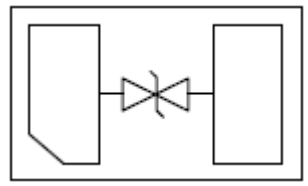
1-Line, Bi-directional, Transient Voltage Suppressor



DFN0603-2L

Features

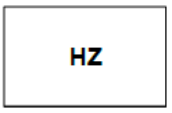
- Ultra small package
- Stand-off voltage: 15V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±15kV (contact)
  IEC61000-4-5(surge): 2.5A (8/20μs)
- Ultra-low capacitance: CJ = 0.3 pF typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

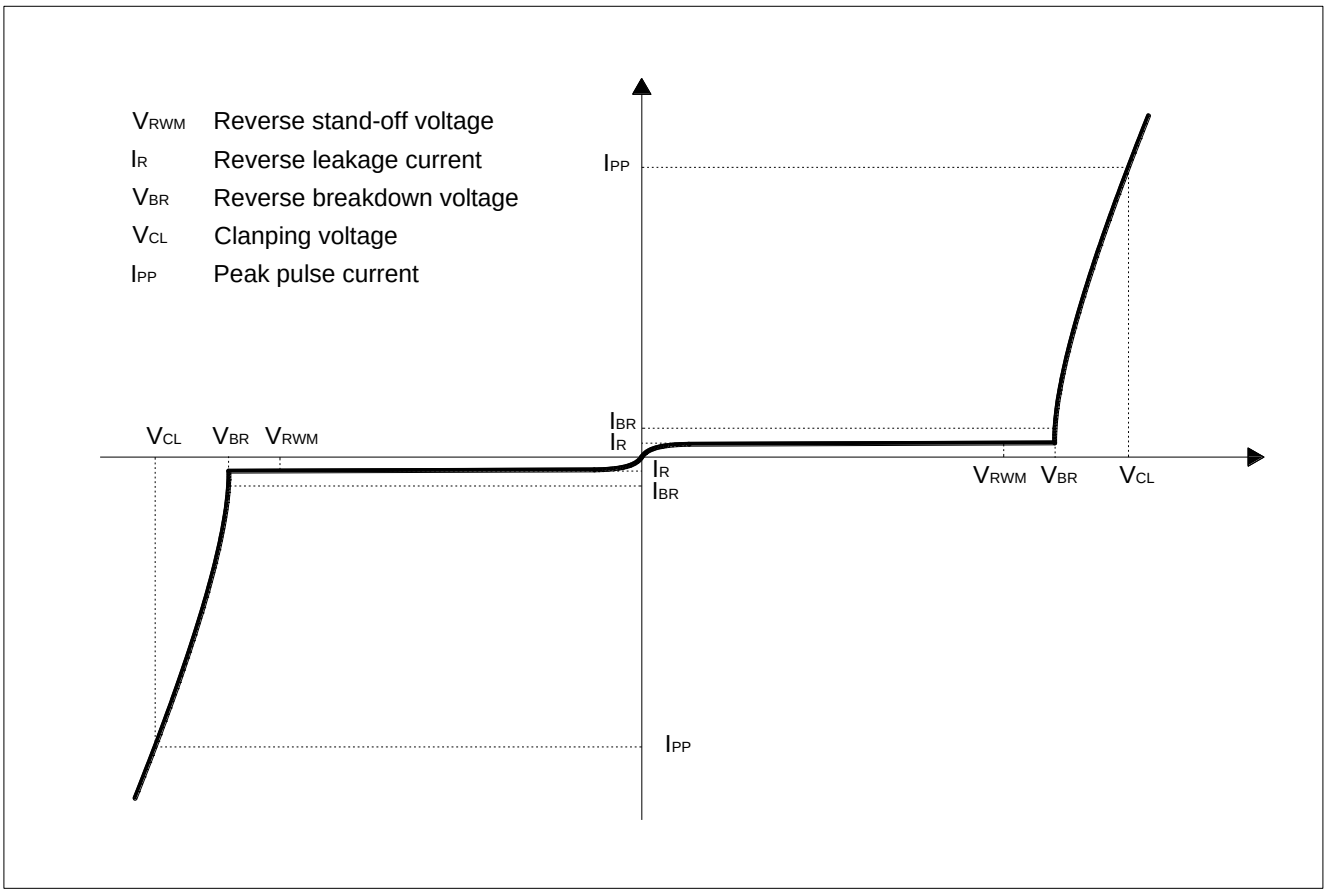
- Cellular Handsets and Accessories
- Serial ATA
- MDDI Ports
- USB Ports
- PCI Express and Serial SATA Ports

