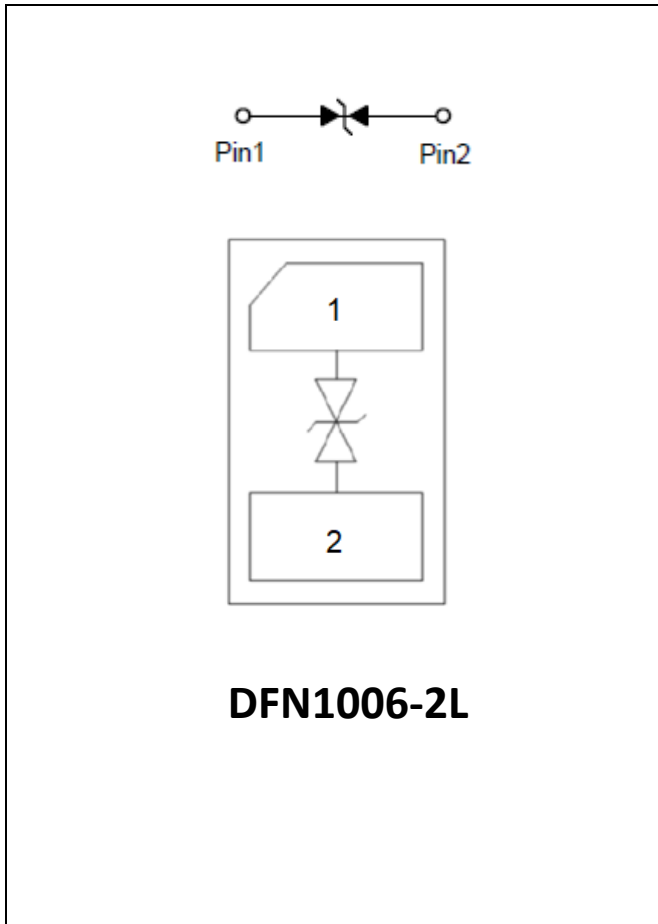


# SESDULC1V5LBA

## 1- Line, Bi-directional, Transient Voltage Suppressor



### Features

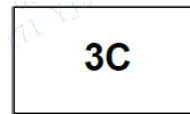
- Low capacitance: 0.3pF typical
- Stand-off voltage: 1.5V Max
- Transient protection for each line according to  
IEC61000-4-2(ESD): 15kV (contact)  
IEC61000-4-2(ESD): 15kV (air)  
IEC61000-4-5(surge): 6A (8/20 $\mu$ s)
- Ultra Low leakage : nA level
- Low clamping voltage
- RoHS Compliant

### Applications

- Thunderbolt
- USB 3.0/3.1/3.2 and 4.0
- USB Type-C
- Display Ports
- Cellular Handsets and Accessories
- Consumer Electronics

