

# LESD8H6.3T5G

## Transient Voltage Suppressors

### Discription

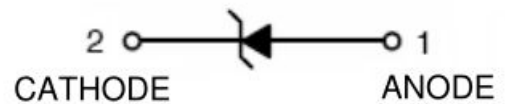
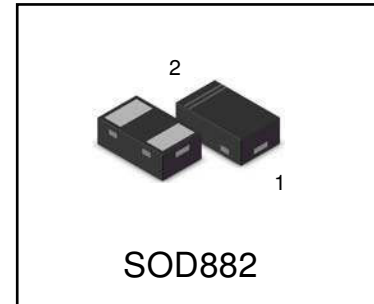
The ESD8H is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.

#### Specification Features:

- Capacitance 230 pF
- Low Clamping Voltage
- Small Body Outline Dimensions:  
0.039" x 0.024" (1.00 mm x 0.60 mm)
- Low Body Height: 0.020" (0.5 mm)
- Stand-off Voltage: 6.3 V
- Low Leakage
- Response Time is Typically < 1.0 ns
- IEC61000-4-2 Level 4 ESD Protection
- This is a Pb-Free Device

**QUALIFIED MAX REFLOW TEMPERATURE:** 260°C  
Device Meets MSL 1 Requirements

LESD8H6.3T5G



### Ordering information

Device	Marking	Shipping
LESD8H6.3T5G	8H	10000/Tape&Reel

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact Air		±30 ±30	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T <sub>A</sub> = 25°C	P <sub>D</sub>	200	mW
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C
Junction Temperature Range	T <sub>J</sub>	-55 to +125	°C
Lead Solder Temperature - Maximum (10 Second Duration)	T <sub>L</sub>	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.

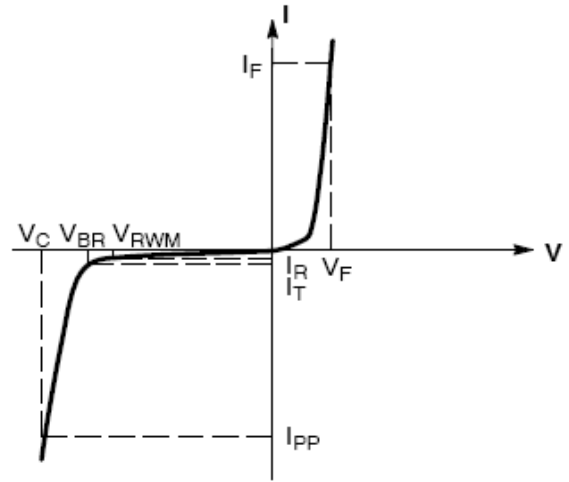
1. FR-5 = 1.0 x 0.75 x 0.62 in.

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## ELECTRICAL CHARACTERISTICS

(T<sub>A</sub> = 25°C unless otherwise noted)

Symbol	Parameter
I <sub>PP</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Working Peak Reverse Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current
P <sub>pk</sub>	Peak Power Dissipation
C	Capacitance @ V <sub>R</sub> = 0 and f = 1.0 MHz



Uni-Directional TVS

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Device	Device Marking	V <sub>RWM</sub> (V) Max	I <sub>R</sub> (uA) @ V <sub>RWM</sub> Max	V <sub>BR</sub> (V) @ I <sub>T</sub> = 1mA (Note 1)		V <sub>C</sub> (V) @ I <sub>PP</sub> = 20A MAX	I <sub>PP</sub> (A) t <sub>p</sub> = 8/20µs Max	V <sub>F</sub> @ I <sub>F</sub> = 10mA (V) Max	C (pF) MAX	R <sub>(dynamic)</sub> (Ω) t <sub>p</sub> = 2/100µs (TLP)
				Min	Max					Typ
LESD8H6.3T5G	8H	6.3	1	7	9.5	11	21	1.1	230	0.11

