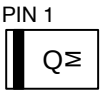
ESD PROTECTION DIODE
S-ESD11LL5.0CT5G

Discription

The S-ESD11LL5.0CT5G 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.

DFN0603-DL



Q =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
- ESD Rating of Class 3 per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- These are Pb−Free Devices
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S-prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

Ordering information

Device	Marking	Shipping
S-ESD11LL5.0CT5G	Q	15000/Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±20 ±16	kV 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	℃

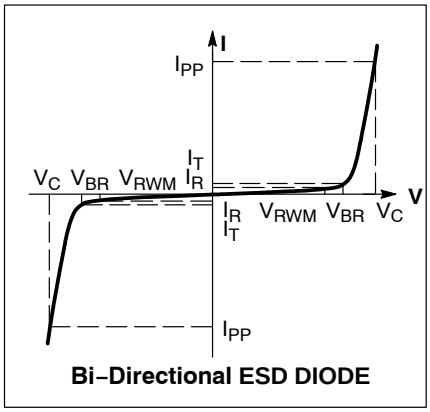
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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

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 1)		I_T (mA)	I_{PP} (A)	V_C (V) @ Max I_{PP}	P_{PK} (W) (8*20 μs)	C (pF)
	Max	Max	Min	Max		Max	Max	Max	Max
S-LESD11LL5.0CT5G	5.0	0.5	6	8.8	1.0	4	20	80	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.

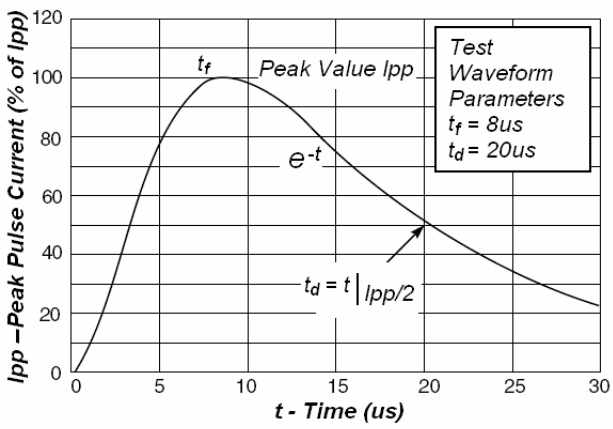


Fig1. Pulse Waveform

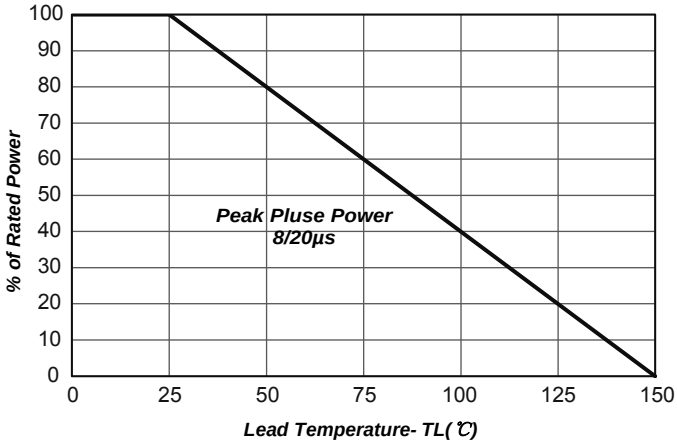


Fig2.Power Derating Curve

Fig3. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2

Fig4. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000-4-2

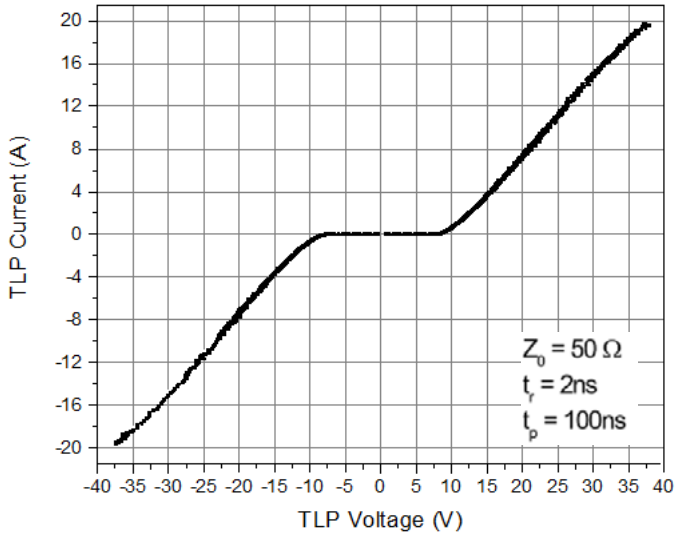


Fig5.TLP Measurement

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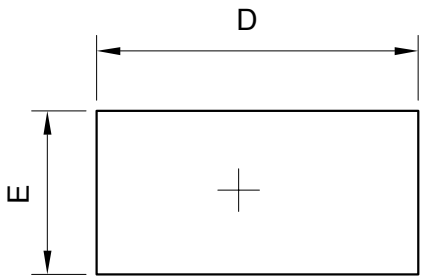
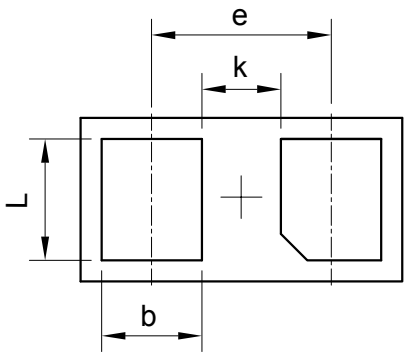
OUTLINE AND DIMENSIONS



TOP VIEW

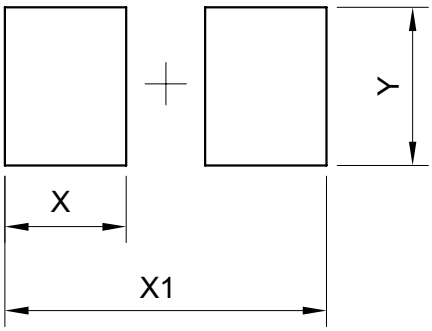


BOTTOM VIEW

DFN0603-DL			
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			

SIDE VIEW

SOLDERING FOOTPRINT



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