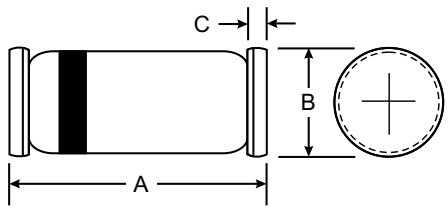
MCL4448

SURFACE MOUNT FAST SWITCHING DIODE

Features

- Saving space
- Hermetic sealed parts
- Micro Melf package



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

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		

Maximum Ratings T_A = 25°C unless otherwise specified

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage			V_{RRM}	100	V
Reverse voltage			V_R	75	V
Peak forward surge current	t_p=1μs		I_{FSM}	2	A
Repetitive peak forward current			I_{FRM}	450	mA
Forward current			I_F	200	mA
Average forward current	V_R=0		I_{FAV}	150	mA
Power dissipation			P_V	500	mW
Junction temperature			T_j	175	˚C
Storage temperature range			T_{stg}	–65...+175	˚C

Electrical Characteristics T_j = 25 ˚C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=5mA	MCL4448	V_F	0.62		0.72	V
	I_F=50mA	MCL4148	V_F		0.86	1	V
	I_F=100mA	MCL4448	V_F		0.93	1	V
Reverse current	V_R=20V		I_R			25	nA
	V_R=20V, T_j=150˚C		I_R			50	μA
	V_R=75V		I_R			5	μA
Breakdown voltage	I_R=100μA, t_p/T=0.01, t_p=0.3ms		$V_{(BR)}$	100			V
Diode capacitance	V_R=0, f=1MHz, V_{HF}=50mV		C_D			4	pF
Rectification efficiency	V_{HF}=2V, f=100MHz		η_r	45			%
Reverse recovery time	I_F=I_R=10mA, i_R=1mA		t_{rr}			8	ns
	I_F=10mA, V_R=6V, i_R=0.1xI_R, R_L=100Ω		t_{rr}			4	ns

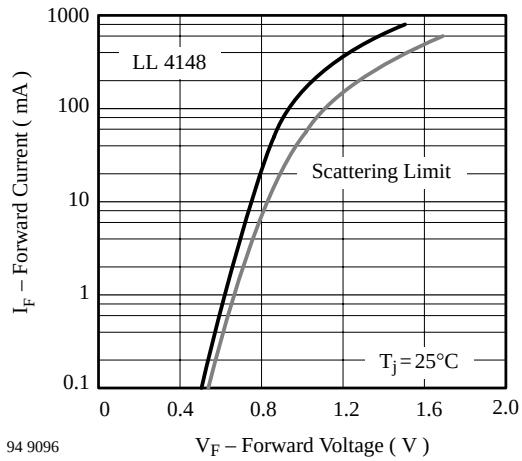


Figure 4. Forward Current vs. Forward Voltage

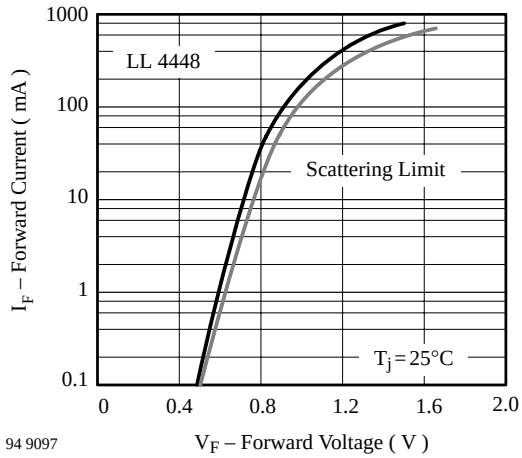


Figure 5. Forward Current vs. Forward Voltage

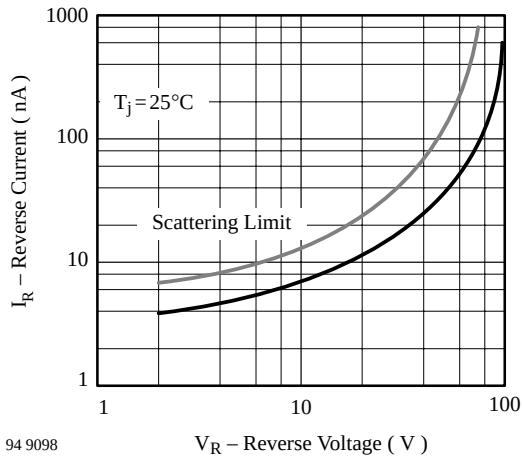


Figure 6. Reverse Current vs. Reverse Voltage

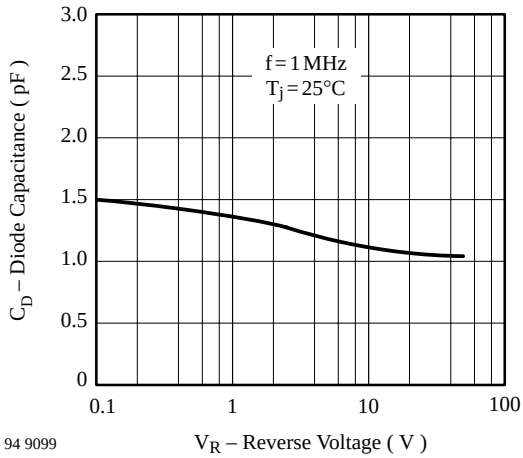


Figure 7. Diode Capacitance vs. Reverse Voltage