

# S-LESD8D5.0CAT5G ESD PROTECTION DIODE

## Discription

The S-LESD8D5.0CAT5G 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.

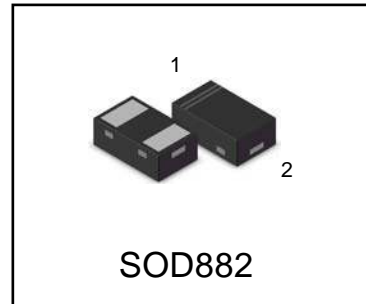
## Applications

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

## Features

- | 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.

S-LESD8D5.0CAT5G



## Ordering information

Device	Marking	Shipping
S-LESD8D5.0CAT5G	AK	10000/Tape&Reel

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge		±25	kV
Contact discharge		±20	kV
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

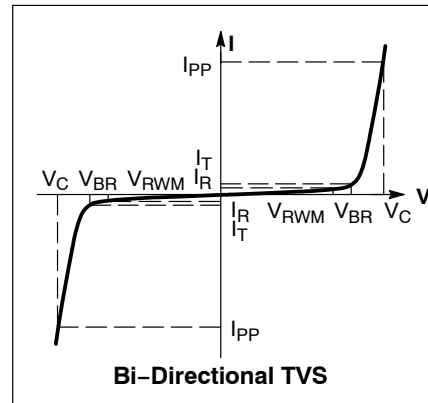
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

# S-LESD8D5.0CAT5G

## 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)	$I_{R1}$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$I_{R2}$ ( $\mu\text{A}$ ) @ $V_R=3.5\text{V}$	$V_{BR}$ (V) @ $I_T$ (Note 1)		$I_T$	$V_C$ (V) @ $I_{PP} = 1\text{A}$ (Note 2)	$V_C$ (V) @ MAX $I_{PP}$ (Note 2)	$I_{PP}$ (A) (Note 2)	$P_{PK}$ (W) (Note 2)	$C$ (pF)
	Max	Max	Max	Min	Max	mA	Max	Max	Max	Max	Max
S-LESD8D5.0CAT5G	5.0	0.5	0.3	5.6	8.0	1.0	9.8	12.5	5.5	69	15

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 3.



Fig1. ESD Clamping Voltage Screenshot Positive 8 kV Contact per IEC61000-4-2

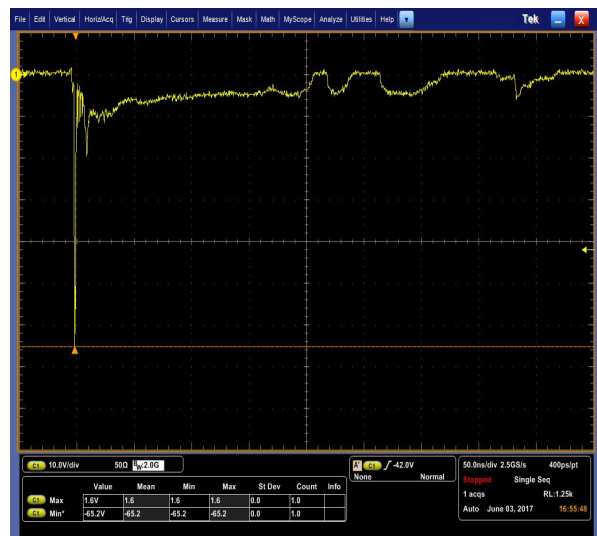


Fig2. ESD Clamping Voltage Screenshot Negative 8 kV Contact per IEC61000-4-2

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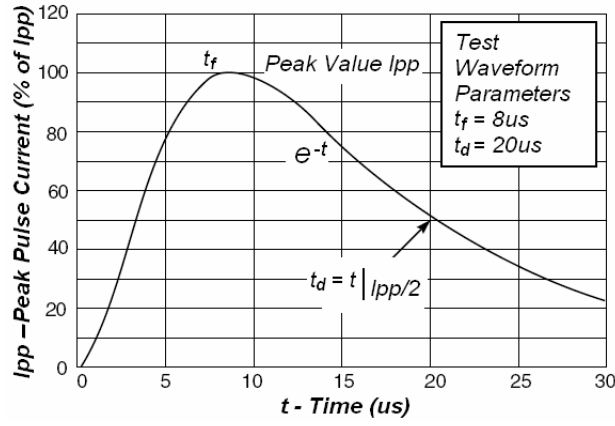


