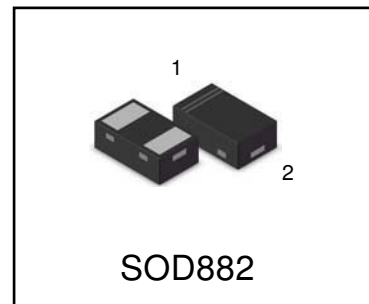


# LESD8D5.0ET5G ESD PROTECTION DIODE

## Discription

The LESD8D5.0ET5G 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.

LESD8D5.0ET5G



## Applications

- | Cellular phones audio
- | MP3 players
- | Digital cameras
- | Portable applications
- | Mobile telephone

## Features

- | Low Leakage
- | Response Time is Typically < 1 ns
- | IEC61000-4-2 Level 4 ESD Protection
- | These are Pb-Free Devices
- | We declare that the material of product compliance with RoHS requirements.

## Ordering information

| Device        | Marking | Shipping        |
|---------------|---------|-----------------|
| LESD8D5.0ET5G | DE      | 10000/Tape&Reel |

## MAXIMUM RATINGS

| Rating   | Symbol                           | Value      | Unit     |
|--|----------------------------------|------------|----------|
| IEC 61000-4-2 (ESD) Air discharge<br>Contact discharge                   |                                  | ±30<br>±30 | kV<br>kV |
| Total Power Dissipation on FR-5 Board (Note 1)<br>@ 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.

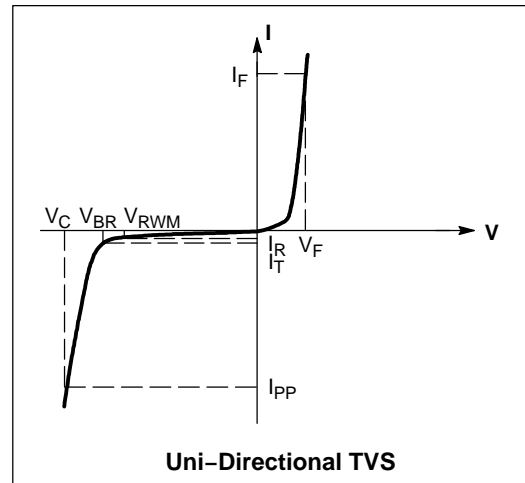
1. FR-5 = 1.0\*0.75\*0.62 in.

# LESD8D5.0ET5G

## ELECTRICAL CHARACTERISTICS

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

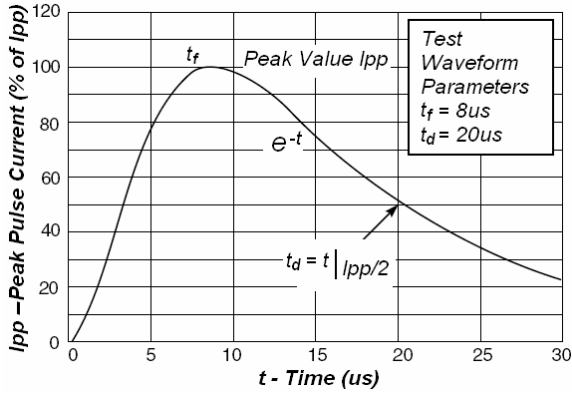
| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |
| $I_F$     | Forward Current                             |
| $V_F$     | Forward Voltage @ $I_F$                     |
| $P_{pk}$  | Peak Power Dissipation                      |
| $C$       | Capacitance @ $V_R = 0$ and $f = 1.0$ MHz   |



