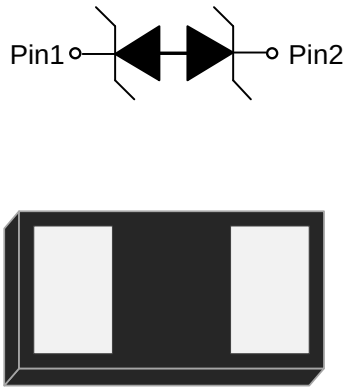
1-Line, Bi-directional, Transient Voltage Suppressor



DFN0603-2L

Features

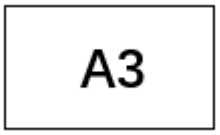
- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 8A (8/20μs)
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

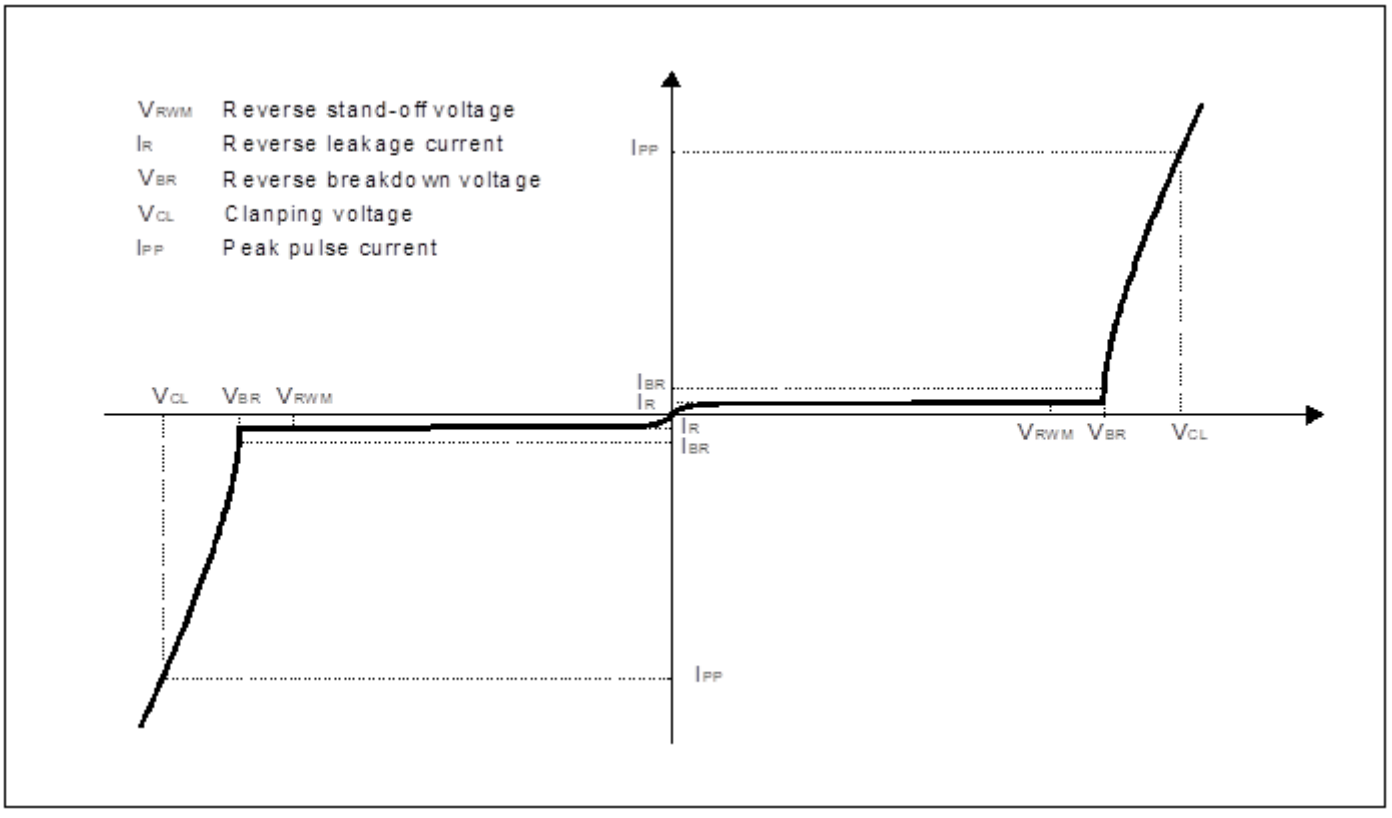
- Cellular handsets
- Tablets
- Laptops
- Network communication devices
- Other portable devices

