



GOOD-ARK

1N4148

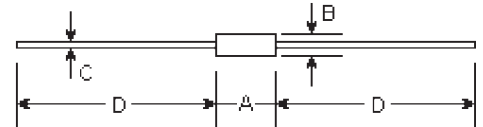
SILICON EPITAXIAL PLANAR DIODE

## Features

**Silicon Epitaxial Planar Diodes**  
fast switching diode.

**DO-35**

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



DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	-	0.154	-	3.9	
B	-	0.075	-	1.9	ϕ
C	-	0.020	-	0.52	ϕ
D	1.083	-	27.50	-	

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

	Symbols	Values	Units
Reverse Voltage	$V_R$	75	Volts
Peak reverse voltage	$V_{RM}$	100	Volts
Rectified current (Average) Half wave rectification with Resist. Load at $T_{amb}=25^\circ\text{C}$ and $f \geq 50\text{Hz}$	$I_o$	150 <sup>(1)</sup>	mA
Surge forward current at $t < 1\text{s}$ and $T_j = 25^\circ\text{C}$	$I_{FSM}$	500	mA
Power dissipation at $T_{amb} = 25^\circ\text{C}$	$P_{tot}$	500 <sup>(1)</sup>	mW
Junction Temperature	$T_j$	200	$^\circ\text{C}$
Storage temperature range	$T_s$	-65 to +200	$^\circ\text{C}$

Note:

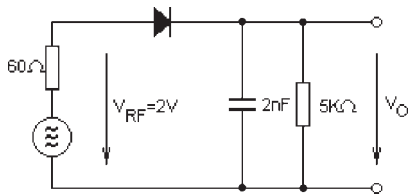
(1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature

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

	Symbols	Min.	Typ.	Max.	Units
Forward voltage at $I_F=10\text{mA}$	$V_F$	-	-	1	Volt
Leakage current at $V_R=20\text{V}$ at $V_R=75\text{V}$ at $V_R=20\text{V}, T_j=150^\circ\text{C}$	$I_{R1}$ $I_{R2}$ $I_{R3}$	- - -	- - -	25 5 50	nA uA uA
Reverse breakdown voltage tested with 100uA pulses	$V_{(BR)R}$	100	-	-	Volts
Capacitance at $V_F=V_R=0$	$C_{tot}$	-	-	4	pF
Voltage rise when switching ON tested with 50mA forward pulses $t_p=0.1\mu\text{s}$ , rise time $<30\text{nS}$ , $f_p=5$ to $100\text{kHz}$	$V_{fr}$	-	-	2.5	Volts
Reverse recovery time from $I_F=10\text{mA}$ 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 <sup>(1)</sup>	K/mW
Rectification efficiency at $f=100\text{MHz}$ , $V_{RF}=2\text{V}$	$\eta_V$	0.45	-	-	-

Note:

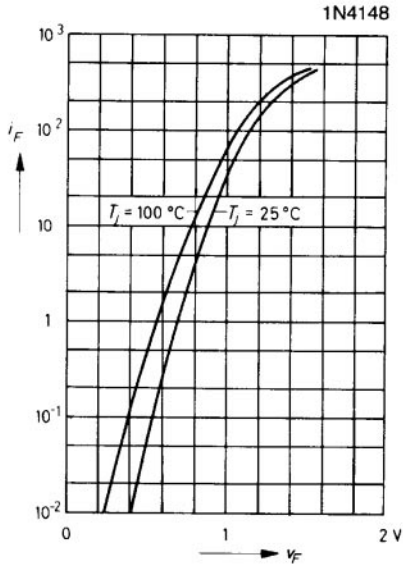
(1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature



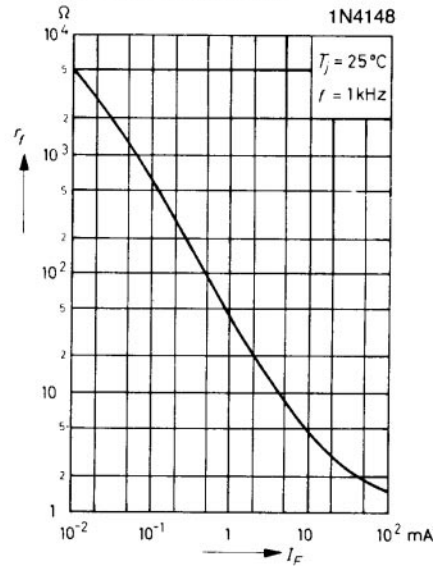
Rectification efficiency measurement circuit

# RATINGS AND CHARACTERISTIC CURVES

**Forward characteristics**

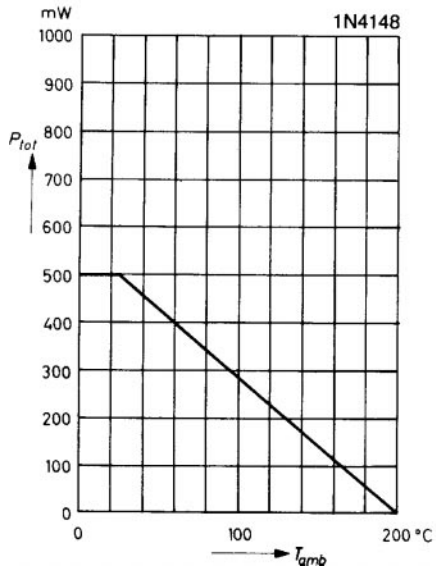


**Dynamic forward resistance versus forward current**

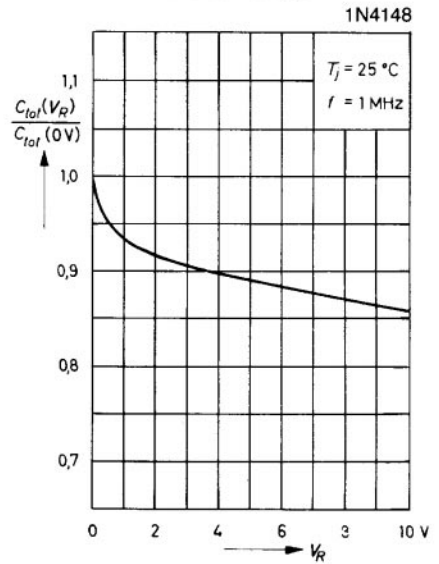


**Admissible power dissipation versus ambient temperature**

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

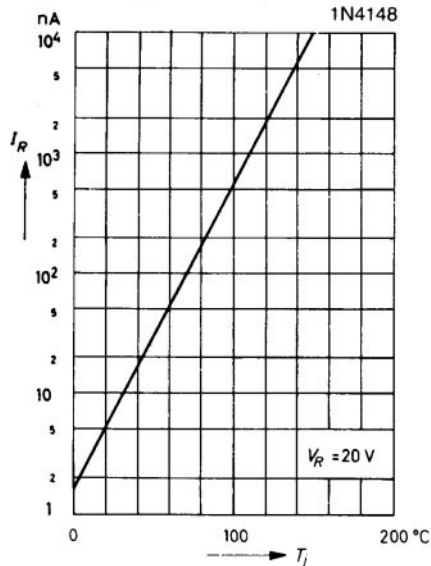


**Relative capacitance versus reverse voltage**



# RATINGS AND CHARACTERISTIC CURVES

**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

