

# LESD8D8.0T5G Transient Voltage Suppressors

## Discription

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, MP3 players, digital cameras and many other portable applications where board space is at a premium.

## Applications

- I Cellular phones audio
- I MP3 players
- I Digital cameras
- I Portable applications
- I 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)
- I Low Leakage
- I Response Time is Typically < 1 ns
- ESD Rating of Class 3 per Human Body Model
- I IEC61000-4-2 Level 4 ESD Protection
- I These are Pb-Free Devices

## MAXIMUM RATINGS

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

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 =  $1.0^{\circ}0.75^{\circ}0.62$  in.





### **Ordering information**

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

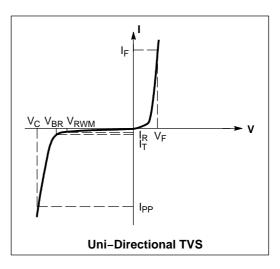


## LESD8D8.0T5G

#### **ELECTRICAL CHARACTERISTICS**

$(T_A = 25^{\circ}C \text{ unless otherwise noted})$	
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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>
Ι <sub>Τ</sub>	Test Current
١ <sub>F</sub>	Forward Current
V <sub>F</sub>	Forward Voltage @ I <sub>F</sub>
P <sub>pk</sub>	Peak Power Dissipation
С	Capacitance @ $V_R = 0$ and f = 1.0 MHz

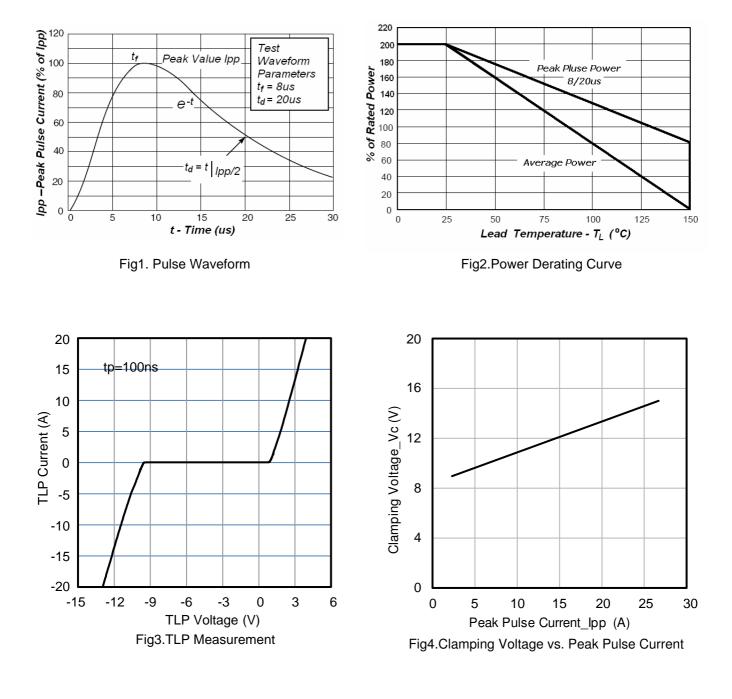


#### ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Working Voltage	Vrwm			8	V	
Breakdown Voltage	Vbr	8.5		10.5	V	IR = 1mA
Peak Pulse Current (8/20µs)	IPP			25	А	
Reverse Leakage Current	I <sub>R</sub>			2	μA	V <sub>RM</sub> = 8V
Clamping Voltage	Vc		10.5		V	IPP =2 A (8 x 20µs pulse)
			16		V	IPP = 25A(8 x 20µs pulse)
ESD Clamping Voltage	Vc		13		V	I <sub>PP</sub> = 16A(tp = 100ns (TLP))
Junction Capacitance	CJ		150		pF	V <sub>R</sub> = 0V, f = 1MHz



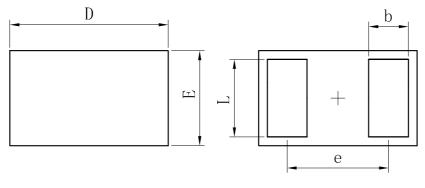
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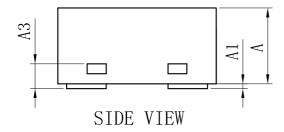
### **OUTLINE AND DIMENSIONS**



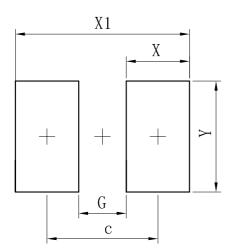
TOP VIEW



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



## SOLDERING FOOTPRINT



Dimensions	(mm)
С	0.70
G	0.30
Х	0.40
X1	1.10
Y	0.70