# Transient Voltage Suppressors ESD Protection Diodes with Ultra−Low Capacitance

The ESD8L 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
1) Ultra Low Capacitance 0.5 pF
2) Low Clamping Voltage
3) Small Body Outline Dimensions
4) Stand−off Voltage: 5 V
5) Low Leakage
6) Response Time is Typically < 1.0 ns
7) IEC61000−4−2 Level 4 ESD Protection
9) We declare that the material of product compliant with RoHS requirements and Halogen Free.

LESD8L5.0T5G

SOD882

1 CATHODE   2 ANODE
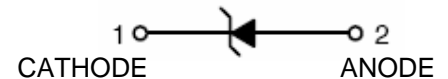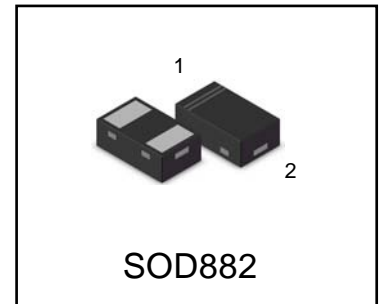
● DEVICE MARKING AND ORDERING INFORMATIONS

Device	Marking	Shipping
LESD8L5.0T1G	D	5000/Tape&Reel
LESD8L5.0T3G	D	8000/Tape&Reel
LESD8L5.0T5G	D	10000/Tape&Reel

● MAXIMUM RATINGS(Ta = 25℃)

Parameter		Symbol	Limits	Unit
IEC 61000−4−2 (ESD)	Contact		±10	kV
	Air		±15	
Total Device Dissipation, FR−5 Board (Note 1) @ T_A = 25°C		P_D	150	mW
Junction Temperature Range		T_J	−55～+125	℃
Storage temperature Range		Tstg	−55～+150	℃
Lead Solder Temperature − Maximum (10 Second Duration)		T_L	260	℃

1. FR−5 = 1.0 x 0.75 x 0.62 in.

ELECTRICAL CHARACTERISTICS

(T_A = 25°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
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz

Uni−Directional TVS
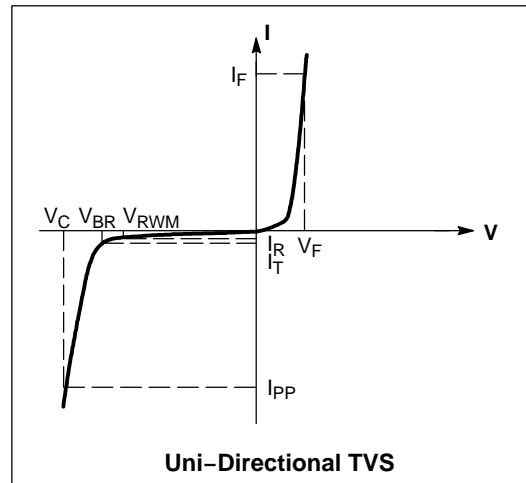
●ELECTRICAL CHARACTERISTICS (Ta= 25℃)

Device	Device Marking	V_{RWM} (V) Max	I_R (u A) @V_{RWM} Max	V_{BR} (V) @ I_T (Note 2) Min	IT mA	C (pF) Max	V_C (V) @I_{PP} = 1 A Max	VC Per IEC61000−4−2
LESD8L5.0T5G	D	5	1	5.4	1	0.9	9.8	Figures 1 and 2 See Below

