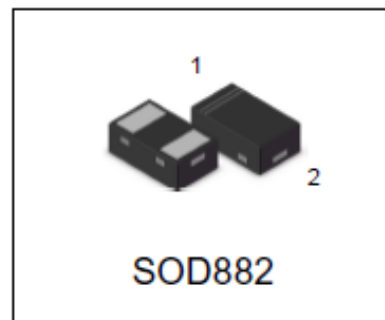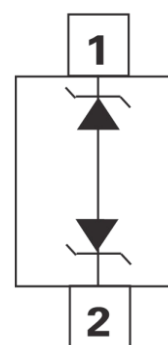# ESD Protection –ESDLC3V3D8B

Description

The ESDLC3V3D8B is designed to protect voltage sensitive components that require ultra−low capacitance from ESD and transient voltage events. Excellent clamping capability, low capacitance, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed and antenna line applications..

SOD882

Feature

- Case : SOD882 package
- Ultra Low Capacitance 0.5 pF
- Low clamping voltage
- Low Leakage current
- Response Time is Typically < 1.0 ns
- IEC61000 4 2 Level 4 ESD Protection
- This is a Pb−Free Device

Schematic & PIN Configuration

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
IEC61000-4-2 (Contact)	V_{ESD}	15	kV
IEC61000-4-2 (Air)	V_{ESD}	10	kV
Total Power Dissipation on FR−5 Board (Note 1) @ TA = 25 ℃	P_D	150	mW
Lead Soldering Temperature	T_L	260 (10 sec)	° C
Operating Temperature	T_J	-55 to 125	° C
Storage Temperature Range	T_{STG}	-55 to 150	° C

Electrical Characteristics (T =25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	It = 1mA	4.8			V
Reverse Leakage Current	I_R	V_R = V_{RWM}			1	μA
Clamping Voltage	V_C	I_{PP}=1A, t_P = 8/20μs		10		V
Junction Capacitance	C_J	V_R=0V, f = 1MHz		0.5	0.9	pF

