

# LESD8LL5.0CT5G ESD PROTECTION DIODE

## Discription

The LESD8LL5.0CT5G is designed to protect voltage sensitive components from ESD. 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, digital cameras and many other portable applications where board space is at a premium.

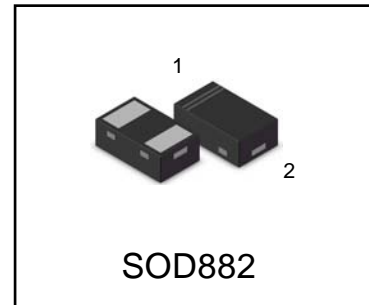
## Applications

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

## Features

- I Low Leakage
- I Response Time is Typically < 1 ns
- I IEC61000-4-2 Level 4 ESD Protection
- I We declare that the material of product compliant with RoHS requirements and Halogen Free.

LESD8LL5.0CT5G



## Ordering information

Device	Marking	Shipping
LESD8LL5.0CT5G	Q4	10000/Tape&Reel

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±15 ±8	kV kV
Total Power Dissipation on FR-5 Board (Note 1) @ T <sub>A</sub> =25°C	PD	200	mW
Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-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.

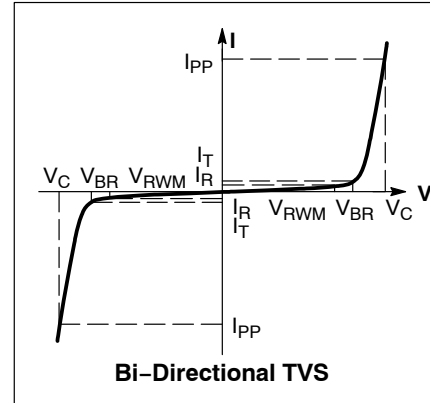
1. FR-5 = 1.0\*0.75\*0.62 in.

# LESD8LL5.0CT5G

## 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
$P_{pk}$	Peak Power Dissipation
C	Capacitance @ $V_R = 0$ and $f = 1.0$ MHz

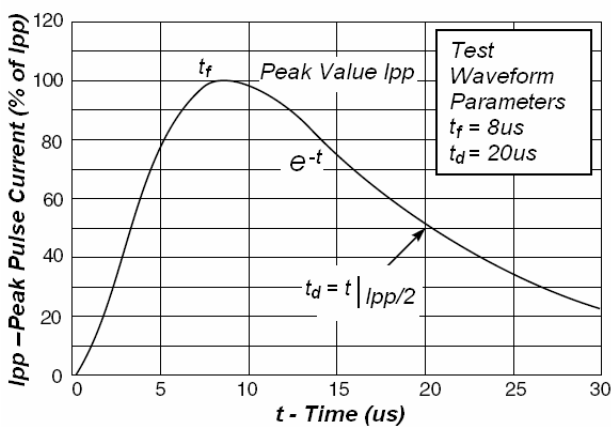


## ELECTRICAL CHARACTERISTICS

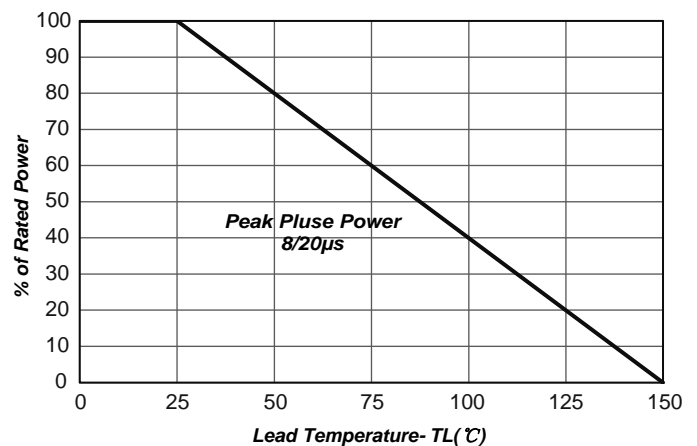
Device	$V_{RWM}$ (V)	$I_R$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 2)		$I_T$	$V_C$ (V) @ $I_{PP} = 1$ A (Note 3)	$V_C$ (V) @ MAX $I_{PP}$ (Note 3)	$I_{PP}$ (A) (Note 3)	$P_{PK}$ (W) (Note 3)	C (pF)	
	Max	Max	Min	Max	mA	Max	Max	Max	Max	Typ	Max
LESD8LL5.0CT5G	5	0.5	6	9	1.0	12	25	4	80	0.25	0.3

Other voltage available upon request.

