

## ESD Protection -ESDULC5V0D8B

### Description

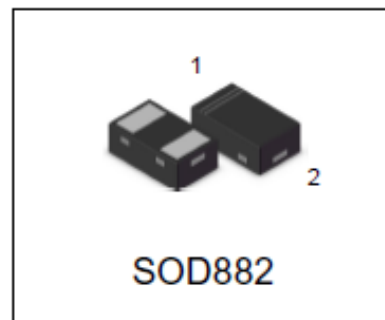
The ESDULC5V0D8B is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events. Excellent clamping capability, low capacitance, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is 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..

### Feature

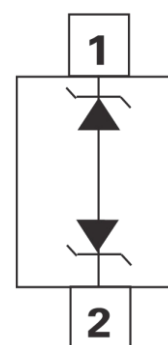
- Case : SOD882 package
- Ultra Low Capacitance 0.5 pF
- Low clamping voltage
- Low Leakage current
- Response Time is Typically < 1.0 ns
- IEC61000 4 2 Level 4 ESD Protection
- This is a Pb- Free Device

### Applications

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



### Schematic & PIN Configuration



### 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) @ $T_A = 25\text{ }^\circ\text{C}$	$P_D$	150	mW
Lead Soldering Temperature	$T_L$	260 (10 sec)	$^\circ\text{C}$
Operating Temperature	$T_J$	-55 to 125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$

Electrical Characteristics (T = 25° C)

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

Rating & Characteristic Curves

Figure 1 - Electrical Parameter

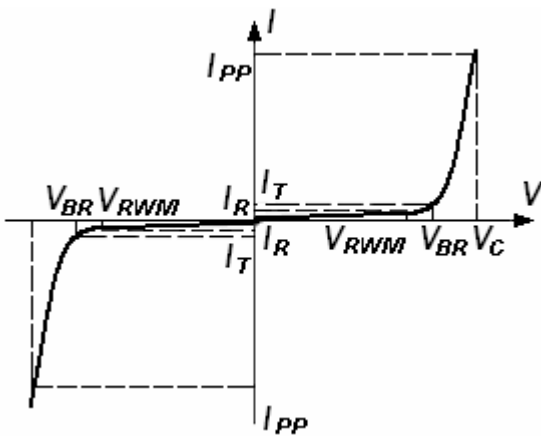


Figure 2- IEC61000-4-2 Waveform

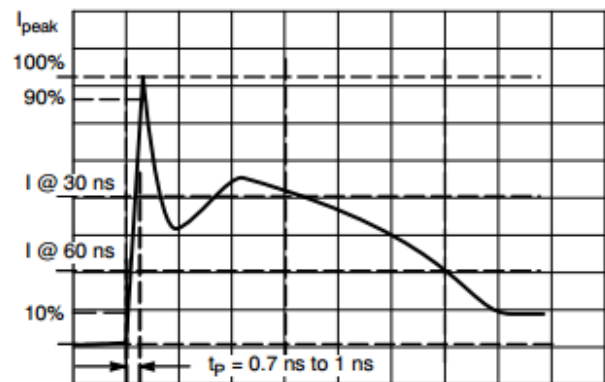


Figure 3- ESD Clamping Voltage Screenshot  
Positive 8 kV Contact per IEC61000- 4- 2