Fig3. Pulse Waveform

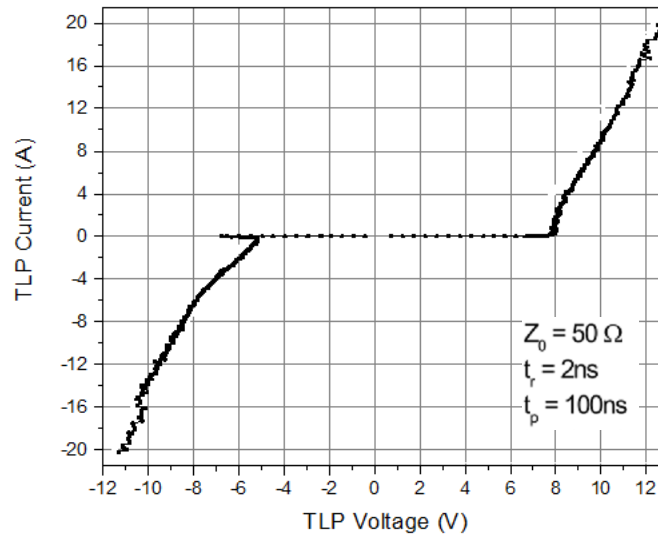
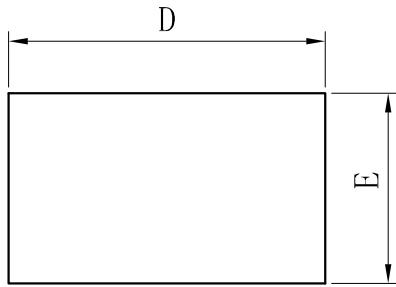


Fig4.TLP Measurement

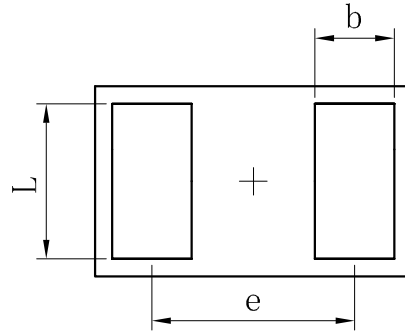
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## OUTLINE AND DIMENSIONS

### SOD882

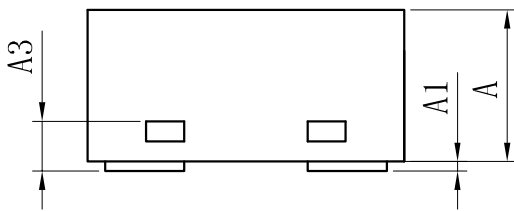


TOP VIEW



BOTTOM VIEW

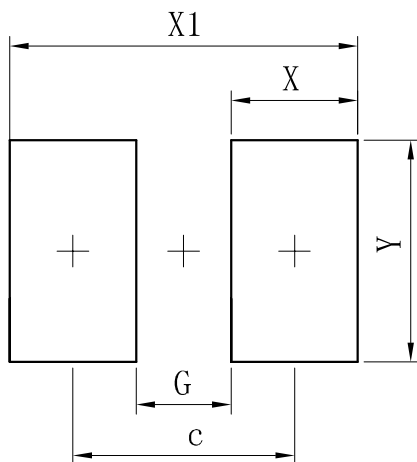
SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			



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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