- $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$
- Surge current waveform per Figure 1.

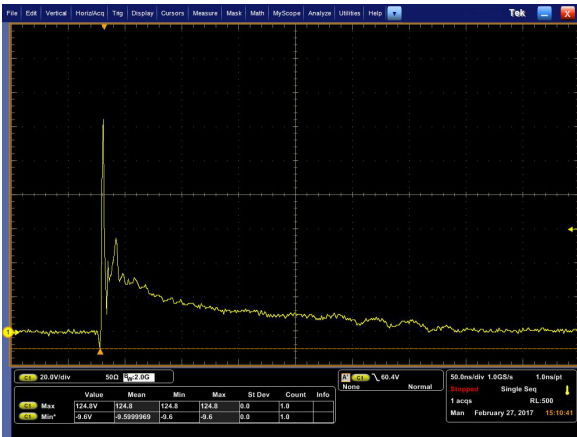


**Fig1. Pulse Waveform**

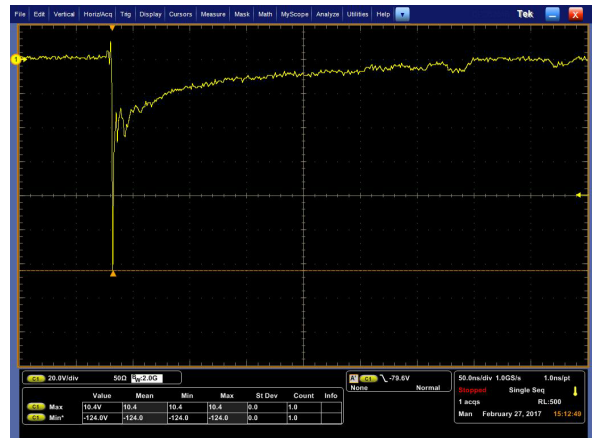


**Fig2. Power Derating Curve**

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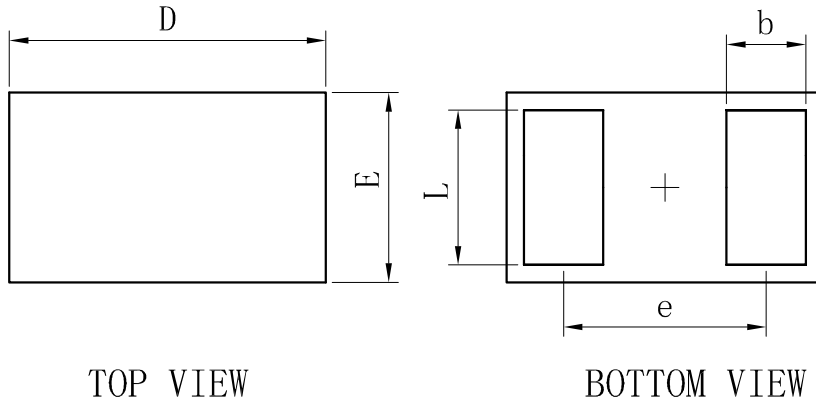
**Fig3. ESD Clamping Voltage  
Positive 8 kV Contact per IEC61000-4-2**



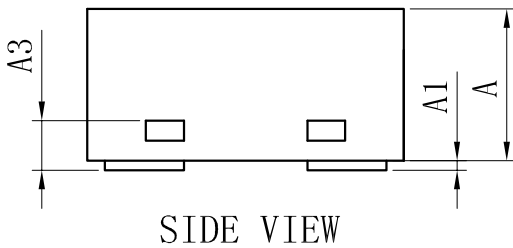
**Fig 4 . ESD Clamping Voltage  
Negative 8 kV Contact per IEC61000-4-2**

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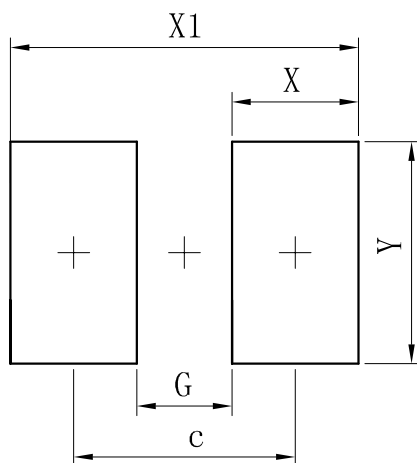
## Package Outline Dimension



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