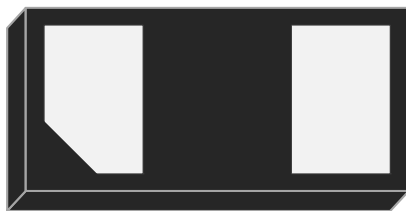


1- Line, Bi-directional, Ultra-low Capacitance, Transient Voltage Suppressor


DFN0603-2L

Features

- Stand-off voltage: $\pm 18\text{V}$ Max
- Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 25\text{kV}$ (air)
IEC61000-4-2(ESD): $\pm 15\text{kV}$ (contact)
- Low leakage current
- Ultra-low capacitance: $C_j = 0.3\text{pF}$ typ.
- Low clamping voltage:
- RoHS Compliant

Applications

- Cellular handsets and Accessories
- Display Ports
- MDDI Ports
- USB Ports
- Digital Visual Interface
- PCI Express and Serial SATA Ports

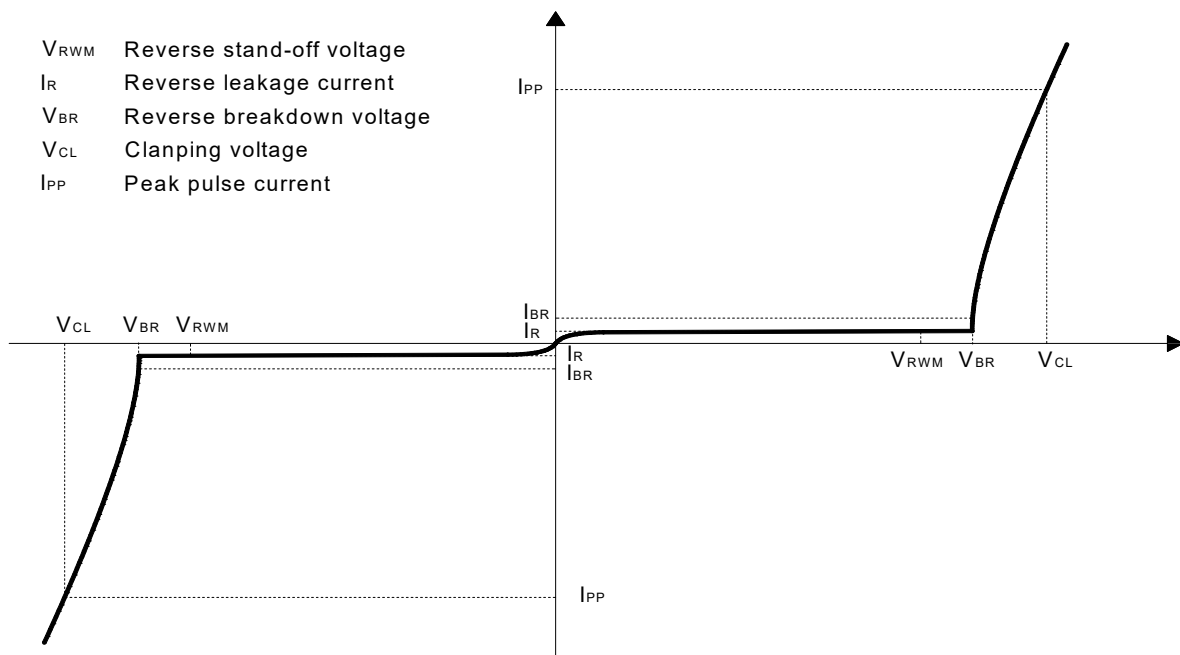
Mechanical Data

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

PZ

■Definitions of electrical characteristics

- V_{RWM} Reverse stand-off voltage
 I_R Reverse leakage current
 V_{BR} Reverse breakdown voltage
 V_{CL} Clamping voltage
 I_{PP} Peak pulse current





ESDULC18VLZBA

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	80	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	kV
ESD according to IEC61000-4-2 contact discharge		± 15	
Junction temperature	T_J	-55~125	°C
Storage temperature	T_{STG}	-55~150	°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				18
Reverse leakage current	I_R	μA	$V_{RWM} = 5V$			0.2
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	19.5		
Clamping voltage ¹⁾	V_{CL}	V	$I_{PP} = 2A, t_p = 8/20\mu s$			40
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		0.3	

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDULC18VLZBA	F1	Approximate 0.18	10000	100000	400000	7" reel



■ Characteristics (Typical)

