

LESD8D24CT5G ESD PROTECTION DIODE

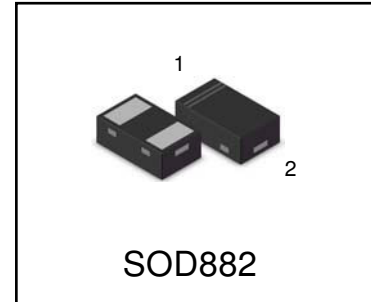
Discription

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.

Features

- | Small Body Outline Dimensions:
1.00 mm x 0.60 mm
- | Low Body Height: 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
- | 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 _A =25°C	PD	200	mW
Junction and Storage Temperature Range	T _J ,T _{STG}	-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.

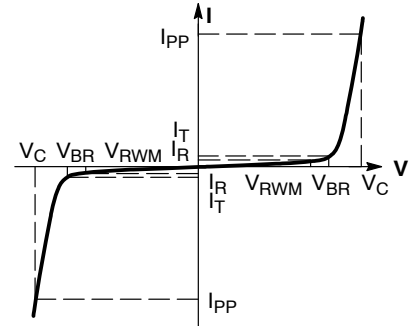
1. FR-5 = 1.0*0.75*0.62 in.

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 (μA) @ 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°C .

** Surge current waveform per Figure 1.

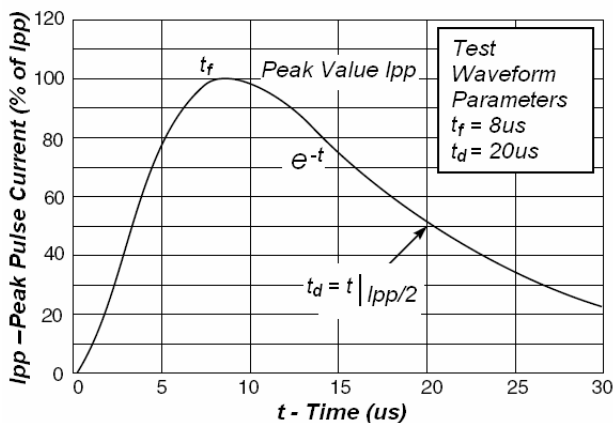


Fig 1. Pulse Waveform

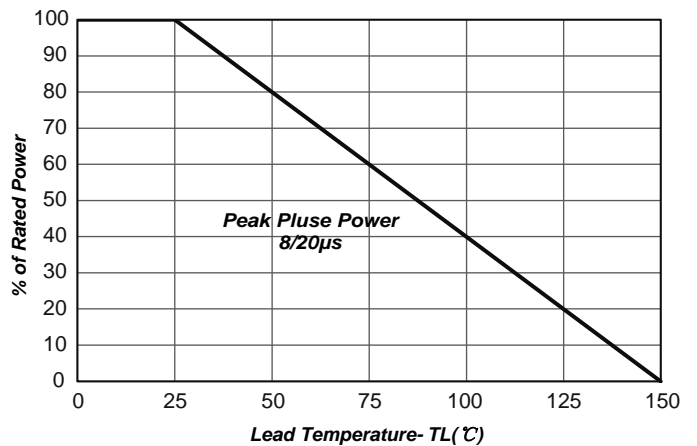


Fig2. Power Derating Curve

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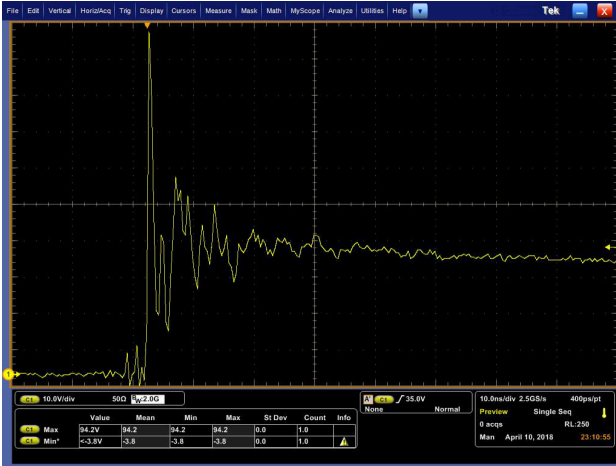


