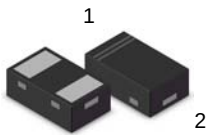
# LESD8LVL5.0CT5G ESD PROTECTION DIODE

## Discription

The LESD8LVL5.0CT5G 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.

LESD8LVL5.0CT5G




SOD882


## Applications

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

## Ordering information

| Device | Marking | Shipping |
|---|---|---|
| LESD8LVL5.0CT5G | QL | 10000/Tape&Reel |

## Features

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

## MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| IEC 61000-4-2 (ESD) Air discharge<br>Contact discharge | | ±20<br>±20 | kV<br>kV |
| Total Power Dissipation on FR-5 Board (Note 1) @ $T_A$=25℃ | PD | 200 | mW |
| Junction and Storage Temperature Range | TJ,TSTG | -55 to 150 | ℃ |
| Lead Solder Temperature – Maximum (10 Second Duration) | TL | 260 | ℃ |

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.

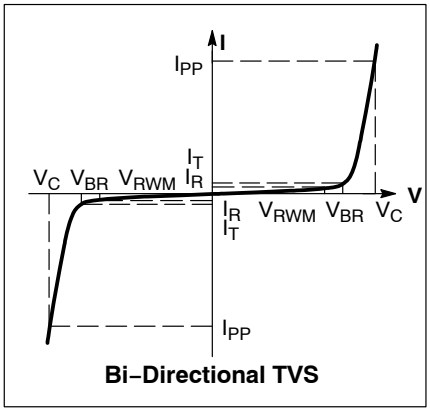
1. FR-5 = 1.0*0.75*0.62 in.

# LESD8LVL5.0CT5G

## ELECTRICAL CHARACTERISTICS

($T_A$ = 25°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) | $I_R$ (μA) @ $V_{RWM}$ | $V_{BR}$ (V) @ $I_T$ (Note 2) | | $I_T$ | $V_C$ (V) @ $I_{PP}$ = 1 A (Note 3) | $V_C$ (V) @ $I_{PP}$ = 3 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 | Max | Typ | Max |
| LESD8LVL5.0CT5G | 5 | 0.5 | 6 | 9 | 1.0 | 12 | 16 | 19 | 4 | 50 | 0.25 | 0.3 |

Other voltage available upon request.

2. $V_{BR}$ is measured with a pulse test current IT at an ambient temperature of 25℃

