

S-LESD8L3.3CT5G

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.

Specification 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: 3.3 V
- Low Leakage
- Response Time is Typically < 1.0 ns
- IEC61000-4-2 Level 4 ESD Protection
- This is a Pb-Free Device
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S-prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

Mechanical Characteristics:

CASE: Void-free, transfer-molded, thermosetting plastic
Epoxy Meets UL 94 V-0

LEAD FINISH: NiPdAu

QUALIFIED MAX REFLOW TEMPERATURE: 260°C

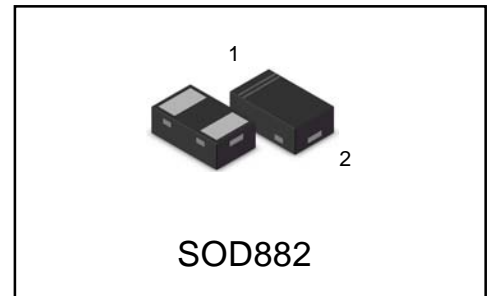
Device Meets MSL 1 Requirements

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact Air		±10 ±15	kV
Storage Temperature Range	T _{stg}	-55 to +150	°C
Junction Temperature Range	T _J	-55 to +125	°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.

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Ordering information

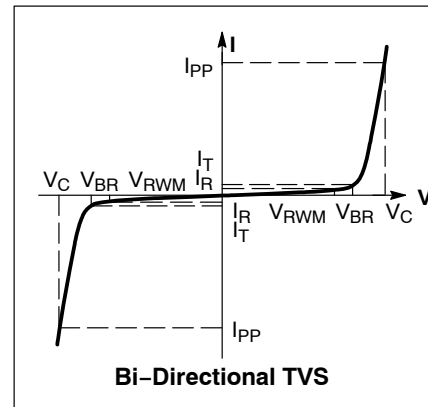
Device	Marking	Shipping
S-LESD8L3.3CT5G	S	10000/Tape&Reel

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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



ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 1.0 V Max. @ I_F = 10 mA for all types)

Device	Device Marking	V _{RWM} (V)	I _R (nA) @ V _{RWM}	V _{BR} (V) @ I _T (Note 1)		I _T (mA)	C (pF) (Max)	V _C (V) @ I _{PPM} = 2 A (Note 2)	V _C (Per IEC61000-4-2 (Note 3))
		Max	Max	Min	Max			Max	
S-LESD8L3.3CT5G	S	3.3	50	3.8	8	1.0	0.9	15	Figures 1 and 2 See Below

