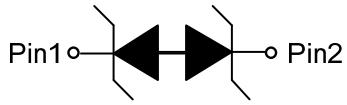
1- Line, Bi-directional, Transient Voltage Suppressor



DFN1006-2L

Features

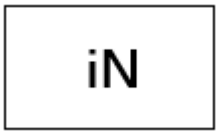
- Stand-off voltage: 18V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 3.5A (8/20μs)
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

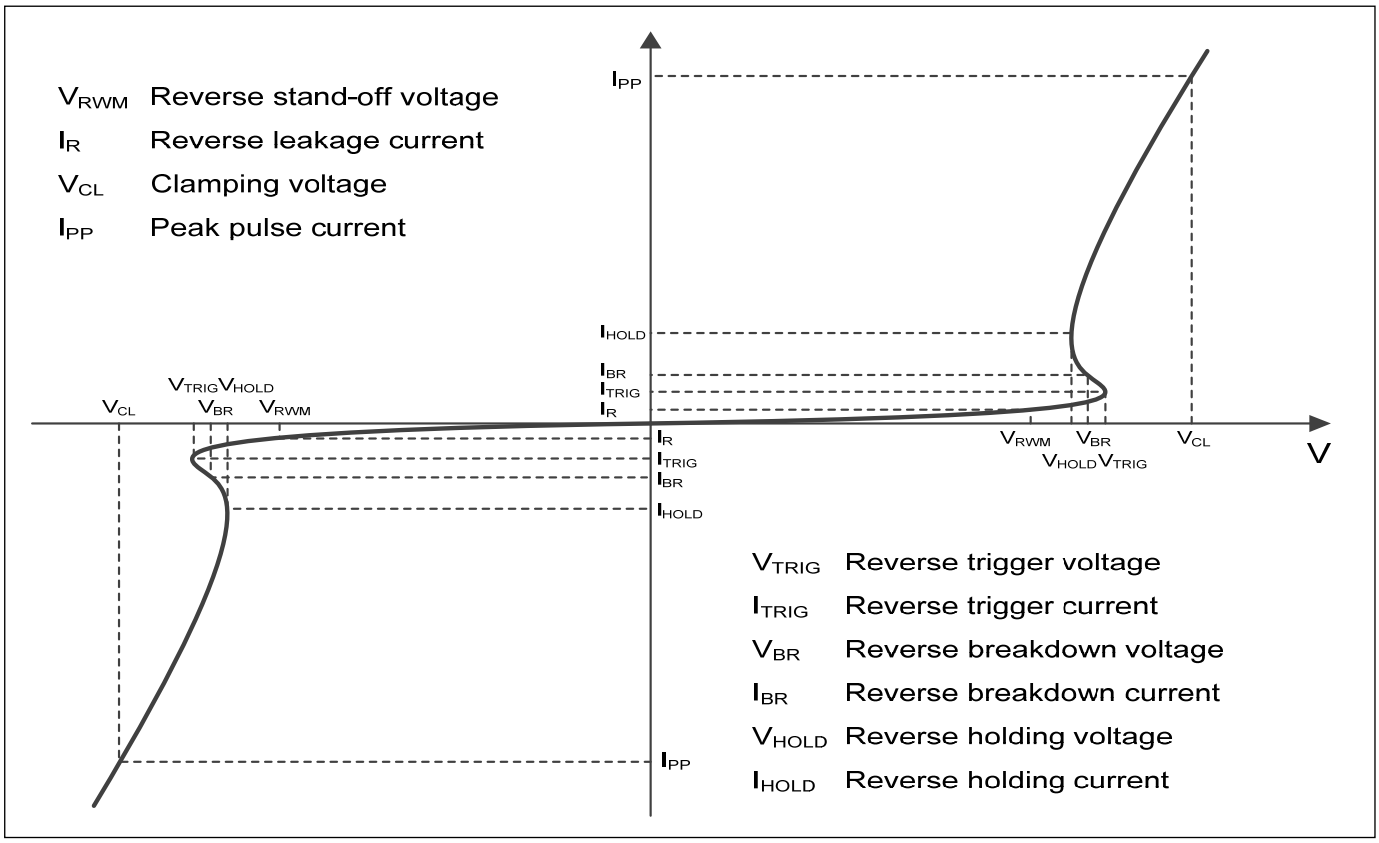
- Cellular handsets
- Tablets
- Laptops
- Network communication devices
- Other portable devices

