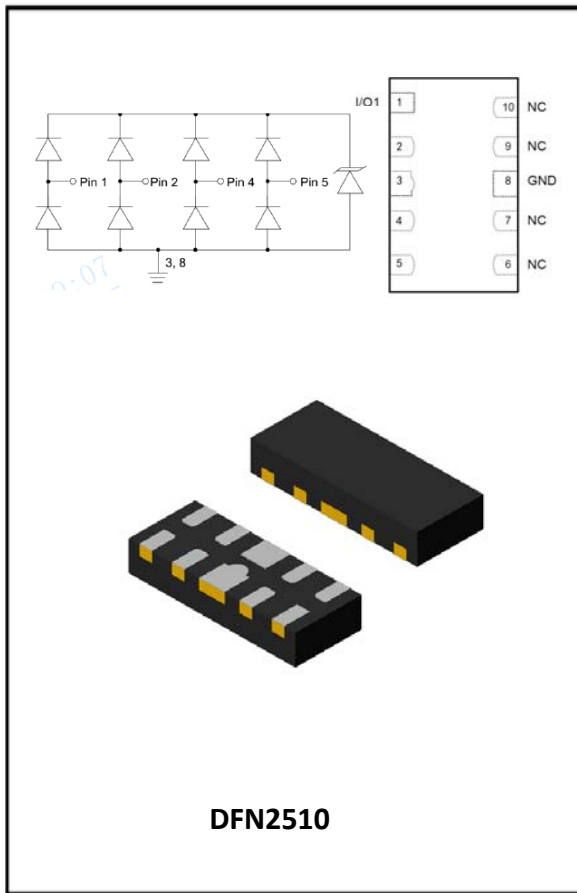


4-Line, Uni-directional, Ultra-low Capacitance, Transient Voltage Suppressor



Features

- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 15\text{kV}$ (contact/Air)
IEC61000-4-5(surge): 5.5A (20 μs)
- Ultra-low capacitance: $C_J = 0.26\text{F}$ typ
- Low leakage current
- Low clamping voltage
- Up to 4 lines protects
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Display Ports
- MDDI / MHL
- USB 2.0 / USB 3.0
- Digital Visual Interface (DVI)
- PCI Express and Serial SATA Ports

Caution:

*This Device is designed for signal line protection only.
Not intended to be used under bias, not for application
with a power line.*

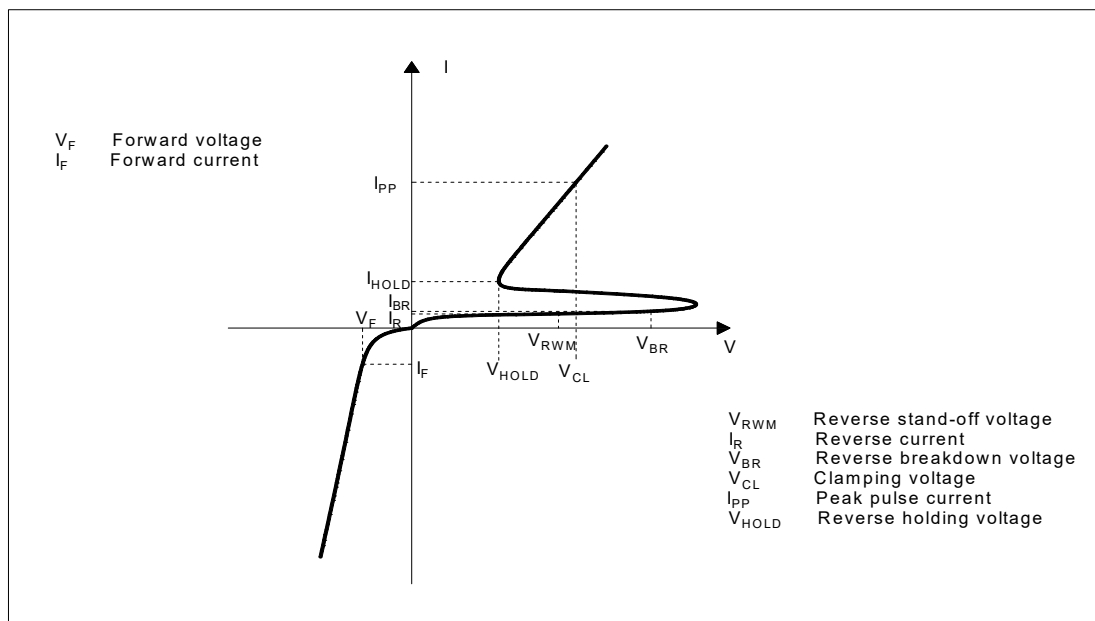
Mechanical Data

- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Marking Information: See Below

