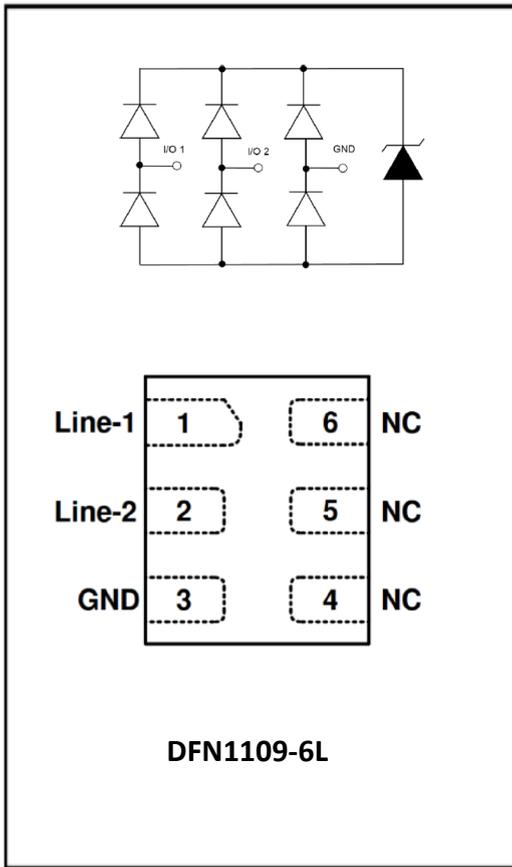


2-Line, Bi-directional, Ultra-low Capacitance, Transient Voltage Suppressor



Features

- Operating voltage: 3.3V
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 15\text{kV}$ (contact)
IEC61000-4-5(surge): 3A (8/20 μs)
- Ultra low capacitance: $C_j=0.15\text{pF}$ typ
- Ultra low leakage
- Low clamping voltage
- Up to 2 lines protects
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- USB Ports
- Digital Visual Interface
- MMC/SD Ports

