

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

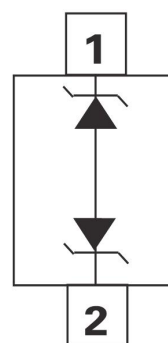
- Case : SOD882 package
- Ultra Low Capacitance 0.5 pF
- Low clamping voltage
- Low Leakage current
- Response Time is Typically < 1.0 ns
- IEC61000 4 2 Level 4 ESD Protection
- This is a Pb-Free Device

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}	10	kV
IEC61000-4-2 (Air)	V_{ESD}	15	kV
Total Power Dissipation on FR-5 Board (Note 1) @ $T_A = 25^{\circ}C$	P_D	100	mW
Lead Soldering Temperature	T_L	260 (10 sec)	$^{\circ}C$
Operating Temperature	T_J	-55 to 125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}C$

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}	$I_t = 1\text{mA}$	6		11	V
Reverse Leakage Current	I_R	$V_R = V_{RWM}$			1	μA
Clamping Voltage	V_C	$I_{pp}=1\text{A}$, $t_p = 8/20\mu\text{s}$		11		V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f = 1\text{MHz}$		0.5		pF

Rating & Characteristic Curves

Figure 1 - Electrical Parameter

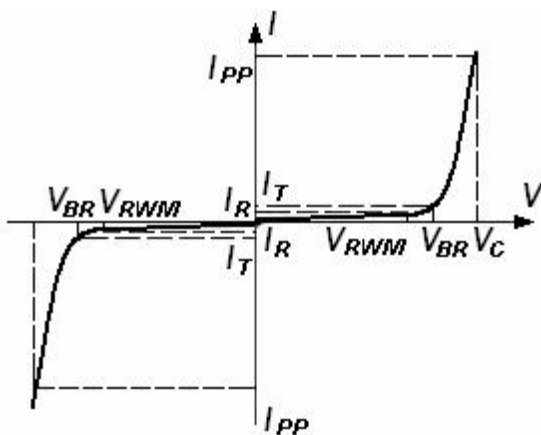


Figure 2- IEC61000-4-2 Waveform

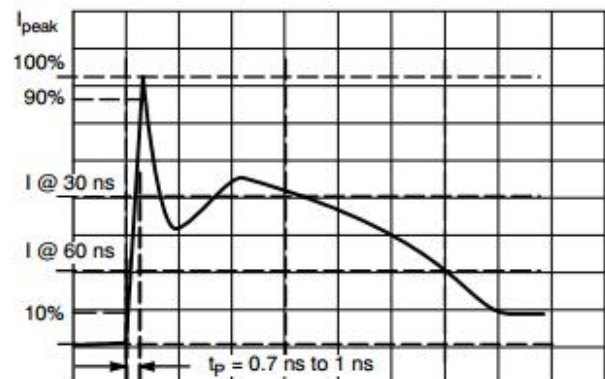


Figure 3- ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2

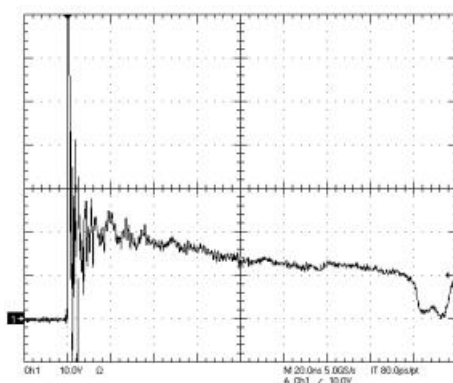
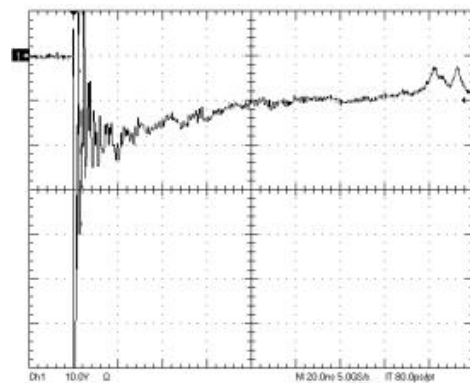
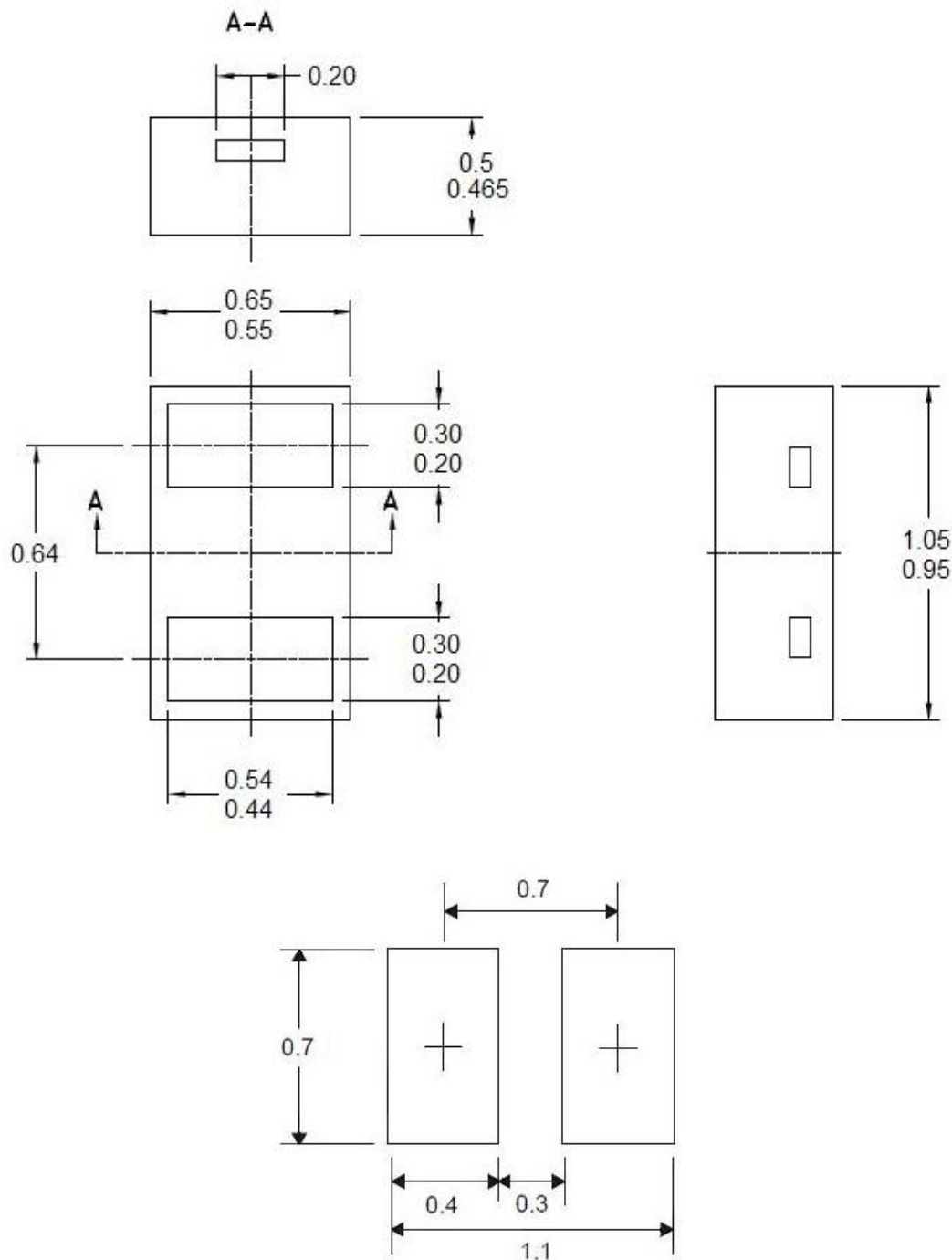


Figure 3- ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000-4-2



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.