

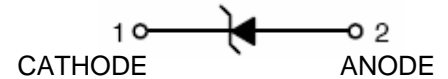
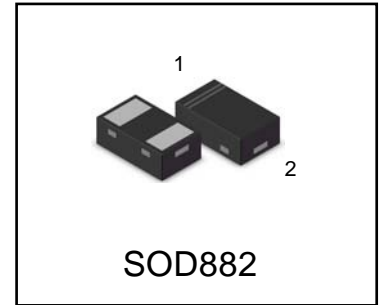
## Transient Voltage Suppressors ESD Protection Diodes with Ultra-Low Capacitance

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



### ● 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(T<sub>a</sub> = 25 °C)

Parameter	Symbol	Limits	Unit
IEC 61000-4-2 (ESD) Contact		±10	kV
Air		±15	
Total Device Dissipation, FR-5 Board (Note 1) @ T <sub>A</sub> = 25°C	P <sub>D</sub>	150	mW
Junction Temperature Range	T <sub>J</sub>	-55 ~ +125	°C
Storage temperature Range	T <sub>stg</sub>	-55 ~ +150	°C
Lead Solder Temperature - Maximum (10 Second Duration)	T <sub>L</sub>	260	°C

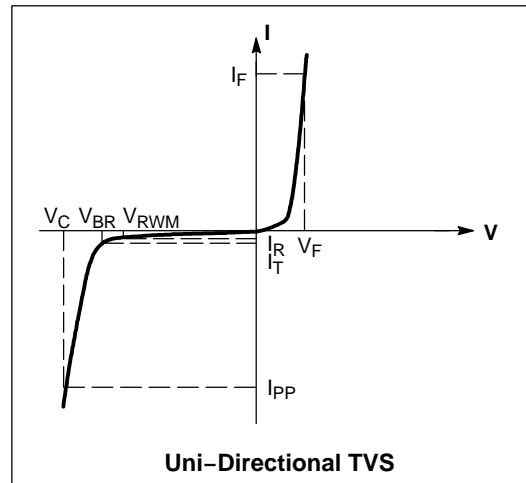
1. FR-5 = 1.0 x 0.75 x 0.62 in.

## LESD8L5.0T5G

### ELECTRICAL CHARACTERISTICS

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

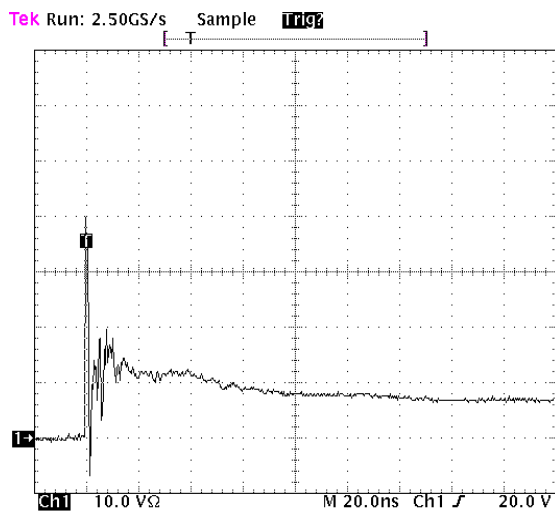
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$
$P_{pk}$	Peak Power Dissipation
C	Capacitance @ $V_R = 0$ and $f = 1.0$ MHz



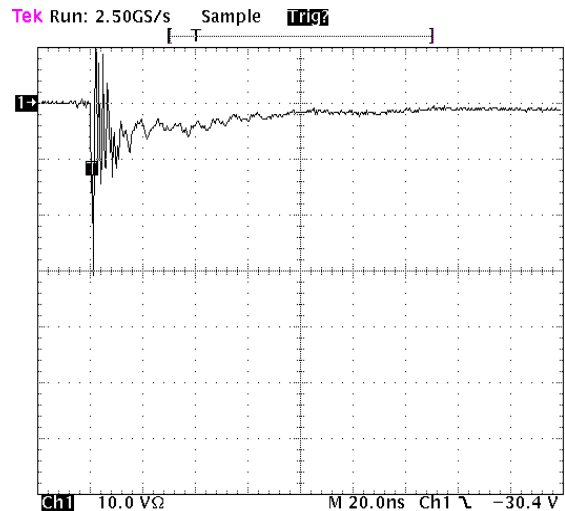
### ● ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

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

2.  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$ .



