

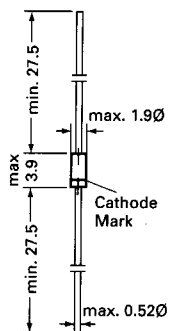
# 1N 4148

## SILICON EPITAXIAL PLANAR DIODE

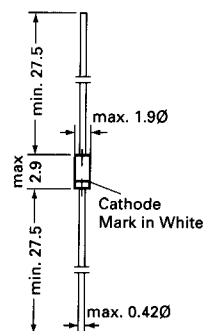
### Silicon Expitaxial Planar Diode

fast switching diode.

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



Glass case JEDEC DO-35



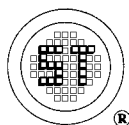
Glass case JEDEC DO-34

Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

	Symbol	Value	Unit
Reverse Voltage	$V_R$	75	V
Peak Reverse Voltage	$V_{RM}$	100	V
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ }^\circ\text{C}$ and $f \geq 50\text{ Hz}$	$I_o$	150 <sup>1)</sup>	mA
Surge Forward Current at $t < 1\text{ s}$ and $T_j = 25\text{ }^\circ\text{C}$	$I_{FSM}$	500	mA
Power Dissipation at $T_{amb} = 25\text{ }^\circ\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction Temperature	$T_j$	200	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-65 to + 200	$^\circ\text{C}$

<sup>1)</sup> Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature



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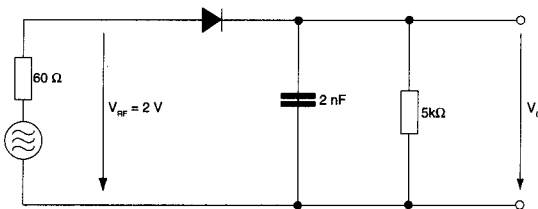
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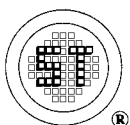
Characteristics at  $T_j = 25\text{ }^\circ\text{C}$

	Symbol	Min.	Typ.	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 $V_R = 20\text{ V}, T_j = 150\text{ }^\circ\text{C}$	$I_{R1}$ $I_{R2}$ $I_{R3}$	- - -	- - -	25 5 50	nA $\mu\text{A}$ $\mu\text{A}$
Reverse Breakdown Voltage tested with $100\text{ }\mu\text{A}$ Pulses	$V_{(BR)R}$	100	-	-	V
Capacitance at $V_F = V_R = 0$	$C_{tot}$	-	-	4	pF
Voltage Rise when Switching ON tested with $50\text{ mA}$ Forward Pulses $t_p = 0.1\text{ s}$ , Rise Time $< 30\text{ ns}$ , $f_p = 5\text{ to }100\text{ kHz}$	$V_{fr}$	-	-	2.5	V
Reverse Recovery Time from $I_F = 10\text{ mA}$ 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 <sup>1)</sup>	K/mW
Rectification Efficiency at $f = 100\text{ MHz}$ , $V_{RF} = 2\text{ V}$	$\eta_V$	0.45	-	-	-

