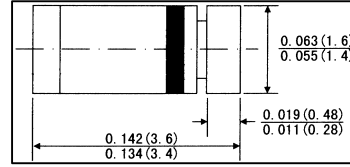


### FEATURES

- Silicon epitaxial planar diode
- Fast swithcing diodes
- 500mW power dissipation
- The diode is also available in the DO-35 case with the type designation 1N4148



Dimensions in inches and (millimeters)

### MECHANICAL DATA

- **Case:** MinMelf glass case(SOD- 80)
- **Weight:** Approx. 0.05gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbol	Value	Units
Reverse voltage	$V_R$	75	Volts
Peak reverse voltage	$V_{RM}$	100	Volts
Average rectified current, Half wave rectification with Resistive load at $T_A=25^\circ\text{C}$ and $F \geq 50\text{Hz}$	$I_{AV}$	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 $T_A=25^\circ\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction temperature	$T_J$	175	°C
Storage temperature range	$T_{STG}$	-65 to + 175	°C

1)Valid provided that at a distance of 8mm from case are kept at ambient temperature(DO-35)

### ELECTRICAL CHARACTERISTICS

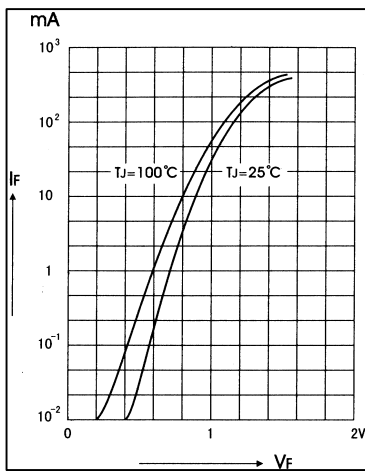
(Ratings at 25°C ambient temperature unless otherwise specified)

	Symbols	Min.	Typ.	Max.	Units
Forward voltage	$V_F$			1	Volts
Leakage current at $V_R=20\text{V}$ at $V_R=75\text{V}$ at $V_R=20\text{V}, T_J=150^\circ\text{C}$	$I_R$			25	nA
	$I_R$			5	nA
	$I_R$			50	nA
Junction capacitance at $V_R=V_F=0\text{V}$	$C_J$			4	pF
Voltage rise when switching ON tested with 50mA pulse $T_p=0.1 \mu\text{S}$ , Rise time $< 30 \mu\text{S}$ , $f_p=5$ 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	$R \theta_{JA}$			350 <sup>1)</sup>	K/W
Rectification efficiency at $f=100\text{MHz}, V_{RF}=2\text{V}$	$\eta$	0.45			

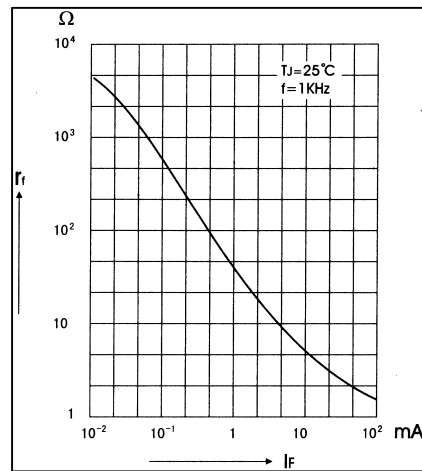
1)Valid provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35)

**RATINGS AND CHATACTERISTIC CURVES LL4148**

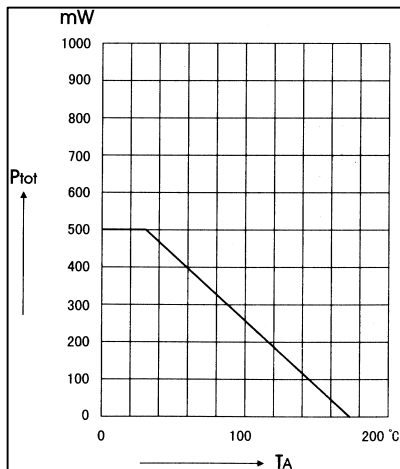
**FIG.1-FORWARD CHARACTERISTICS**



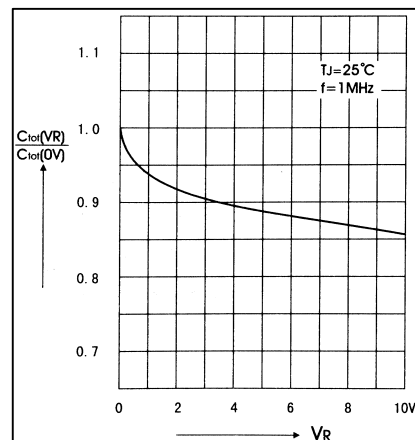
**FIG.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT**



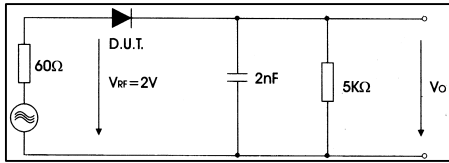
**FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE**



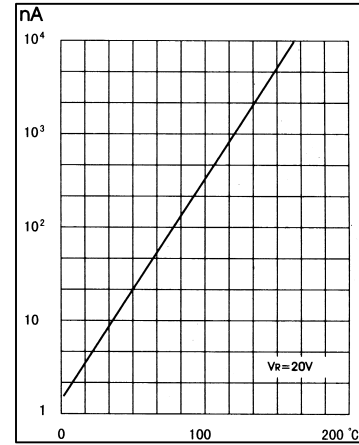
**FIG.4-RELATIVE CAPACITANCE VERSUS VOLTAGE**



**FIG.5-RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT**



**FIG.6-LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE**



**FIG.7-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION**

