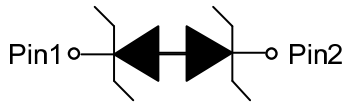


1-Line, Bi-directional, Transient Voltage Suppressor



DFN0603-2L

Features

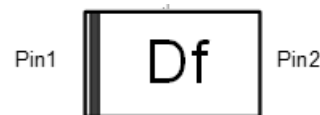
- Ultra small package
- Stand-off voltage: 16V Max
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
- IEC61000-4-5(surge): 6A (8/20 μs)
- Ultra-low capacitance: $C_J = 5\text{ pF}$ typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

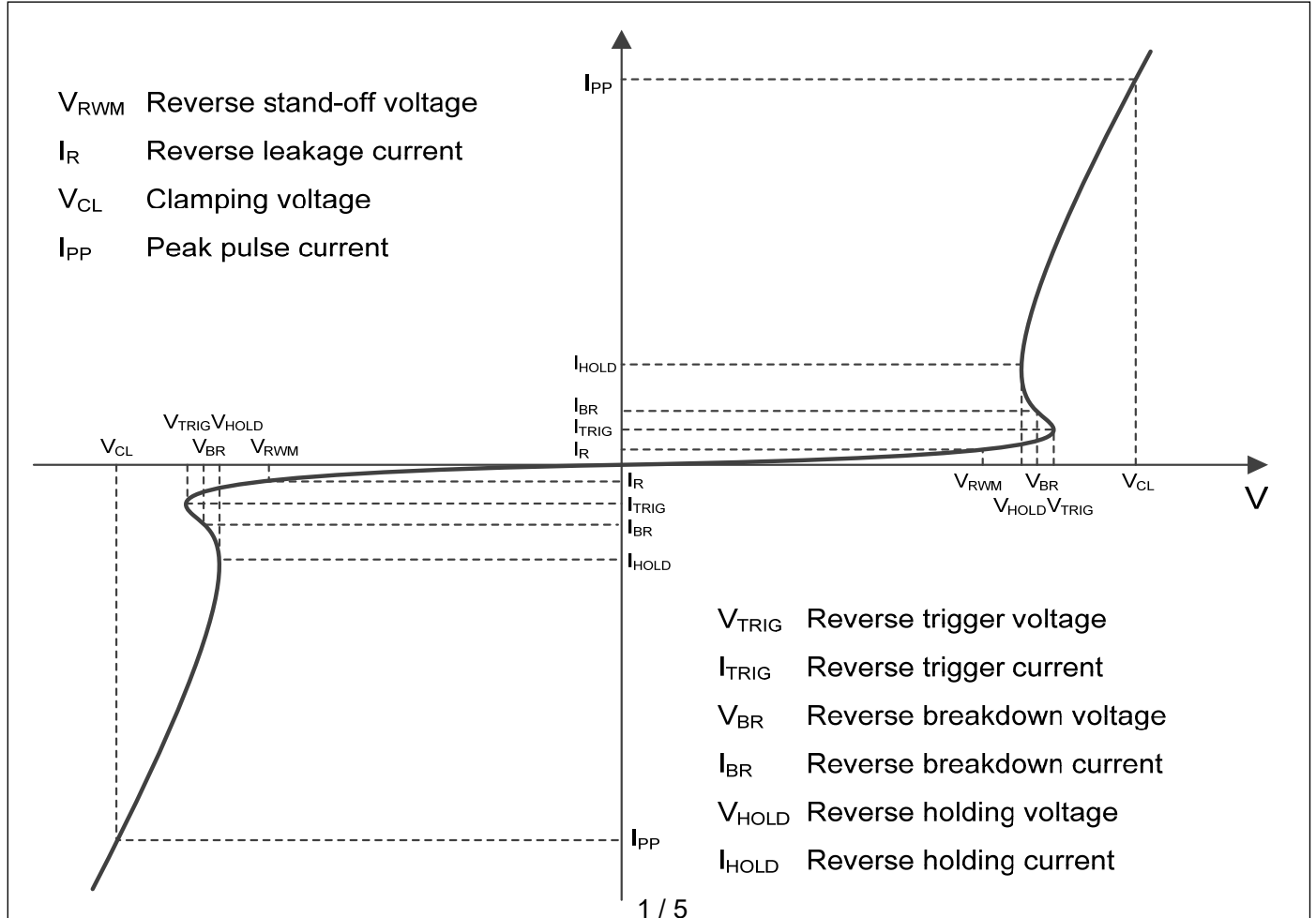
- Cellular handsets
- USB VBUS and CC Line Protection
- Microphone Line Protection
- GPIO Protection

Mechanical Characteristics

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



■Definitions of electrical characteristics





ESDLC16VLZB

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

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	140	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	6	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 (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				16
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	16.5		21
Reverse leakage current	I_R	nA	$V_{RWM} = 16V$			100
Clamping voltage ³⁾	V_{CL}	V	$I_{PP} = 1A, t_p = 8/20\mu s$			18
		V	$I_{PP} = 6A, t_p = 8/20\mu s$			23
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		5	7

(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)

