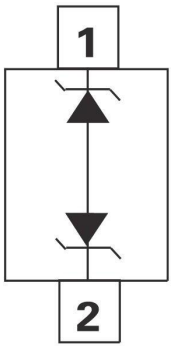
ESDULC5V0BDB

Description

The ESDULC5V0BDB 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.

Schematic & PIN Configuration



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

Applications

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

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
IEC61000-4-2 (Contact)	V_{ESD}	10	kV
IEC61000-4-2 (Air)	V_{ESD}	15	kV
Total Power Dissipation on FR−5 Board (Note 1) @ TA = 25°C	P_D	100	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

Dated:01/2019
Rev:1.0

ESDULC5V0BDB

Electrical Characteristics (T =25° C)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	It = 1mA	6		11	V
Reverse Leakage Current	I_R	$V_R = V_{RWM}$			1	μA
Clamping Voltage	V_C	I_{PP}=1A, t_P = 8/20μs		11		V
Junction Capacitance	C_J	V_R=0V, f = 1MHz		0.5		pF

Rating & Characteristic Curves

Figure 1 - Electrical Parameter

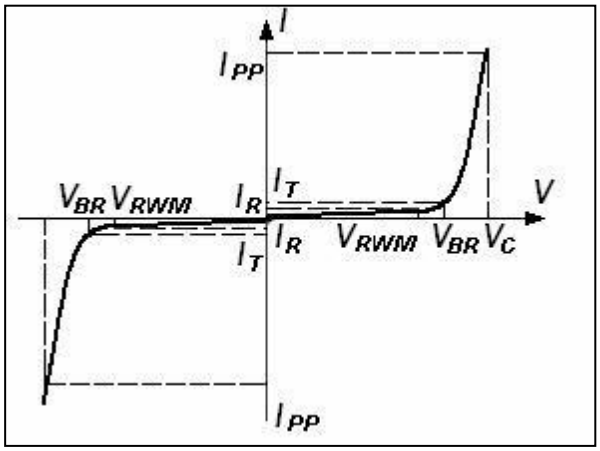


Figure 2- IEC61000−4−2 Waveform

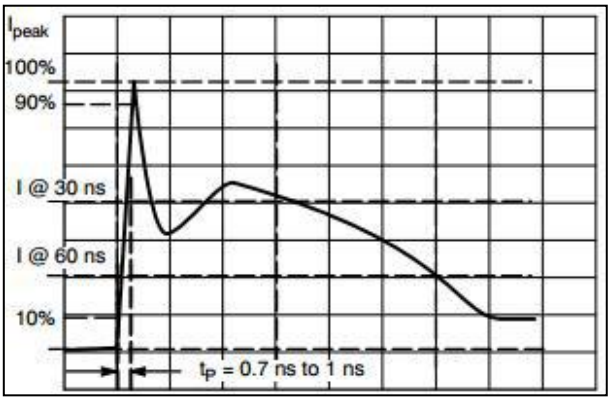


Figure 3- ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000−4−2

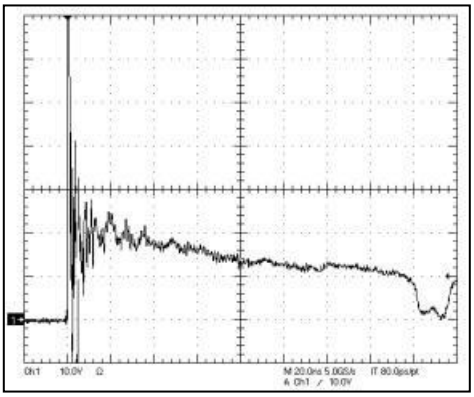
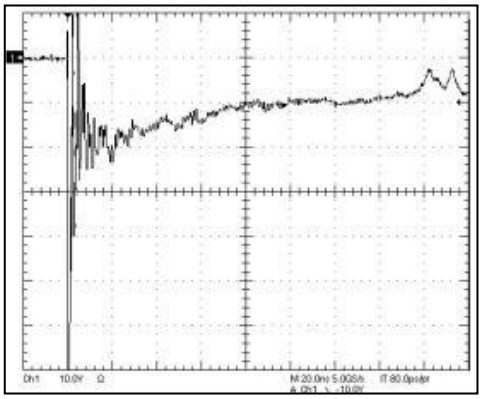
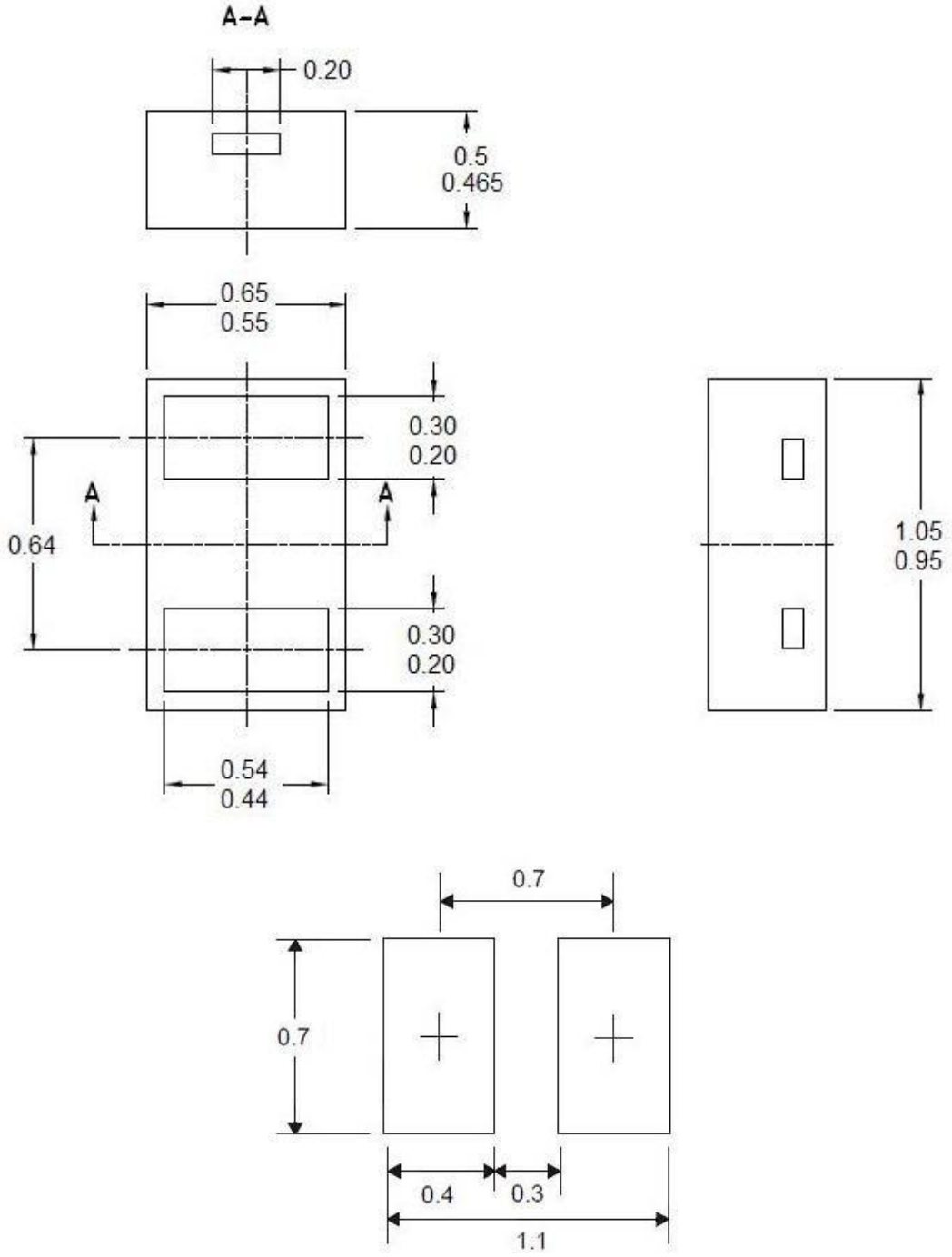


Figure 3- ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000−4−2



Dated:01/2019
Rev:1.0

PACKAGE OUTLINE DIMENSIONS in millimeters :**SOD882**



Disclaimer

Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

Dated:01/2019
Rev:1.0