Mechanical Data

- Package: DFN0603-2L
- Case Material: “Green” Molding Compound
- Marking Information: See Below
- Marking:



■Definitions of electrical characteristics



■Maximum Ratings

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	80	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	8	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	125	°C
Storage temperature	T_{STG}	-55~150	°C

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				3.3
Reverse leakage current	I_R	nA	V_{RWM} =3.3 V			500
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	3.7		
Clamping voltage [3]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			7
		V	I_{PP} = 8A, t_p = 8/20μs			10
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		16	

(1). TLP parameter: Z_0 = 50Ω, 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)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD3V3LZB1	Approximate 0.18	10000	100000	400000	Tape & reel

■ Characteristics (Typical)

Fig1. 8/20μs waveform per IEC61000-4-5

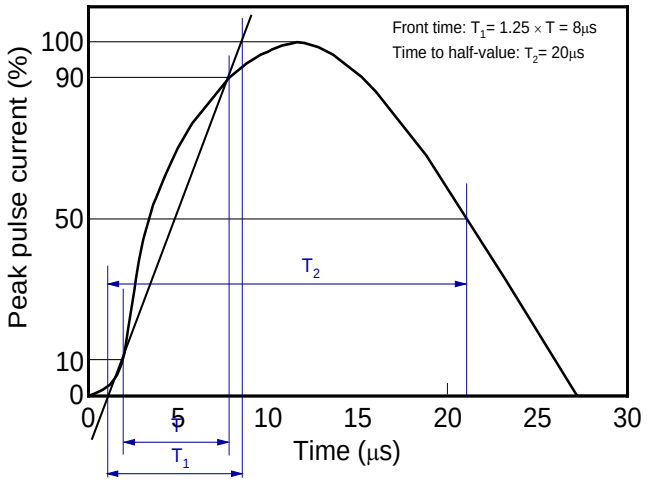


Fig2. Contact discharge current waveform per IEC61000-4-2

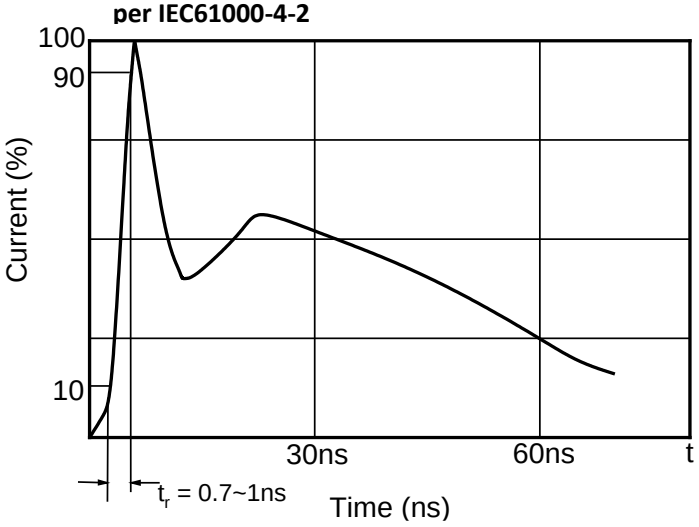


Fig3. Clamping voltage vs. Peak pulse current

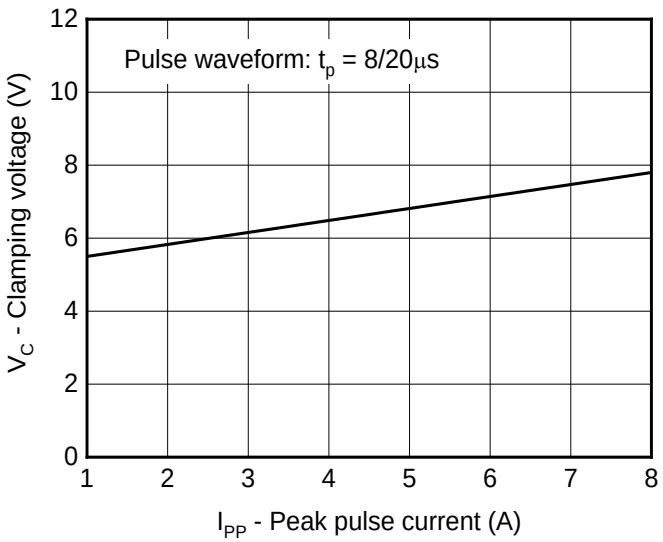


Fig4. Capacitance vs. Reverse voltage

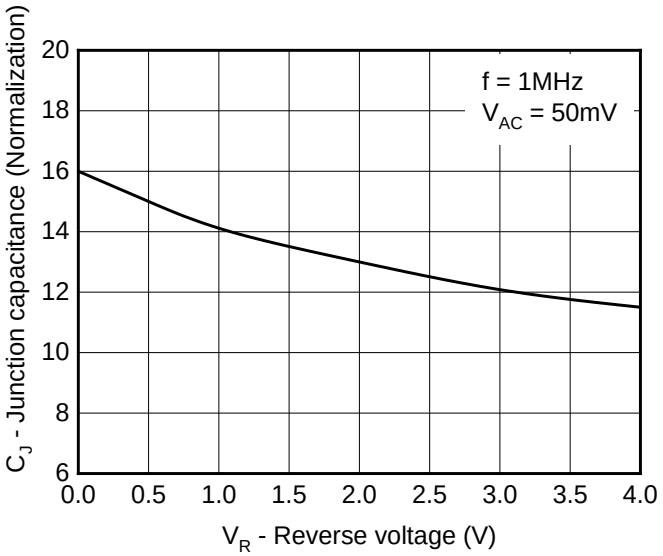


