

# LESD8D12CT5G ESD PROTECTION DIODE

## Discription

The LESD8D12CT5G 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.

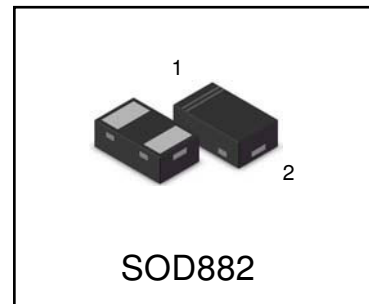
## Applications

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

## 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 (> 16 kV) per Human Body Model
- | IEC61000-4-2 Level 4 ESD Protection
- | We declare that the material of product compliance with RoHS requirements.

LESD8D12CT5G



## Ordering information

Device	Marking	Shipping
LESD8D12CT5G	H1	10000/Tape&Reel

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air Contact Contact discharge		±25 ±25	kV kV
ESD Voltage Per Human Body Model		16	kV
Total Power Dissipation on FR-5 Board (Note 1) @ 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.

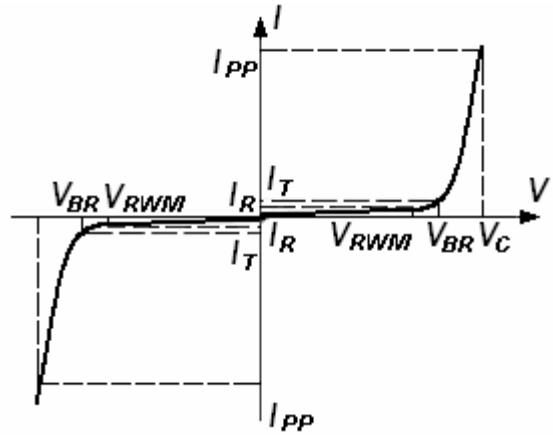
1. FR-5 = 1.0\*0.75\*0.62 in.

# LESD8D12CT5G

## ELECTRICAL CHARACTERISTICS

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

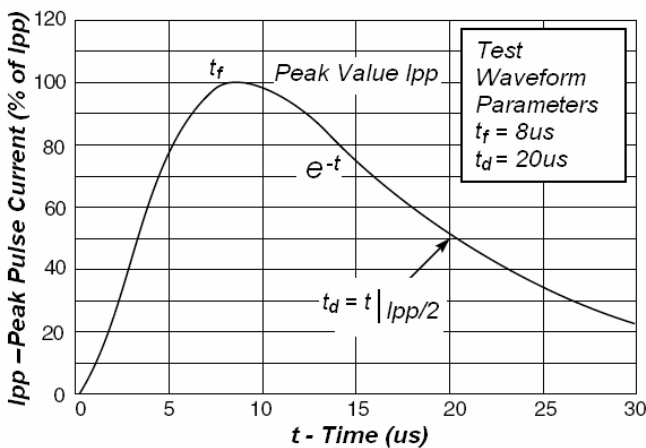
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$
$P_{pk}$	Peak Power Dissipation
C	Max. Capacitance @ $V_R = 0$ and $f = 1$ MHz



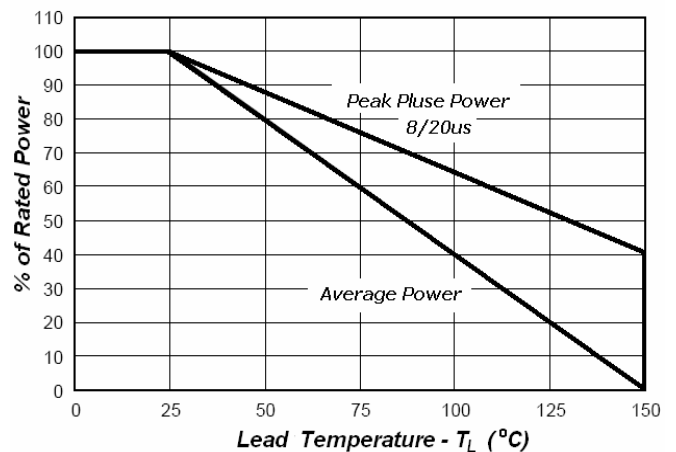
## ELECTRICAL CHARACTERISTICS

Device	$V_{RWM}$ (V)	$I_R$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 1)		$I_T$ (mA)	$I_{PP}$ (A)	$V_C$ (V) @ Max $I_{PP}$	$P_{PK}$ (W) (8*20 $\mu\text{s}$ )	C (pF)		
	Max	Max	Min	Max		Max	Max	Max	Min	Typ	Max
LESD8D12CT5G	12	1.0	13.3	16	1.0	4	24	95	3.5	6.5	9.5

- $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$
- Surge current waveform per Figure 1.

