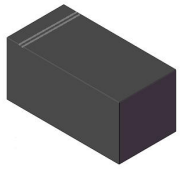
LESD11D12CAT5G ESD PROTECTION DIODE

Discription

The LESD11D12CAT5G 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, digital cameras and many other portable applications where board space is at a premium.

LESD11D12CAT5G



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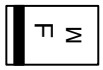
PIN 1



F = Specific Device Code
M = Month Code

Applications

- Cellular phones audio
- Digital cameras
- Portable applications
- 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
- IEC61000−4−2 Level 4 ESD Protection
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

Ordering information

Device	Marking	Shipping
LESD11D12CAT5G	F (Rotate 90℃cw)	15000/Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air Contact Contact discharge		±30 ±30	kV kV
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	℃
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	℃

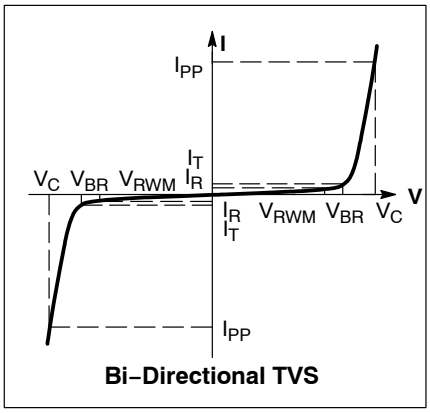
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

LESD11D12CAT5G

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



Bi−Directional TVS

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			12	V	
Breakdown Voltage	V_{BR}	13	14.5	16	V	I_T = 1mA
Reverse Leakage Current	I_R		50	100	nA	V_R = 12V
Peak Pulse Current (8/20μs)	I_{PP}			10	A	
Clamping Voltage	V_C			16	V	I_{PP} =1A (8 x 20μs pulse)
Clamping Voltage	V_C		17	19	V	I_{PP} =8A (8 x 20μs pulse)
Junction Capacitance	C_J		9	12	pF	V_R = 0V, f = 1MHz,Level=50mV
Dynamic Resistance	$R_{(dynamic)}$		0.2	0.3	Ω	tp = 8/20 μs

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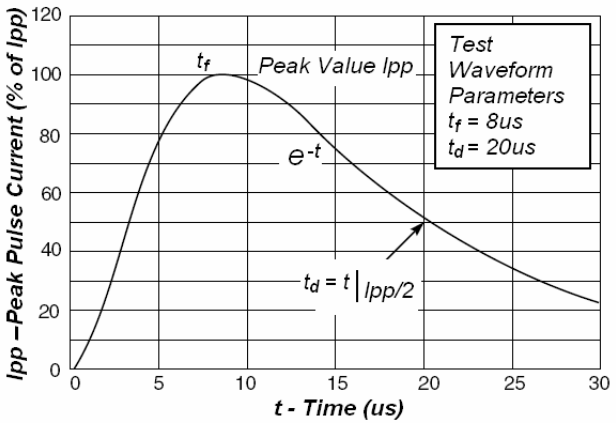

