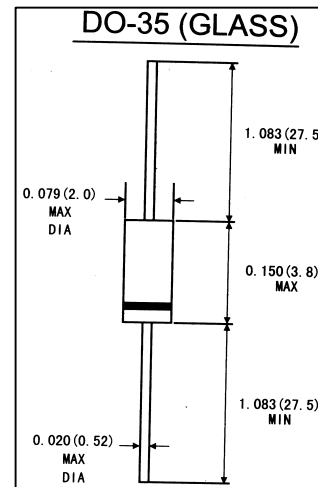


FEATURES

- Silicon epitaxial planar diode
- Fast swithching diodes
- 500mW power dissipation
- The diode is also available in the Mini-Melf case with the type designation LL4148

MECHANICAL DATA

- **Case:** DO-35 glass case
- **Polarity:** Color band denotes cathode end
- **Weight:** Approx. 0.13gram



Dimensions in inches and (millimeters)

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	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 ¹⁾	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 $V_R=20\text{V}$	I_R			25	nA
at $V_R=75\text{V}$	I_R			5	nA
at $V_R=20\text{V}$, $T_J=150^\circ\text{C}$	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	K/W
Rectification effience at $f=100\text{MHz}$, $V_{RF}=2\text{V}$	η	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 1N4148

FLG.1-FORWARD CHARACTERISTICS

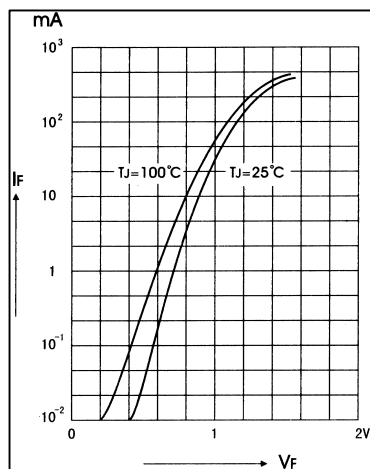


FIG.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

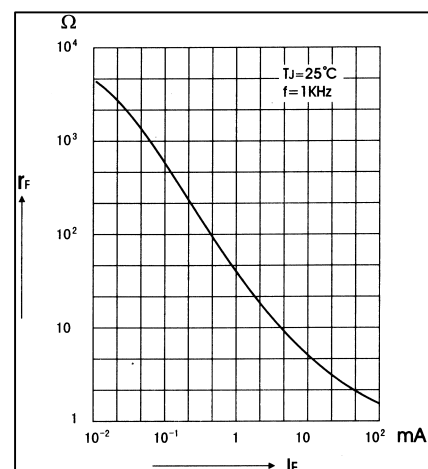


FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

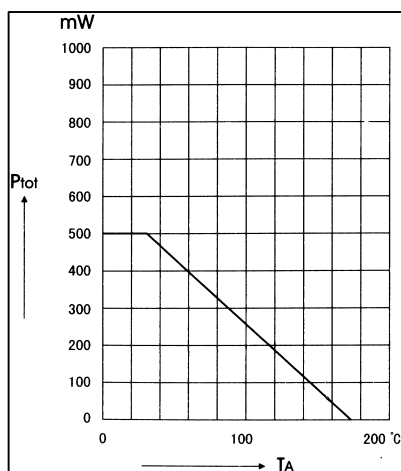
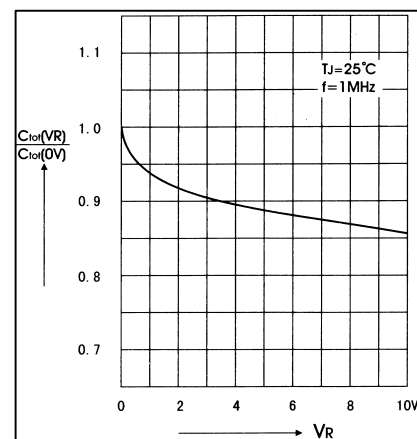
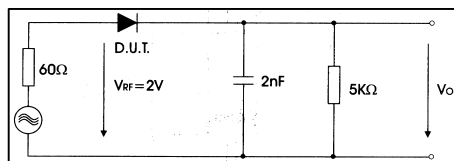


FIG.4-RELATIVE CAPACITANCE VERSUS VOLTAGE



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



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

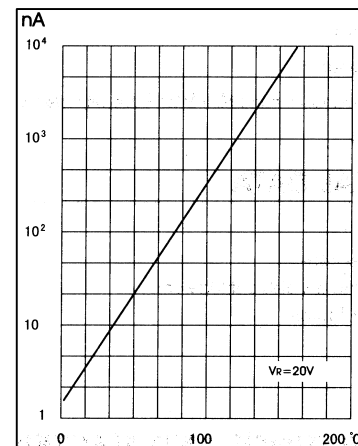


FIG.7-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