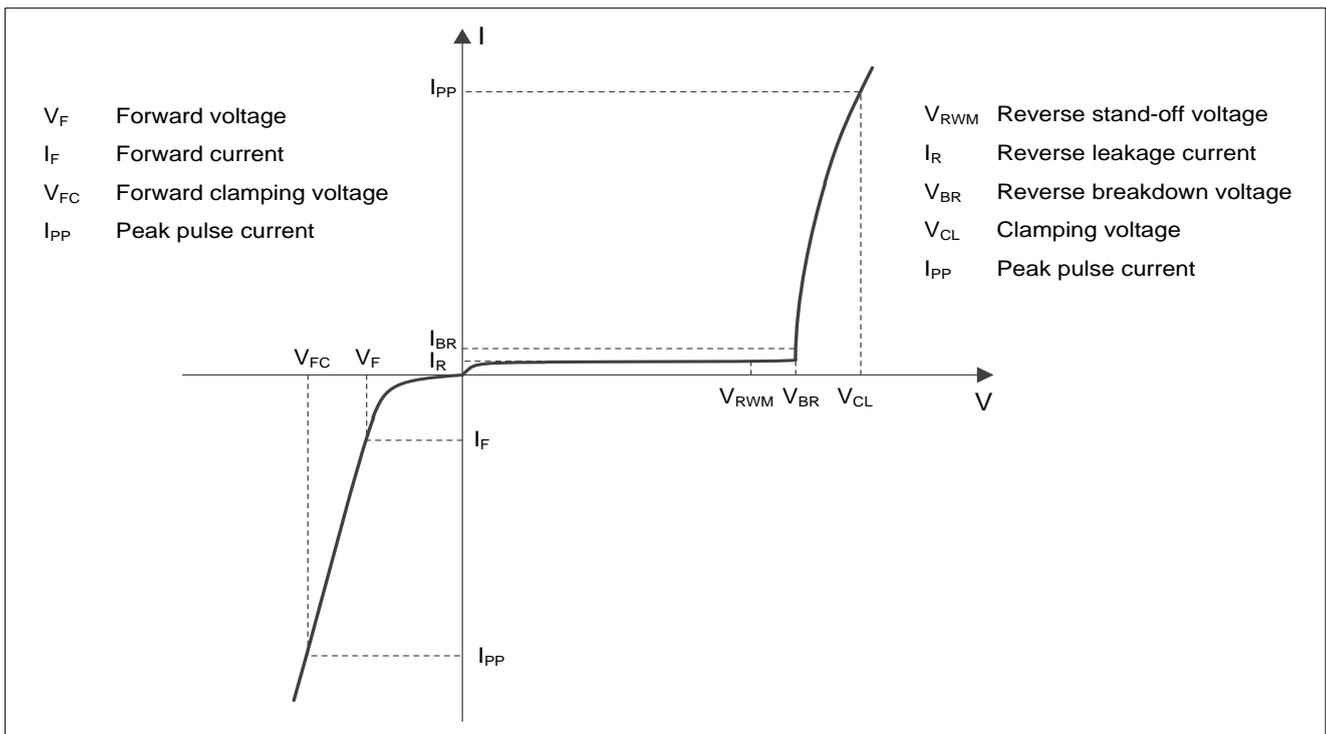
Mechanical Data

- Package: DFN1109-6L
- Terminals: Tin plated leads, solderabl per J-STD-002 and JESD22-B102
- Marking Information: See Below



32P = Device Marking Code
Dot denotes Pin1

■Definitions of electrical characteristics





ESDSL3302P2S

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	50	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{pp}	3	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 20	KV
ESD according to IEC61000-4-2 contact discharge		± 15	
Junction temperature	T_J	125	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

■Electrical Characteristics ($T_a=25^{\circ}C$ Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V	Any I/O pin to ground			3.3
Reverse leakage current	I_R	nA	$V_{RWM} = 3.3V$, any I/O pin to ground			200
Reverse breakdown voltage	$V_{(BR)}$	V	$I_T = 1mA$, any I/O pin to ground	3.5		
Clamping voltage	V_{CL}	V	$I_{PP} = 1A$, $t_p = 8/20\mu s$			10
		V	$I_{PP} = 3A$, $t_p = 8/20\mu s$			17
Junction capacitance	CJ	pF	$V_R = 0V$, $f = 1MHz$ Any I/O pin to GND		0.15	0.25

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSL3302P2S	F1	Approximate 1.4	3000	30000	120000	7 reel



■ Characteristics (Typical)

