

# LESD8D24CT5G ESD PROTECTION DIODE

## Discription

The LESD8D24CT5G 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.

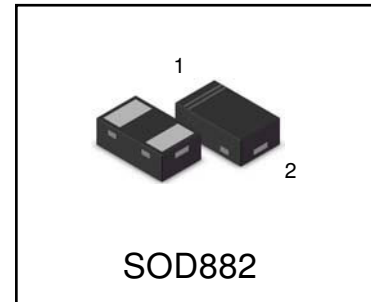
## Applications

- | 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
- | 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.

LESD8D24CT5G  
S-LESD8D24CT5G



## Ordering information

Device	Marking	Shipping
LESD8D24CT5G S-LESD8D24CT5G	4C	10000/Tape&Reel

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air Contact Contact discharge		±30 ±30	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.

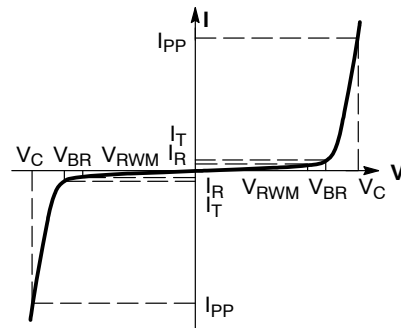
1. FR-5 = 1.0\*0.75\*0.62 in.

# LESD8D24CT5G

## Electrical Parameter

( $T_A = 25^\circ\text{C}$  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 Parameter ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Device	$V_{RWM}$ (V)	$I_R$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$V_{BR}$ (V) * @ $I_T = 1\text{mA}$	$I_{PP}$ (A) **	$V_C$ (V) ** @ $I_{PP} = 1\text{A}$	$V_C$ (V) ** @ $I_{PP} = 5\text{A}$	$P_{PK}$ (W) **	$C$ (pF) $V_R=0\text{V}$ , $f=1\text{MHz}$ ;
	Max	Max	Min	Max	Max	Max	Max	Max
LESD8D24CT5G	24	0.1	26	5	29	35	175	30

\*  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$ .

\*\* Surge current waveform per Figure 1.

