

VII. Switching Diode

(a). SMD Type (Mini-MELF) LL4148

(Package: Mini-MELF)

<p>FEATURES</p> <ul style="list-style-type: none"> • Silicon epitaxial planar diode • Fast switching diodes • 500mW power dissipation • High temperature soldering guaranteed 250 /10 seconds at terminals <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : Mini-MELF glass sealed envelope • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.002 ounce, 0.05 grams 	<p>Case: Mini-MELF Dimensions in inches and (millimeters)</p>
--	---

Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	LL4148	Units
Maximum repetitive peak reverse voltage	V_{RRM}	100	Volts
Maximum RMS voltage	V_{RMS}	75	Volts
Maximum average forward rectified current at $T_a = 75$	I_o	150	mA
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	500	mA
Maximum instantaneous forward voltage at 10mA	V_F	1.0	Volts
Maximum DC reverse current $T_a=25$ $V_R=75V$ at rated DC blocking voltage $T_a=100$ $V_R=20V$	I_R	5.0 50	μA
Maximum reverse recovery time (Note 1)	T_{rr}	4.0	ns
Typical junction capacitance (Note 2)	C_j	4.0	PF
Operating junction and storage temperature range	T_j, T_{stg}	-65 to +200	

Note :

1. Test condition : $I_F = 10mA$, $I_R = 10mA$, $I_{RR} = 1mA$, $V_R = 6V$, $R_L = 100\Omega$

2. Measured at 1.0MHz and applied reverse voltage of 4.0 volts

Ratings and Characteristic Curves of LL4148

FIG. 1-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

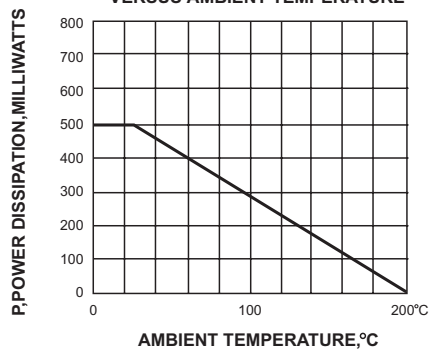


FIG. 2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE (TYPICAL VALUES)

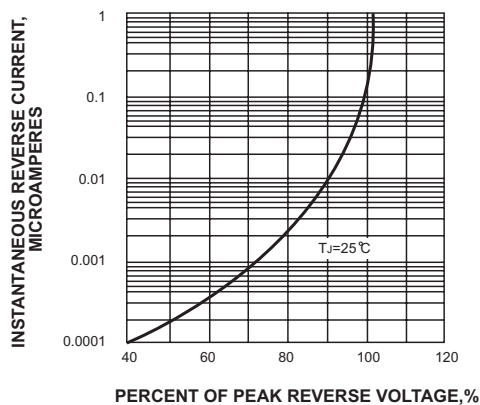


FIG. 3-FORWARD CHARACTERISTICS

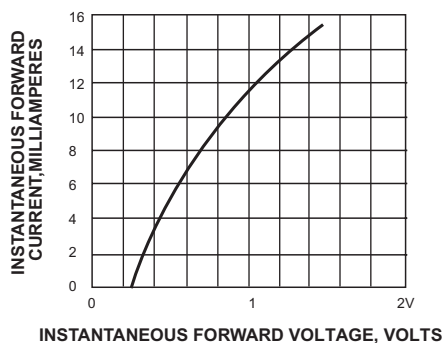


FIG. 4-RELATIVE CAPACITANCE VERSUS REVERSE VOLTAGE

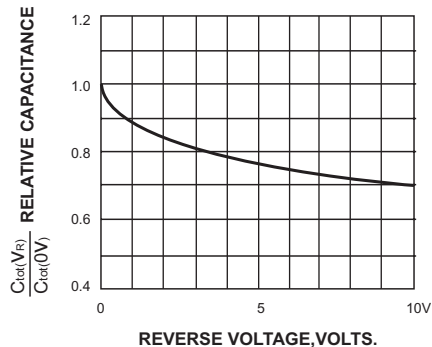


FIG. 5-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