3345C

3345C= Device Marking Code

■Definitions of electrical characteristics





SESDSL3304P5

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	22	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	5.5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 15	KV
ESD according to IEC61000-4-2 contact discharge		± 15	
Junction temperature	T_J	-55~125	$^{\circ}C$
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	$I_{PP} = 5.5, (8 \times 20\mu s \text{ pulse})$ any I/O pin to ground			4
Clamping voltage ¹⁾	V_{CL}	V	$I_{PP} = 4$, $t_p = 0.2/100ns$ (TLP), any I/O pin to ground		2.8	
		V	$I_{PP} = 16A$, $t_p = 0.2/100ns$ (TLP), any I/O pin to ground		5.1	
Junction capacitance	CJ	pF	$V_R = 0V$, $f = 1MHz$ Any I/O pin to GND		0.6	0.8
			$V_R = 0$, $f = 1MHz$ Between I/O pins		0.26	0.4

Notes:

1) TLP settings: 100ns, $t_r = 0.2ns$.

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SESDSLC3304P5	F1	Approximate 3.48	3000	30000	120000	7 reel

■ Characteristics (Typical)

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

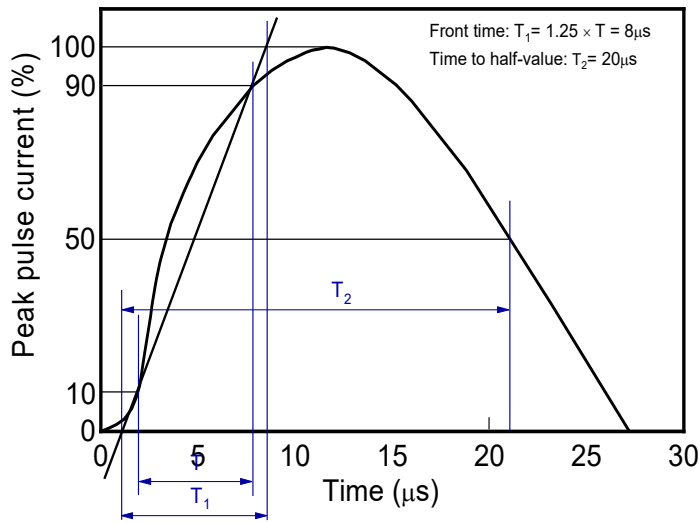


Fig.3 Clamping voltage vs. Peak pulse current

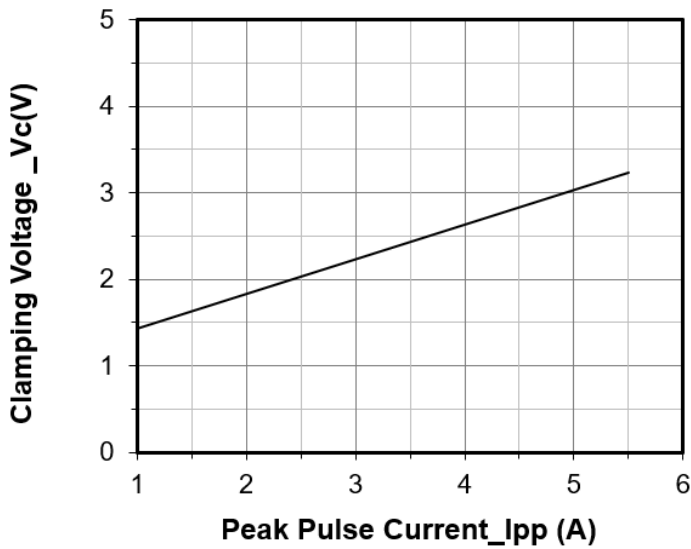


Fig.5 Non-repetitive peak pulse power vs. Pulse time

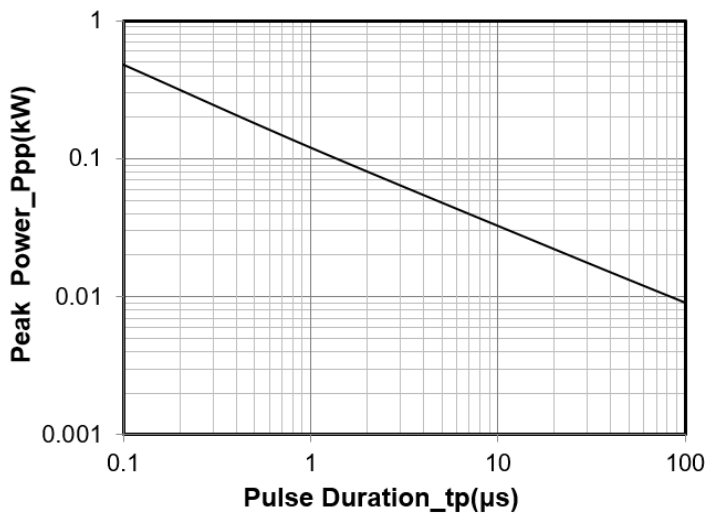


Fig.2 Contact discharge current waveform per IEC61000-4-2

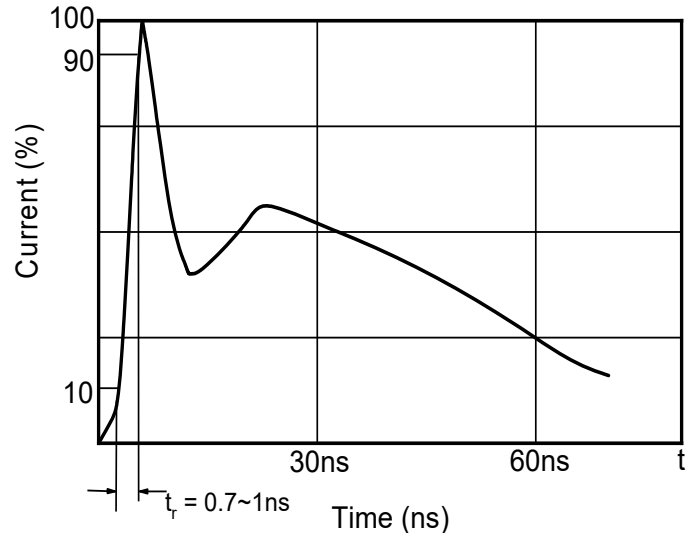


Fig.4 Capacitance vs. Reverse voltage

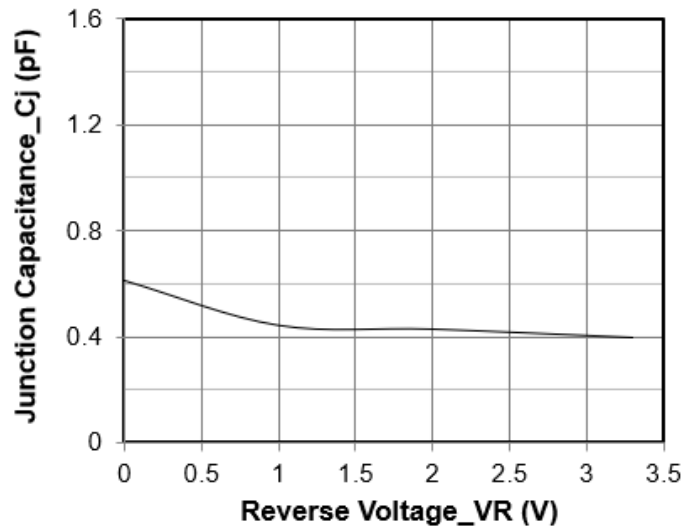


Fig.6 Power derating vs. Ambient temperature

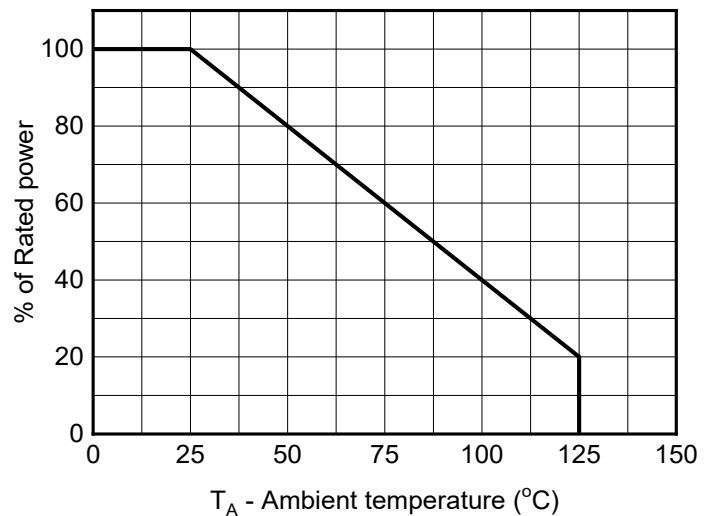




Fig.7 ESD clamping
(8kV contact discharge per IEC61000-4-2)

