



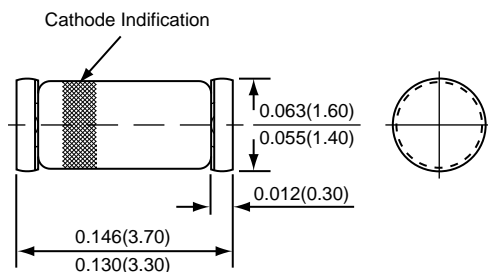
# LL4148, LL4448

## SILICON EPITAXIAL PLANAR DIODES

Reverse Voltage 100 Volts

Peak Forward Current - 500mA

### SOD-80



Glass case  
Mini MELF / SOD 80  
JEDEC DO 213AA

technical drawings  
according to DIN  
specifications

\*Dimensions in inches and (millimeters)



### FEATURES

- \* Electrical data identical with the devices 1N4148
- \* and 1N4448 respectively
- \* Extreme fast switches

### MECHANICAL DATA

**Case :** Mini MELF SOD-80 Glass Case

**Weight :** approx. 0.05 gram

### ABSOLUTE MAXIMUM RATINGS ( T<sub>J</sub>=25°C )

PARAMETER	Test Conditions	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	100	V
Reverse Voltage		V <sub>R</sub>	75	V
Peak Forward Surge Current	tp = 1 us	I <sub>FSM</sub>	2	A
Repetitive Peak Forward Current		I <sub>FRM</sub>	500	mA
Forward Current		I <sub>F</sub>	300	mA
Average Forward Current	V <sub>R</sub> = 0	I <sub>FAV</sub>	150	mA
Power Dissipation		P <sub>V</sub>	500	mW
Junction Temperature		T <sub>J</sub>	175	°C
Storage Temperature Range		T <sub>STG</sub>	-65 to +175	°C

### MAXIMUM THERMAL RESISTANCE ( T<sub>J</sub>=25°C )

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Junction Ambient	on PC Board 50mm x 50mm x 1.6mm	R <sub>θJA</sub>	500	K / W

### MAXIMUM THERMAL RESISTANCE ( T<sub>J</sub>=25°C )

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward Voltage	( I <sub>F</sub> = 5 mA ) ( Type : LL4448 )	V <sub>F</sub>	0.62	-	0.72	Volts
	( I <sub>F</sub> = 50 mA ) ( Type : LL4148 )		-	0.86	1.0	
	( I <sub>F</sub> = 100 mA ) ( Type : LL4448 )		-	0.93	1.0	
Reverse Current	( V <sub>R</sub> = 20 V )	I <sub>R</sub>	-	-	25	nAdc
	( V <sub>R</sub> = 20 V, T <sub>J</sub> =150°C )		-	-	50	uAdc
	( V <sub>R</sub> = 75 V )		-	-	5.0	
Breakdown Voltage	( I <sub>R</sub> = 100 uA, tp/T = 0.01, tp = 0.3 ms )	V <sub>(BR)</sub>	100	-	-	Volts
Diode Capacitance	( V <sub>R</sub> = 0, f=1.0MHz, V <sub>HF</sub> = 50mV )	C <sub>D</sub>	-	-	4	pF
Rectification Efficiency	( V <sub>HF</sub> = 2 V, f = 100MHz )	η <sub>r</sub>	45	-	-	%
Reverse Recovery Time	( I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>R</sub> = 1mA )	t <sub>rr</sub>	-	-	8	nS
	( I <sub>F</sub> = 10mA, V <sub>R</sub> = 6 V, I <sub>R</sub> = 0.1 X I <sub>R</sub> , R <sub>L</sub> = 100Ω )		-	-	4	

# RATINGS AND CHARACTERISTIC CURVES LL4148, LL4448

FIG.1 - FORWARD CURRENT VS. FORWARD VOLTAGE

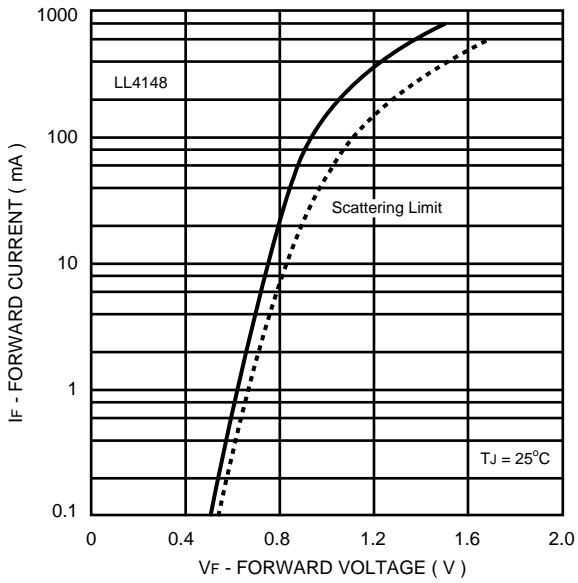


FIG.2 - FORWARD CURRENT VS. FORWARD VOLTAGE

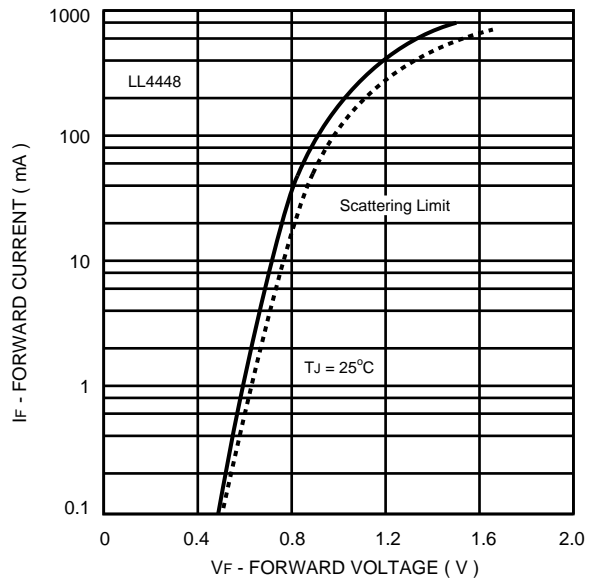


FIG.3 - REVERSE CURRENT VS. REVERSE VOLTAGE

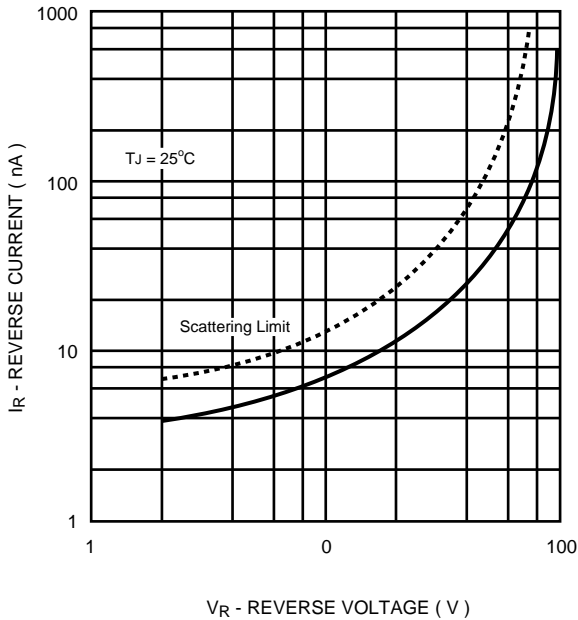


FIG.4 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