Fig1. Pulse Waveform

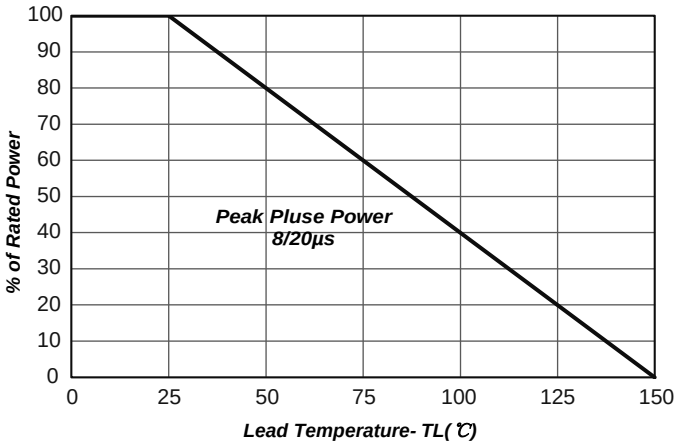

Fig2 Power Derating

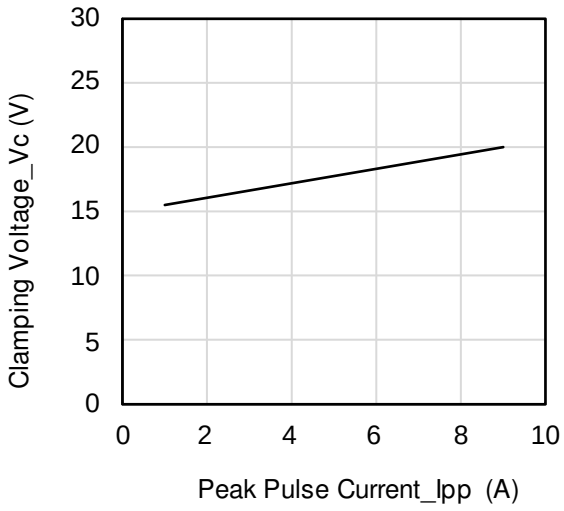

Fig3. Clamping Voltage vs.Peak Pulse Current

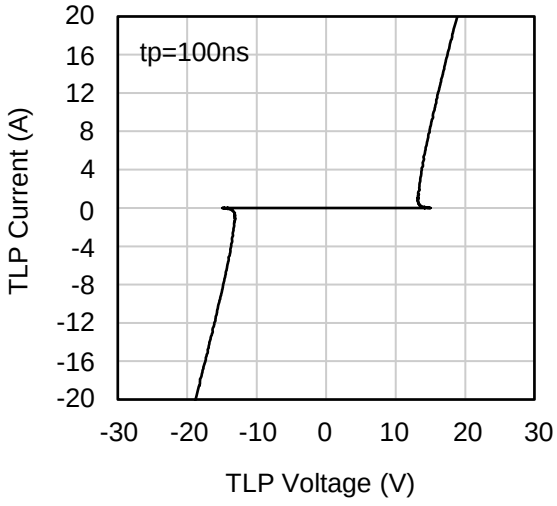

Fig4. TLP Measurement

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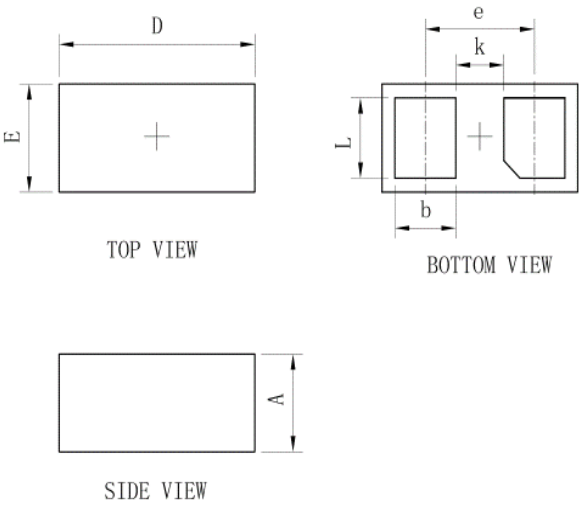
OUTLINE AND DIMENSIONS



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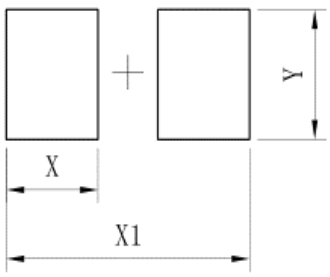
Dim	Min	Typ.	Max
D	0.58	0.61	0.64
E	0.28	0.31	0.34
e	-	0.34	-
L	0.20	0.23	0.26
b	0.16	0.19	0.22
A	0.25	0.28	0.31
k	0.12	0.15	0.18
All Dimensions in mm			

SOLDERING FOOTPRINT



DFN0603-DL	
DIM	(mm)
X	0.23
X1	0.61
Y	0.30

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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