LESD9L5.0T5G
ESD PROTECTION DIODE

Discription

The LESD9L5.0T5G protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD. It gives designer the flexibility to protect one unidirectional line in applications where arrays are not practical.



SOD-923

Features

- ★ Ultra Low Capacitance 0.5 pF
- ★ Low Clamping Voltage
- ★ Small Body Outline Dimensions: 0.039″ x 0.024″ (1.00 mm x 0.60 mm)
- ★ Low Body Height: 0.016″ (0.4 mm)
- ★ Stand−off Voltage: 5 V
- ★ Low Leakage
- ★ Response Time is Typically < 1.0 ns
- ★ IEC61000−4−2 Level 4 ESD Protection
- ★ This is a Pb−Free Device



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
LESD9L5.0T5G	SOD-923	8000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20μs)	90	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±15 ±10	KV

Electrical Characteristics

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	5.4			V
I_R	Reverse Leakage Current	V_{RWM} = 5V			1.0	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs		15		V
		I_{PP} = 4A, t_p = 8/20μs		20		V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		60		pF

Typical Characteristics

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

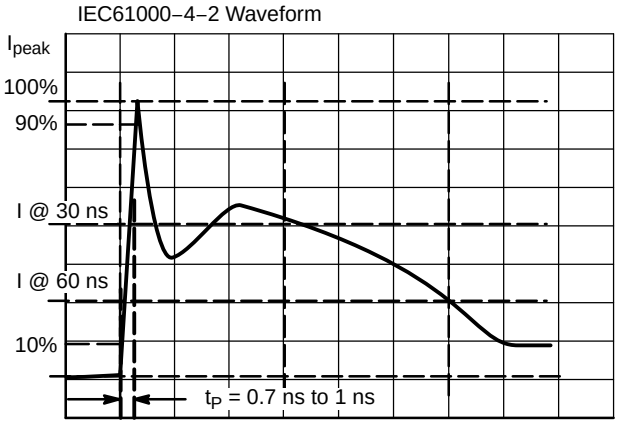


Figure 1. IEC61000−4−2 Spec

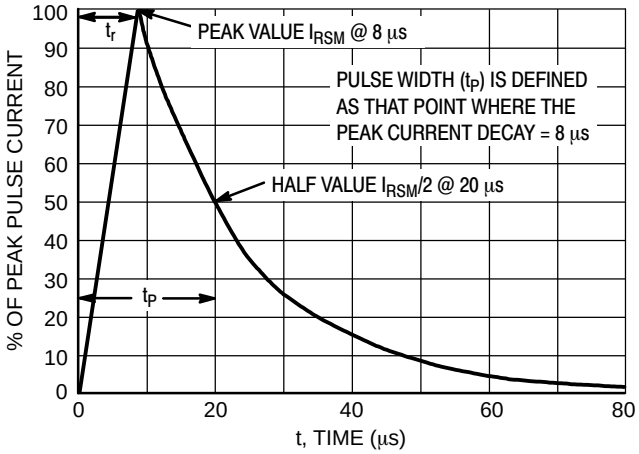
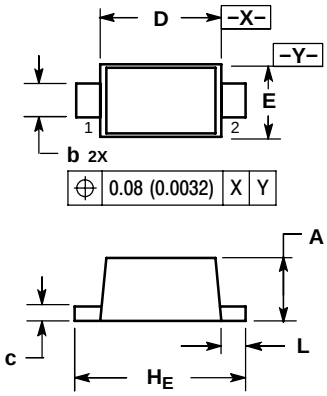


Figure 2. 8 X 20 μs Pulse Waveform

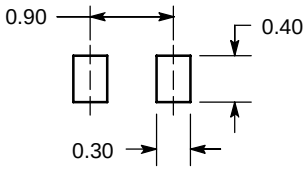
SOD-923 Package Information



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

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

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