



GOOD-ARK

1N4148

SILICON EPITAXIAL PLANAR DIODE

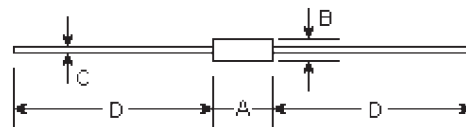
Features

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 ⁽¹⁾	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 ⁽¹⁾	mW
Junction Temperature	T_j	200	$^{\circ}\text{C}$
Storage temperature range	T_s	-65 to +200	$^{\circ}\text{C}$

Note:

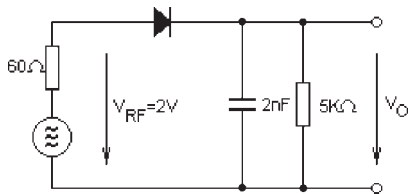
(1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature

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 100kHz	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 ⁽¹⁾	K/mW
Rectification efficiency at $f=100\text{MHz}$, $V_{RF}=2\text{V}$	η_V	0.45	-	-	-

Note:

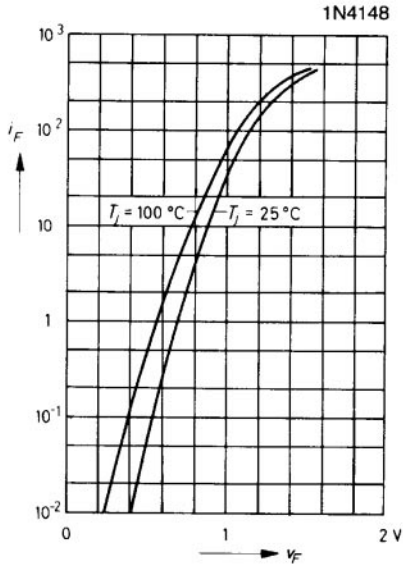
(1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature



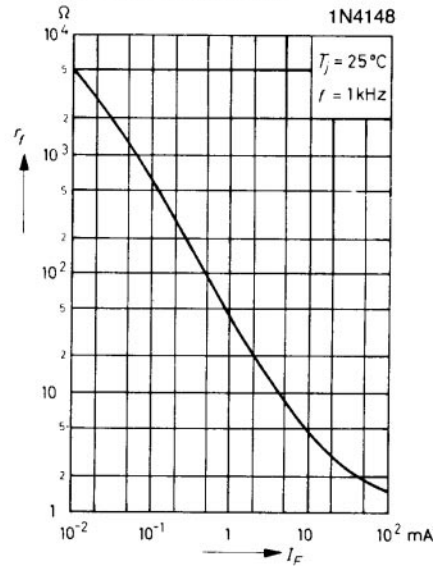
Rectification efficiency measurement circuit

RATINGS AND CHARACTERISTIC CURVES

Forward characteristics

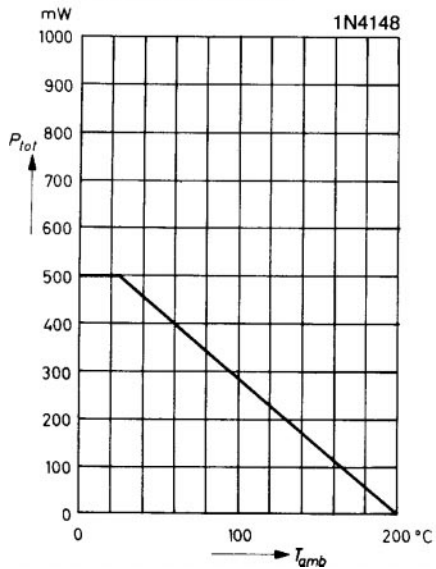


Dynamic forward resistance versus forward current

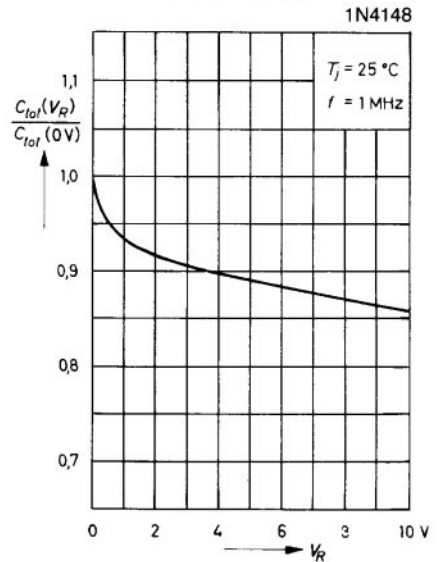


Admissible power dissipation versus ambient temperature

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

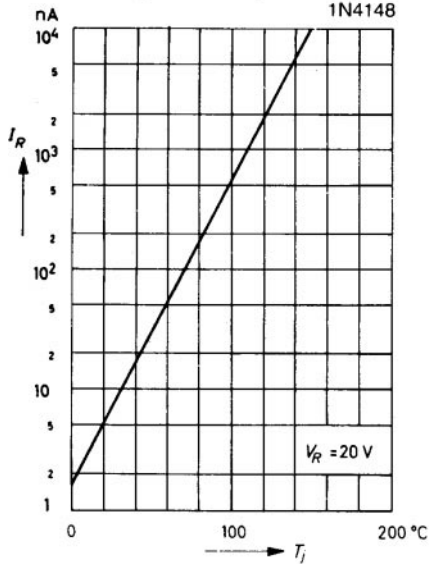


Relative capacitance versus reverse voltage



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