Mechanical Data

- Package: DFN1006-2L
- 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}	140	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	3.5	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	℃
Storage temperature	T_{STG}	-55~150	℃

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				18
Reverse leakage current	I_R	nA	V_{RWM} =7V			500
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	18.5		23
Clamping voltage [3]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			30
		V	I_{PP} = 3.5A, t_p = 8/20μs			40
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		8	

(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
ESD18VLBS	Approximate 0.9	10000	100000	400000	Tape & reel

■ Characteristics (Typical)

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

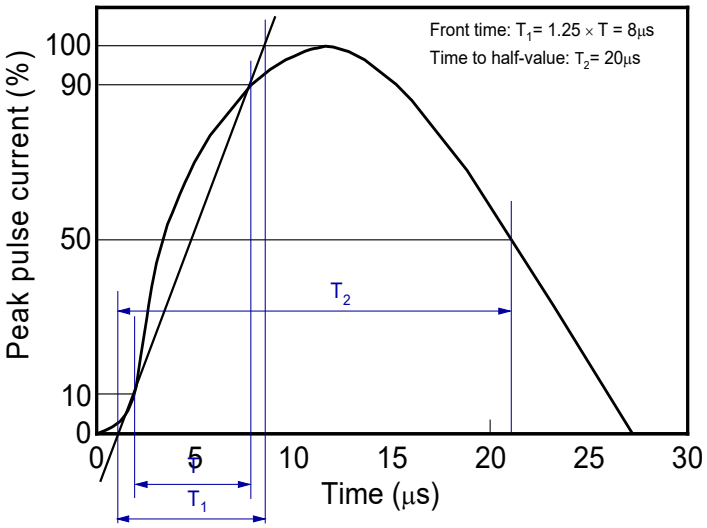


Fig.2 Contact discharge current waveform per IEC61000-4-2

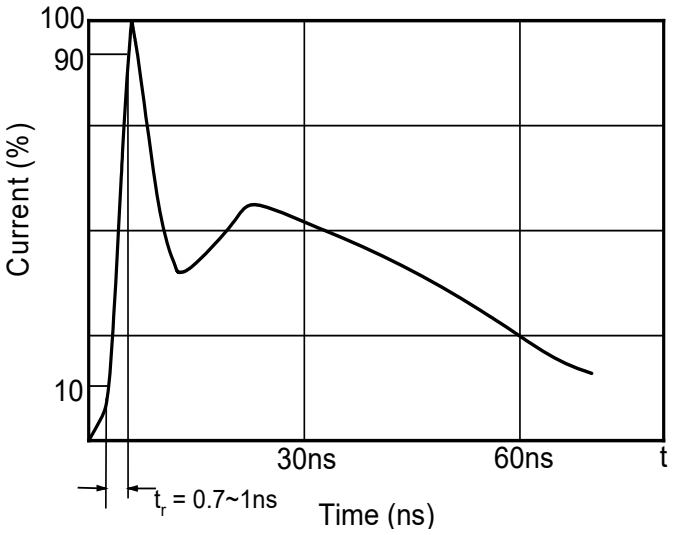


Fig.3 Clamping voltage vs. Peak pulse current

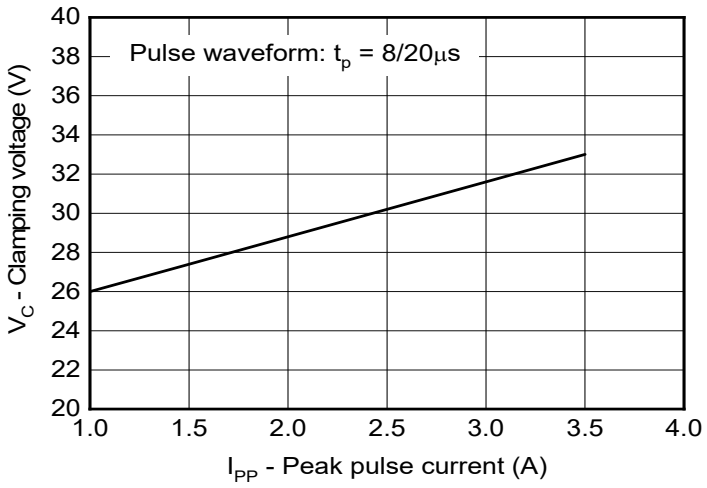


Fig.4 Capacitance vs. Reverse voltage

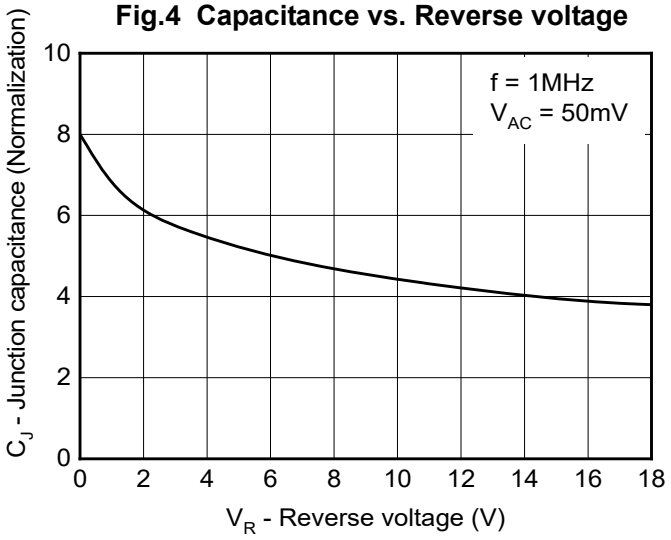


Fig.5 Non-repetitive peak pulse power vs. Pulse time

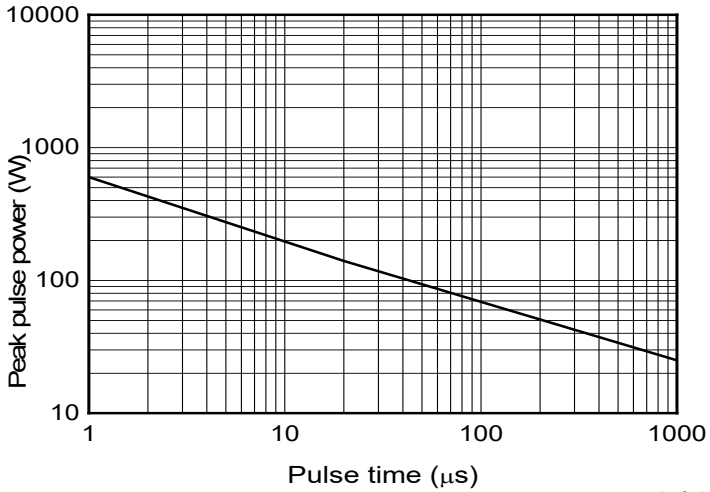


Fig.6 Power derating vs. Ambient temperature