1. V<sub>BR</sub> is measured with a pulse test current I<sub>T</sub> at an ambient temperature of 25°C.

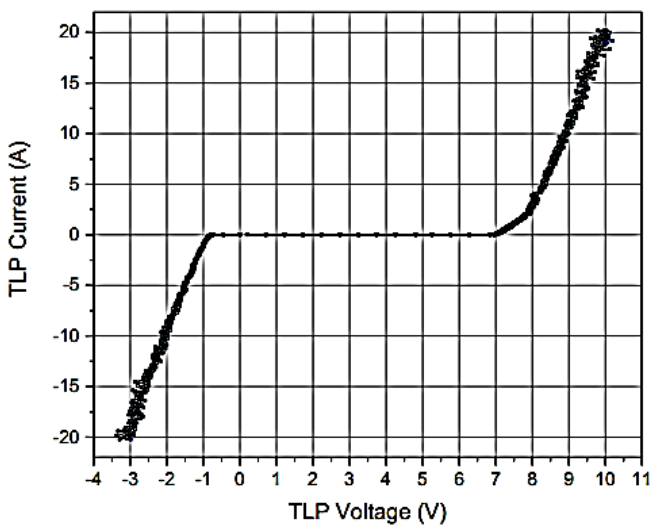


Figure 1 .TLP Measurent

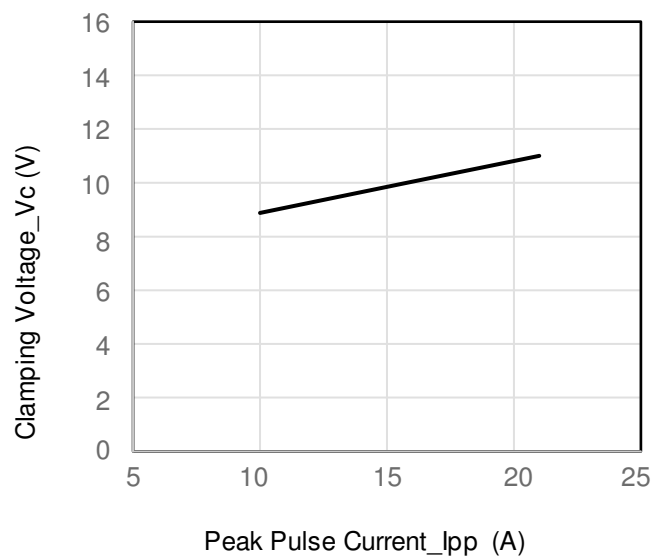


Figure 2 .Clamping Voltage vs.Peak Pulse Current

LESD8H6.3T5G

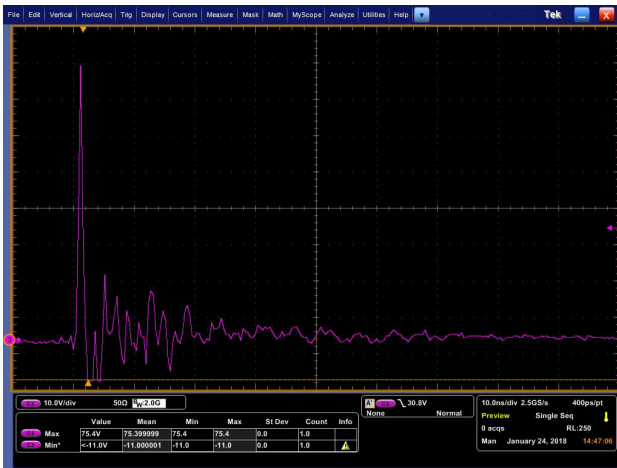


Figure 3.ESD Elamping Voltage Screenshot Positive 8 kV Econtact per IEE61000-4-2

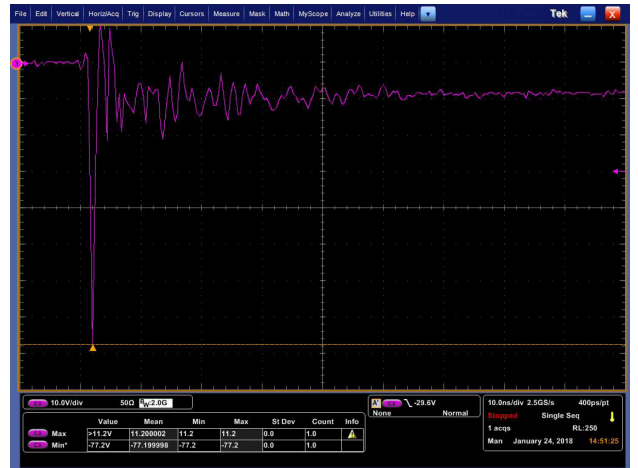
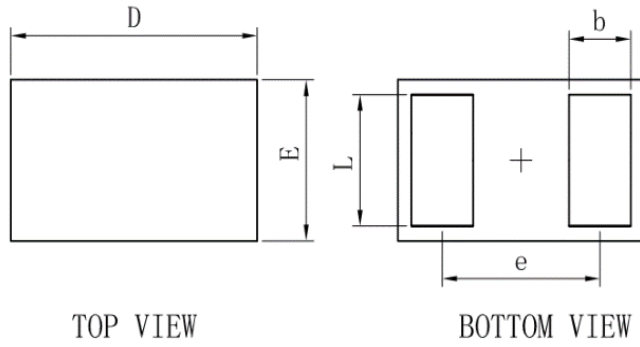


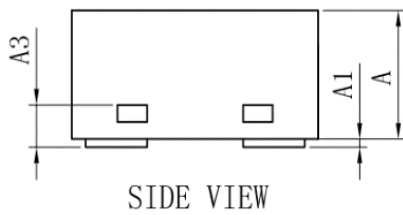
Figure 4.ESD Elamping Voltage Screenshot Negative 8 kV Econtact per IEE61000-4-2

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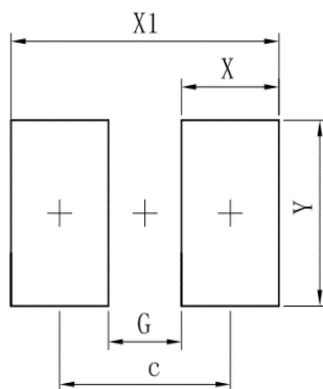
## OUTLINE AND DIMENSIONS



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



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