Fig.1 8/20 μ s waveform per IEC61000-4-5

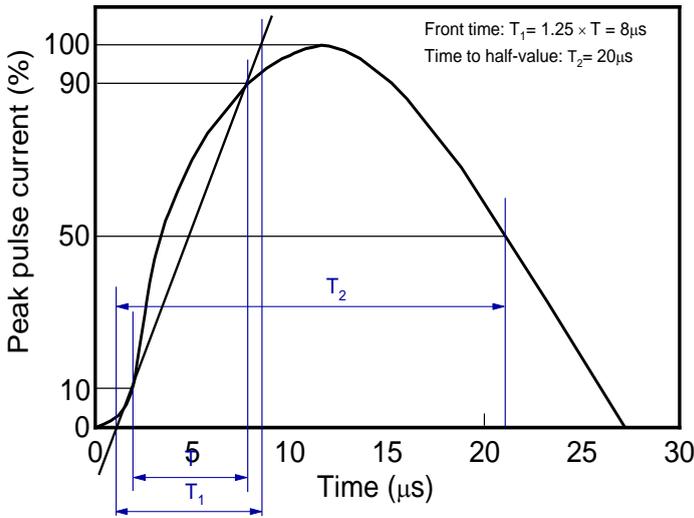


Fig.3 Clamping voltage vs. Peak pulse current

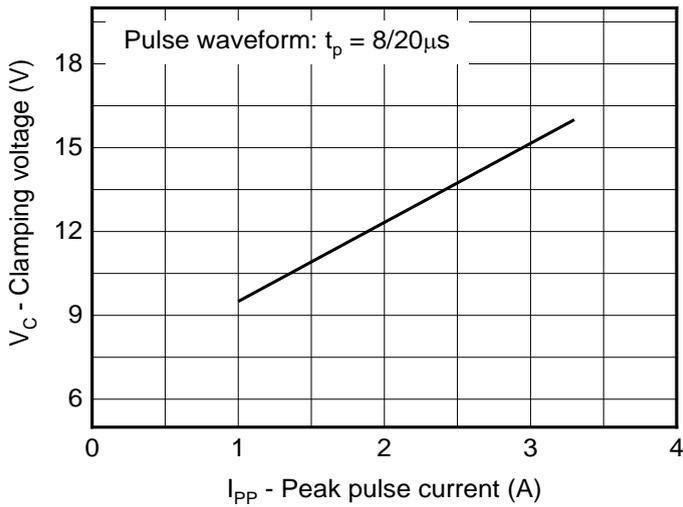


Fig.5 Non-repetitive peak pulse power vs. Pulse time

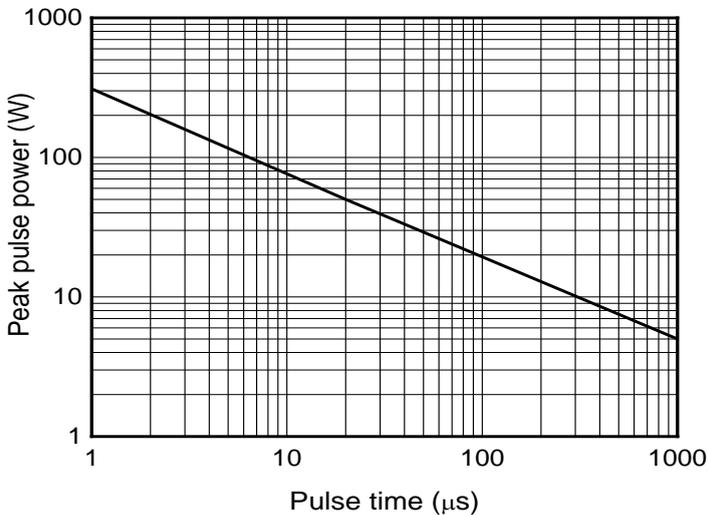


Fig.2 Contact discharge current waveform per IEC61000-4-2

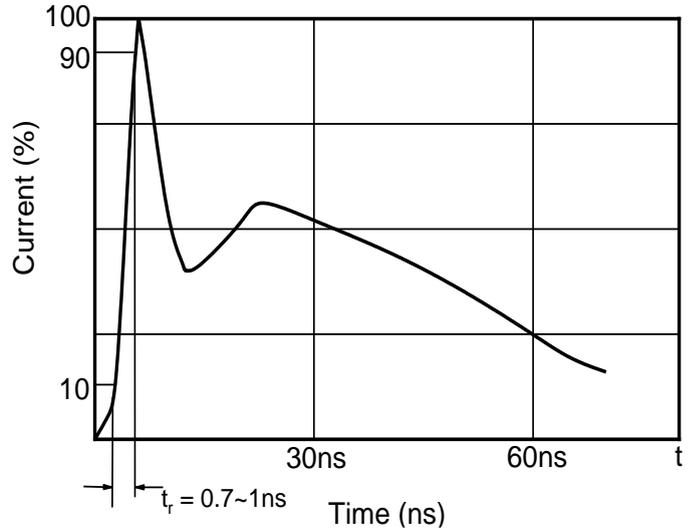


Fig.4 Capacitance vs. Reverse voltage

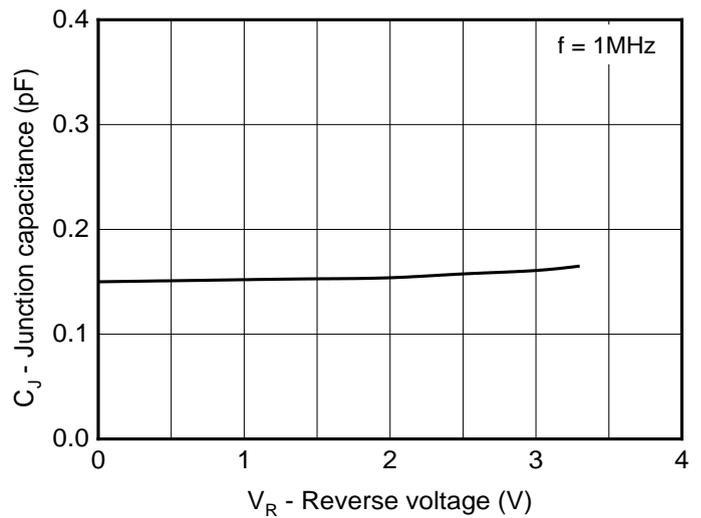


Fig.6 Power derating vs. Ambient temperature