<sup>1)</sup> Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature



Rectification Efficiency Measurement Circuit

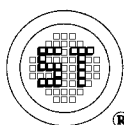
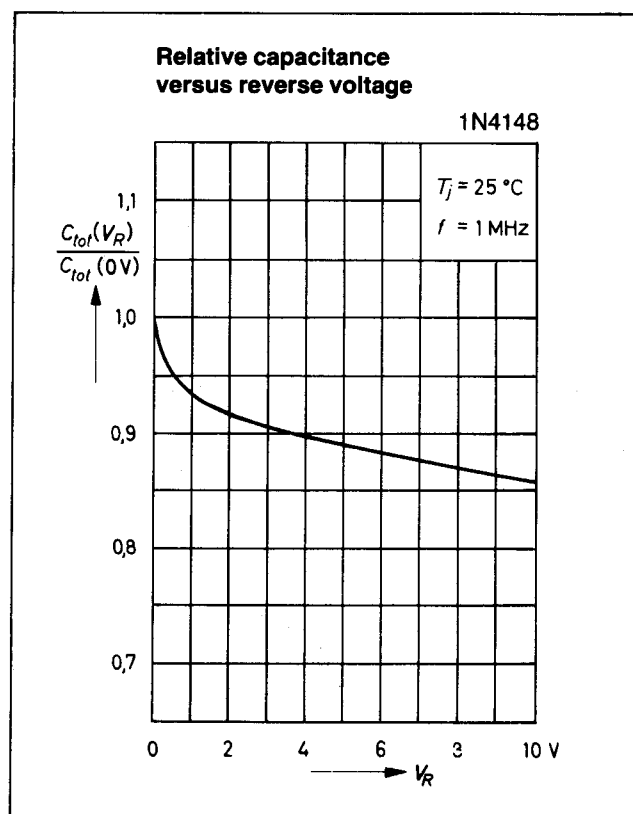
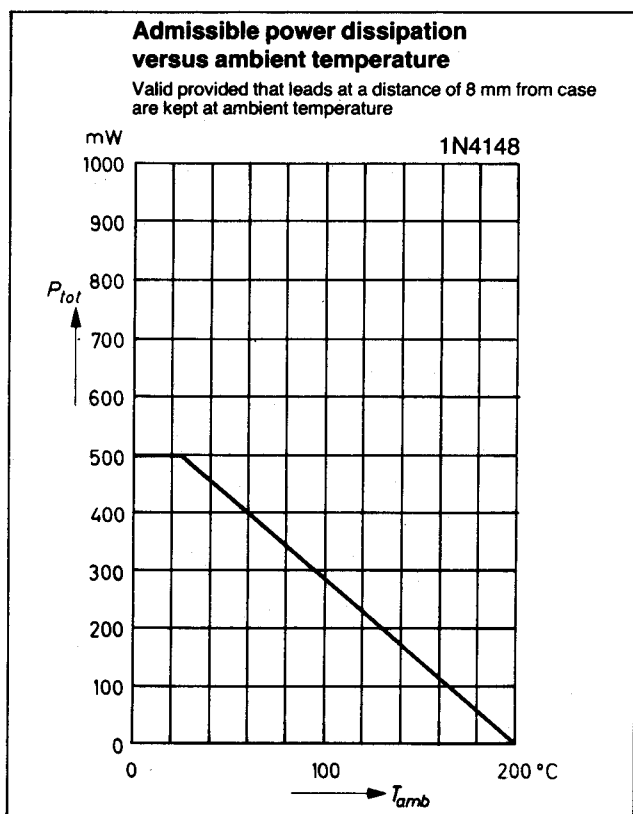
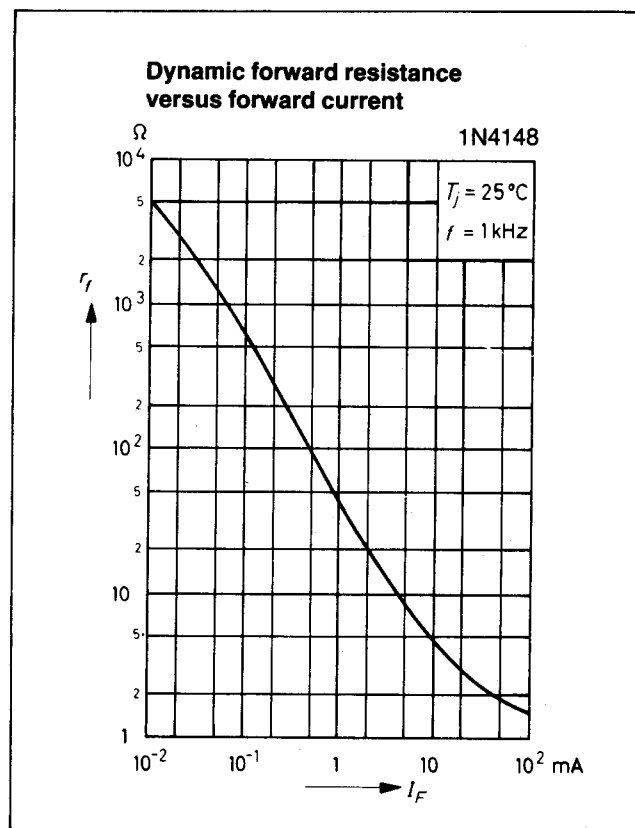
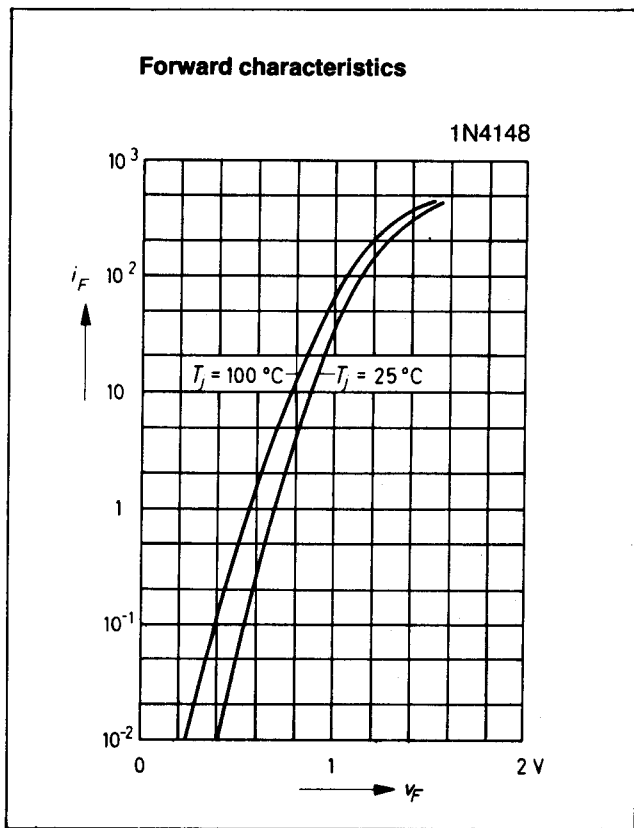