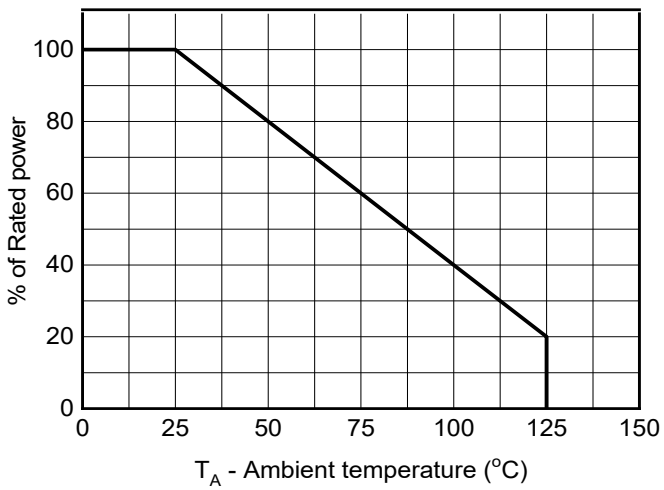
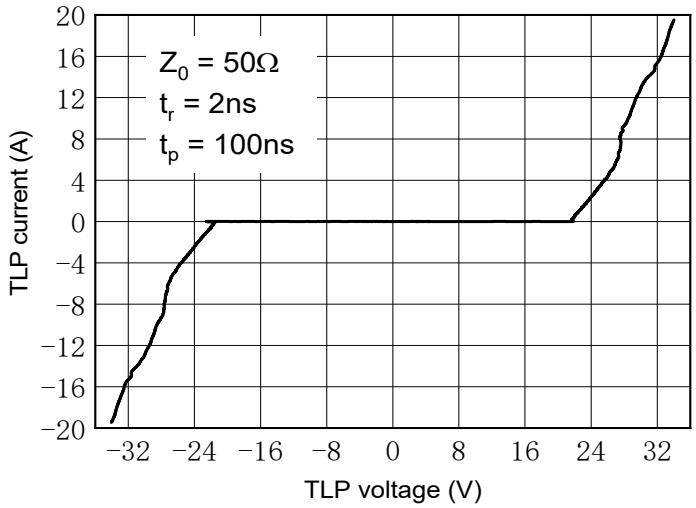
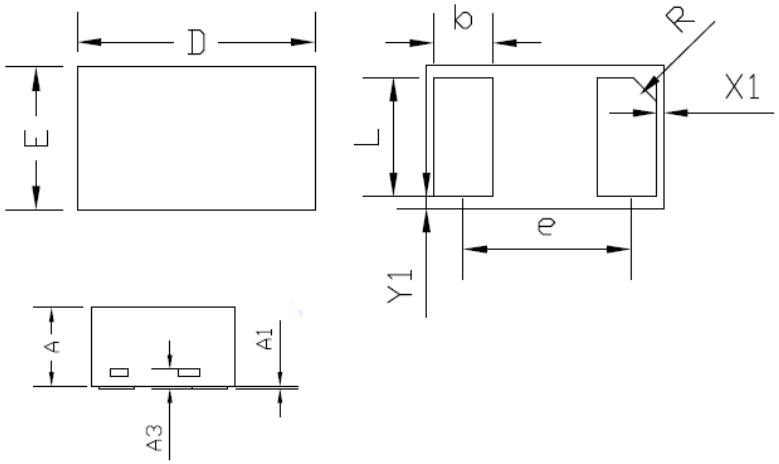


Fig.7 TLP Measurement

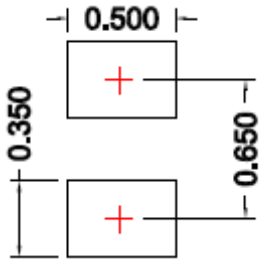


■ Outline Dimensions



COMMON DIMENSION (MM)			
PKG	DFN1006-2L		
REF.	MIN.	NOM.	MAX
A	0.45	0.50	0.55
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
L	0.45	0.50	0.55
e		0.650	
R	0.07	0.10	0.13
X1	0.025	---	0.065
Y1	0.025	---	0.065
A1	0	---	0.015
A3	0.119	---	0.15

■ Recommended PCB Layout



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

Unit:mm

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