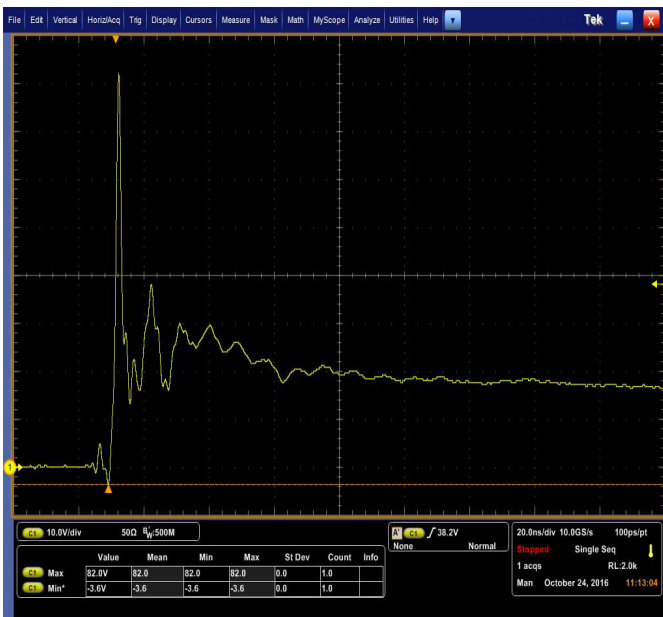


**Fig1. Pulse Waveform**

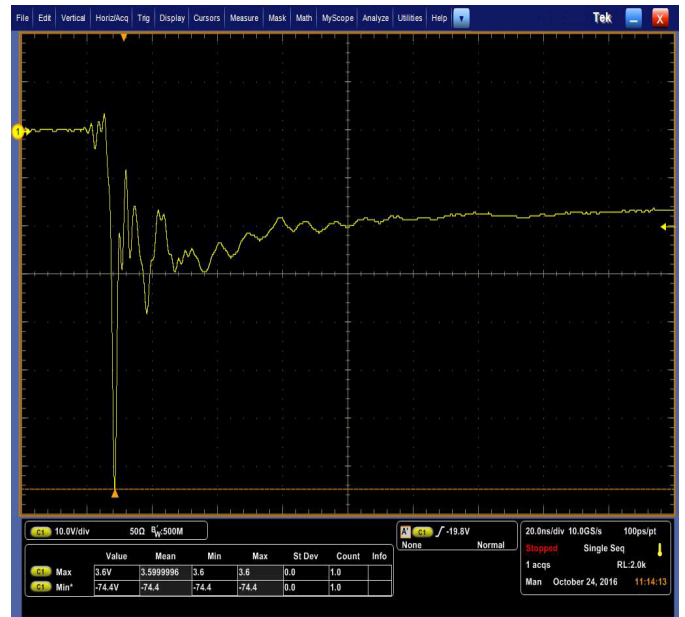


**Fig2 Power Derating**

# LESD8D12CT5G



**Figure 3. Positive 8kV contact per IEC 61000-4-2-LESD8D12CT5G**



**Fig 4. Negative 8kV contact per IEC 61000-4-2-LESD8D12CT5G**

## Application Note

Electrostatic discharge (ESD) is a major cause of failure in electronic systems. Transient Voltage Suppressors (TVS) are an ideal choice for ESD protection. They are capable of clamping the incoming transient to a low enough level such that damage to the protected semiconductor is prevented.

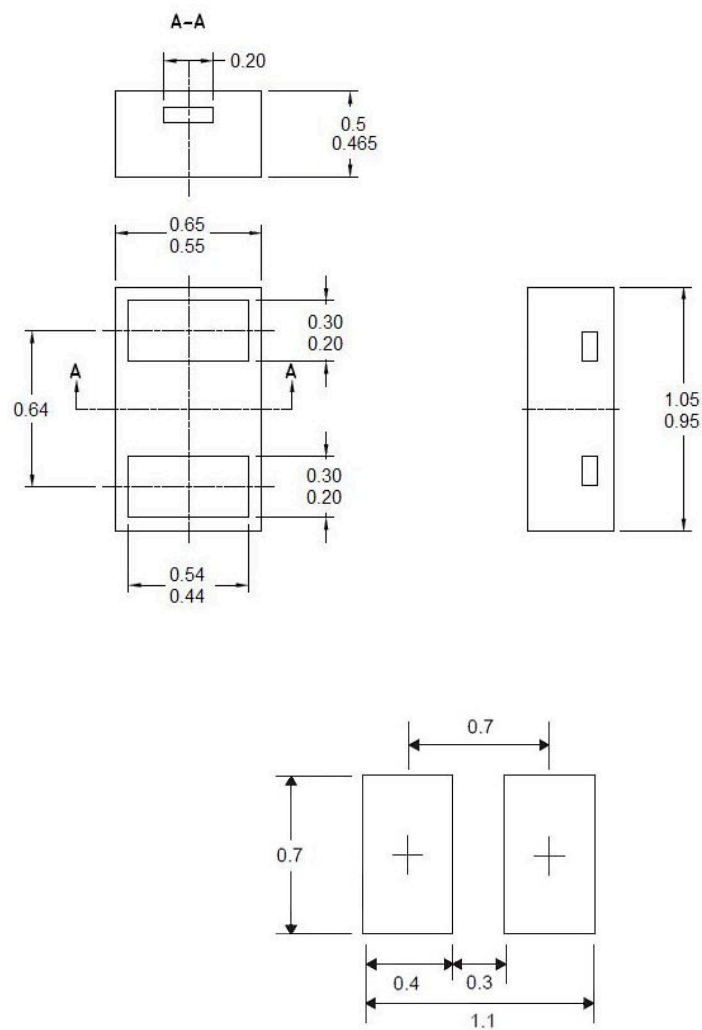
Surface mount TVS offer the best choice for minimal lead inductance. They serve as parallel protection elements, connected between the signal line to ground. As the transient rises above the operating voltage of the device, the TVS becomes a low impedance path diverting the transient current to ground. The LESD8D12CT5G is the ideal board level protection of ESD sensitive semiconductor components.

The tiny SOD882 package allows design flexibility in the design of high density boards where the space saving is at a premium. This enables to shorten the routing and contributes to hardening against ESD.

**LESD8D12CT5G****SOD882**

DIMENSION OUTLINE:

Unit:mm



单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)