Mechanical Characteristics

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



■Definitions of electrical characteristics



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

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	90	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	2.5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±20	KV
ESD according to IEC61000-4-2 contact discharge		±15	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				15
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	16.7		
Reverse leakage current	I_R	nA	V_{RWM} =15 V			200
Clamping voltage 3)	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			26
		V	I_{PP} = 8A, t_p = 8/20μs			35
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz Any I/O pin to GND		0.3	0.5

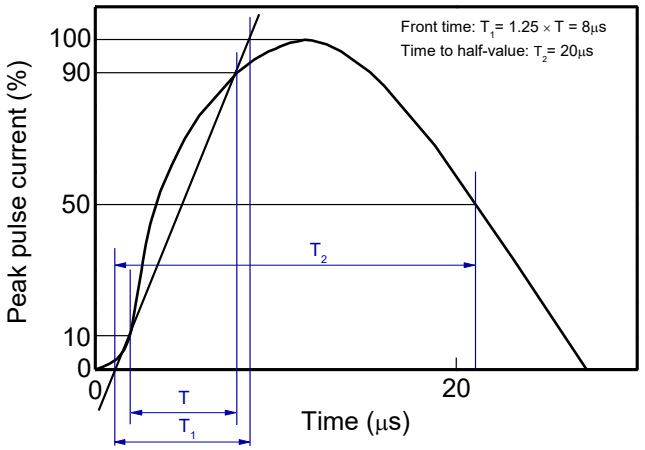
(1). TLP parameter: Z_0 = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.
(2). Contact discharge mode, according to IEC61000-4-2.
(3). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

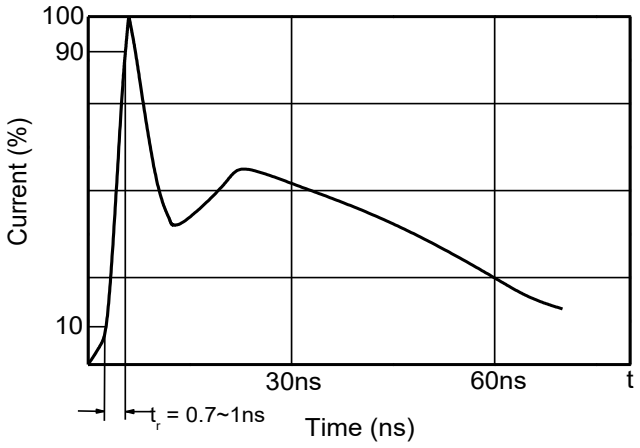
PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSLC15VLZBS	Approximate 0.18	10000	100000	400000	Tae& reel

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

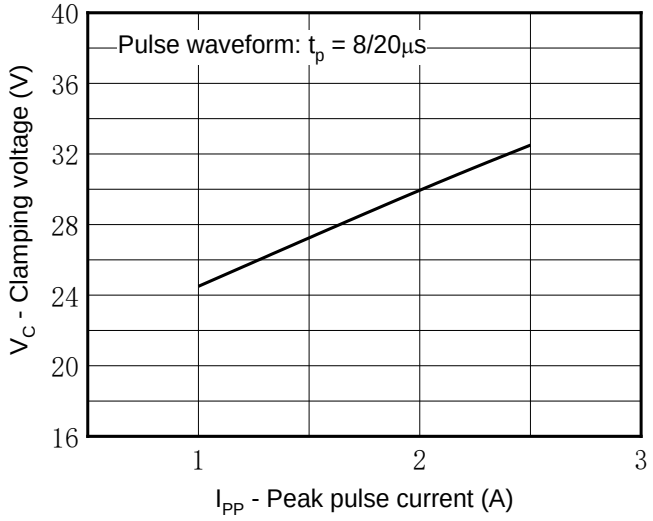
8/20μs waveform per IEC61000-4-5



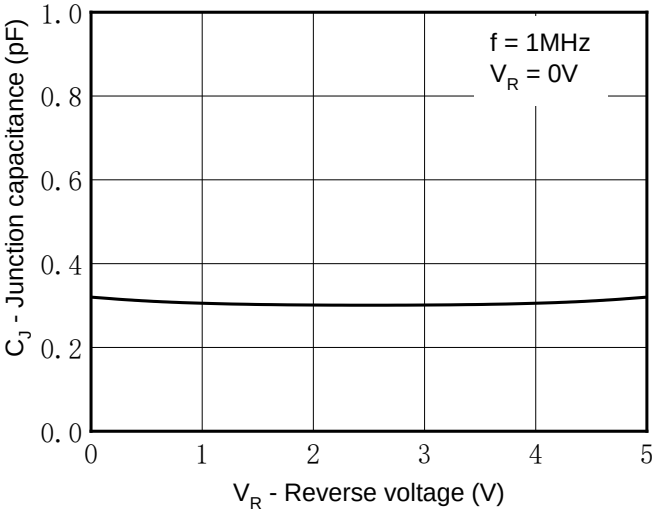
Contact discharge current waveform per IEC61000-4-2