2. VBR is measured with a pulse test current IT at an ambient temperature of 25°C.
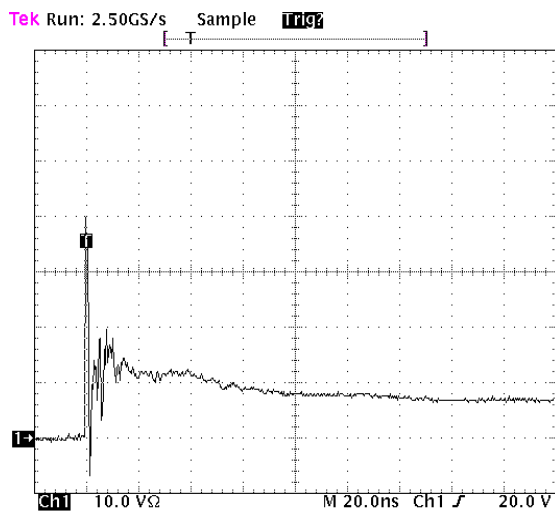
Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000−4−2
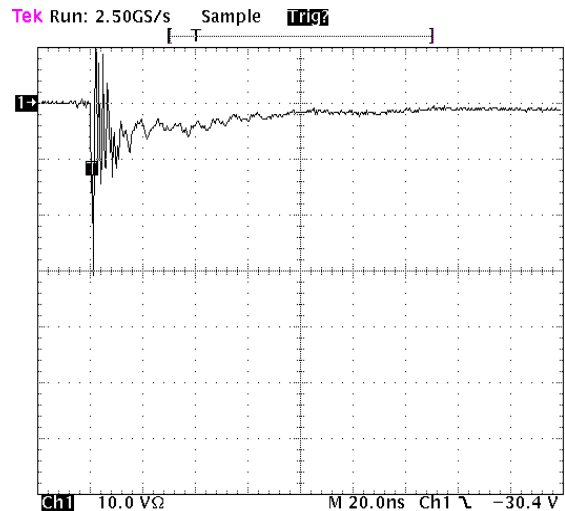
Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000−4−2
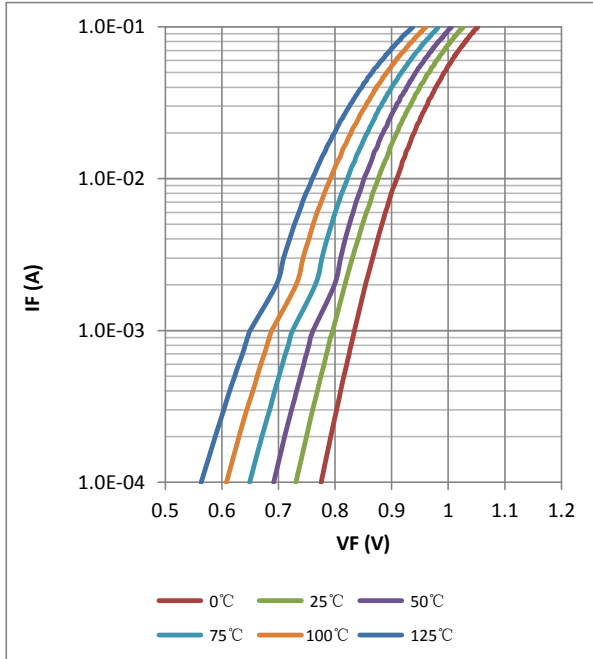
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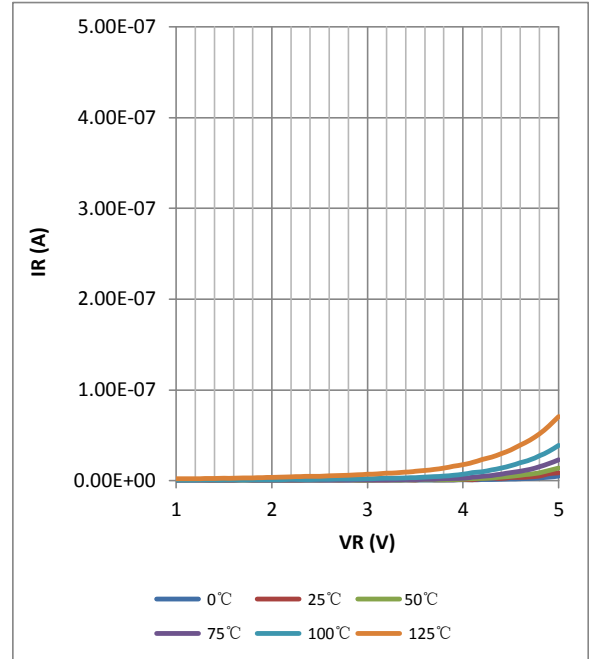## **ELRCTRICAL CHARACTERISTICS CURVES**

FIG.3 Forward Characteristics
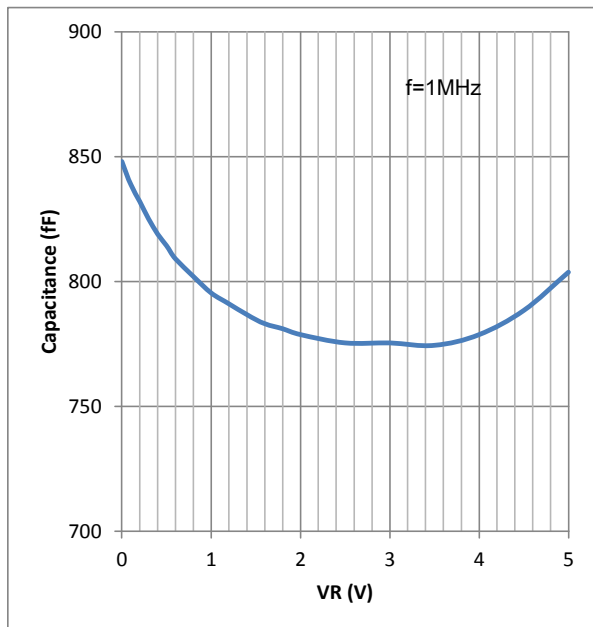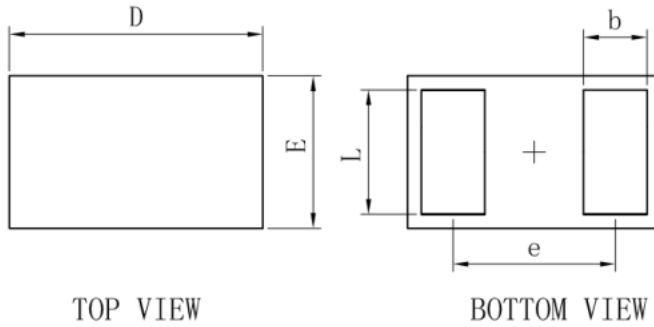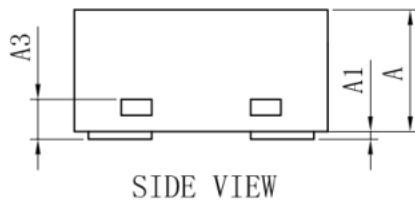

FIG.4 Leakage Current

FIG.5 Capacitance
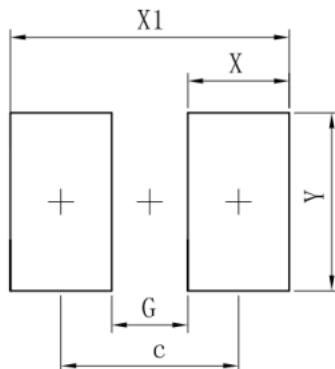
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OUTLINE AND DIMENSIONS

SOD882

TOP VIEW

BOTTOM VIEW

SIDE VIEW

SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	–	0.64	–
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	–	0.05
A3	0.127REF.		
All Dimensions in mm			

SOLDERING FOOTPRINT

SOD882

Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

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