

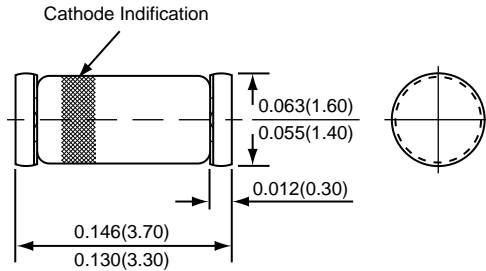


# LL4148, LL4448 SILICON EPITAXIAL PLANAR DIODES

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 ( $T_J=25^{\circ}\text{C}$ )

PARAMETER	Test Conditions	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage		$V_{RRM}$	100	V
Reverse Voltage		$V_R$	75	V
Peak Forward Surge Current	$t_p = 1 \text{ us}$	$I_{FSM}$	2	A
Repetitive Peak Forward Current		$I_{FRM}$	500	mA
Forward Current		$I_F$	300	mA
Average Forward Current	$V_R = 0$	$I_{FAV}$	150	mA
Power Dissipation		PV	500	mW
Junction Temperature		$T_J$	175	$^{\circ}\text{C}$
Storage Temperature Range		$T_{STG}$	-65 to +175	$^{\circ}\text{C}$

## MAXIMUM THERMAL RESISTANCE ( $T_J=25^{\circ}\text{C}$ )

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Junction Ambient	on PC Board 50mm x 50mm x 1.6mm	$R_{\theta JA}$	500	K / W

## MAXIMUM THERMAL RESISTANCE ( $T_J=25^{\circ}\text{C}$ )

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward Voltage	( $I_F = 5 \text{ mA}$ ) ( Type : LL4448 )	$V_F$	0.62	-	0.72	Volts
	( $I_F = 50 \text{ mA}$ ) ( Type : LL4148 )		-	0.86	1.0	
	( $I_F = 100 \text{ mA}$ ) ( Type : LL4448 )		-	0.93	1.0	
Reverse Current	( $V_R = 20 \text{ V}$ )	$I_R$	-	-	25	nAdc
	( $V_R = 20 \text{ V}$ , $T_J=150^{\circ}\text{C}$ )		-	-	50	uAdc
	( $V_R = 75 \text{ V}$ )		-	-	5.0	
Breakdown Voltage	( $I_R = 100 \text{ uA}$ , $t_p/T = 0.01$ , $t_p = 0.3 \text{ ms}$ )	$V_{(BR)}$	100	-	-	Volts
Diode Capacitance	( $V_R = 0$ , $f=1.0\text{MHz}$ , $V_{HF} = 50\text{mV}$ )	$C_D$	-	-	4	pF
Rectification Efficiency	( $V_{HF} = 2 \text{ V}$ , $f = 100\text{MHz}$ )	$\eta_r$	45	-	-	%
Reverse Recovery Time	( $I_F = I_R = 10\text{mA}$ , $I_R = 1\text{mA}$ )	$t_{rr}$	-	-	8	nS
	( $I_F = 10\text{mA}$ , $V_R = 6 \text{ V}$ , $I_R = 0.1 \times I_R$ , $R_L = 100\Omega$ )		-	-	4	

# RATINGS AND CHARACTERISTIC CURVES LL4148, LL4448

FIG.1 - FORWARD CURRENT VS. FORWARD VOLTAGE

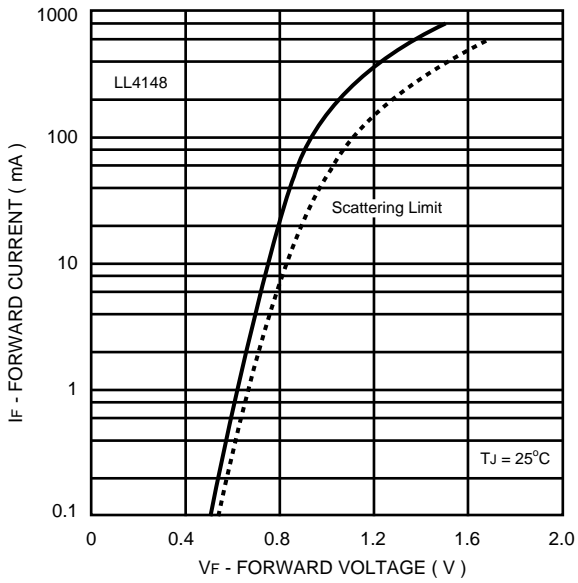


FIG.2 - FORWARD CURRENT VS. FORWARD VOLTAGE

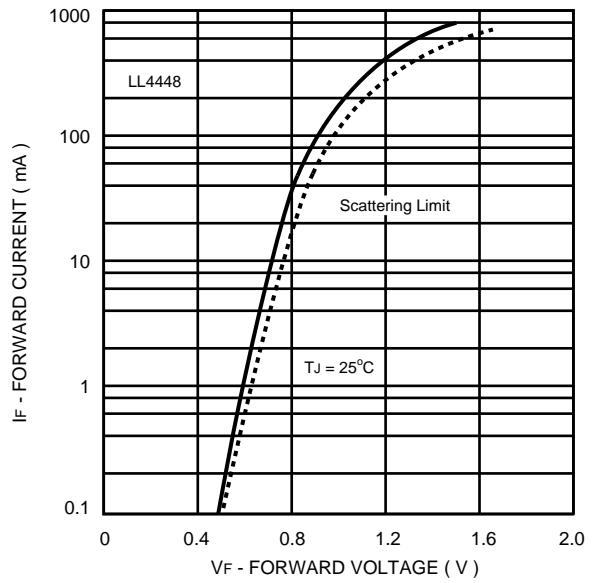


FIG.3 - REVERSE CURRENT VS. REVERSE VOLTAGE

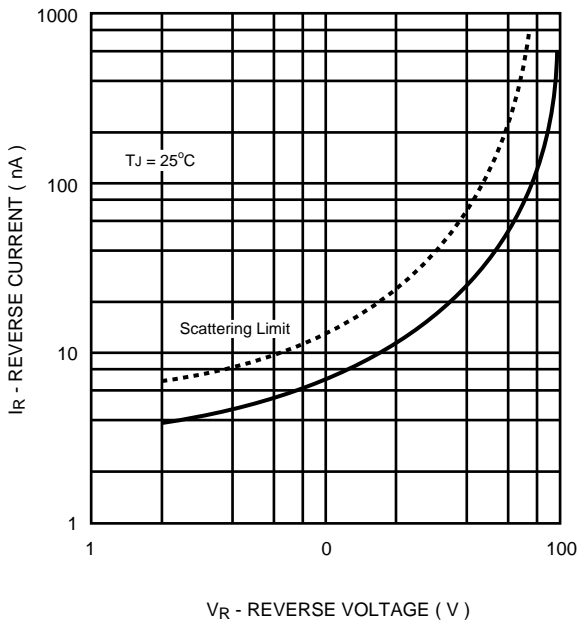


FIG.4 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