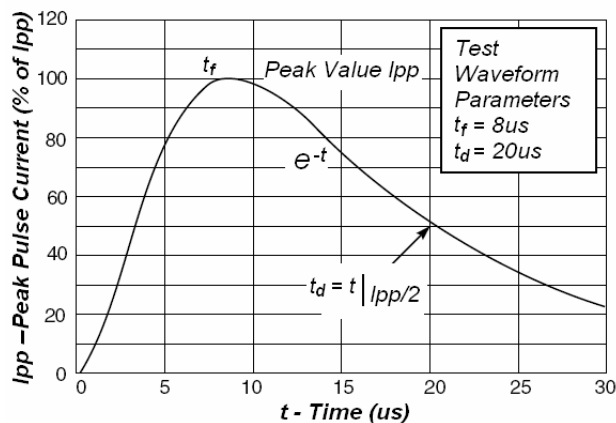


Fig 1. Pulse Waveform

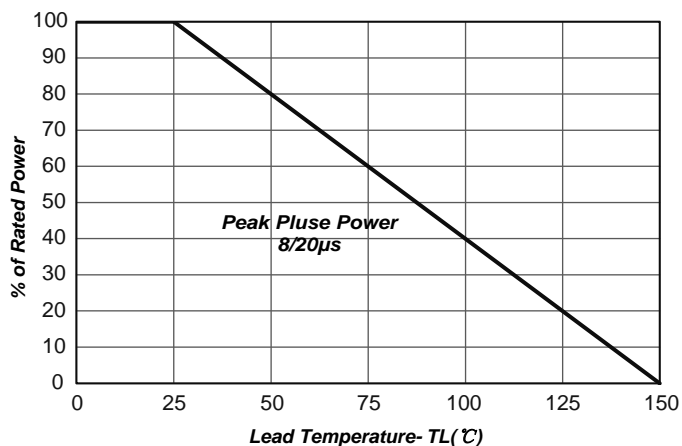


Fig2.Power Derating Curve

# LESD8D24CT5G

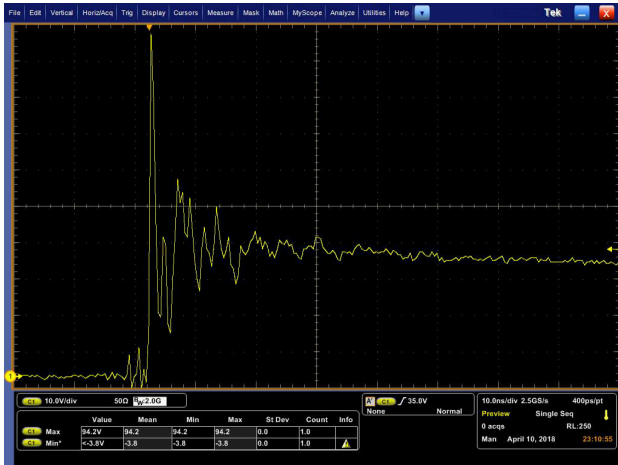


Figure 3.ESD Elamping Voltage Screenshot  
Positive 8 kV Eontact per IEE61000-4-2



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

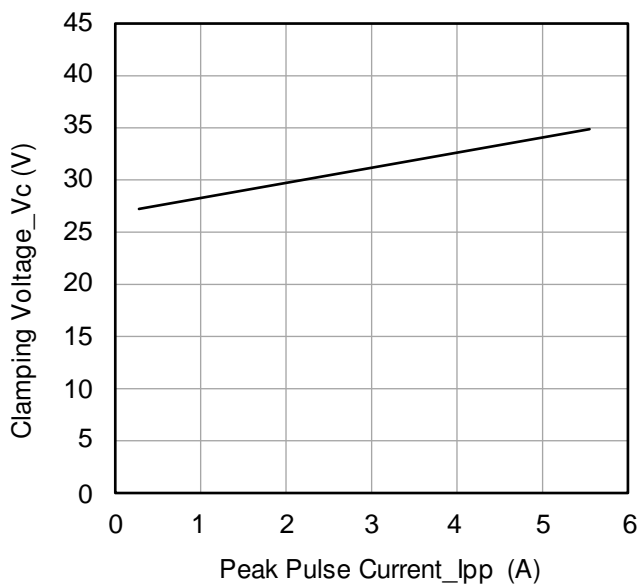
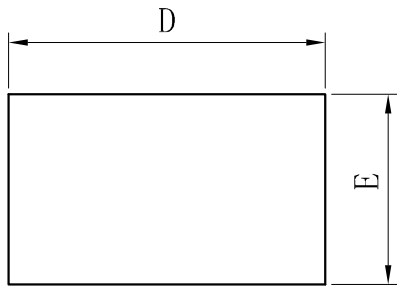


Fig 5 .Clamping Voltage vs. Peak Pulse Current

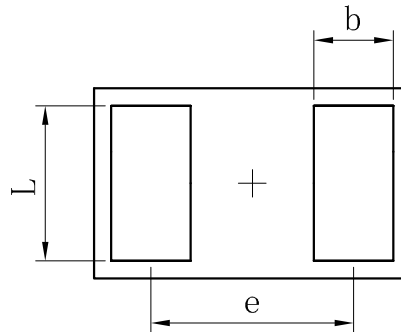
# LESD8D24CT5G

## OUTLINE AND DIMENSIONS

### SOD882

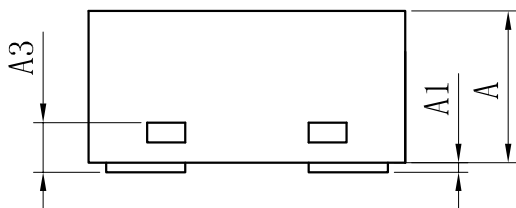


TOP VIEW



BOTTOM VIEW

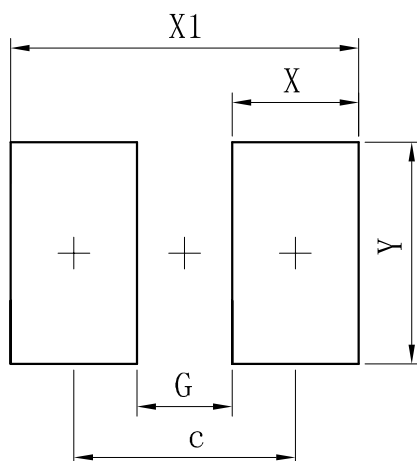
SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	—	0.64	—
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	—	0.05
A3	0.127REF.		
All Dimensions in mm			



SIDE VIEW

## SOLDERING FOOTPRINT

### SOD882



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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