**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**

## LESD8L5.0T5G

### ELRCTRICAL CHARACTERISTICS CURVES

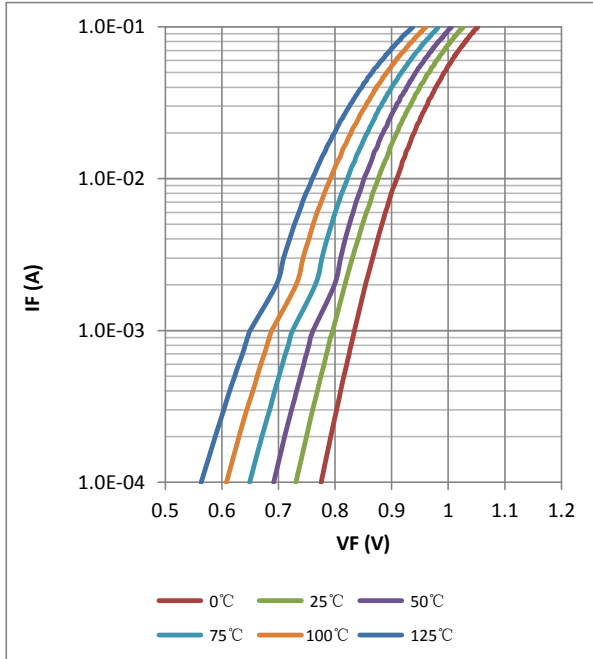


FIG.3 Forward Characteristics

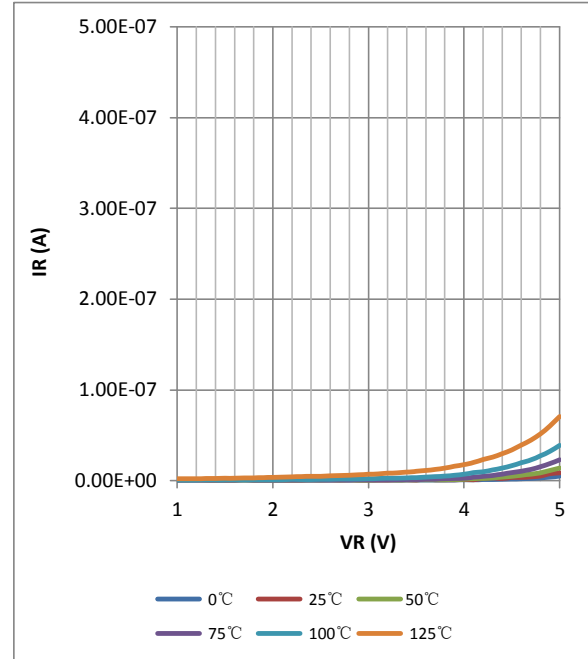


FIG.4 Leakage Current

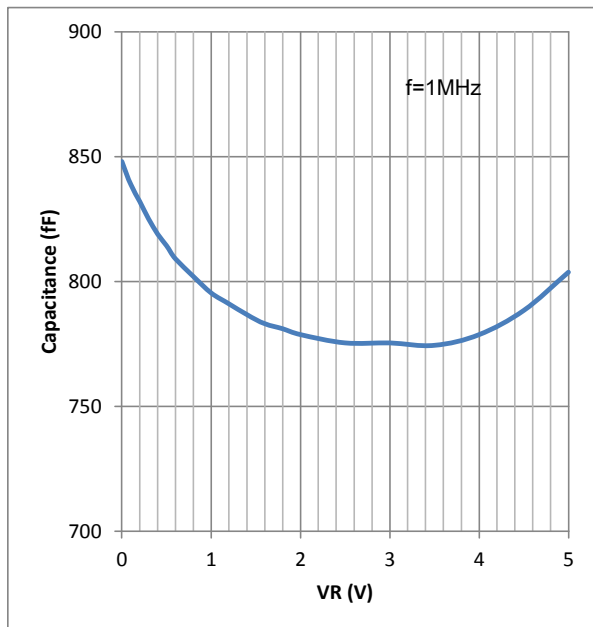
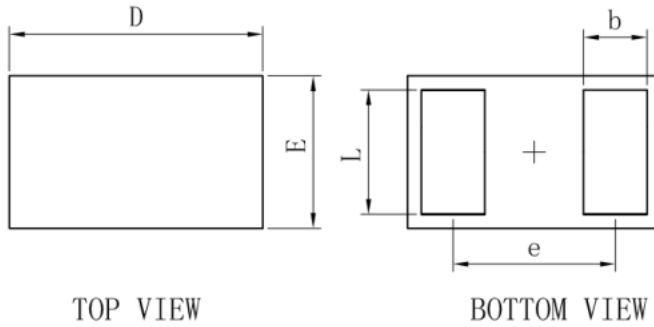


FIG.5 Capacitance

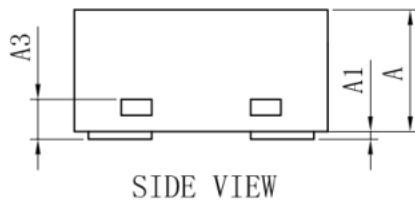
## LESD8L5.0T5G

### OUTLINE AND DIMENSIONS

#### SOD882

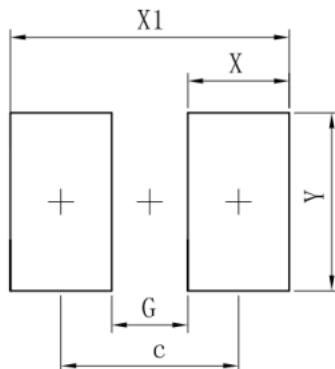


SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			



### SOLDERING FOOTPRINT

#### SOD882



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