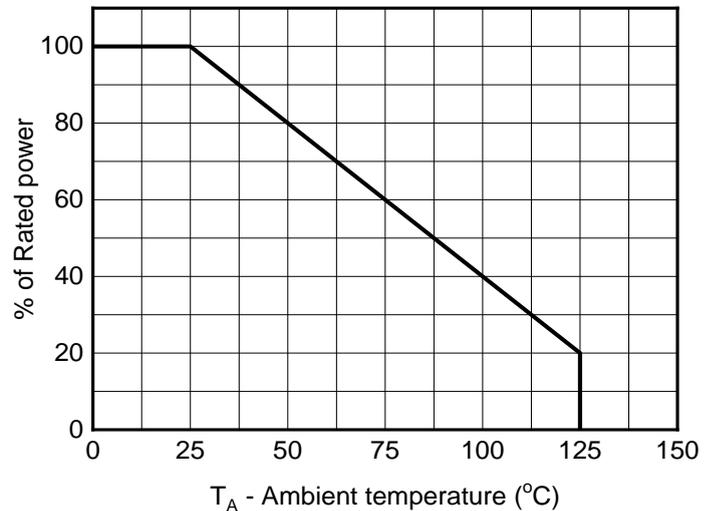
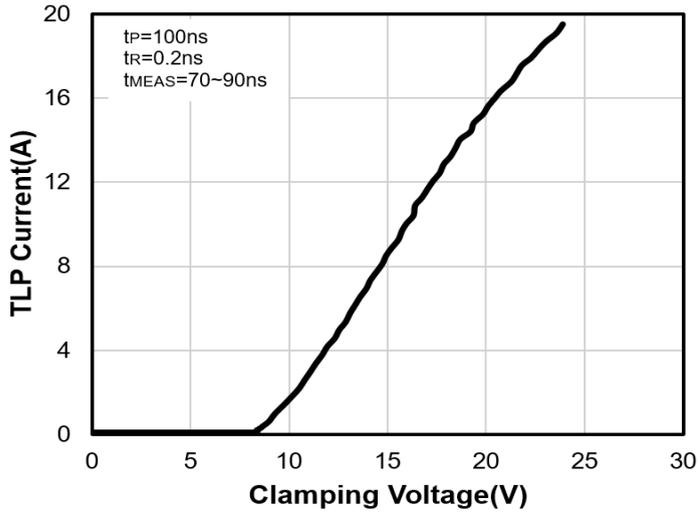
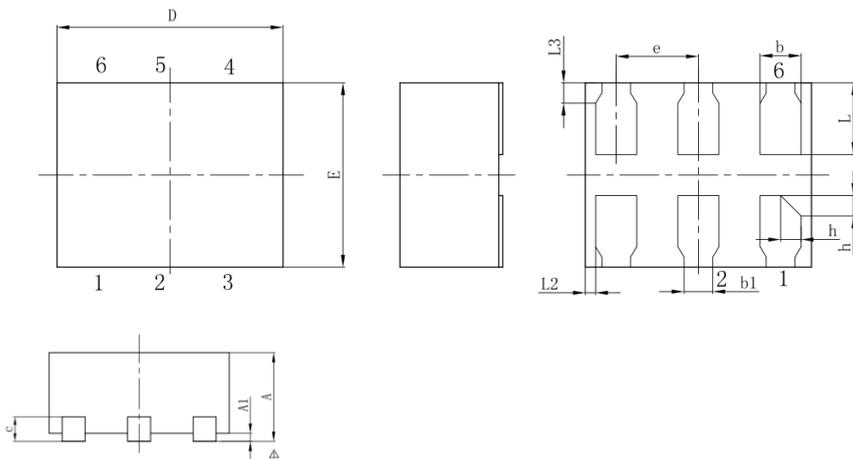


Fig.7 TLP measurement



■ Outline Dimensions (DFN1109-6L)



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.15	0.20	0.25
b1	0.14 REF		
c	0.10	0.152	0.20
D	1.05	1.10	1.15
e	0.40 BSC		
E	0.85	0.90	0.95
L	0.30	0.35	0.40
L2	0.05 REF		
L3	0.10 REF		
h	0.05	0.10	0.15



ESDSL3302P2S

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