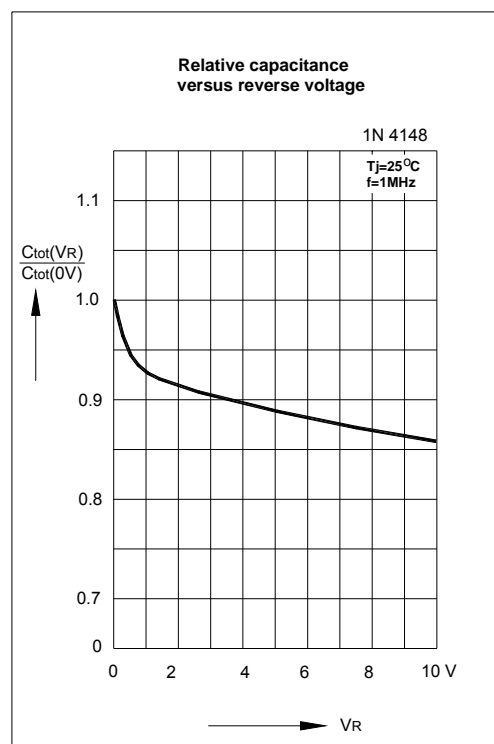
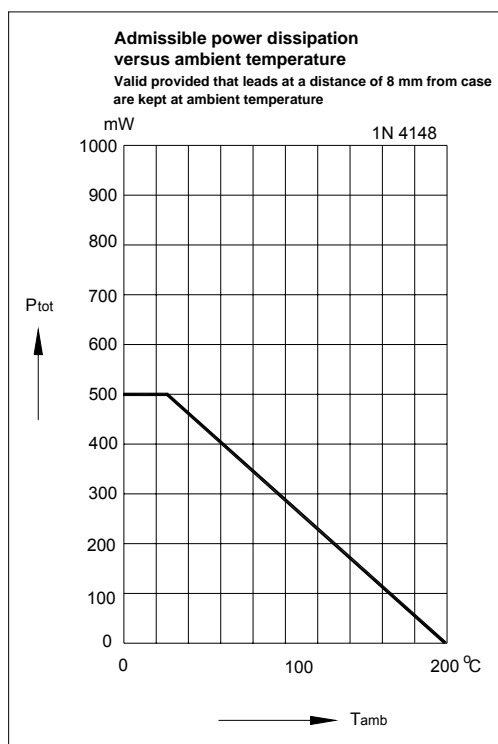
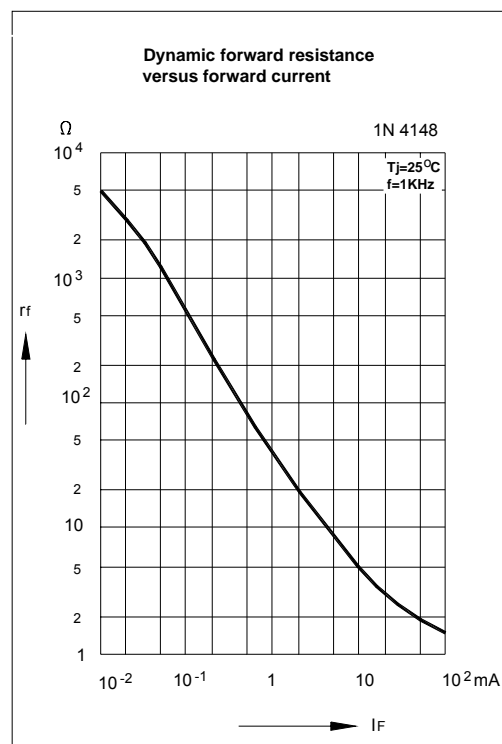
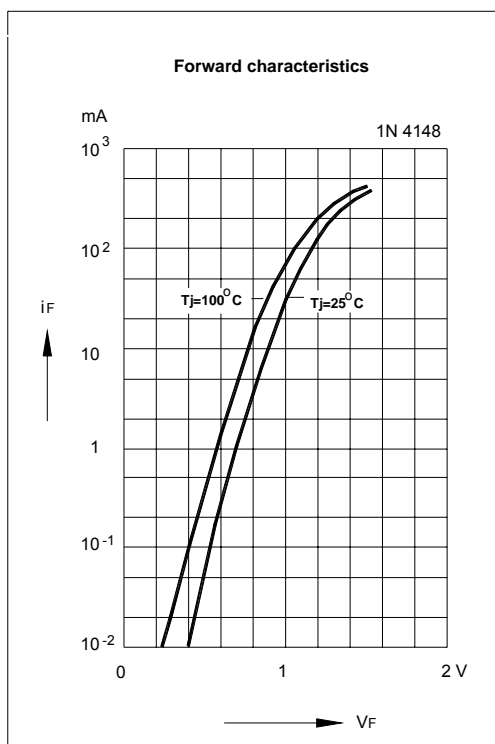
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Silicon Epitaxial Planar Switching Diode

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	-	1	V
Leakage Current at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$, $T_J = 150 \text{ }^\circ\text{C}$	I_R I_R I_R	- - -	25 5 50	nA μA μA
Reverse Breakdown Voltage at $I_R = 100 \text{ }\mu\text{A}$ at $I_R = 5 \text{ }\mu\text{A}$	$V_{(BR)R}$ $V_{(BR)R}$	100 75	- -	V 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 $t_p = 0.1 \text{ s}$, Rise Time < 30 ns, $f_p = 5 \text{ to } 100 \text{ KHz}$	V_{fr}	-	2.5	V
Reverse Recovery Time at $I_F = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$, $V_R = 6 \text{ V}$, $R_L = 100 \text{ }\Omega$	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.





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