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

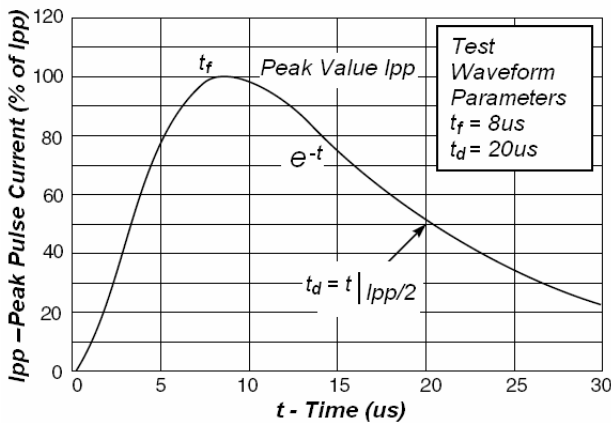


Fig 1. Pulse Waveform

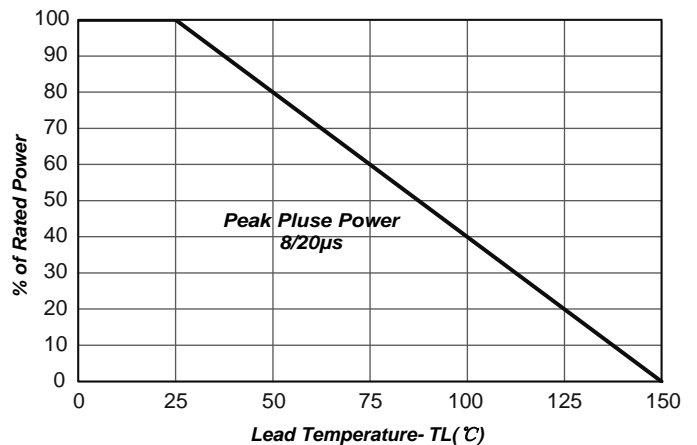


Fig 2. Power Derating Curve

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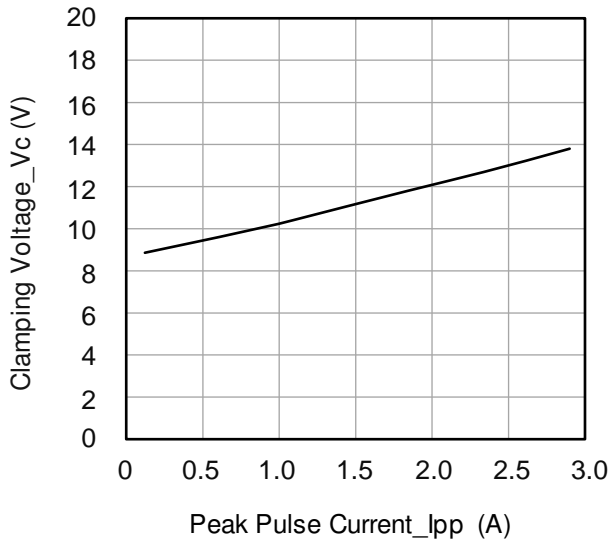


Fig 3 .Clamping Voltage vs. Peak Pulse Current

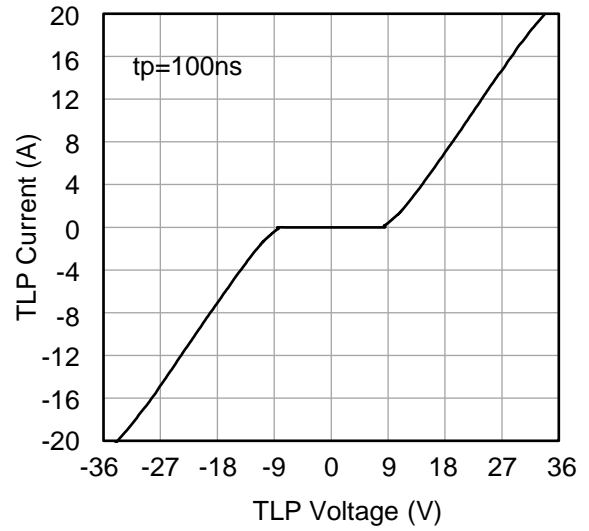
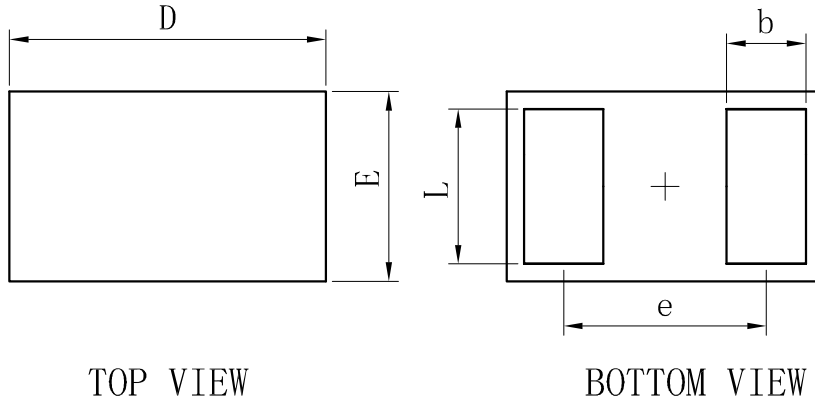


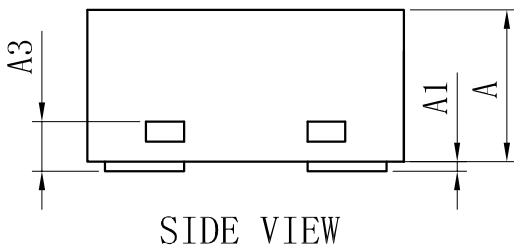
Fig 4. TLP Measurement

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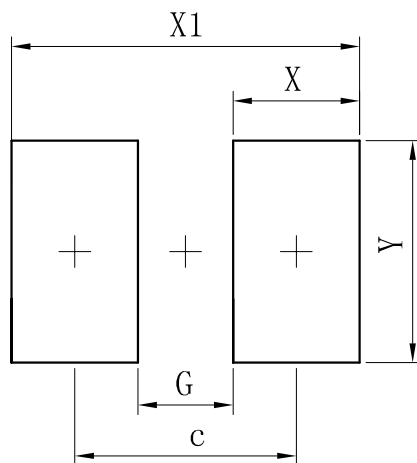
Package Outline Dimension



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			



Suggested Pad layout



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

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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