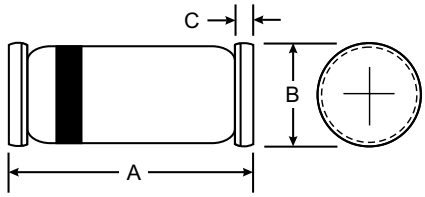
MCL4154

SURFACE MOUNT FAST SWITCHING DIODE

Features

- Silicon Epitaxial Planar Diodes
- Micro Melf package



LL34/ SOD-80		
Dim	**Min**	**Max**
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

Mechanical Data

- Case: SOD-80/LL34, Glass
- Terminals: Solderable per MIL-STD-202,
- Method 208
- Polarity: Cathode Band
- Weight: 0.05 grams (approx.)

RoHS COMPLIANT

Maximum Ratings T_A = 25°C unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	35	V
Reverse voltage		V_R	25	V
Peak forward surge current	t_p = 1 µs	I_{FSM}	2	A
Repetitive peak forward current		I_{FRM}	450	mA
Forward continuous current		I_F	200	mA
Average forward current	V_R = 0	I_{FAV}	150	mA
Power dissipation		P_{tot}	500	mW

Thermal Characteristics T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction to ambient air	mounted on epoxy-glass hard tissue, Fig. 4, 35 µm copper clad, 0.9 mm^2 copper area per electrode	R_{thJA}	500	K/W
Junction temperature		T_j	175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

Electrical Characteristics T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 30 mA	V_F			1000	mV
Reverse current	V_R = 25 V	I_R			100	nA
	V_R = 25 V, T_j = 150 °C	I_R			100	µA
Breakdown voltage	I_R = 5 µA, t_p/T = 0.01, t_p = 0.3 ms	$V_{(BR)}$	35			V
Diode capacitance	V_R = 0, f = 1 MHz, V_{HF} = 50 mV	C_D			4	pF
Reverse recovery time	I_F = I_R = 10 mA, i_R = 1 mA	t_{rr}			4	ns
	I_F = 10 mA, V_R = 6 V, i_R = 0.1 x I_R, R_L = 100 Ω	t_{rr}			2	ns

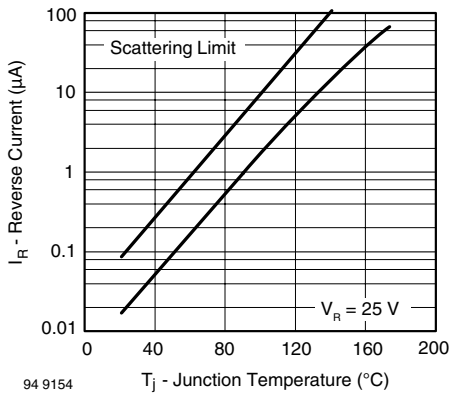


Figure 1. Reverse Current vs. Junction Temperature

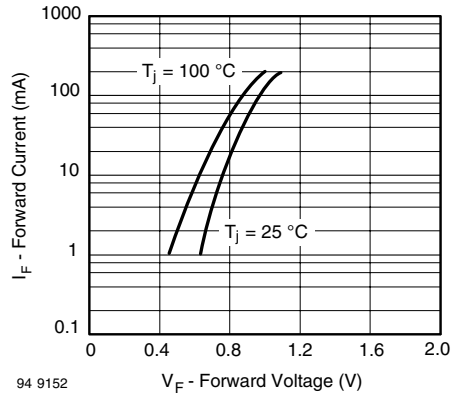


Figure 2. Forward Current vs. Forward Voltage

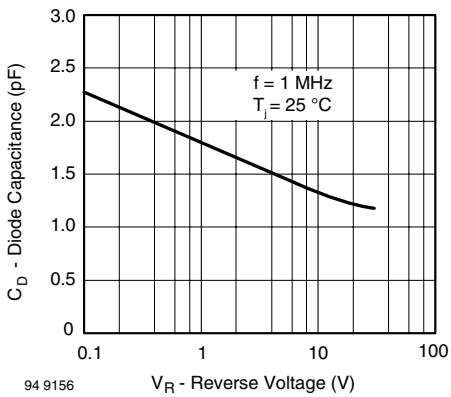


Figure 3. Diode Capacitance vs. Reverse Voltage

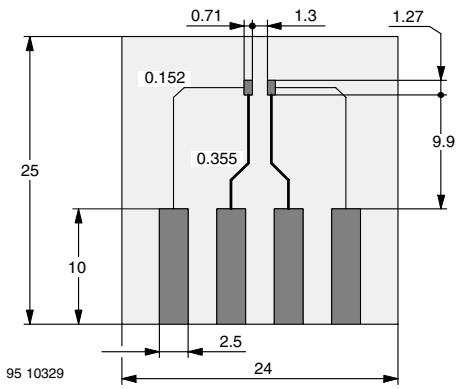


Figure 4. Board for R_{thJA} definition (in mm)