

# LL4148

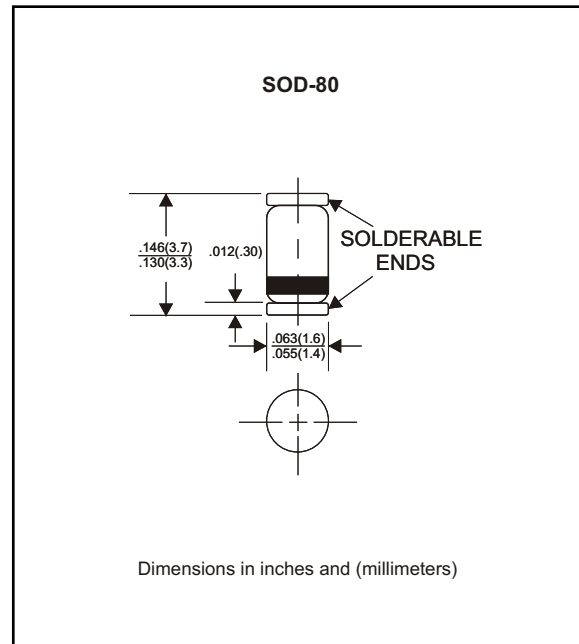
Silicon epitaxial planar type

## Features

- Small surface mounting type
- High reliability
- High speed ( $t_{rr} < 4 \text{ ns}$ )

## Mechanical data

Case : Glass, SOD-80 (MINI-MELF)  
 Terminals : Solder plated, solderable per MIL-STD-750,  
 Method 2026  
 Polarity : Indicated by cathode band  
 Mounting Position : Any  
 Weight : 0.015 gram



## MAXIMUM RATINGS (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Repetitive peak reverse voltage		$V_{RRM}$			100	V
Reverse voltage		$V_R$			75	V
Peak forward surge current	$t_p = 1 \text{ us}$	$I_{FSM}$			2.0	A
Repetitive peak forward voltage		$I_{FRM}$			500	mA
Forward current		$I_F$			300	mA
Average forward current	$V_R = 0$	$I_{FAV}$			150	mA
Power dissipation		$P_V$			500	mW
Junction temperature		$T_j$			175	$^{\circ}\text{C}$
Storage temperature		$T_{STG}$	-55		+175	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 5\text{mA}$	$V_F$	0.62		0.72	V
	$I_F = 10\text{mA}$	$V_F$		0.86	1.00	V
Reverse current	$V_R = 20\text{V}$	$I_R$			25	nA
	$V_R = 20\text{V}, T_j = 150^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
	$V_R = 75\text{V}$	$I_R$			5.0	$\mu\text{A}$
Breakdown current	$I_R = 100\mu\text{A}, T_p/T = 0.01, T_p = 0.3\text{ms}$	$V_{(BR)}$	100			V
Diode capacitance	$V_R = 0, f = 1\text{MHz}, V_{HF} = 50\text{mV}$	$C_D$			4.0	pF
Rectification efficiency	$V_{HF} = 2\text{V}, f = 100\text{MHz}$	$\eta_R$	45			%
Reverse recovery time	$I_F = I_R = 10\text{mA}, I_{RR} = 1\text{mA}$	$t_{rr}$			8	ns
	$I_F = 10\text{mA}, V_R = 6\text{V}, I_{RR} = 0.1 \times I_R, R_L = 100\Omega$	$t_{rr}$			4	ns

# RATING AND CHARACTERISTIC CURVES (LL4148)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

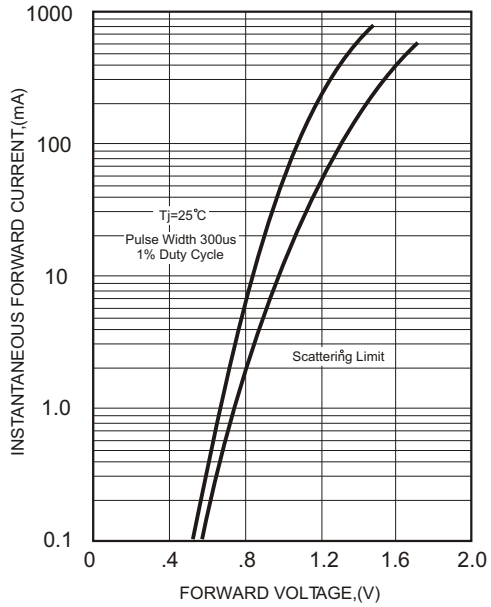


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

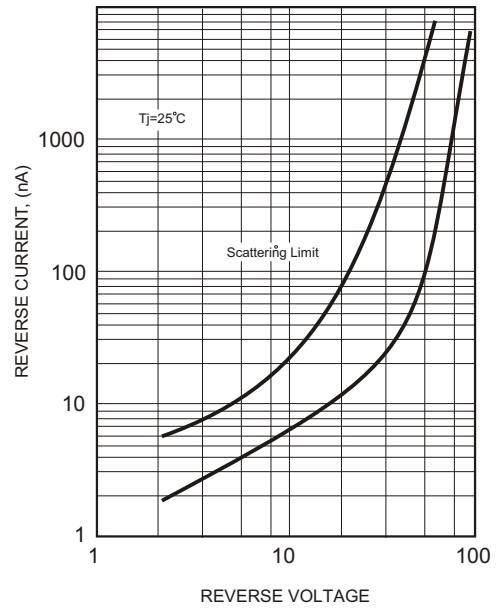


FIG.2 - TYPICAL DIODE CAPACITANCE

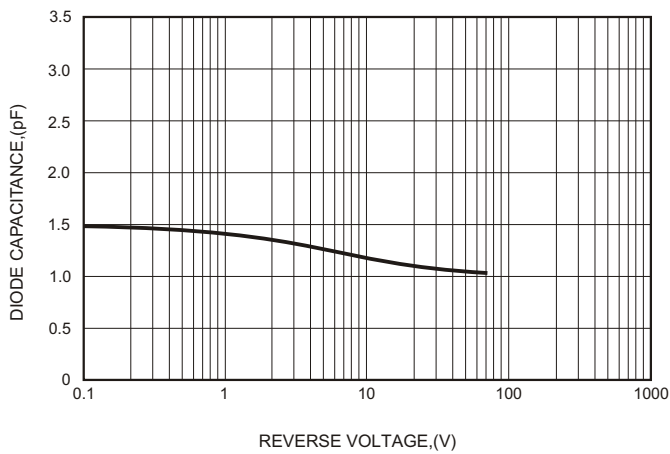


FIG.4 - REVERSE CURRENT VS JUNCTION TEMPERATURE