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

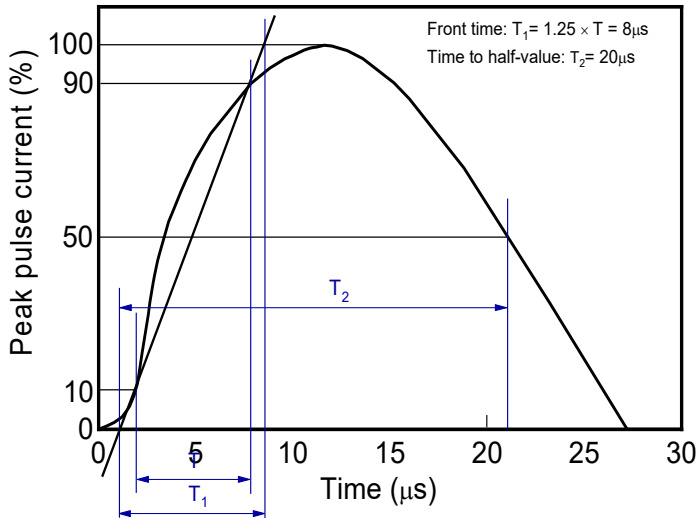


Fig.3 Clamping voltage vs. Peak pulse current

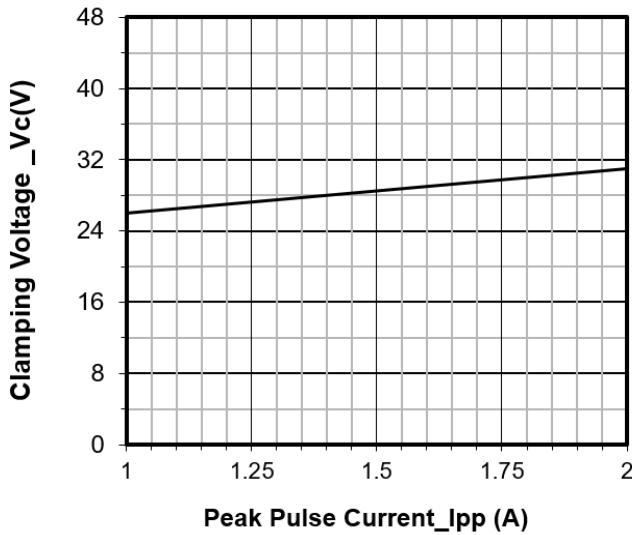


Fig.5 Non-repetitive peak pulse power vs. Pulse time

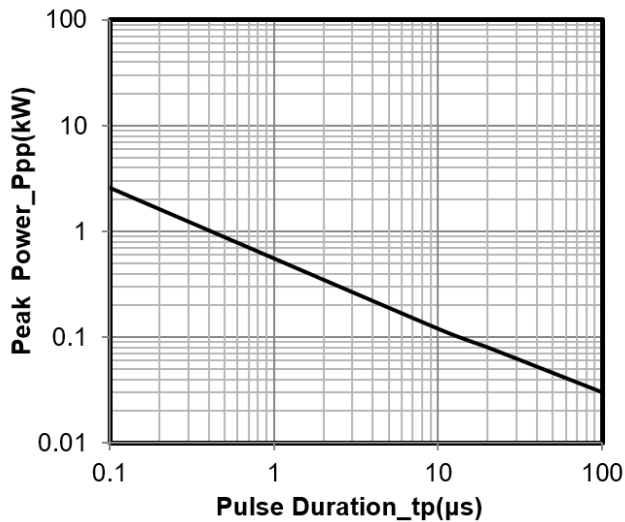


Fig.2 Contact discharge current waveform per IEC61000-4-2

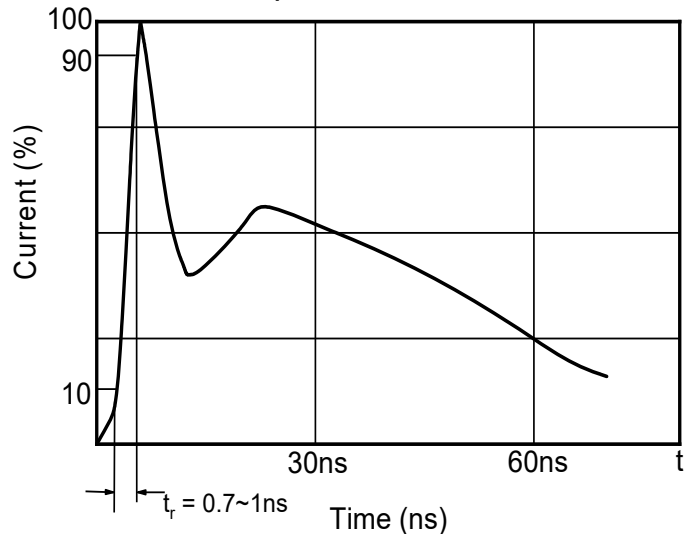


Fig.4 Capacitance vs. Reverse voltage

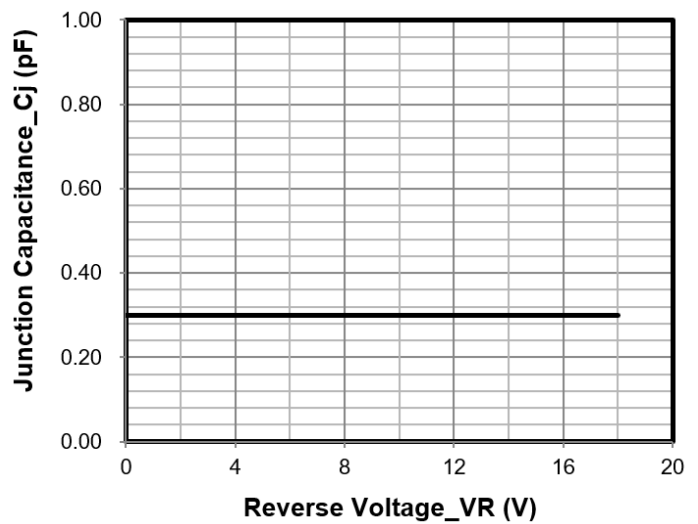


Fig.6 Power derating vs. Ambient temperature

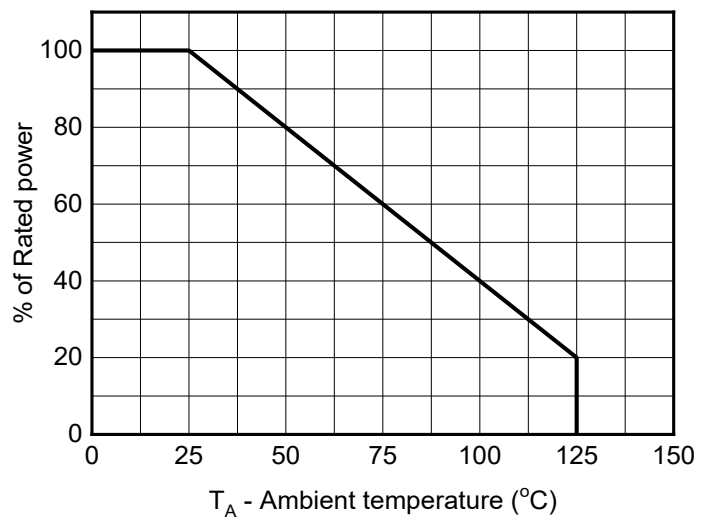
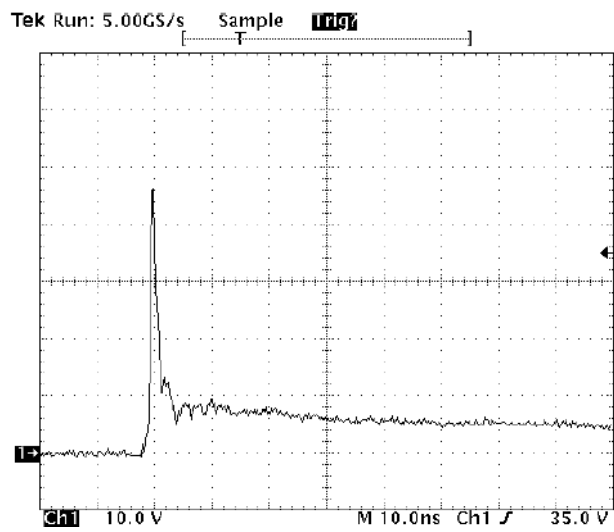