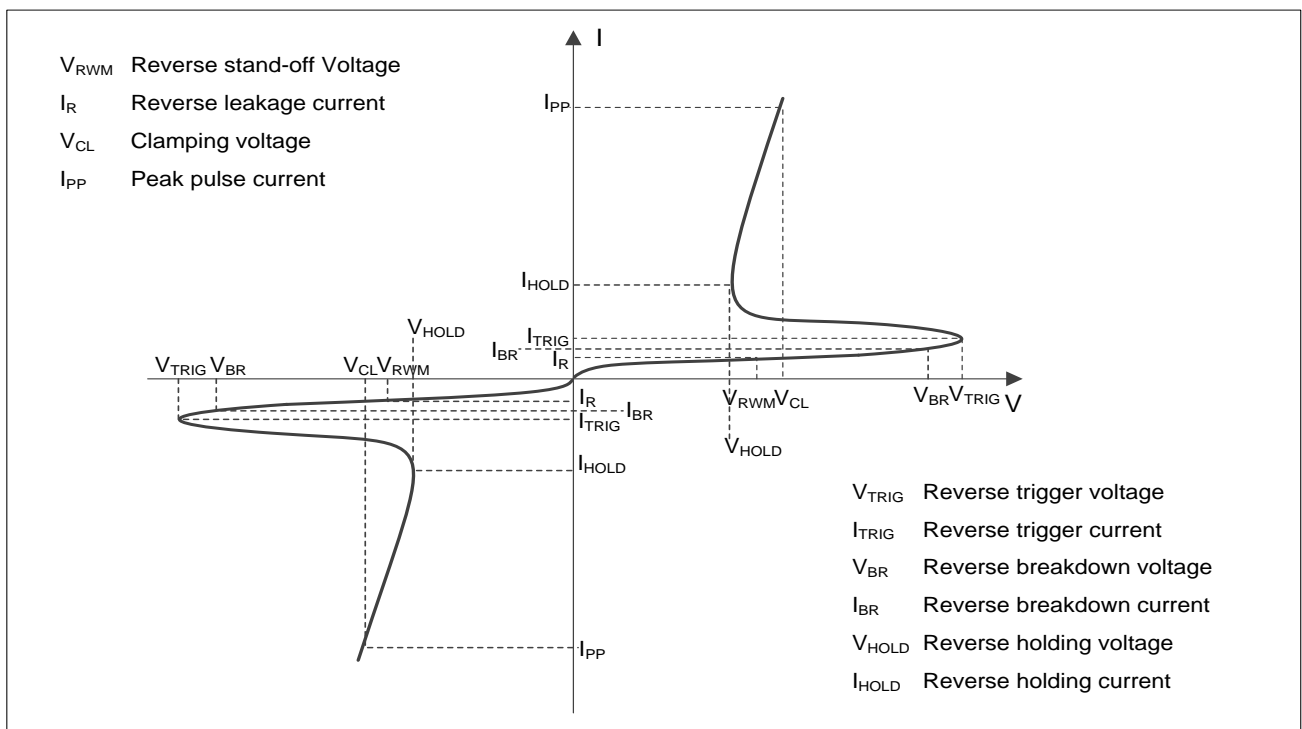
### Mechanical Characteristics

- Package: DFN1006-2L
- Case Material: "Green" Molding Compound.
- Marking Information: See Below



3C = Device Marking Code

### ■ Definitions of electrical characteristics





# SESDULC1V5LBA

## ■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (tp = 8/20μs)	P <sub>pk</sub>	36	W
Peak pulse current (tp = 8/20μs)	I <sub>pp</sub>	6	A
ESD according to IEC61000-4-2 air discharge	V <sub>ESD</sub>	±15	KV
ESD according to IEC61000-4-2 contact discharge		±15	KV
Junction temperature	T <sub>J</sub>	-55~125	°C
Storage temperature	T <sub>STG</sub>	-55~150	°C

## ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V <sub>RWM</sub>	V				1.5
Reverse breakdown voltage	V <sub>BR</sub>	V	I <sub>BR</sub> = 1mA	3.5		
Reverse leakage current	I <sub>R</sub>	uA	V <sub>RWM</sub> = 1.5V			0.1
Clamping voltage	V <sub>CL</sub>	V	I <sub>PP</sub> = 6A (8 x 20μs pulse)		4.8	6
Clamping voltage <sup>(1)</sup>	V <sub>CL</sub>	V	I <sub>PP</sub> = 4A, tp = 10/100ns (TLP)		5	
		V	I <sub>PP</sub> = 8A, tp = 10/100ns (TLP)		6.2	
		V	I <sub>PP</sub> = 16A, tp = 10/100ns (TLP)		8.8	
Dynamic Resistance <sup>(2)</sup>	R <sub>DYN</sub>	Ohm	tp = 10/100ns (TLP)		0.32	
Junction capacitance	C <sub>J</sub>	pF	V <sub>R</sub> = 1V, f = 1MHz		0.3	

(1) Transmission Line Pulse Test (TLP) Settings: tp = 100ns, tr = 10ns.

(2) Dynamic resistance calculated from ITLP = 4A to ITLP = 16A.

