

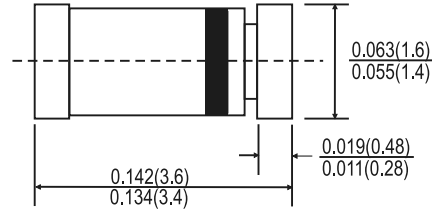
LL4148

SMALL SIGNAL SWITCHING DIODES

FEATURES:

- Silicon epitaxial planar diode
- Fast switching diodes in case MINI MELF, especially suited for automatic insertion

Mini-MELF



MECHANICAL DATA

Case: MINI MELF glass case (SOD-80)
Weight: Approx. 0.05gram

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

Characteristic	Symbol	LL4148	Units
Maximum peak reverse voltage	V _{RRM}	100	Volts
Maximum reverse voltage	V _R	75	Volts
Average rectified current .half wave rectification with Resistive load at T _a =25 °C And F ≥ 50HZ	I _(AV)	0.15 ¹⁾	Amps
Peak forward surge current, <1S single half sine-wave auperimposed on rated load T _a =25 °C	I _{FSM}	0.5	Amps
Power dissipation at T _a =25°C	P _{tot}	500 ¹⁾	mW
Maximum instantaneous forward voltage drop per leg at 0.01A	V _F	1.0	Volts
Maximun Voltage rise when switching ON tested with 50mA pulse t=0.1, S , Rise time <30, S , f=5 to 100 KHZ	V _{fr}	2.5	Volts
Maximun leakage current At V _R =20V At V _R =75V At V _R =20V T _a =150 °C	I _R	25 5 50	nA uA uA
Maximum Reverse recovery time (Note 1)	TRR	4	ns
Maximun Junction capacitance V _R =V _F =0V	C _{tot}	4	PF
Maximun Thermal resistance junction to ambient	R _{th JA}	350 ¹⁾	K /W
MINMUN rectification efficiency at f=100MHZ , V _{RF} =2V	η	045	
Operating temperature range	T _J	150	°C
storage temperature range	T _{stg}	-55 to +150	°C

NOTES:

