



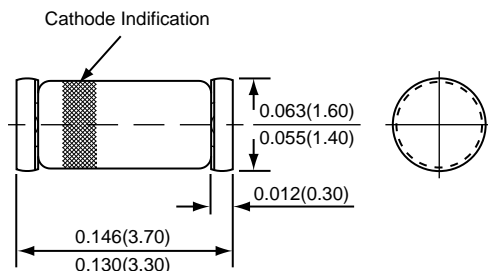
LL4148, LL4448

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	($V_{HF} = 2 \text{ V}$, $f = 100\text{MHz}$)	η_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

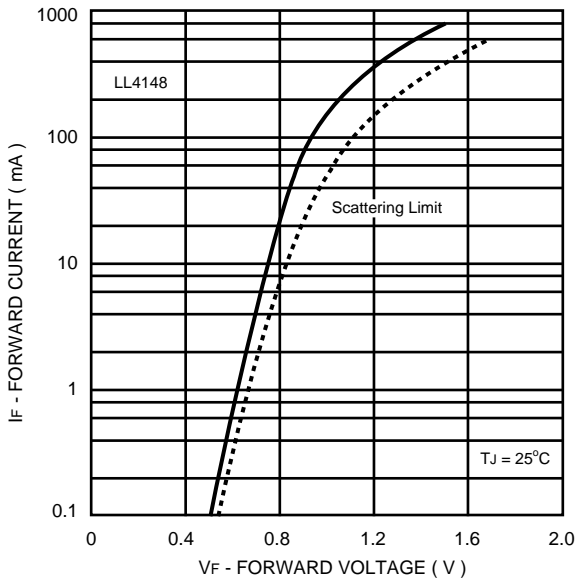


FIG.2 - FORWARD CURRENT VS. FORWARD VOLTAGE

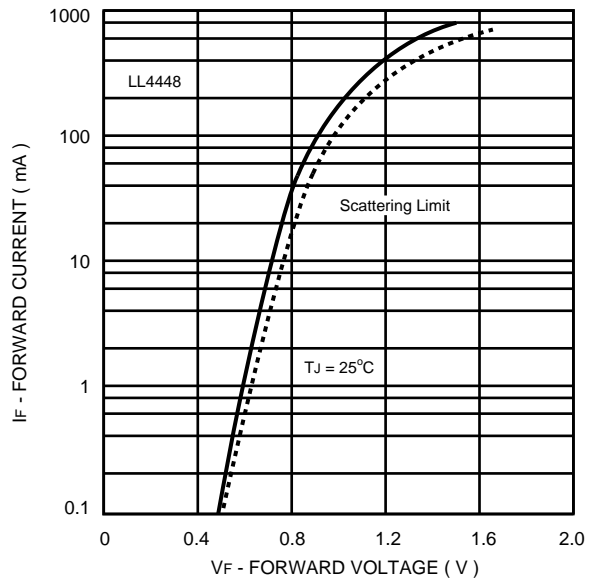


FIG.3 - REVERSE CURRENT VS. REVERSE VOLTAGE

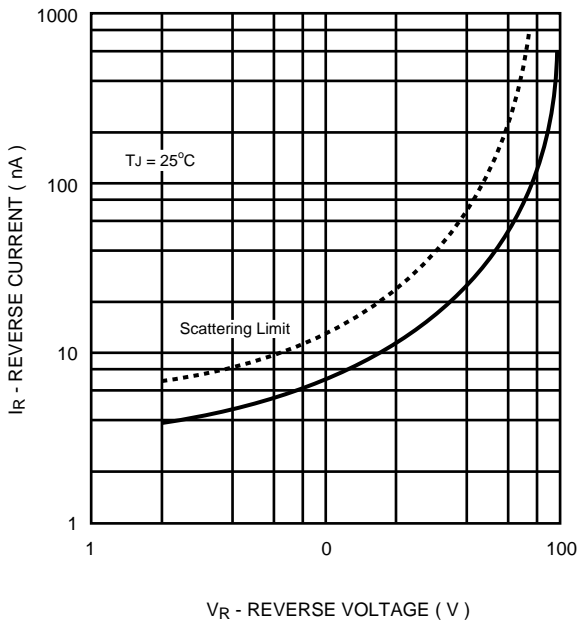


FIG.4 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