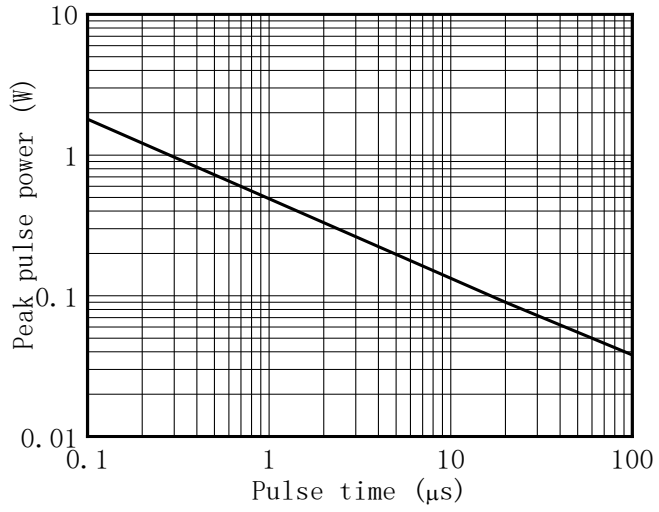
Clamping voltage vs. Peak pulse current



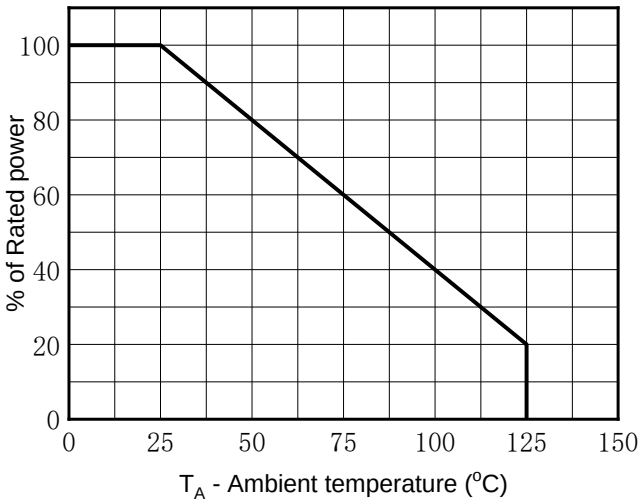
Capacitance vs. Reverse voltage



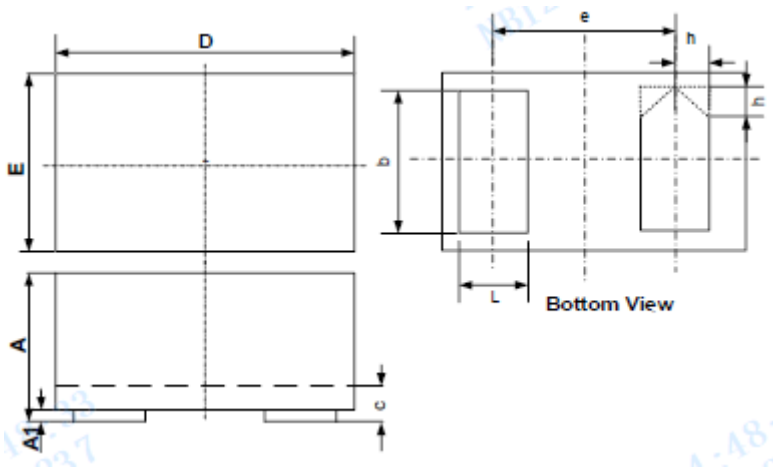
Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

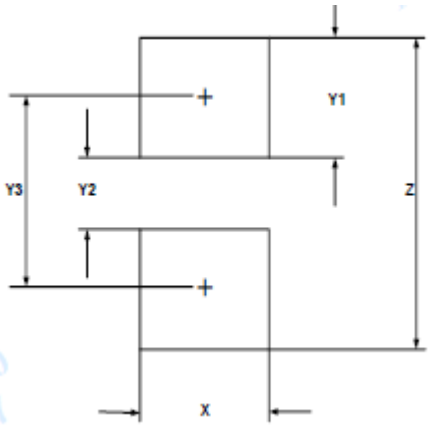


■ Outline Dimensions



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		

■ Recommend land pattern (Unit:mm)



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

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

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

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 with 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.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.21yangjie.com , or consult your nearest Yangjie's sales office for further assistance.