(1)Reverse recovery condition I_F=0.01A , I_R =0.001A , V_R=6V , R_L =100

1):Valid provided that electrodes are kept at ambient temperature

FIG 1-FORWARD CHARACTERISTICS

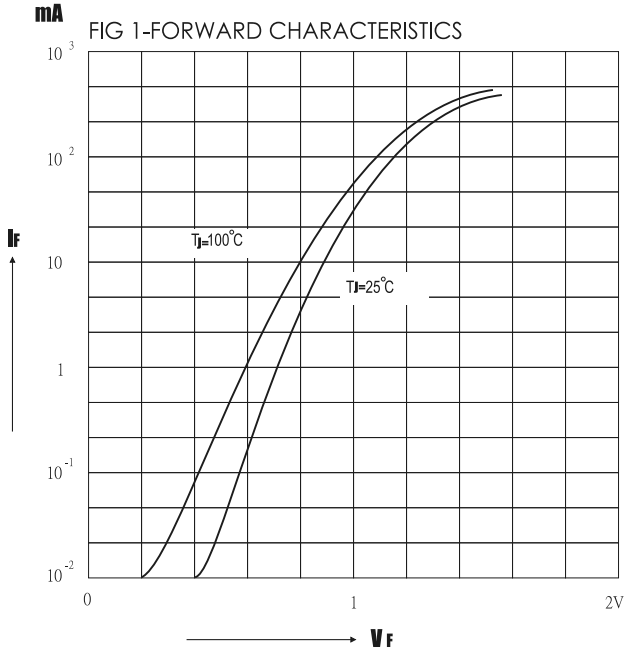


FIG 2: DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

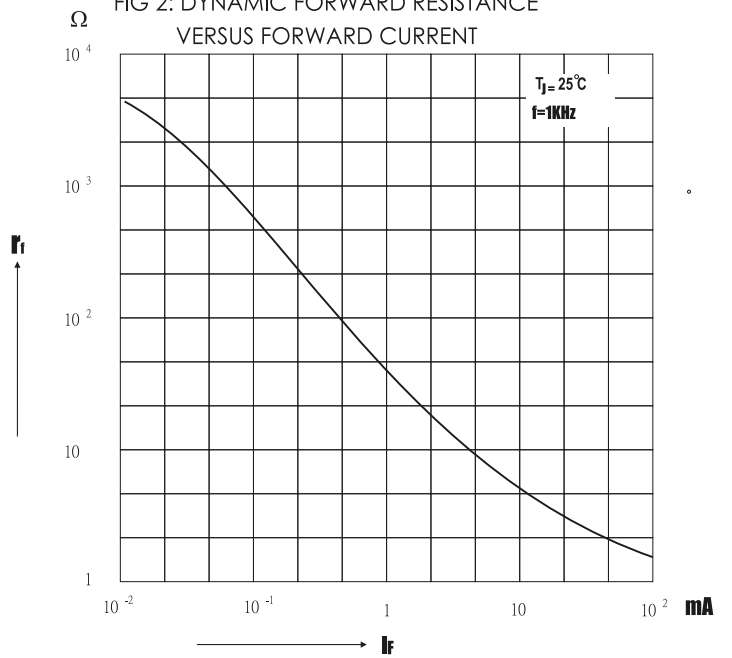


FIG 3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

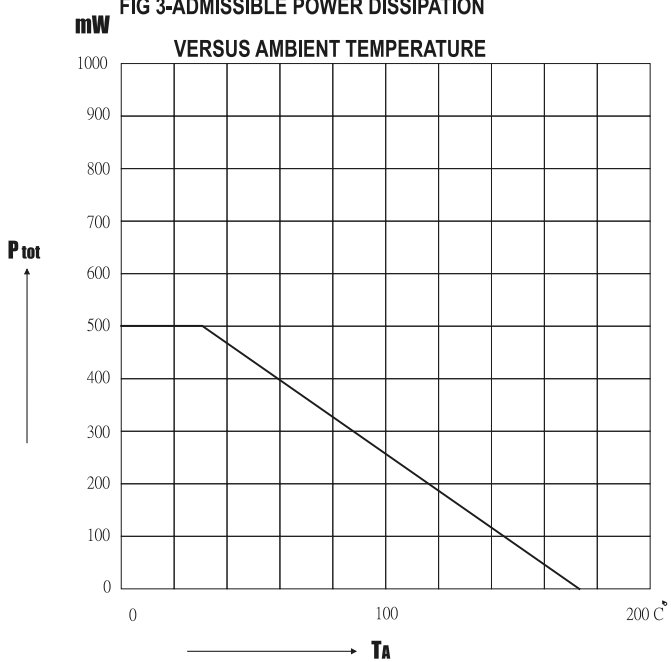


FIG. 4-RELATIVE CAPACITANCE VERSUS REVERS VOLTAGE

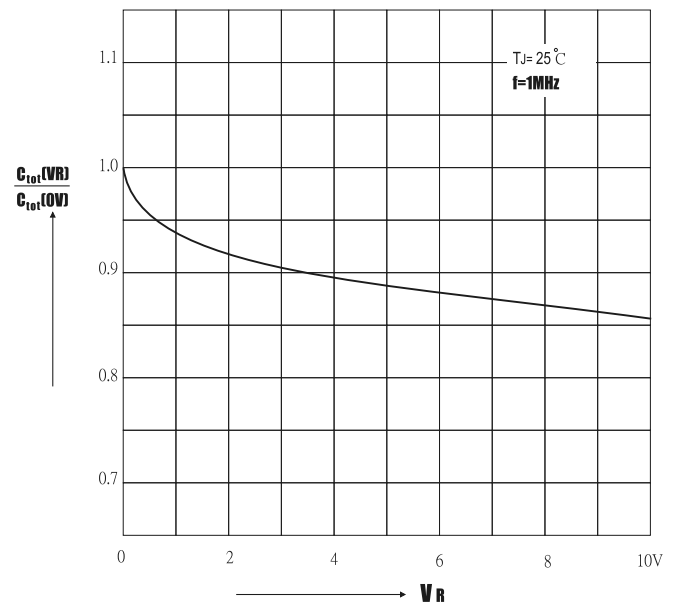


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

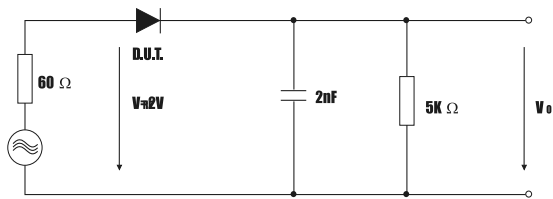


FIG 6: LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

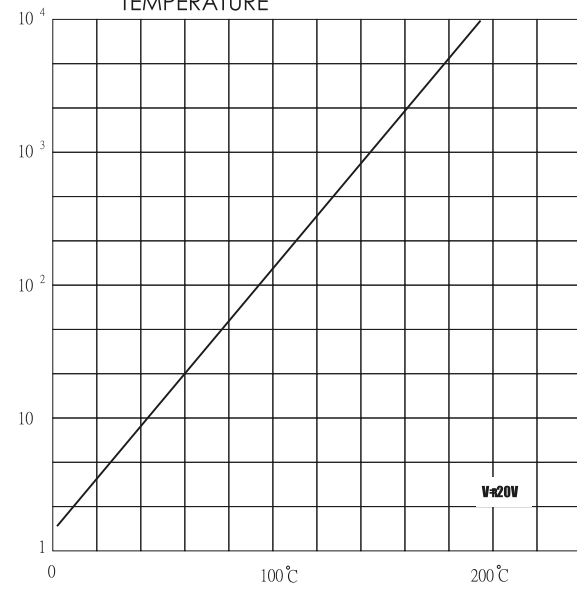


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