Figure 3.ESD Elamping Voltage Screenshot Positive 8 kV Econtact per IEE61000-4-2

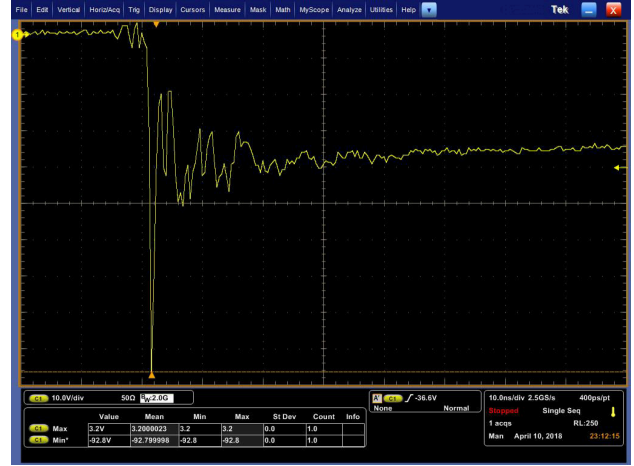


Figure 4.ESD Elamping Voltage Screenshot Negative 8 kV Econtact per IEE61000-4-2

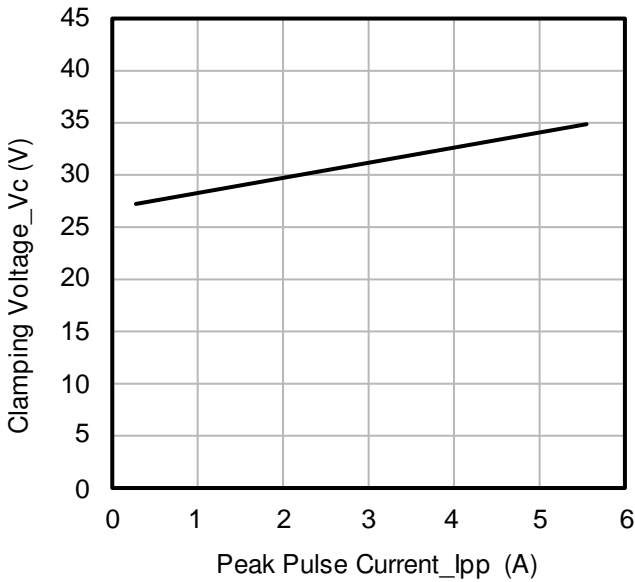
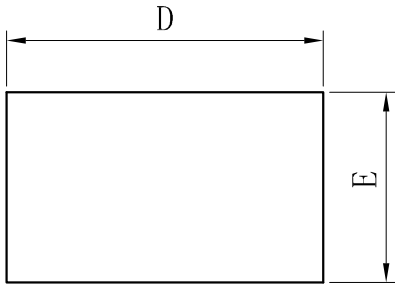


Fig 5 .Clamping Voltage vs. Peak Pulse Current

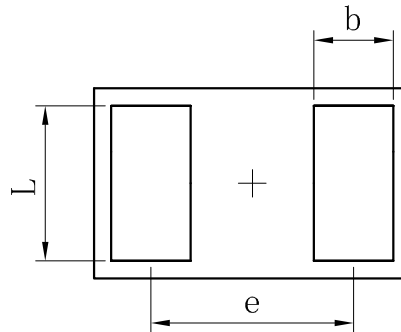
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OUTLINE AND DIMENSIONS

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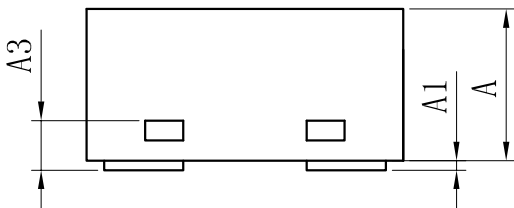


TOP VIEW



BOTTOM VIEW

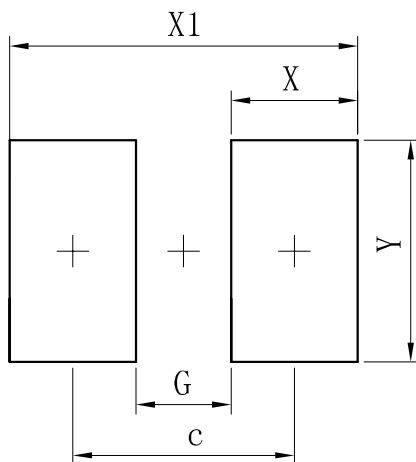
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Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			



SIDE VIEW

SOLDERING FOOTPRINT

SOD882



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