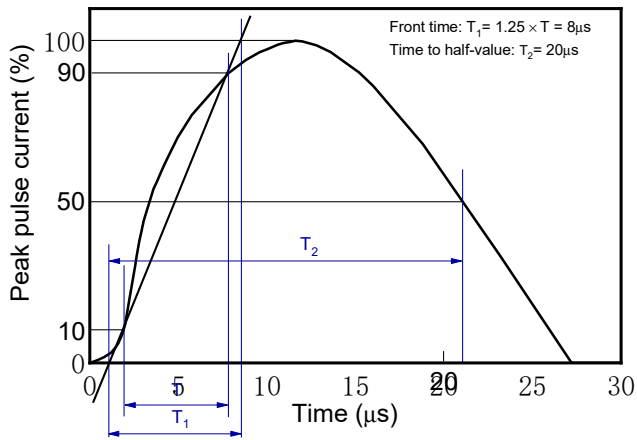
PREFERRED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDLC16VLZB	Approximate 0.18	10000	40000	120000	Tae& reel



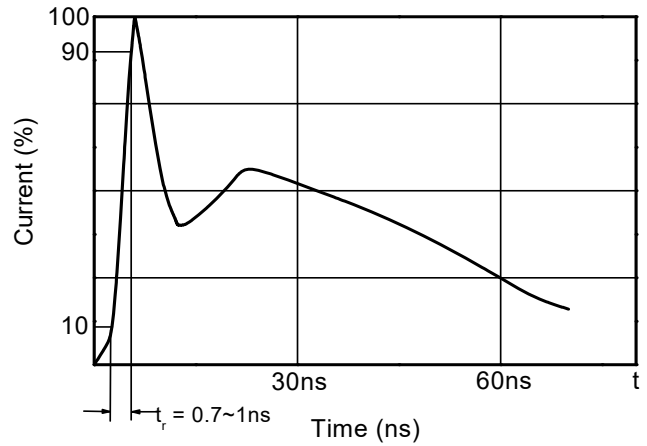
ESDLC16VLZB

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

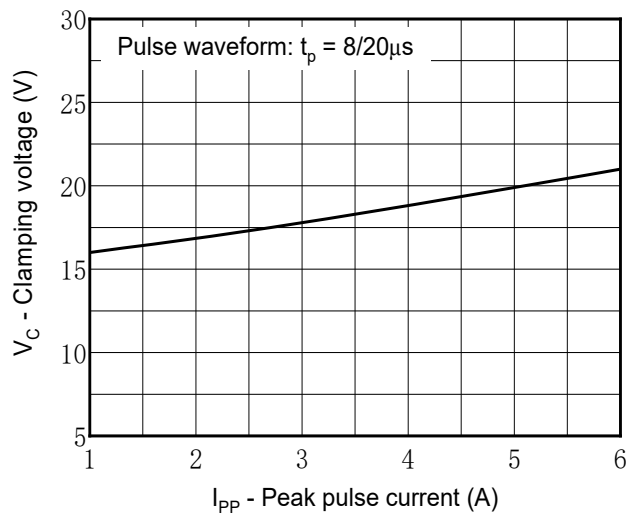
8/20μs waveform per IEC61000-4-5



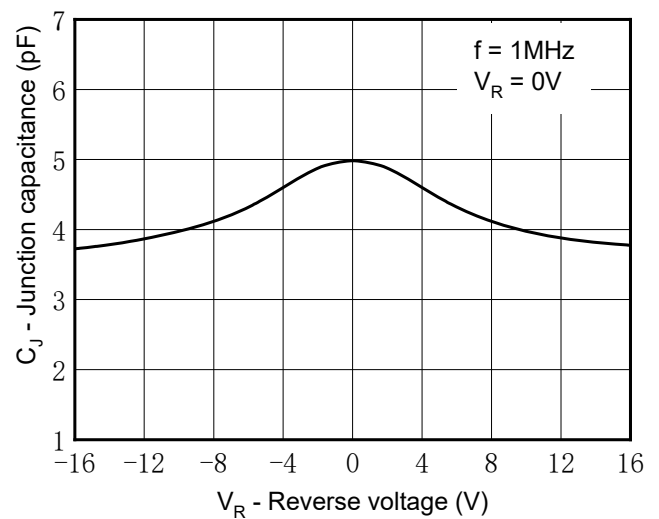
Contact discharge current waveform per IEC61000-4-2