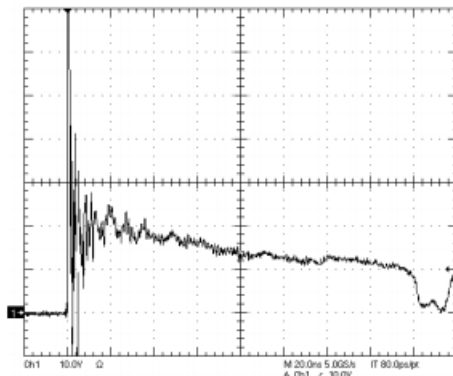
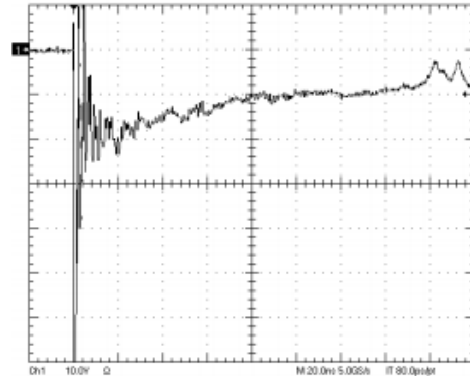
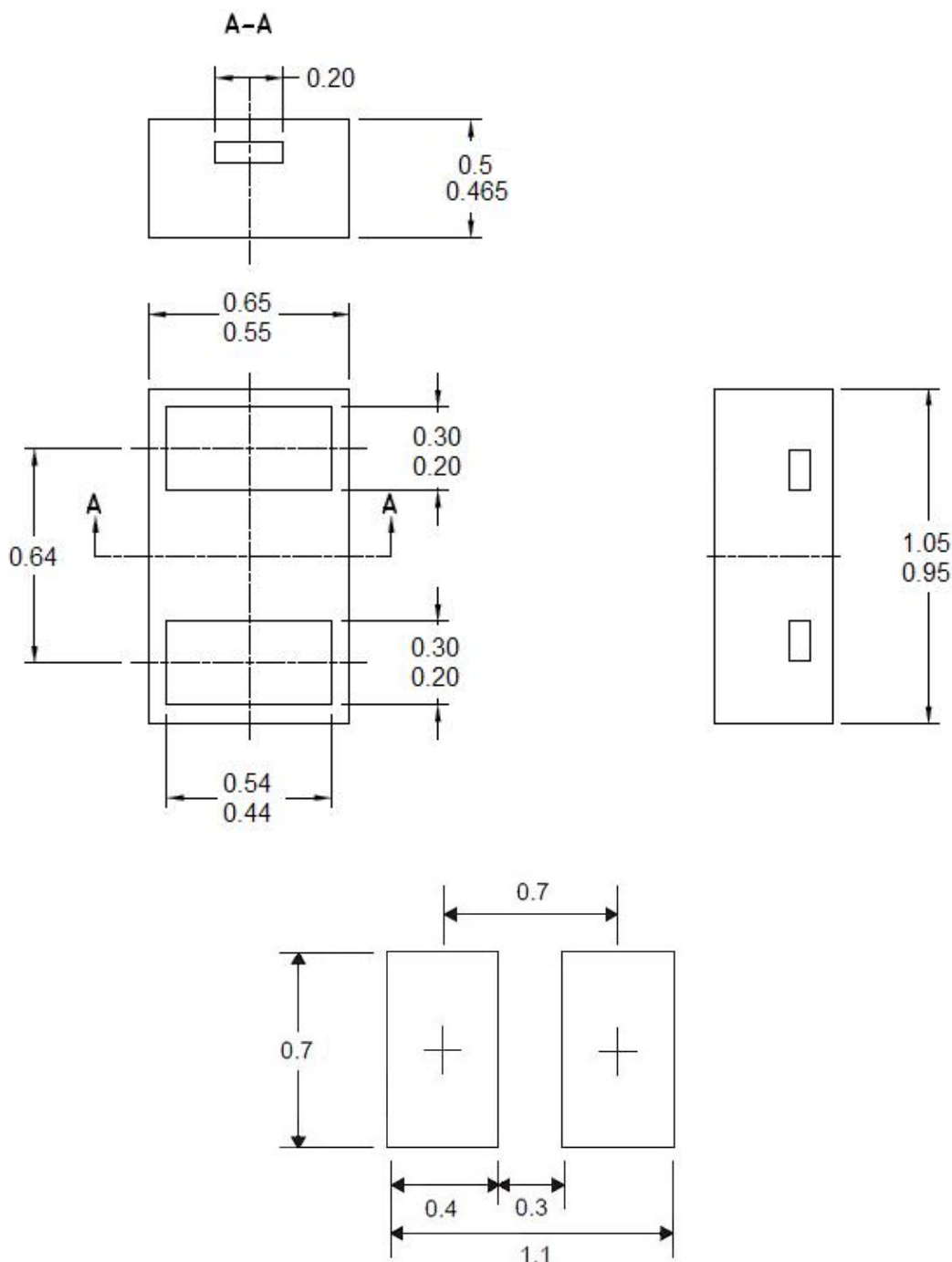


Figure 3- ESD Clamping Voltage Screenshot  
Negative 8 kV Contact per IEC61000- 4- 2



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.