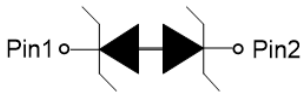
1- Line, Bi-directional, Transient Voltage Suppressor





DFN1006-2L

Features

- Stand-off voltage: 5V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 20A (8/20μs)
- Low leakage current
- Ultra-low capacitance: CJ = 30pF typ
- Low clamping voltage

V_{CL} = 7.8V typ. @ IPP = 16A (TLP)

- RoHS Compliant

Applications

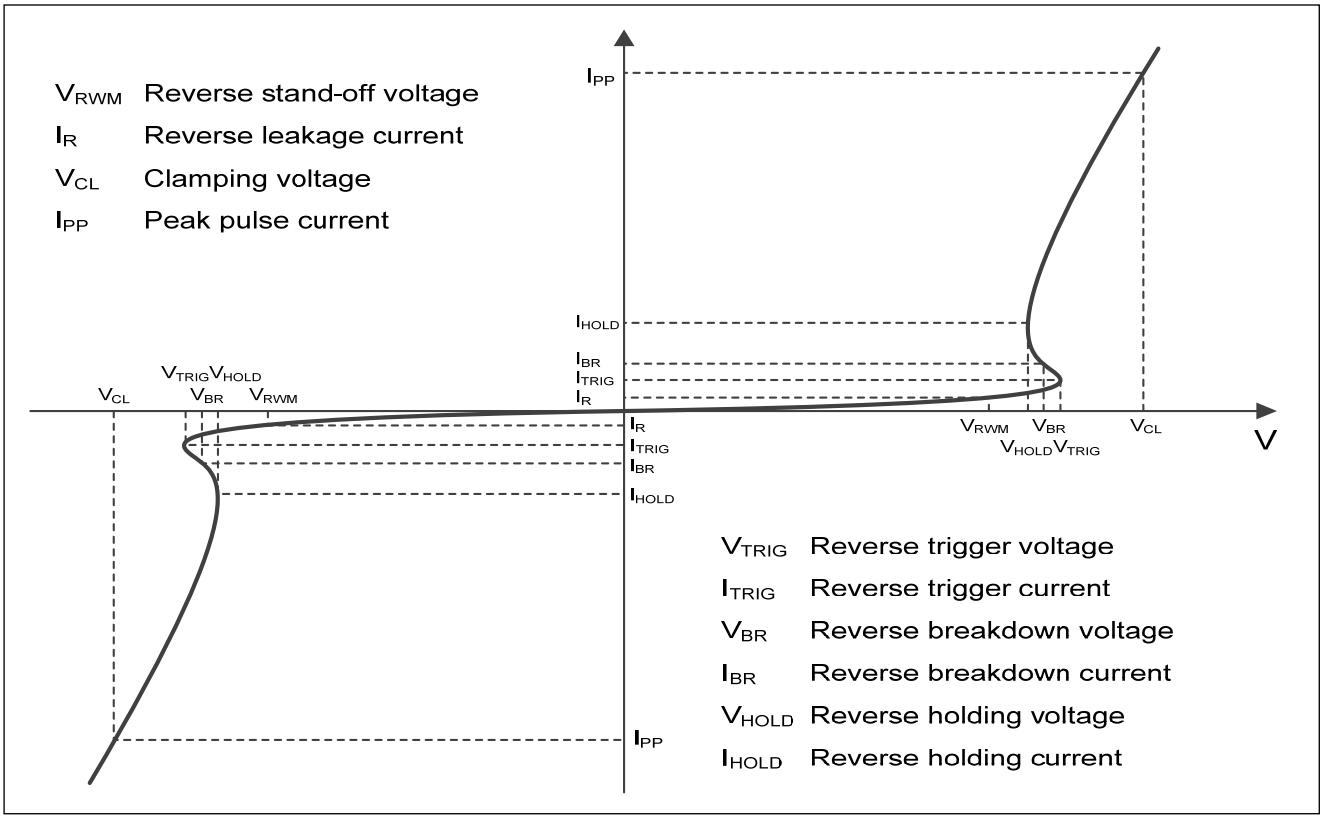
- Battery Line Protection
- Audio Line Protection
- Microphone Line Protection
- GPIO Protection