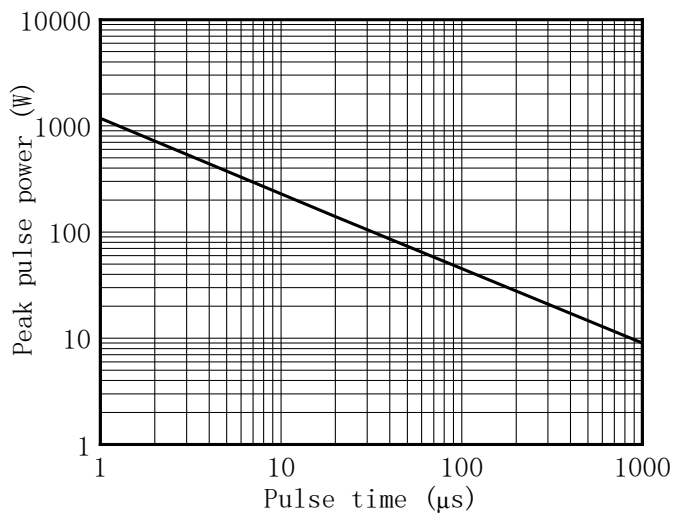
Clamping voltage vs. Peak pulse current



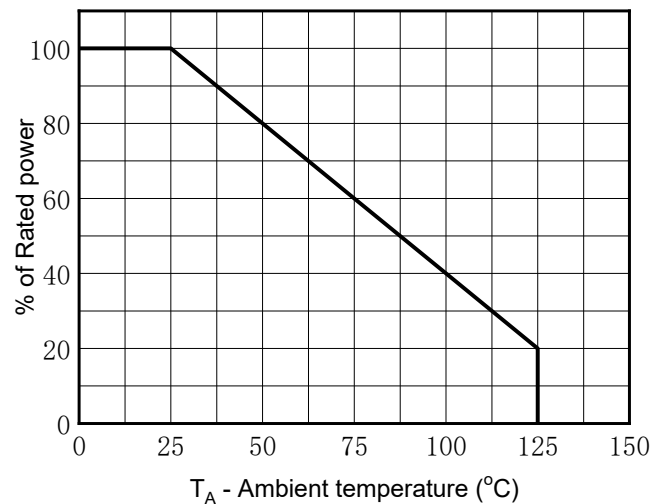
Capacitance vs. Reverse voltage



Non-repetitive peak pulse power vs. Pulse time

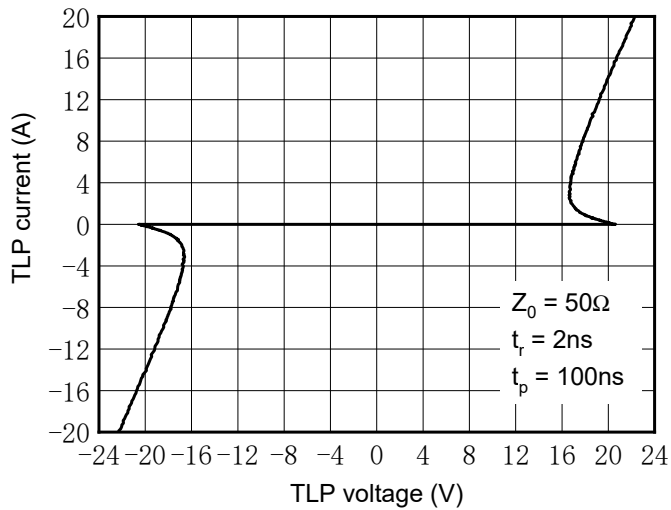


Power derating vs. Ambient temperature

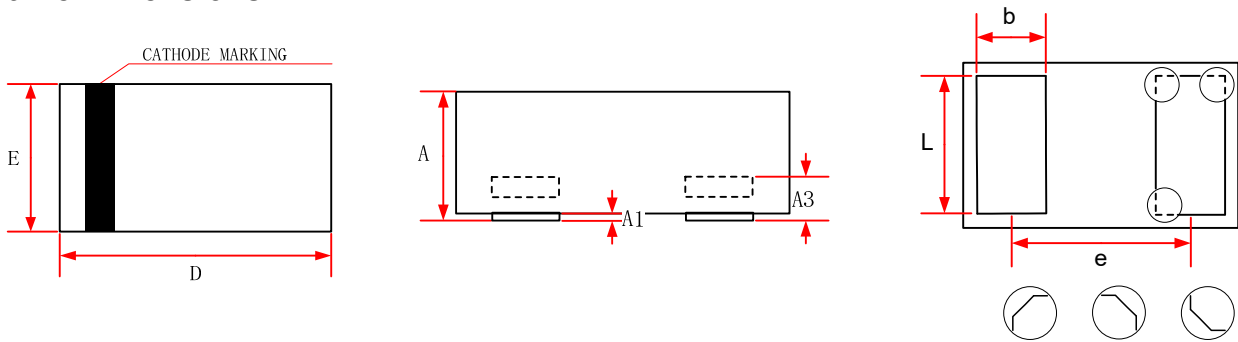




ESDLC16VLZB

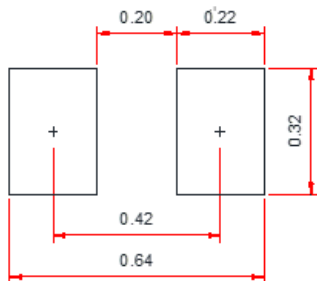


■ Outline Dimensions



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.230	0.300	0.350
A1	0.000	-	0.050
A3	0.102REF.		
D	0.550	0.600	0.670
E	0.250	0.300	0.370
b	0.100	0.170	0.250
L	0.180	0.240	0.280
e	0.360 BSC		

■ 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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