## ■Ordering Information (Example)

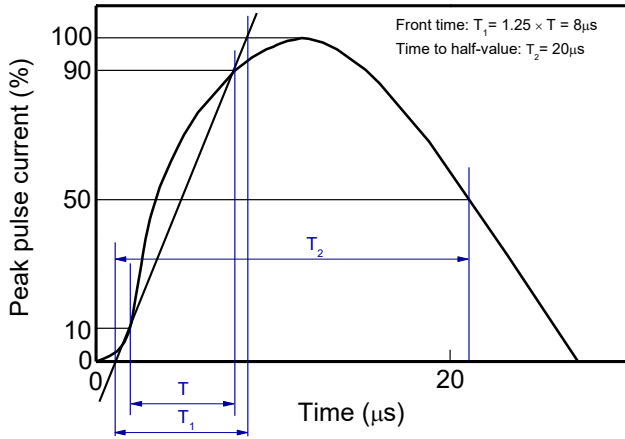
PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SESDULC1V5LBA	Approximate 0.9	10000	100000	400000	Tae& reel



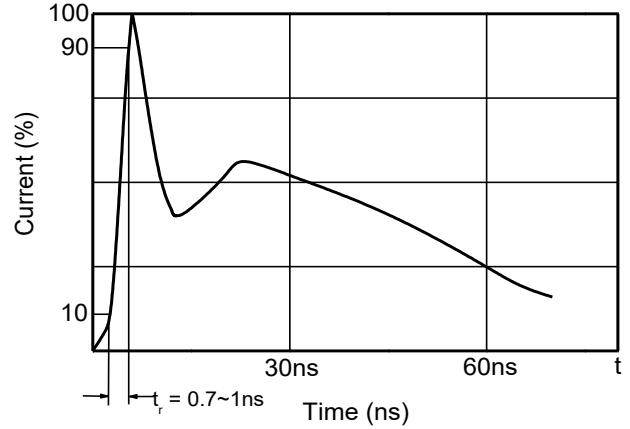
# SESDULC1V5LBA

## ■ Typical Performance Characteristics (Ta=25°C unless otherwise Specified)

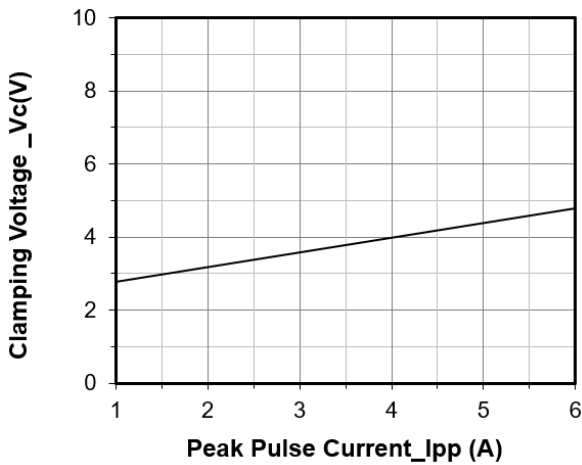
8/20μs waveform per IEC61000-4-5



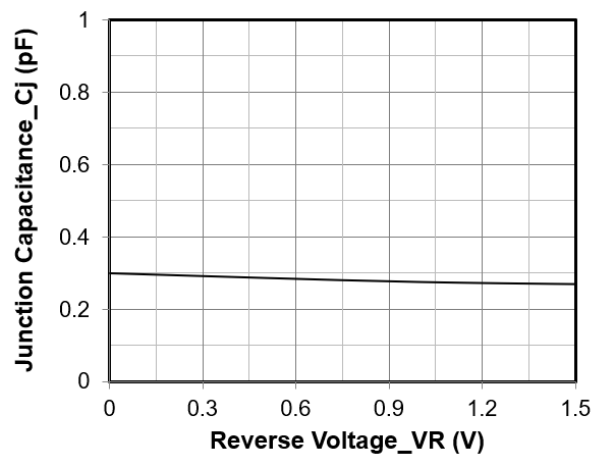
Contact discharge current waveform per IEC61000-4-2



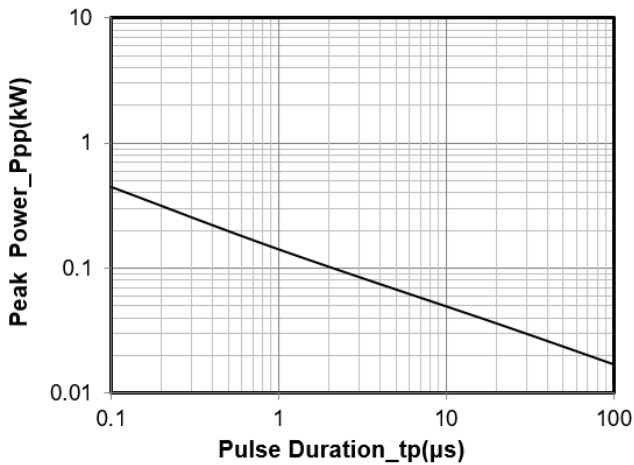
Clamping voltage vs. Peak pulse current



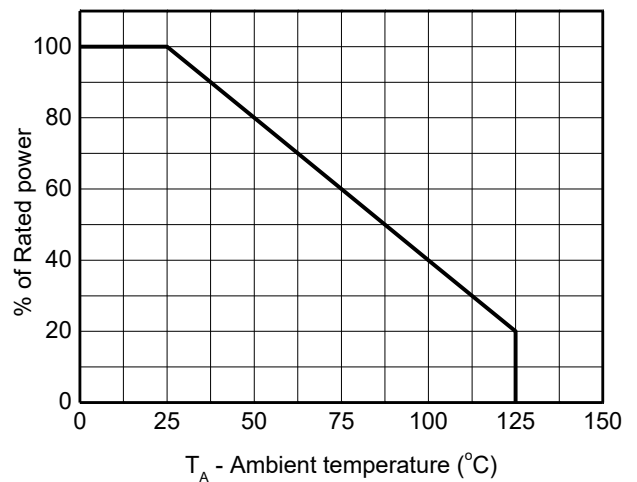
Capacitance vs. Reverse voltage



Non-repetitive peak pulse power vs. Pulse time



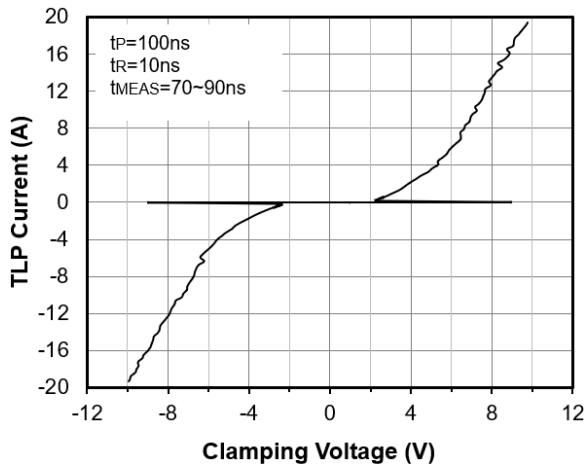
Power derating vs. Ambient temperature



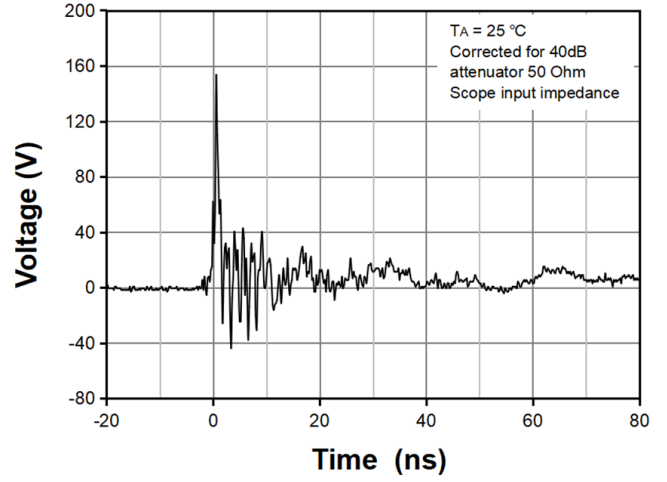


# SESDULC1V5LBA

### TLP Measurement



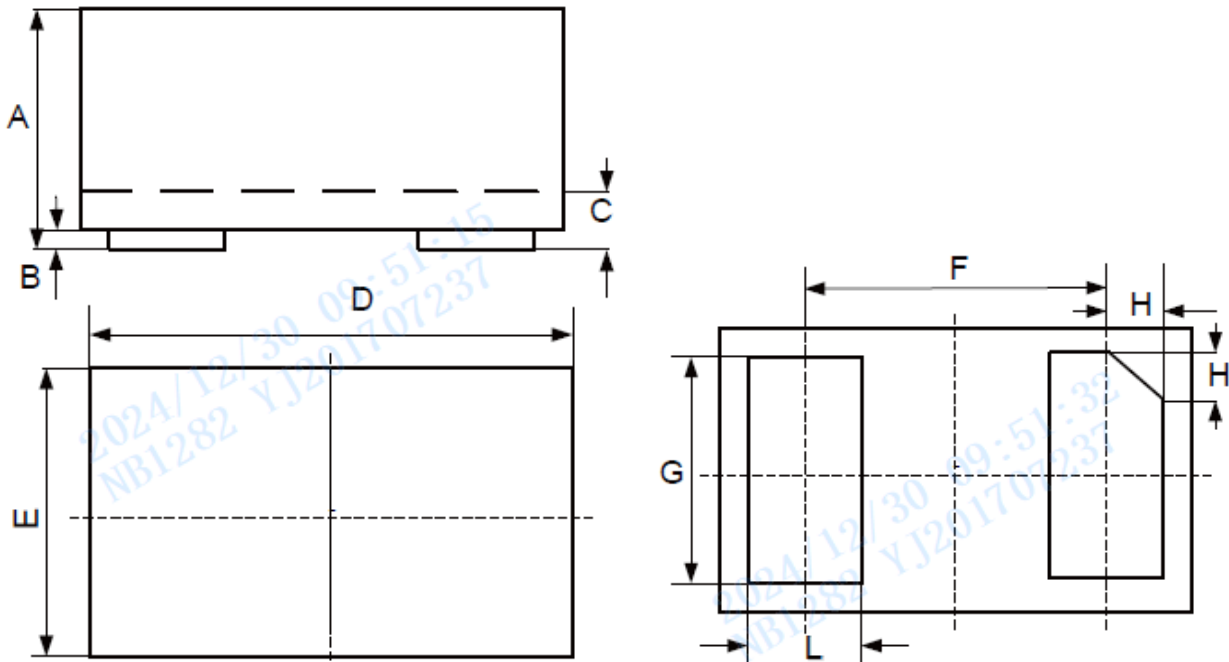
### ESD Clamping Voltage 8 kV Contact per IEC61000-4-2





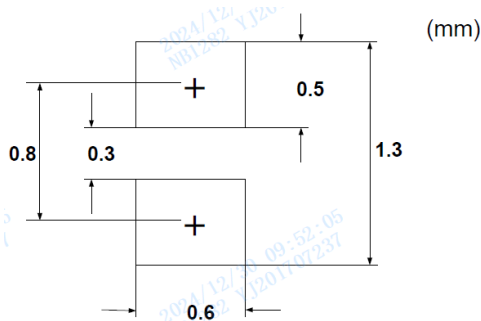
# SESDULC1V5LBA

## ■ Outline Dimensions



DIMENSIONS					NOTE
DIM	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.016	0.022	0.40	0.55	
B	0.000	0.002	0.00	0.05	
C	0.005	0.007	0.12	0.18	
D	0.037	0.041	0.95	1.05	
E	0.022	0.026	0.55	0.65	
F	0.026		0.650		TYP.
G	0.018	0.022	0.45	0.55	
H	0.003	0.007	0.07	0.17	
L	0.008	0.012	0.20	0.30	

## ■ Recommend land pattern (Unit:mm)



Unit: mm

### Notes:

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



# SESDULC1V5LBA

## Disclaimer

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