3. Surge current waveform per Figure 1.

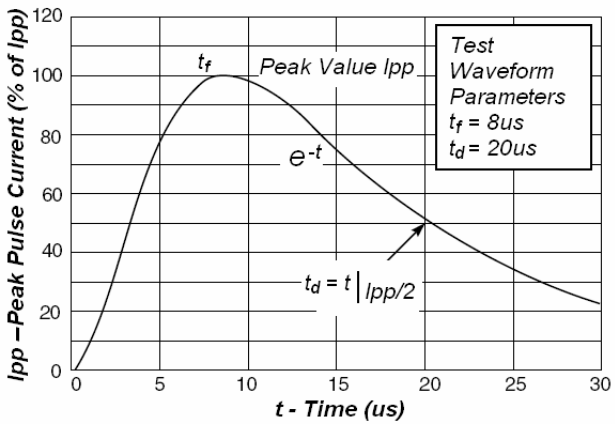



Fig1. Pulse Waveform

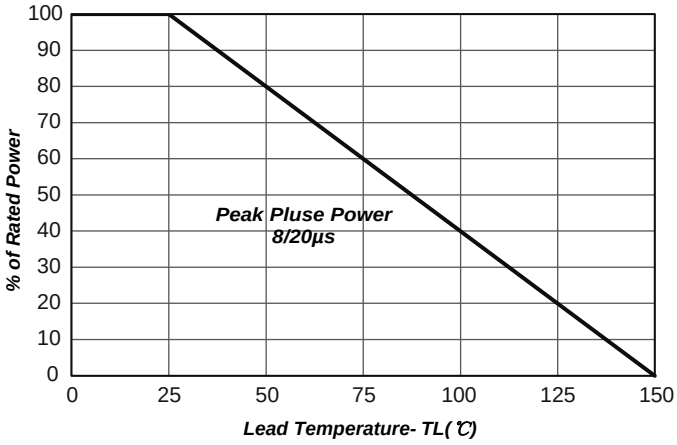



Fig2.Power Derating Curve

# LESD8LVL5.0CT5G

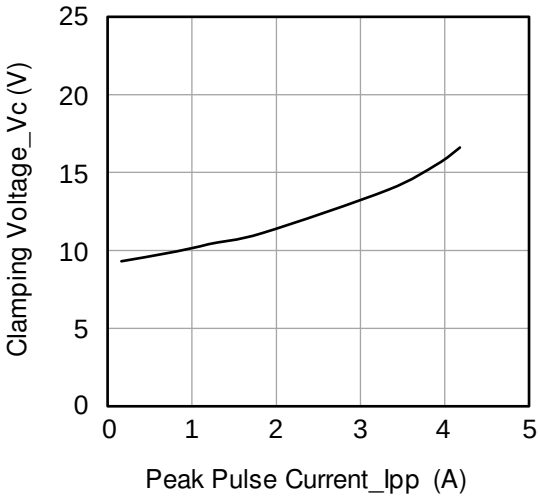



Fig3 .Clamping Voltage vs. Peak Pluse Current

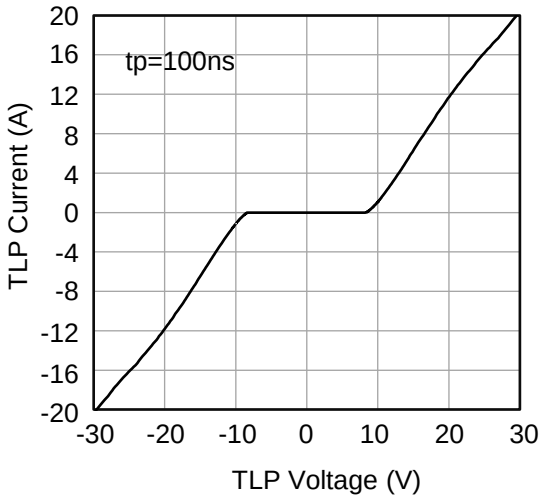
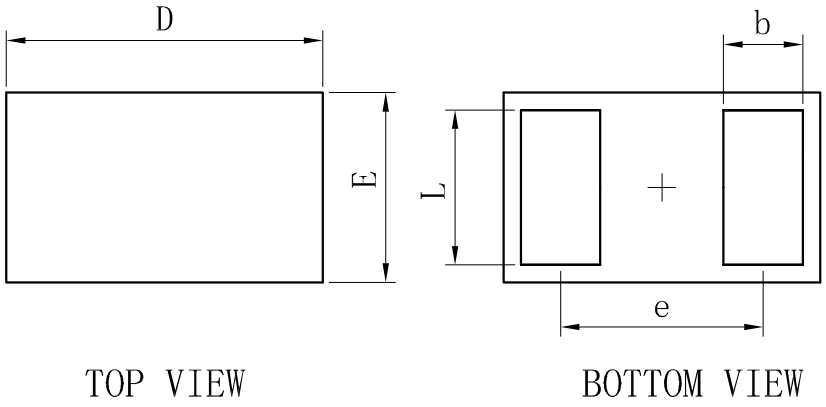


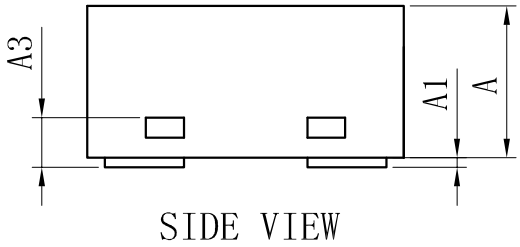

Fig 4. TLP Measurement

# LESD8LVL5.0CT5G

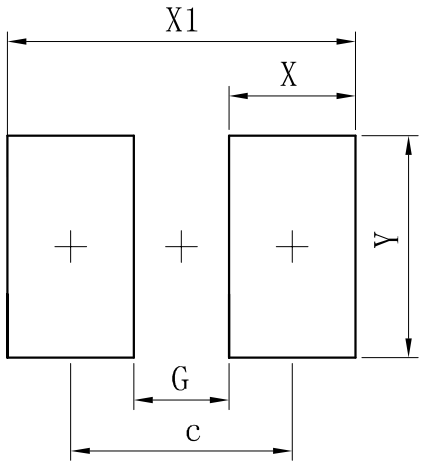
## Package Outline Dimension




| 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 |

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