Fig5. Non-repetitive peak pulse power vs. Pulse time

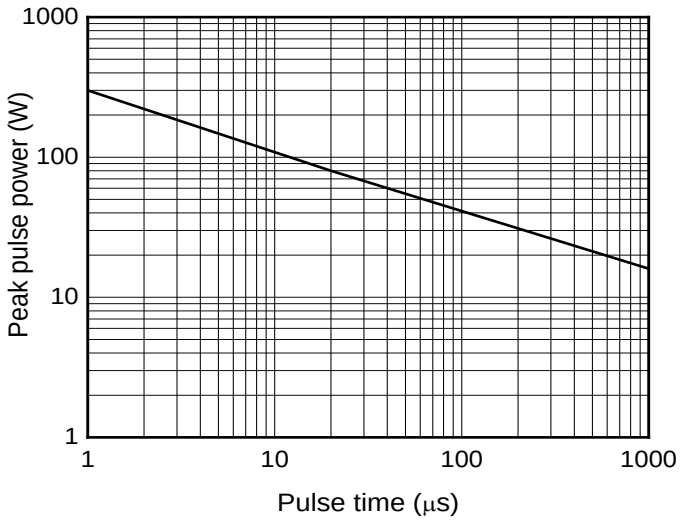


Fig6. Power derating vs. Ambient temperature

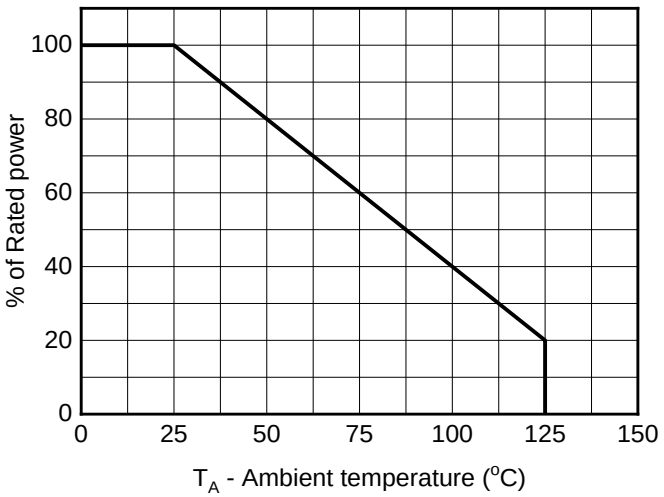
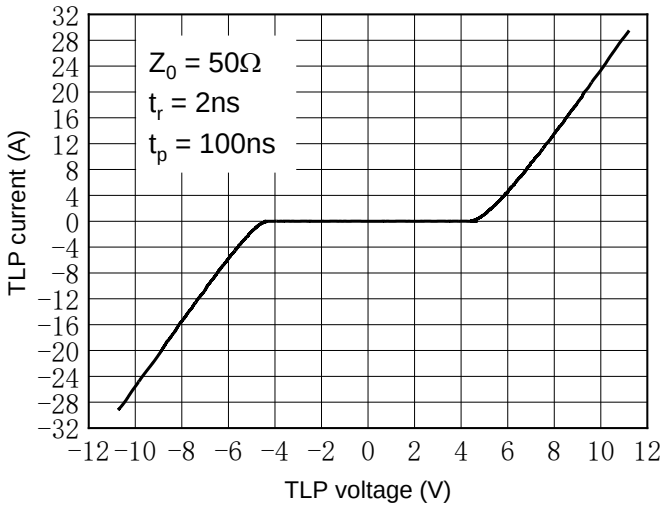
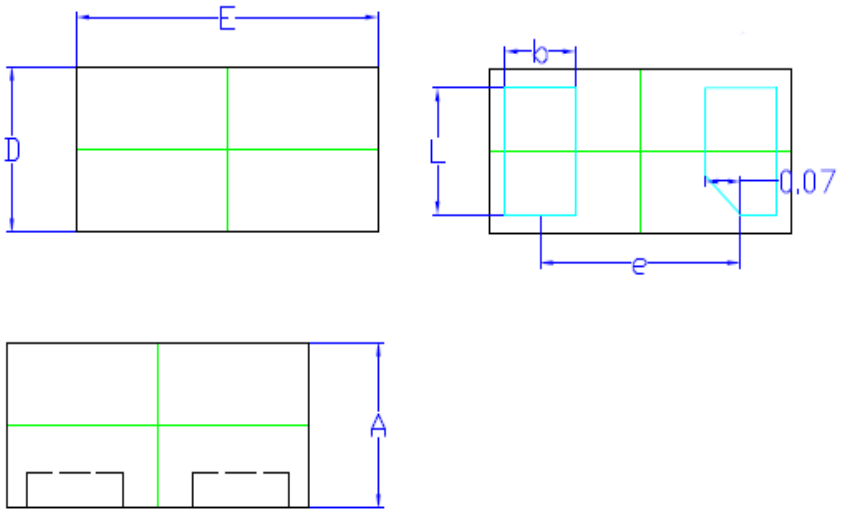


Fig7. TLP Measurement

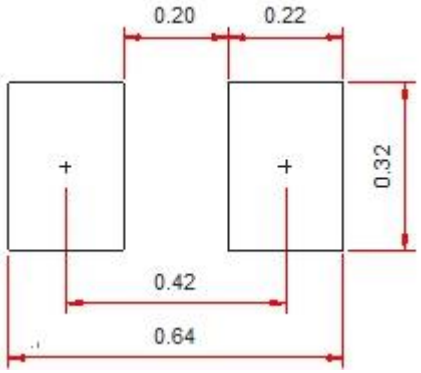


■ Outline Dimensions



Dimensions Unit mm			
Type	Min	Nom	Max
A	0.280	0.300	0.320
b	0.165	0.190	0.215
D	0.250	0.300	0.350
E	0.550	0.600	0.650
e		0.340	
L	0.205	0.230	0.255

■ Recommend land pattern



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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