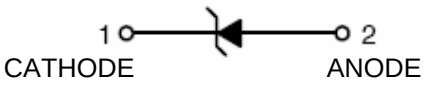
# LESD11D12T5G ESD PROTECTION DIODE

## Description

The LESD11D12T5G 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.

LESD11D12T5G

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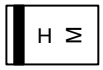
PIN 1




H = Specific Device Code
M = Month Code

## Applications

- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applicationss
- mobile telephone

## Features

- Small Body Outline Dimensions: 0.61 mm x 0.31 mm
- Low Body Height: 0.28 mm
- Low Leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- We declare that the material of product compliance with RoHS requirements.

## Ordering information

| Device | Marking | Shipping |
|---|---|---|
| LESD11D12T5G | H | 15000/Tape&Reel |

## MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| IEC 61000-4-2 (ESD) Air<br>Contact discharge | | ±15<br>±8 | kV<br>kV |
| ESD Voltage Per Human Body Model | | 16 | 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 | ℃ |

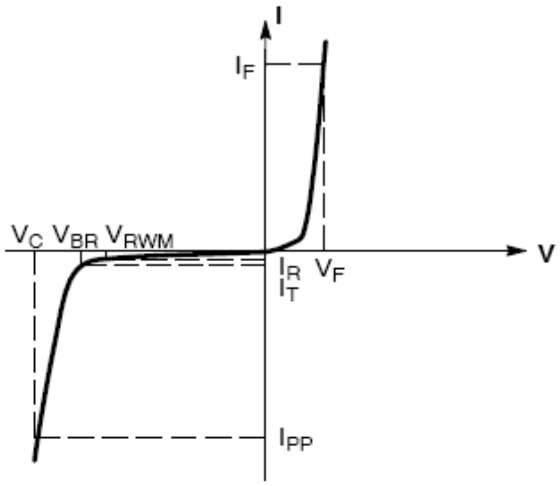
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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

# LESD11D12T5G

**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 |
| $I_F$ | Forward Current |
| $V_F$ | Forward Voltage @ $I_F$ |
| $P_{pk}$ | Peak Power Dissipation |
| C | Max. Capacitance @$V_R$ = 0 and f = 1 MHz |




**Uni–Directional TVS**

ELECTRICAL CHARACTERISTICS ($T_A$=25℃ unless otherwise noted, VF=0.9V Max. @ IF=10Ma for all types)

| Device | $V_{RWM}$ (V) | $I_R$ (μA) @ $V_{RWM}$ | $V_{BR}$ (V) @ $I_T$ (Note 2) | $I_T$ (mA) | $I_{PP}$ (A) (Note 3) | $V_C$ (V) @ Max $I_{PP}$ (Note 3) | $P_{PK}$ (W) (8*20 μs) | C (pF) |
|---|---|---|---|---|---|---|---|---|
| | Max | Max | Min | | Max | Max | Max | Typ |
| LESD11D12T5G | 12 | 1.0 | 13.3 | 1.0 | 4 | 18 | 72 | 25 |

2. $V_{BR}$ is measured with a pulse test current IT at an ambient temperature of 25℃
3. Surge current waveform per Figure 3.

