

Electrostatic discharge Protection Devices(ESD)

FEATURES

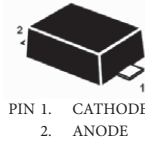
- Reverse working(Stand-off) voltages:5.0V
- Low leakage.
- Response time is typically<1ns.
- ESD Rating of Class 3(>16kV) per Human Body Model.
- IEC61000-4-2Level 4 ESD Protection.

APPLICATIONS

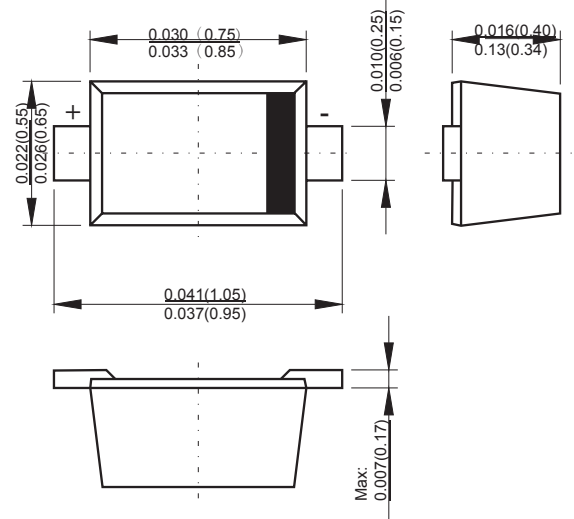
- Designed to protect voltage sensitive components from ESD and transient.
- Case style:SOD-923molded plastic

10 0.2

SOD-923



PIN 1. CATHODE
2. ANODE



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Rating	Symbol	Value	Unit
IEC 61000 -4-2 (ESD)	Contact	±18	kV
	Air	±18	
IEC 61000 -4-4 (EFT)		40	A
Total Power Dissipation on FR -5 Board (Note 1) @ T _A = 25 °C Thermal Resistance, Junction-to-Ambient	P _D	300	mW
	R _{JA}	400	°C/W
Junction and Storage Temperature Range	T _J , T _{stg}	-55 to +150	°C
Lead Solder Temperature - Maximum (10 Second Duration)	T _L	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0 x 0.75 x 0.62 in.

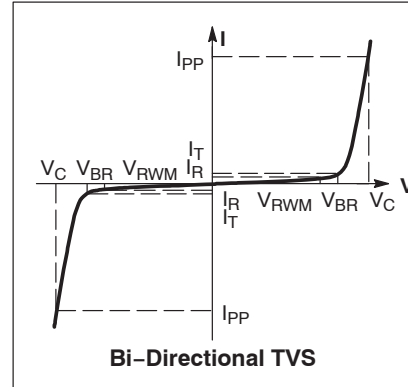
RATINGS AND CHARACTERISTIC CURVES

Electrical Specification ($T_A=25^\circ\text{C}$ unless otherwise specified)

ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
C	Capacitance @ $V_R = 0\text{ V}$ and $f = 1.0\text{ MHz}$



Device	Device Marking	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) @ I_T (Note 2)		I_T	C (pF)	V_C	V_C (V) @ $I_{PP} = 1\text{ A}$
		Max	Max	Min	Max	mA	Typ	Per IEC61000-4-2 (Note 3)	Max Per $8 \times 20\ \mu\text{s}$ (Note 4)
LESD9B5.0ST5G	M	5.0	1.0	5.8	7.8	1.0	15	Figures 1 and 2 See Below	12.5

- V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C .
- For test procedure see Figures 3 and 4
- Surge current waveforms per Figure 5.

IEC 61000-4-2 Spec.

Level	Test Voltage (kV)	First Peak Current (A)	Current at 30 ns (A)	Current at 60 ns (A)
1	2	7.5	4	2
2	4	15	8	4
3	6	22.5	12	6
4	8	30	16	8

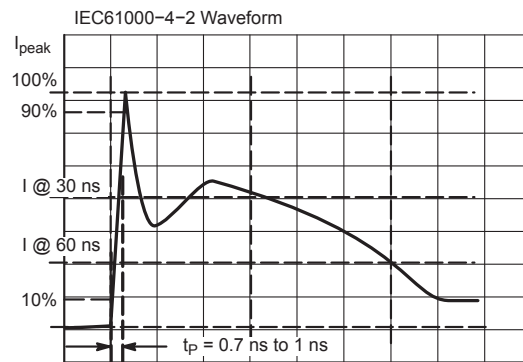


Figure . IEC61000-4-2 Spec

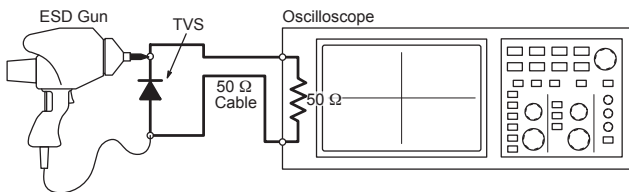


Figure . Diagram of ESD Test Setup

PACKAGE INFORMATION

Device	Package	Shipping
ESD9L3V3C	SOD-923	8000/Tape&Reel

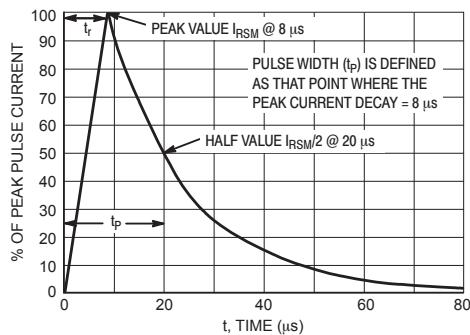


Figure 5. $8 \times 20\ \mu\text{s}$ Pulse Waveform