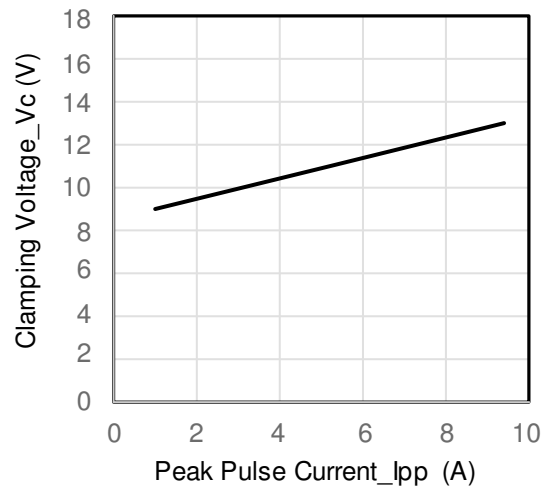
## ELECTRICAL CHARACTERISTICS

| Parameter               | Symbol    | Min | Typ | Max  | Unit          | Test Condition                                    |
|-------------------------|-----------|-----|-----|------|---------------|---|
| Reverse Working Voltage | $V_{RWM}$ |     |     | 5    | V             |   |
| Breakdown Voltage       | $V_{BR}$  | 5.6 |     | 8    | V             | $I_R = 1\text{mA}$                                |
| Reverse Leakage Current | $I_R$     |     |     | 1    | $\mu\text{A}$ | $V_R = 5\text{V}$                                 |
| Peak Pulse Current      | $I_{pp}$  |     |     | 8    | A             |   |
| Clamping Voltage        | $V_C$     |     |     | 9    | V             | $I_{PP} = 1\text{A}$ (8 x 20 $\mu\text{s}$ pulse) |
|                         |           |     |     | 10.8 | V             | $I_{PP} = 5\text{A}$ (8 x 20 $\mu\text{s}$ pulse) |
|                         |           |     |     | 13   | V             | $I_{PP} = 8\text{A}$ (8 x 20 $\mu\text{s}$ pulse) |
| Capacitance             | $C$       |     |     | 50   | pF            | $V_R = 0\text{V}$ , $f = 1\text{MHz}$             |

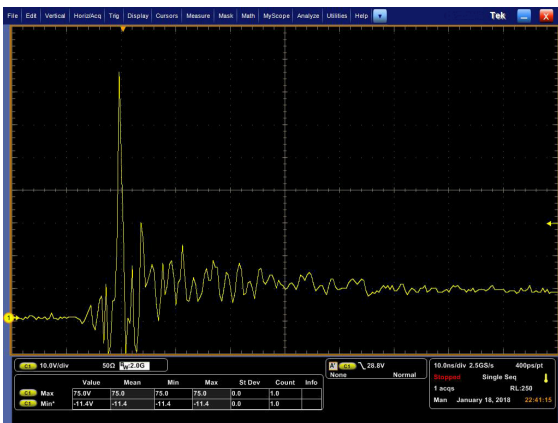
# LESD8D5.0ET5G



**Fig1. Pulse Waveform**



**Fig2. Clamping Voltage vs. Peak Pulse Current**



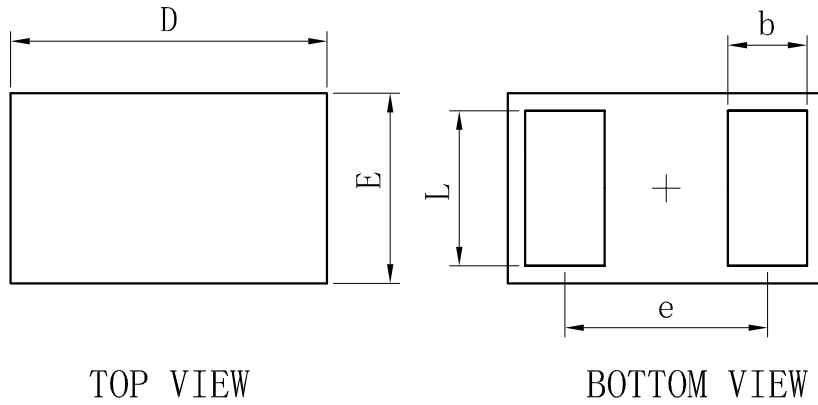
**Fig3. Positive 8kV contact per IEC 61000-4-2**



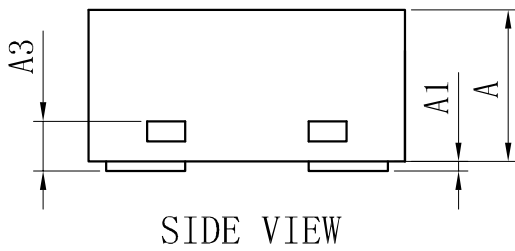
**Fig4. Negative 8kV contact per IEC 61000-4-2**

# LESD8D5.0ET5G

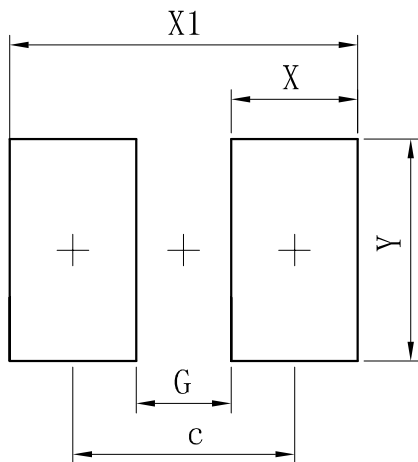
## Package Outline Dimension



| 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 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)