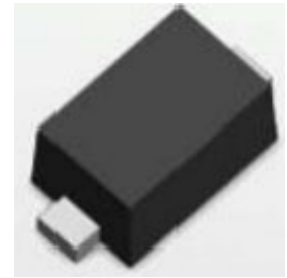


ESDULC5V0BOE

Description

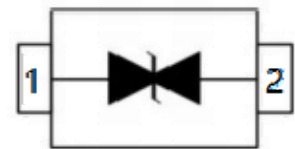
The ESDULC5V0BOE is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events. Excellent clamping capability, low capacitance, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is 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.



Features

- ◆ Ultra Low Capacitance 0.5pF
- ◆ Low clamping voltage
- ◆ Small Body Outline Dimensions
- ◆ Stand-off voltage:5V
- ◆ Low leakage current
- ◆ Response Time is Typically < 1.0ns
- ◆ Complies with following standards:
 - IEC61000-4-2(ESD)immunity test
 - Air discharge: $\pm 15\text{kv}$
 - Contact discharge: $\pm 8\text{kv}$
 - IEC61000-4-4(EFT)40A(5/50ns)

Schematic & PIN Configuration



Applications

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ Pagers

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Peak Pulse Power(8/20us)	P_{PP}	100	Watts
IEC61000-4-2 (Contact)	V_{ESD}	8	KV
IEC61000-4-2 (Air)	V_{ESD}	15	KV
Lead Soldering Temperature	T_L	260 (10 sec)	$^{\circ}\text{C}$
Operating Temperature	T_J	-40 to 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 155	$^{\circ}\text{C}$

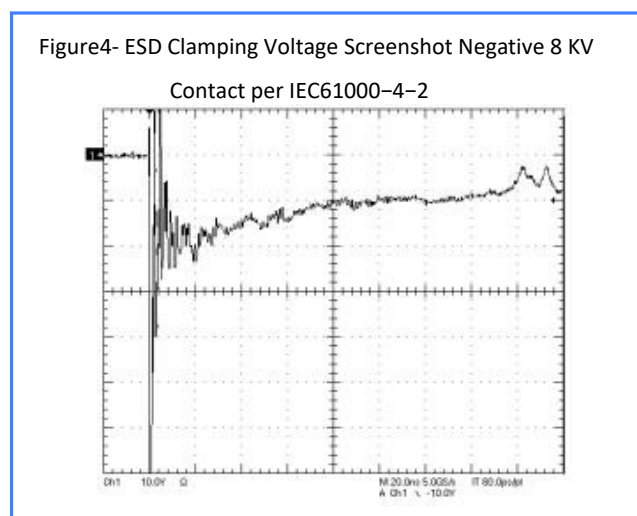
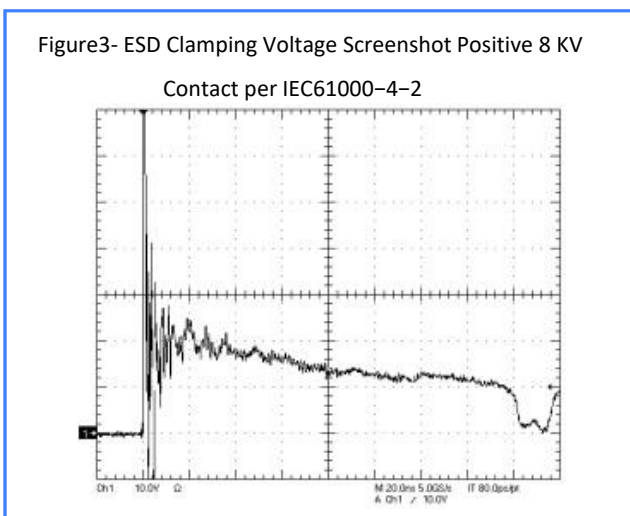
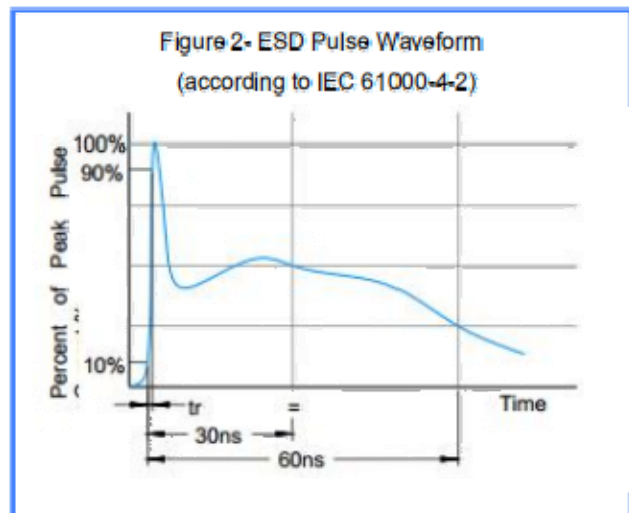
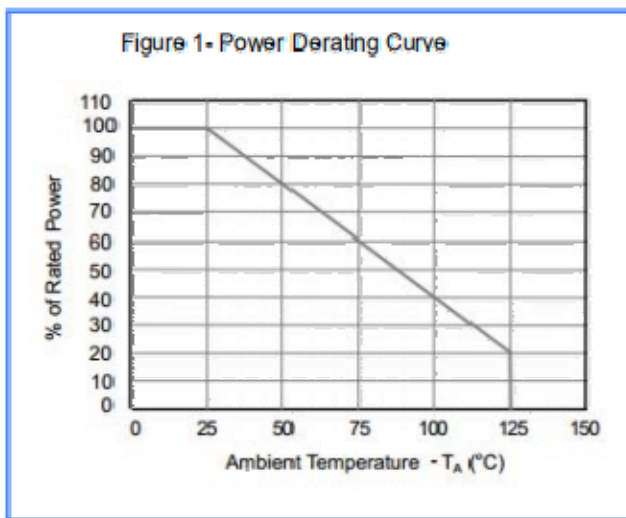
Dated:11/2019
Rev: 1.0

ESDULC5V0BOE

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}	$I_t = 1mA$	5.4			V
Reverse Leakage Current	I_R	$V_R = V_{RWM}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_p = 8/20\mu s$			12.9	V
Junction Capacitance	C_J	$V_R=0V, f = 1MHz$		0.5	0.9	PF

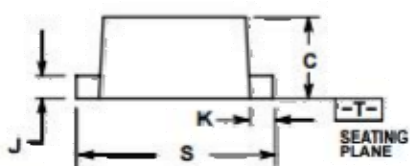
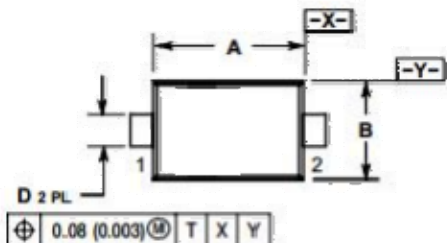
Rating & Characteristic Curves



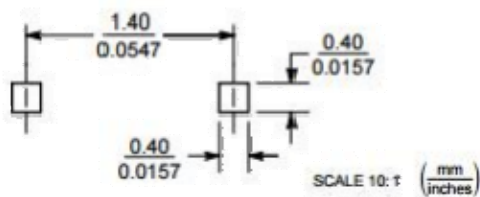
ESDULC5V0BOE

Package Outline

SOD-523



SOLDERING FOOTPRINT*



NOTES:

- 1.DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
- 2.CONTROLLING DIMENSION: MILLIMETER.
- 3.MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS.MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067