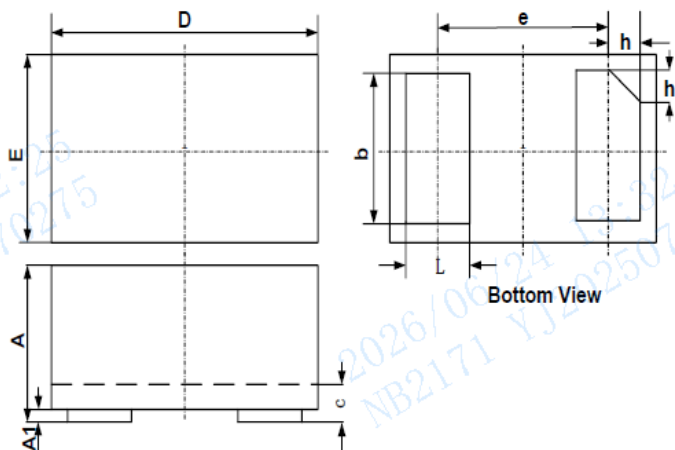


Fig.7 ESD clamping
(8kV contact discharge per IEC61000-4-2)



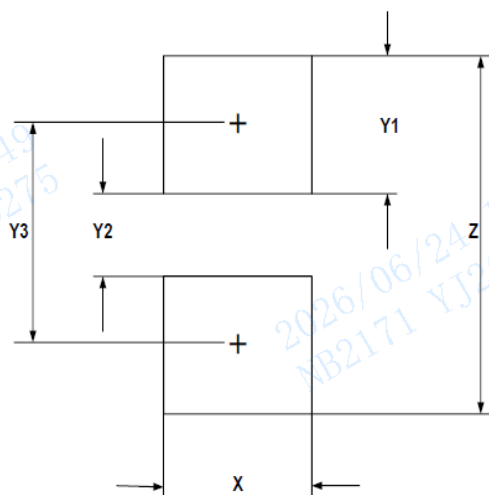


■ Outline Dimensions



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.230		0.330
A1	0.000	0.020	0.050
b	0.215	0.245	0.275
c	0.120	0.150	0.180
D	0.550	0.600	0.650
e	0.355 BSC		
E	0.250	0.300	0.350
L	0.160	0.190	0.220
h	0.079 BSC		

■ Recommended PCB Layout



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026



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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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