Rating & Characteristic Curves

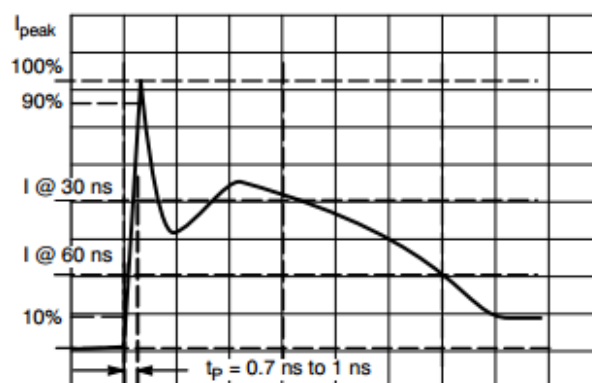Figure 1 - Electrical Parameter

Figure 2- IEC61000−4−2 Waveform

Figure 3- ESD Clamping Voltage Screenshot
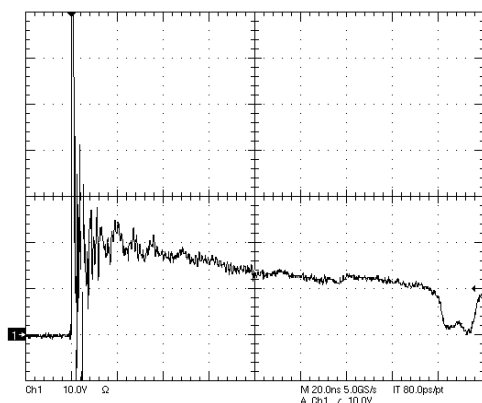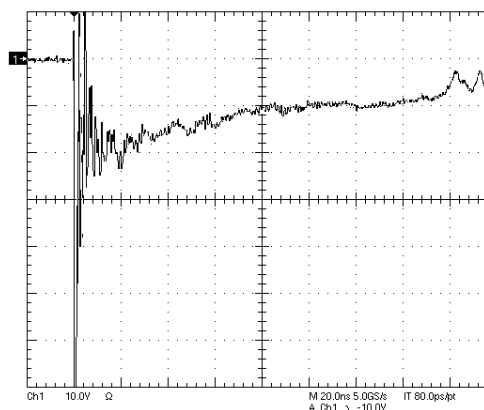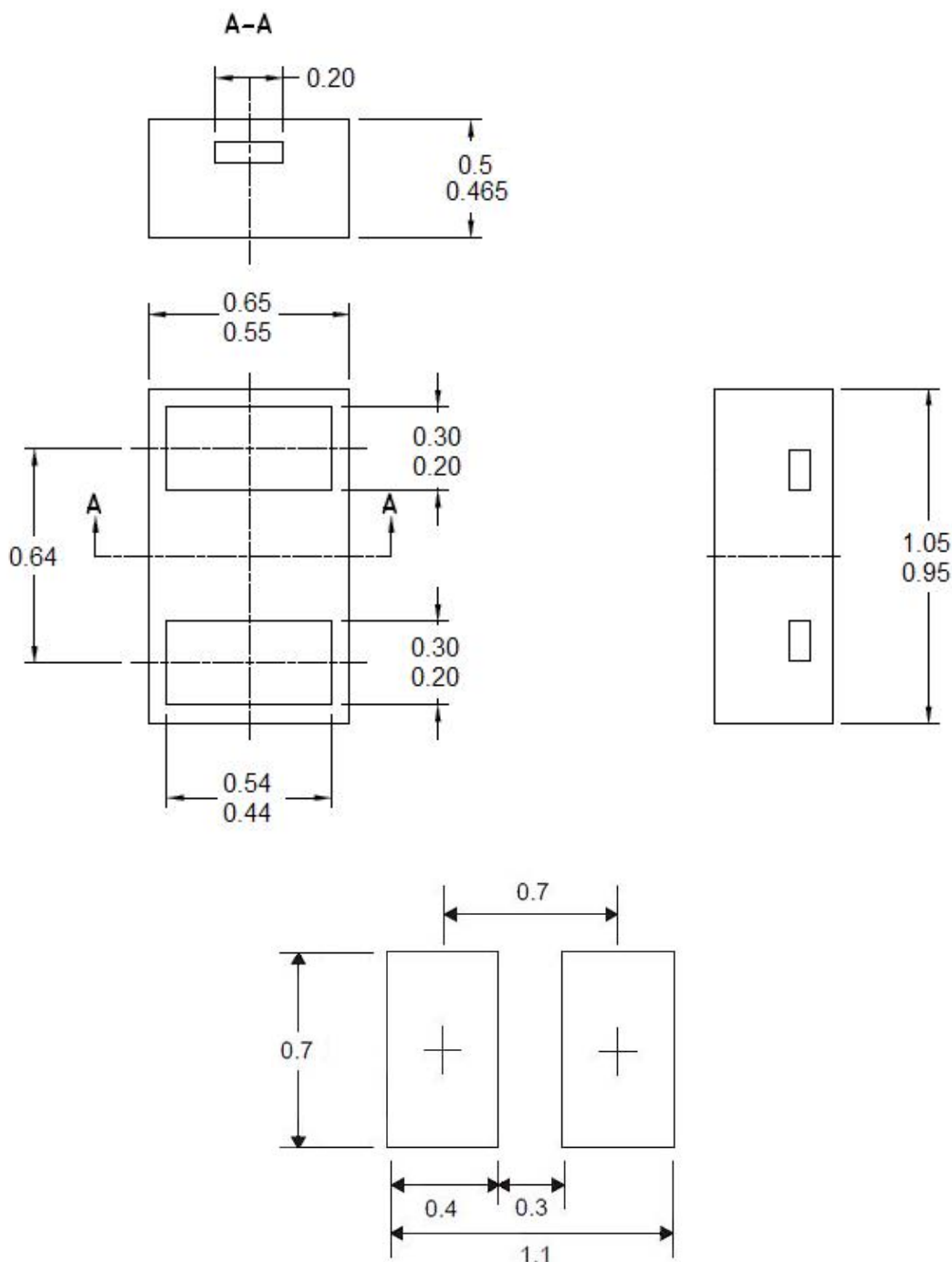Positive 8 kV Contact per IEC61000−4−2

Figure 3- ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000−4−2

PACKAGE OUTLINE DIMENSIONS in millimeters :SOD882

A-A

0.20

0.5
0.465

0.65
0.55

0.30
0.20

A   A

0.64

0.30
0.20

0.54
0.44

1.05
0.95

0.7

0.7

0.4   0.3

1.1