

LESD8D8.0T5G Transient Voltage Suppressors

Description

The LESD8D8.0T5G is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, digital cameras and many other portable applications where board space is at a premium.

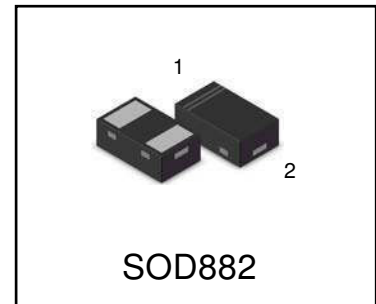
Applications

- | Cellular phones audio
- | Digital cameras
- | Portable applications
- | Mobile telephone

Features

- | Small Body Outline Dimensions:
0.039 " x 0.024 " (1.0 mm x 0.60 mm)
- | Low Body Height: 0.020 " (0.50 mm)
- | Low Leakage
- | Response Time is Typically < 1 ns
- | ESD Rating of Class 3 per Human Body Model
- | IEC61000-4-2 Level 4 ESD Protection
- | These are Pb-Free Devices

LESD8D8.0T5G



Ordering information

Device	Marking	Shipping
LESD8D8.0T5G	7A	10000/Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±30 ±30	kV kV
Peak Pulse Current (8/20μs)	Ppk	400	W
Total Power Dissipation on FR-5 Board (Note 1) @ T _A =25°C	PD	150	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Rating 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.

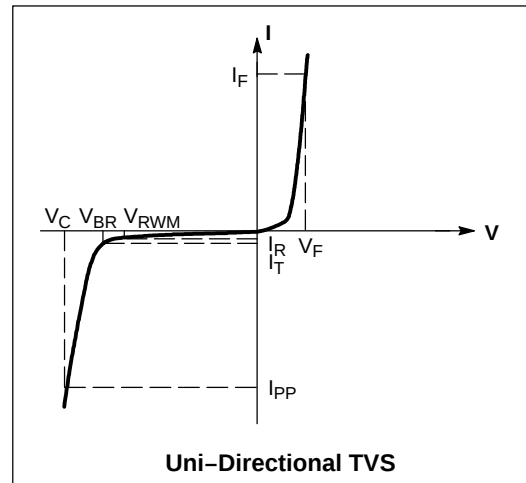
1. FR-5 = 1.0*0.75*0.62 in.

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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 $f = 1.0\text{ MHz}$

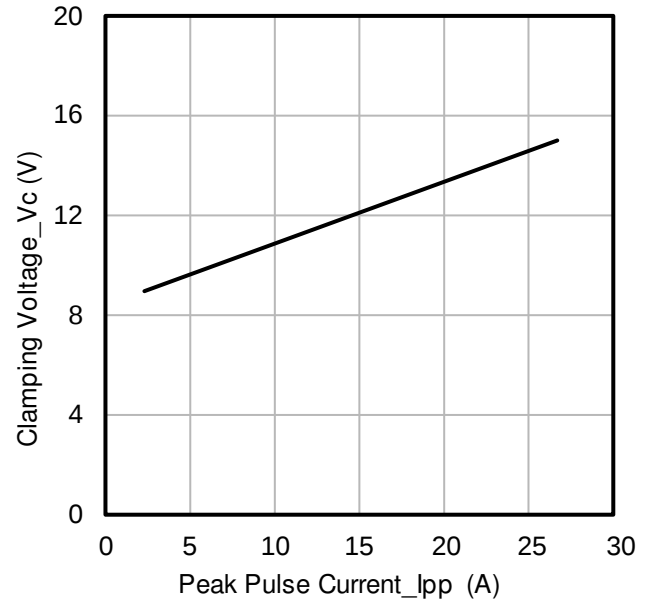
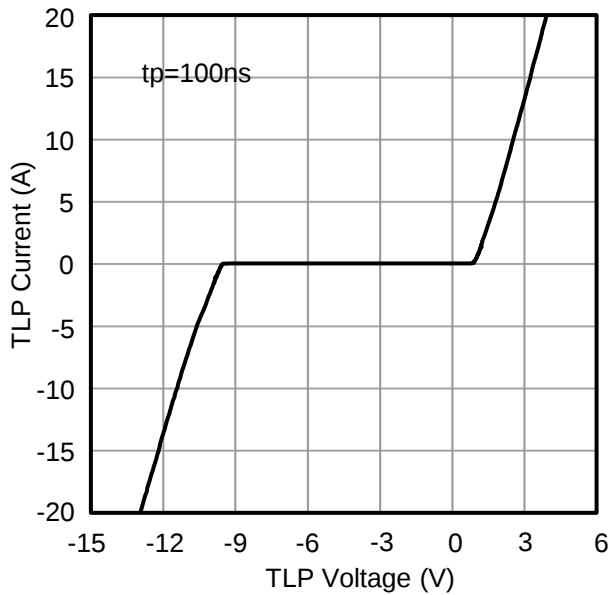
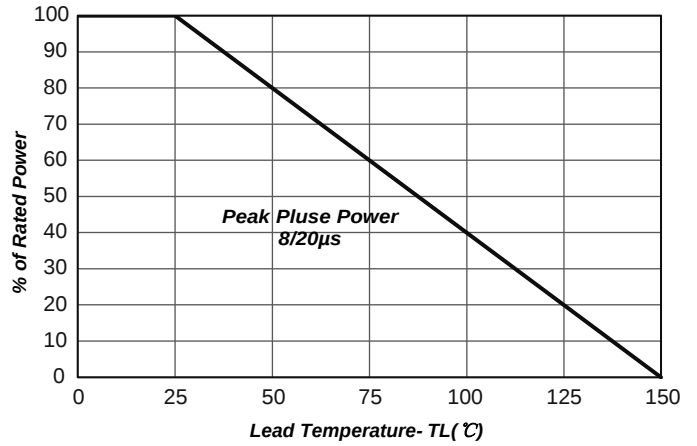
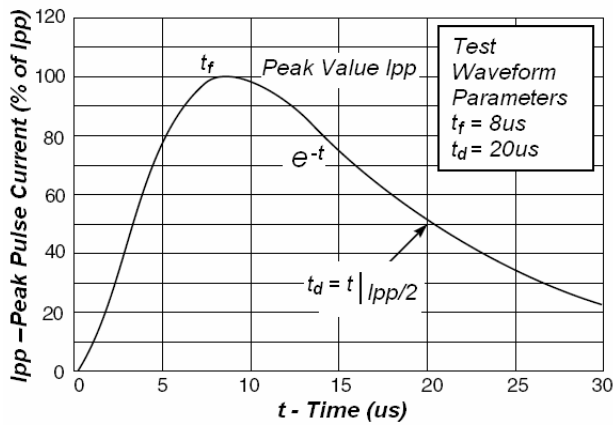


ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			8	V	
Breakdown Voltage	V_{BR}	8.5	9.5	10.5	V	$I_R = 1\text{mA}$
Peak Pulse Current (8/20 μs)	I_{PP}			25	A	
Reverse Leakage Current	I_R			2	μA	$V_{RM} = 8\text{V}$
Clamping Voltage	V_C		10.5		V	$I_{PP} = 2\text{A}$ (8 x 20 μs pulse)
			16	18	V	$I_{PP} = 25\text{A}$ (8 x 20 μs pulse)
ESD Clamping Voltage	V_C		13		V	$I_{PP} = 16\text{A}$ ($t_p = 100\text{ns}$ (TLP))
Junction Capacitance	C_J		150		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

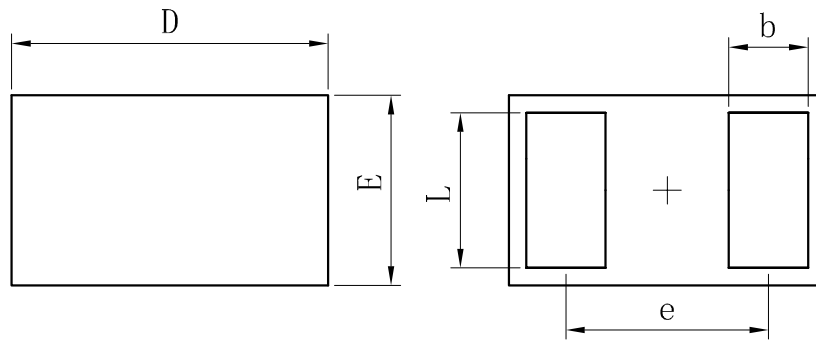
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Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



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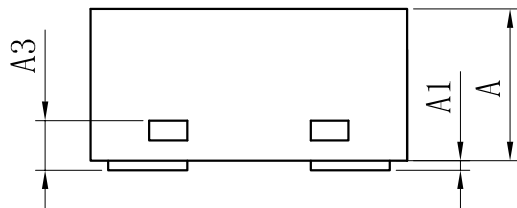
OUTLINE AND DIMENSIONS



TOP VIEW

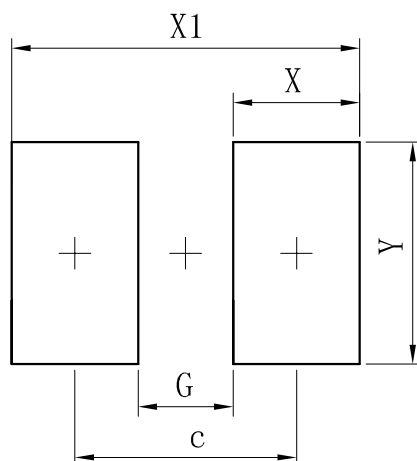
BOTTOM VIEW

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			



SIDE VIEW

SOLDERING FOOTPRINT



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

DISCLAIMER

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