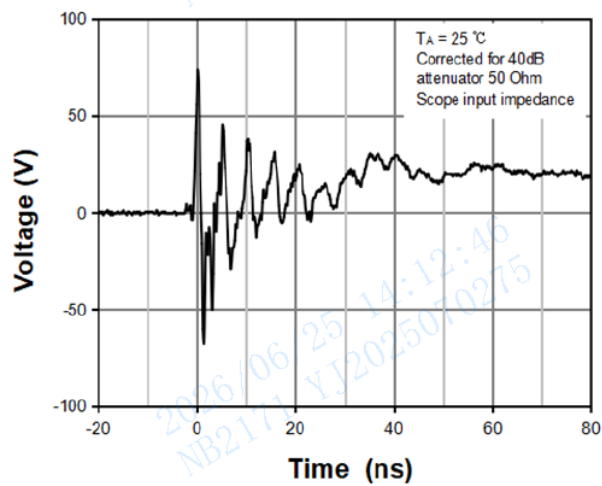
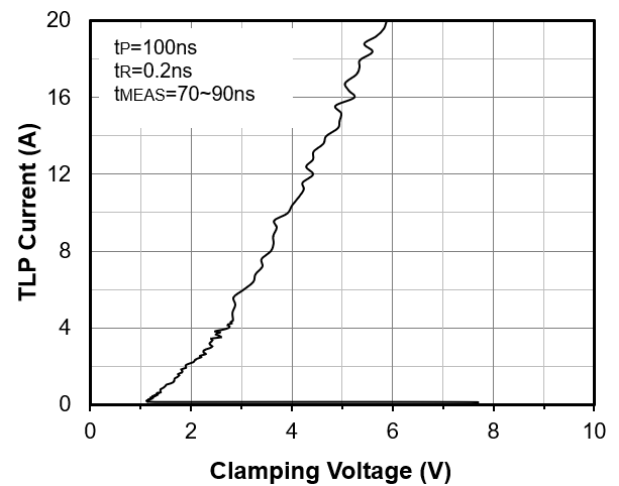


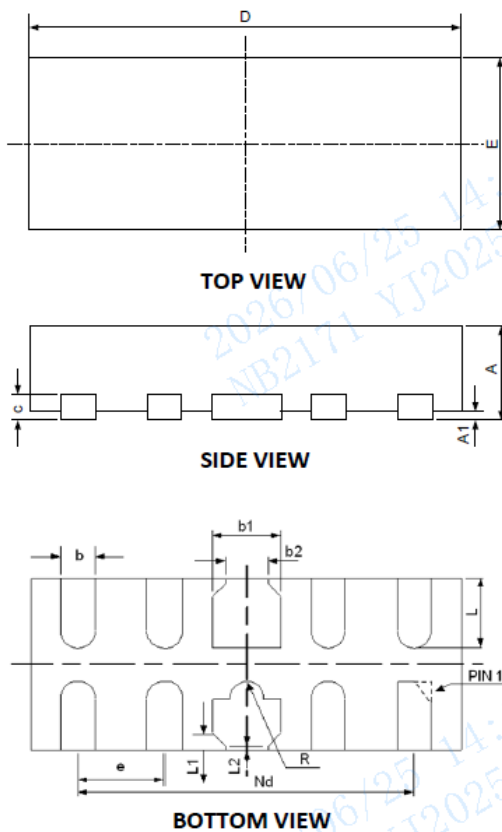
Fig.8 TLP Measurement





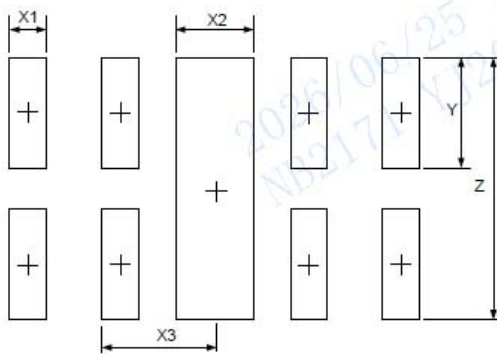
SESDSL3304P5

■ Outline Dimensions



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.450	0.500	0.600	0.018	0.020	0.024
A1	0.000	0.020	0.050	0.000	0.001	0.002
b	0.150	0.200	0.250	0.006	0.008	0.010
b1	0.350	0.400	0.450	0.014	0.016	0.018
b2	0.200	0.250	0.300	0.008	0.010	0.012
c	0.100	0.150	0.200	0.004	0.006	0.008
D	2.450	2.500	2.550	0.098	0.100	0.102
e	0.50BSC			0.020BSC		
Nd	2.00BSC			0.080BSC		
E	0.950	1.000	1.050	0.038	0.040	0.042
L	0.330	0.400	0.450	0.013	0.016	0.018
L1	0.075REF			0.003REF		
L2	0.050REF			0.002REF		
R	0.050	0.100	0.150	0.002	0.004	0.006

■ Soldering Footprint



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	0.200	0.008
X2	0.400	0.016
X3	0.600	0.024
Y	0.600	0.024
Z	1.400	0.056

Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.



Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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