# LESD11D12T5G

TYPICAL CHARACTERISTICS

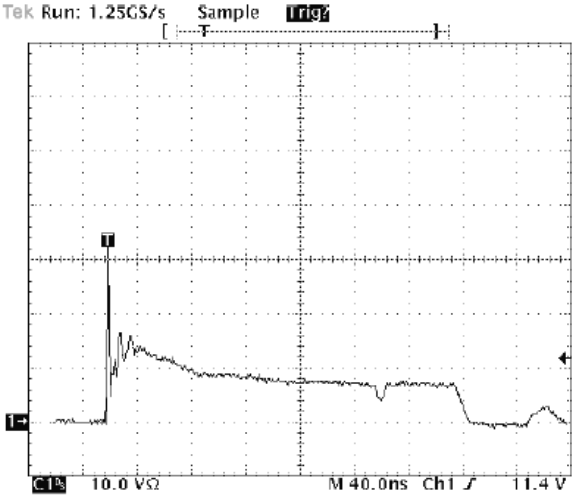



*Figure 1. Positive 8kV contact per IEC 61000-4-2-LESD11D12T5G*

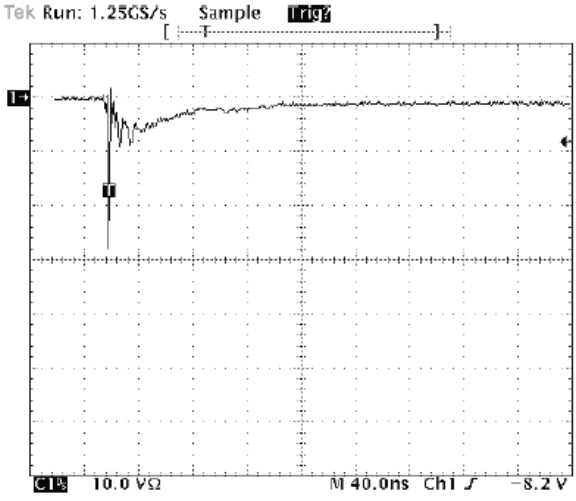



*Fig 2. Negative 8kV contact per IEC 61000-4-2-LESD11D12T5G*

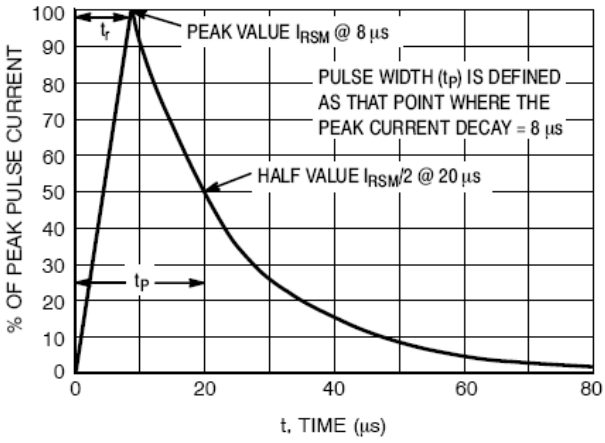


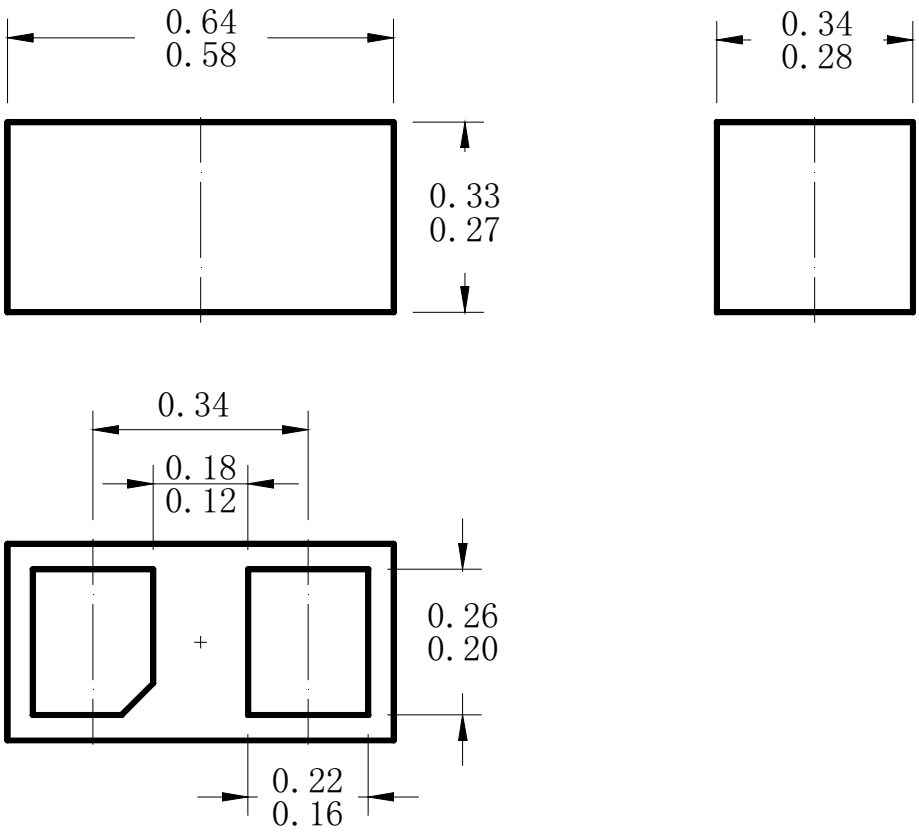

*Figure 3. 8*20 µs Pulse Waveform*

# LESD11D12T5G

## DFN0603-D

DIMENSION OUTLINE:

Unit:mm




## Soldering Footprint