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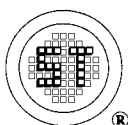
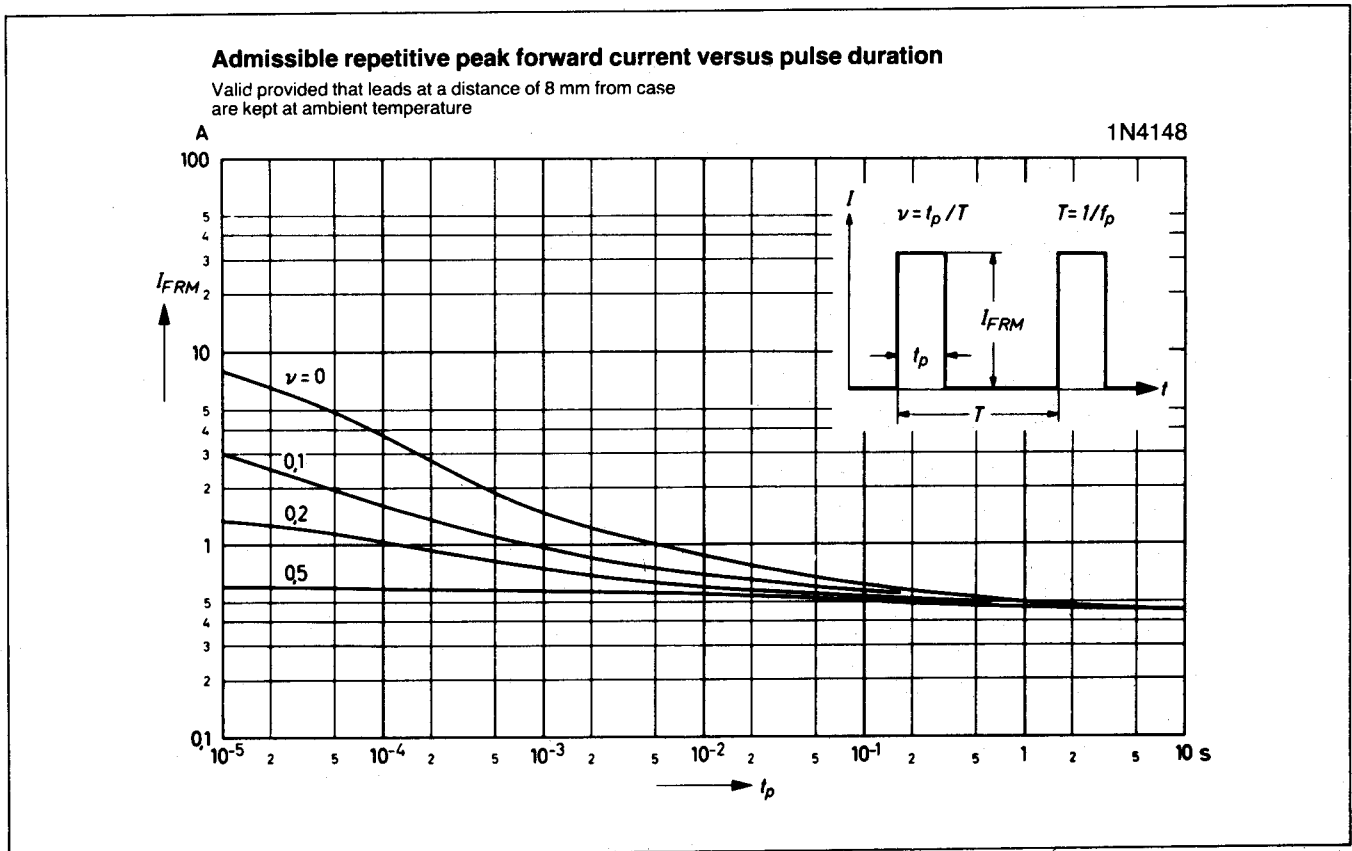
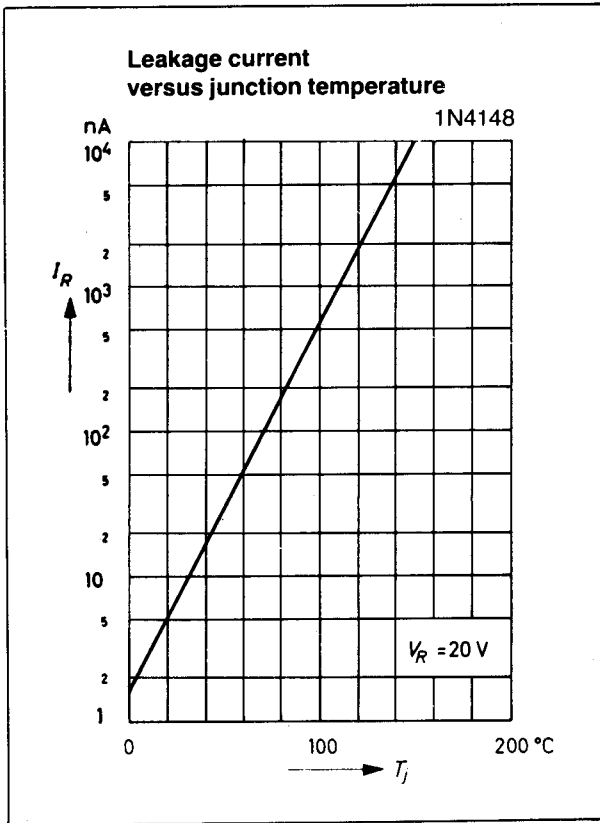
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