DEC

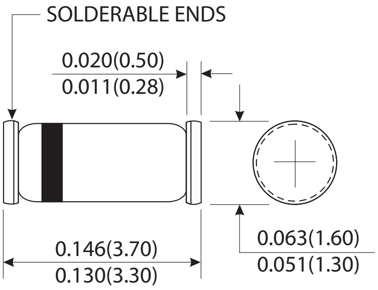
LL4148

SMALL SIGNAL
SWITCHING DIODES

Features

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

MELF (DO-35)



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Mini-MELF glass case(DO-35)
- Weight: Approx. 0.05 gram

Maximum Ratings And Electrical Characteristics

(Ratings at 25℃ 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℃ and F≥50Hz	I_{AV}	150[1)]	mA
Surge forward current at t<1S and T_J=25℃	I_{FSM}	500	mA
Power dissipation at T_A=25℃	P_{tot}	500[1)]	mW
Junction temperature	T_J	175	℃
Storage temperature range	T_{STG}	-65 to +175	℃
1) Vaild provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35)			

Electrical characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified)

	Symbols	Min.	Typ.	Max.	Units
Forward voltage	V_F			1	Volts
Leakage current at V_R=20V at V_R=75V at V_R=20V, T_J=150℃	I_R I_R I_R			25 5 50	nA μA μA
Junction Capacitance at V_R=V_F=0V	C_J			4	pF
Voltage rise when switching ON tested with 50mA pulse tp=0.1μS, Rise time<30μS, fp=5 to 100KHz	V_{fr}			2.5	Volts
Reverse Recovery time from I_F=10mA to I_R=1mA, V_R=6V, R_L=100Ω	t_{rr}			4	ns
Thermal resistance, junction to Ambient	$R_{\theta JA}$			350[1)]	K/W
Rectification efficiency at f=100MHz, V_{RF}=2V	η	0.45			
1) Vaild provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35)					

RATINGS AND CHARACTERISTIC CURVES LL4148

FIG.1-FORWARD CHARACTERISTICS

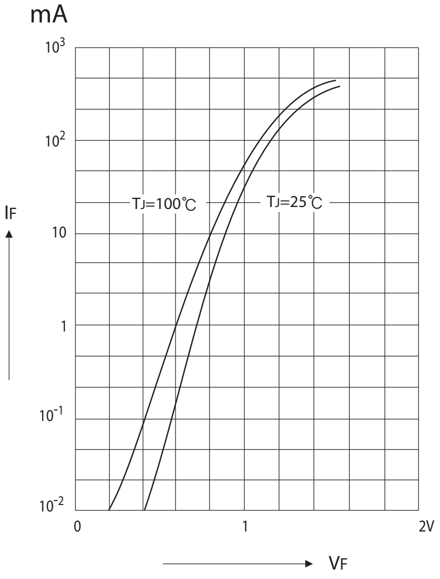


FIG.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

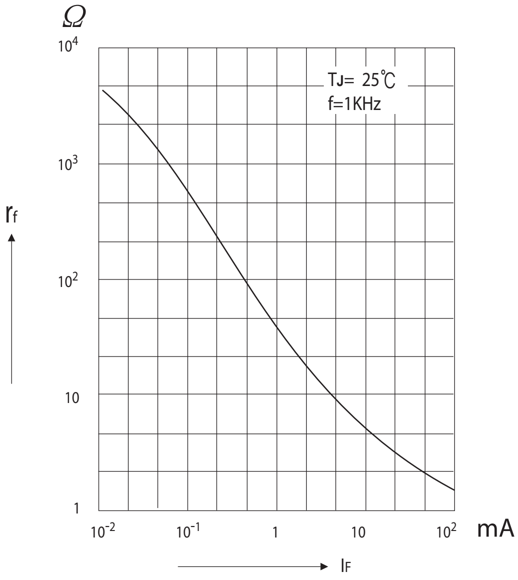


FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

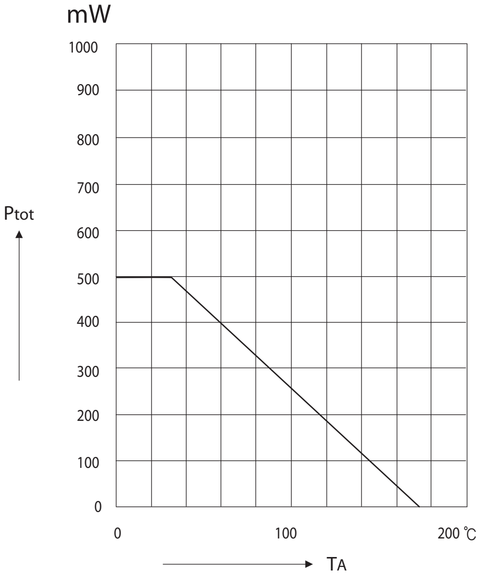


FIG. 4-RELATIVE CAPACITANCE VERSUS VOLTAGE

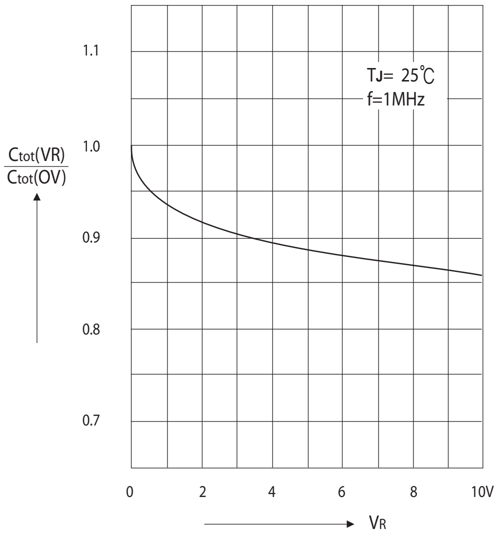


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FIG.5-RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

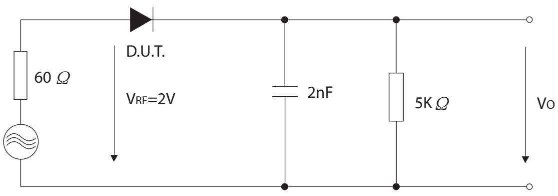

FIG.6-LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

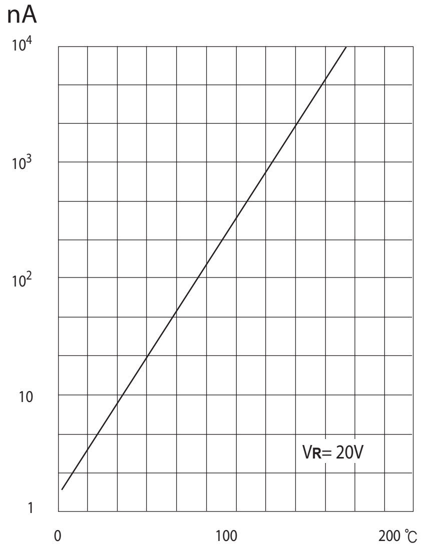

FIG.7-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION