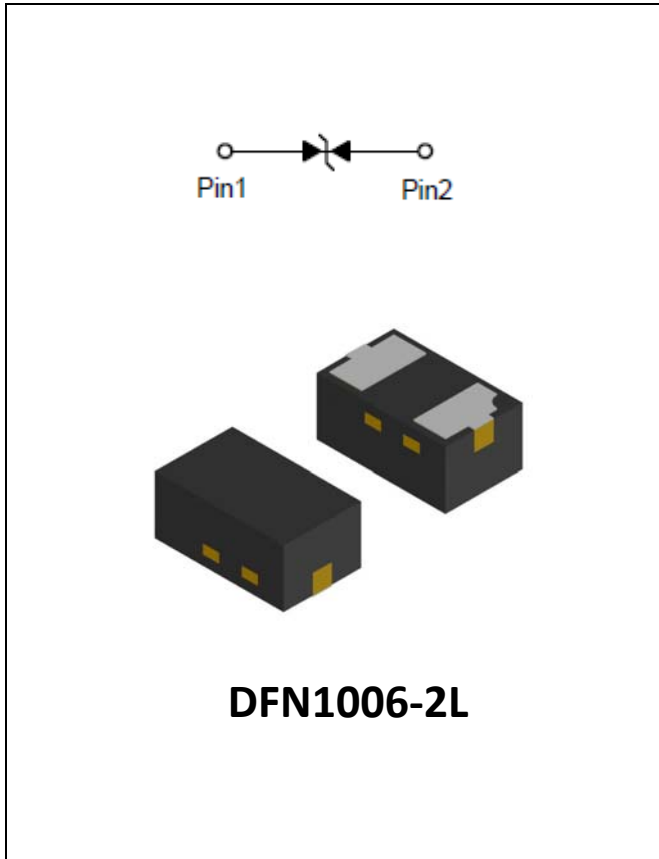


## 1- Line, Bi-directional, Transient Voltage Suppressor



### Features

- Ultra small package
- Stand-off voltage: 3.3V Max
- Transient protection for each line according to  
IEC61000-4-2(ESD): 12kV (contact)  
IEC61000-4-5(surge): 4A (8/20 $\mu$ s)
- Low leakage current
- Low clamping voltage
- RoHS Compliant

### Applications

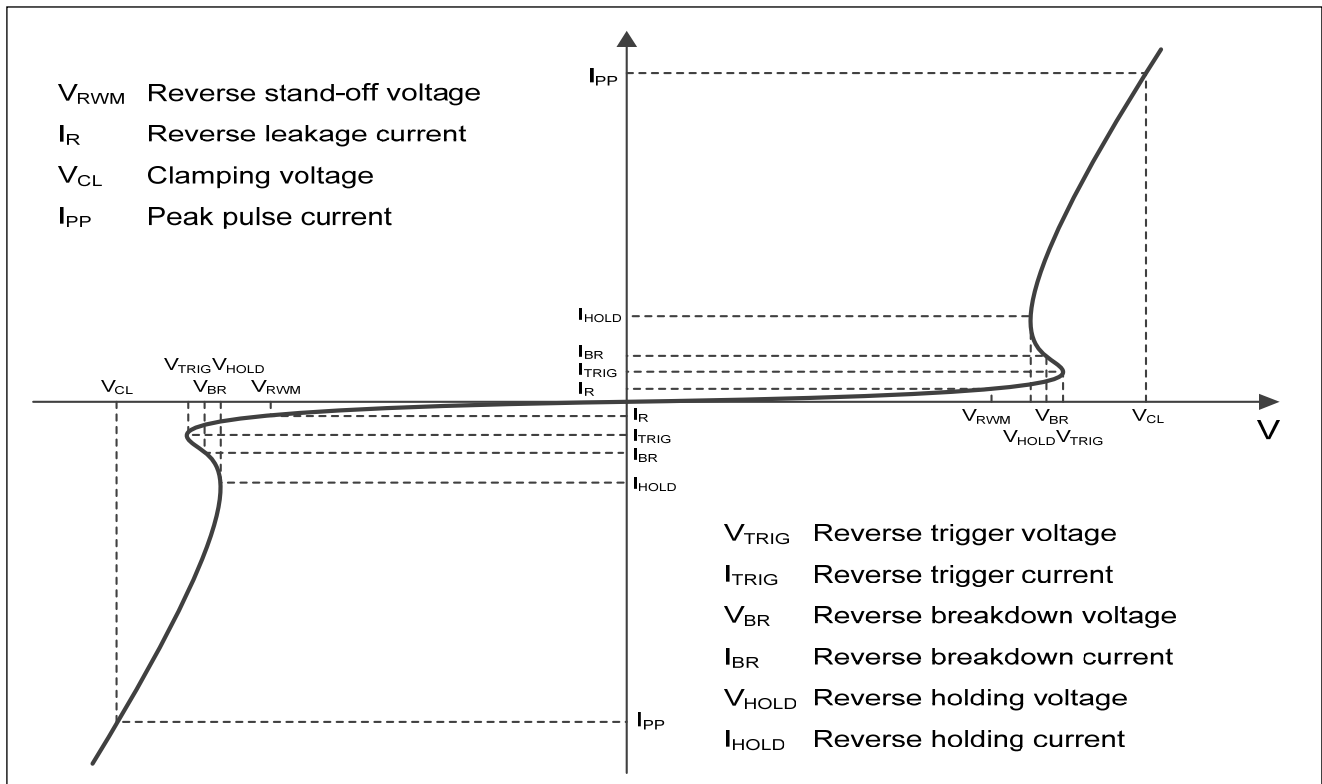
- Cellular handsets
- Tablets
- Laptops
- Other portable devices
- Network communication devices

### Mechanical Characteristics

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



### ■ Definitions of electrical characteristics





# SESDULC3V3LB

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

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ( $t_p = 8/20\mu s$ )	$P_{pk}$	13	W
Peak pulse current ( $t_p = 8/20\mu s$ )	$I_{PP}$	4	A
ESD according to IEC61000-4-2 air discharge	$V_{ESD}$	$\pm 15$	KV
ESD according to IEC61000-4-2 contact discharge		$\pm 12$	KV
Junction temperature	$T_J$	-55~125	°C
Storage temperature	$T_{STG}$	-55~150	°C

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	$V_{RWM}$	V				3.3
Reverse breakdown voltage	$V_{BR}$	V	$I_{BR} = 1mA$	4.5		8
Reverse leakage current	$I_R$	$\mu A$	$V_{RWM} = 3.3V$			0.1
Clamping voltage <sup>3)</sup>	$V_{CL}$	V	$I_{PP} = 1A, t_p = 8/20\mu s$		1.75	
		V	$I_{PP} = 4A, t_p = 8/20\mu s$		2.9	
Junction capacitance	$C_J$	pF	$V_R = 1V, f = 1MHz$		0.2	

(1). TLP parameter:  $Z_0 = 50\Omega$ ,  $t_p = 100ns$ ,  $t_r = 2ns$ , averaging window from 60ns to 80ns.  $R_{DYN}$  is calculated from 4A to 16A.

(2). Contact discharge mode, according to IEC61000-4-2.

(3). Non-repetitive current pulse, according to IEC61000-4-5.

## ■Ordering Information (Example)

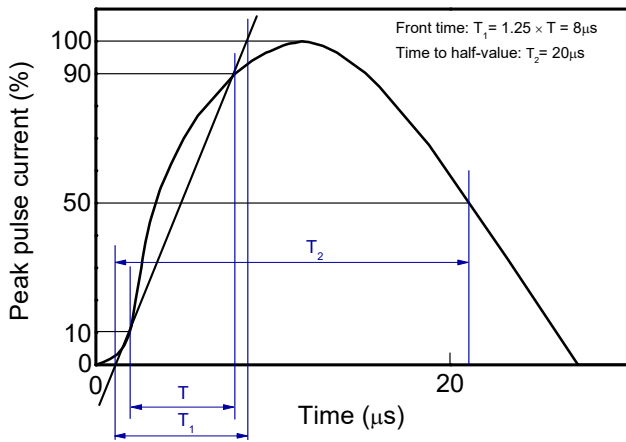
PREFERRED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SESDULC3V3LB	Approximate 0.9	10000	100000	400000	Tae& reel



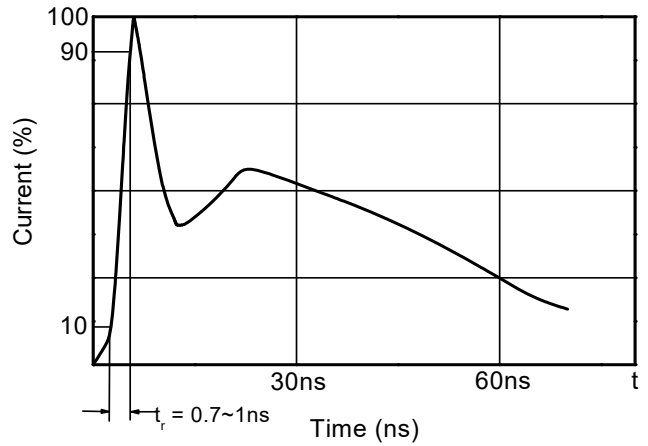
# SESDULC3V3LB

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

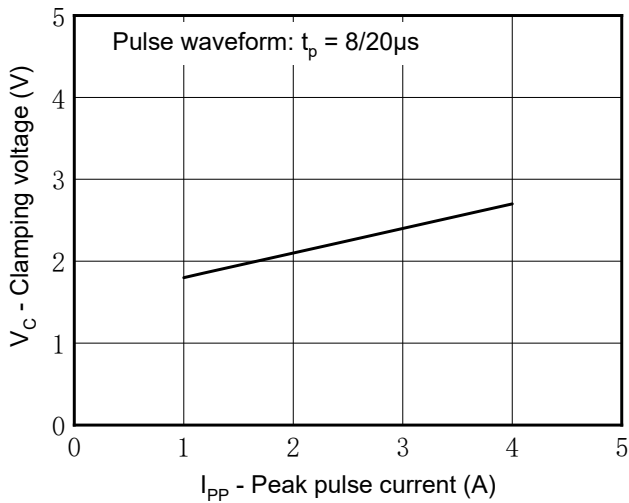
### 8/20μs waveform per IEC61000-4-5



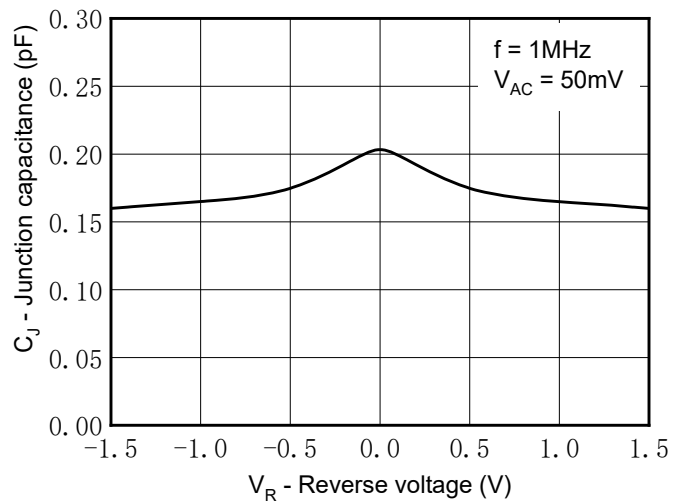
### Contact discharge current waveform per IEC61000-4-2



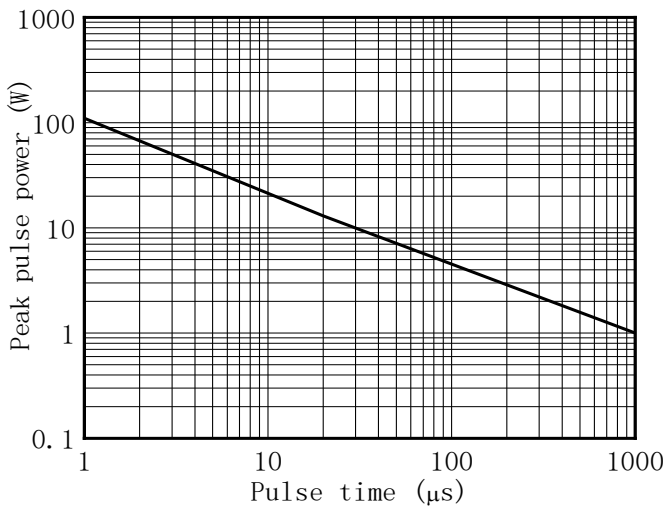
### Clamping voltage vs. Peak pulse current



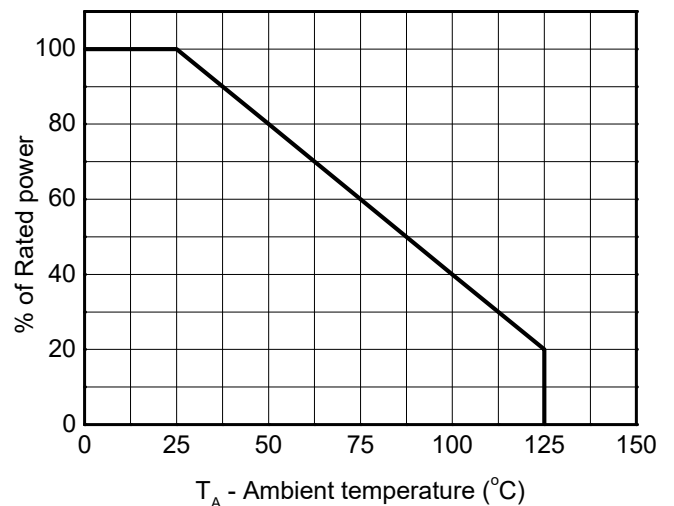
### Capacitance vs. Reverse voltage



### Non-repetitive peak pulse power vs. Pulse time



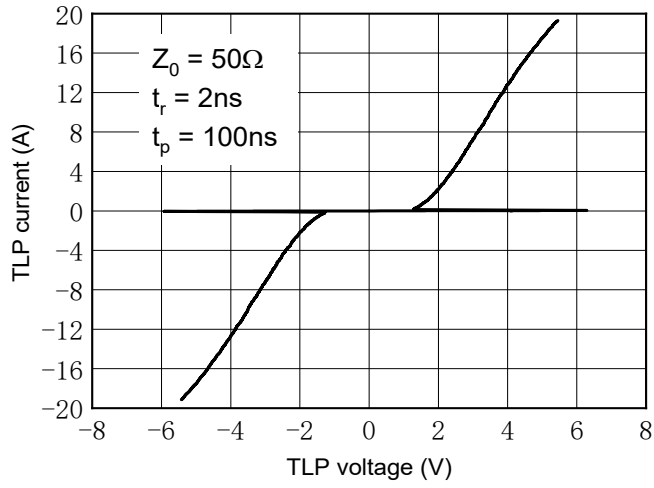
### Power derating vs. Ambient temperature





# SESDULC3V3LB

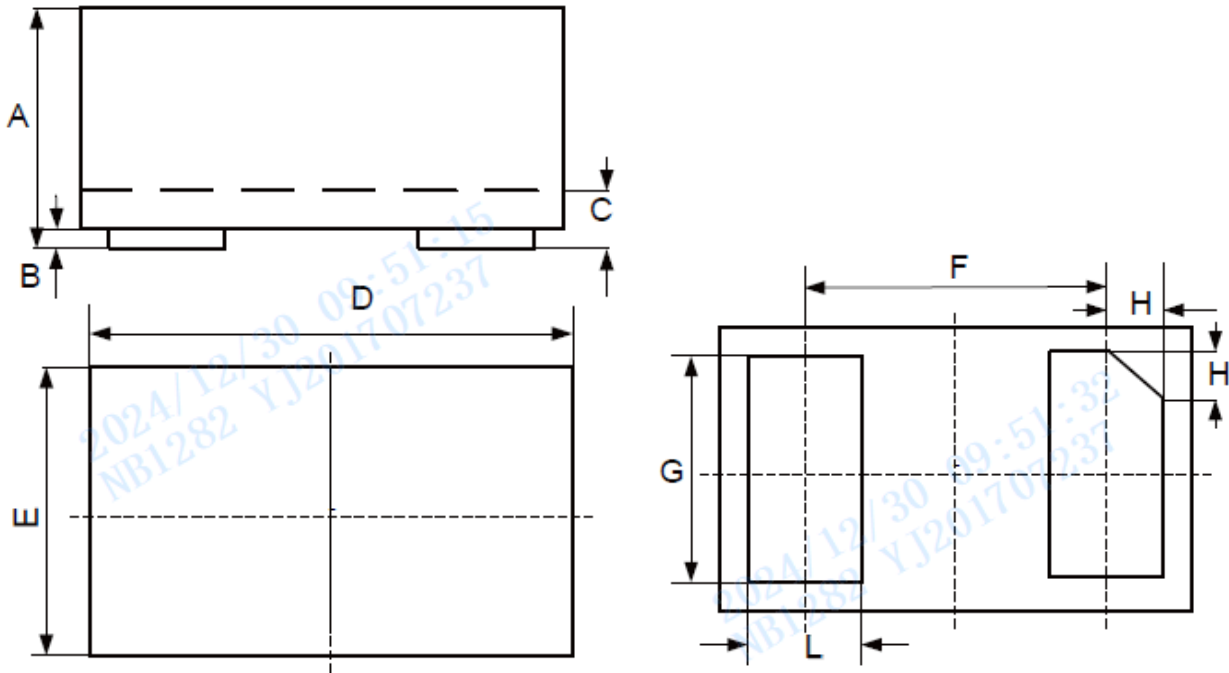
TLP Measurement





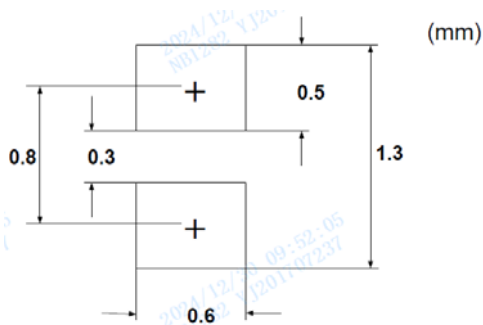
# SESDULC3V3LB

## ■ Outline Dimensions



DIMENSIONS					
DIM	INCHES		MM		NOTE
	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



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