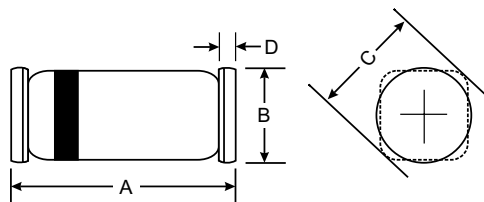


Features

- Silicon Epitaxial Planar Diodes
- Saving space
- Hermetic sealed parts
- Fits onto SOD323 / SOT23 footprints
- Electrical data identical with the devices 1N4148 and 1N4448 respectively
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



SOD-80		
Dim	Min	Max
A	3.3	3.7
B	1.4	1.6
C	1.7Ø Typical	
D	0.3 Typical	
All Dimensions in mm		

Mechanical Data

- **Case:**(SOD-80) Glass case
- **Weight:** approx. 12 mg
- **Cathode Band Color:** Black
- **Packaging Codes/Options:**
TR3 / 10 k per 13" reel (8 mm tape), 10 k/box
TR / 2.5 k per 7" reel (8 mm tape), 12.5 k/box

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V _{RRM}	100	V
Reverse voltage		V _R	75	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

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	I _F = 5 mA	MCL4448	V _F	620		720	mV
	I _F = 50 mA	MCL4148	V _F		860	1000	mV
	I _F = 100 mA	MCL4448	V _F		930	1000	mV
Reverse current	V _R = 20 V		I _R			25	nA
	V _R = 20 V, T _j = 150 °C		I _R			50	µA
	V _R = 75 V		I _R			5	µA
Breakdown voltage	I _R = 100 µA, t _p /T = 0.01, t _p = 0.3 ms		V _(BR)	100			V
Diode capacitance	V _R = 0, f = 1 MHz, V _{HF} = 50 mV		C _D			4	pF
Rectification efficiency	V _{HF} = 2 V, f = 100 MHz		η _r	45			%
Reverse recovery time	I _F = I _R = 10 mA, i _R = 1 mA		t _{rr}			8	ns
	I _F = 10 mA, V _R = 6 V, i _R = 0.1 x I _R , R _L = 100 Ω		t _{rr}			4	ns

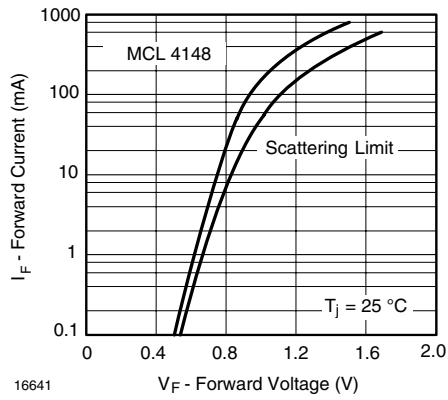


Figure 1. Forward Current vs. Forward Voltage

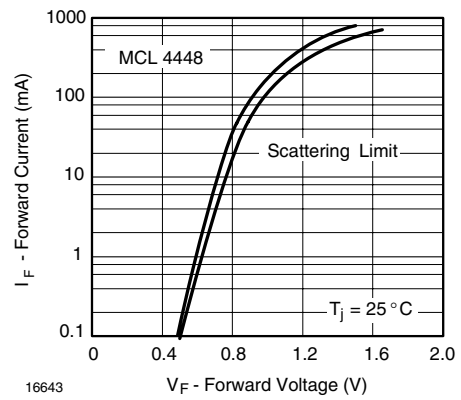


Figure 2. Forward Current vs. Forward Voltage

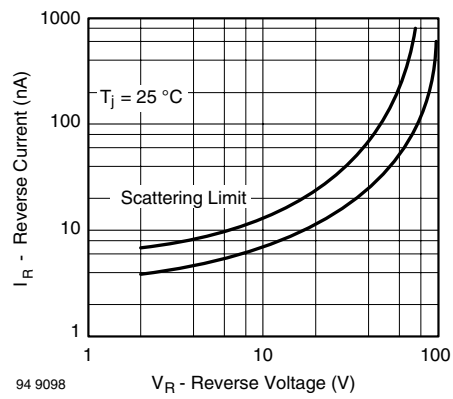


Figure 3. Reverse Current vs. Reverse Voltage

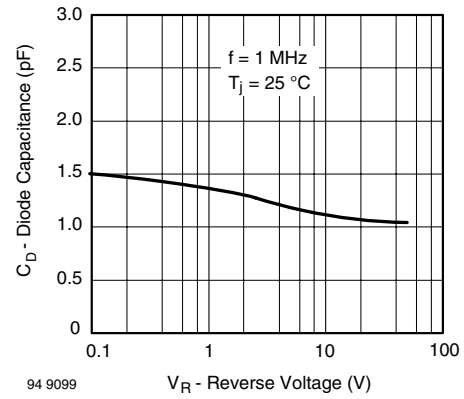


Figure 4. Diode Capacitance vs. Reverse Voltage

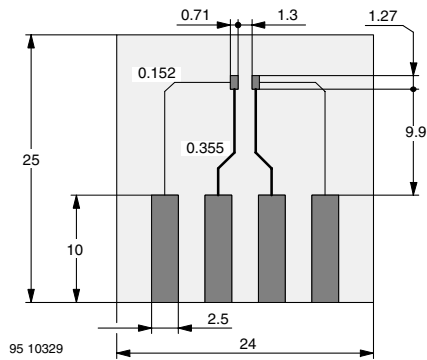


Figure 5. Board for R_{thJA} definition (in mm)