Mechanical Data

- Package: DFN1006-2L
- Case Material: “Green” Molding Compound
- Marking Information: See Below

5B

■Definitions of electrical characteristics



■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	240	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	20	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	
Junction temperature	T_J	-55~125	℃
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				5
Reverse leakage current	I_R	uA	V_{RWM} = 5V,			0.5
Reverse breakdown voltage	$V_{(BR)}$	V	I_T = 1mA,	5.5		
Clamping voltage	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			8
		V	I_{PP} = 10A, t_p = 8/20μs			9
		V	I_{PP} = 20A, t_p = 8/20μs			12
Junction capacitance	CJ	pF	V_R = 0V, f = 1MHz		30	

Notes:

(1). TLP parameter: Z0 = 50Ω, tp = 100ns, tr = 2ns, averaging window from 60ns to 80ns. RDYN is calculated from 4A to 16A.

(2). Contact discharge mode, according to IEC61000-4-2.

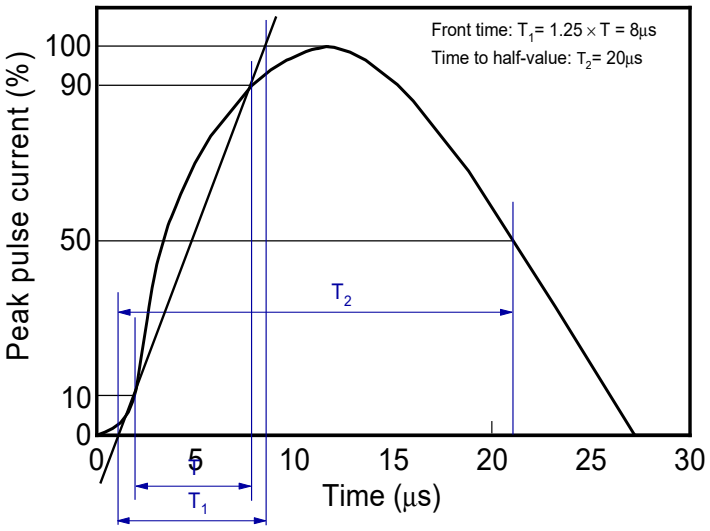
(3). Non-repetitive current pulse, according to IEC61000-4-5

■Ordering Information (Example)

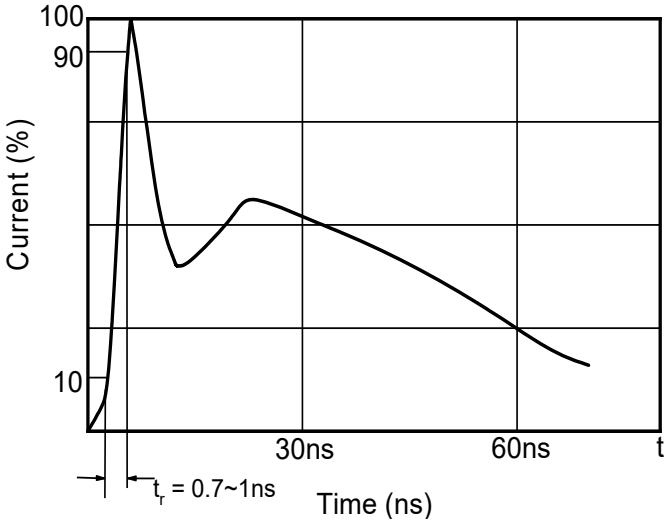
PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD5V0LBA7	F1	Approximate 0.9	10000	100000	400000	7 reel

■ Characteristics (Typical)

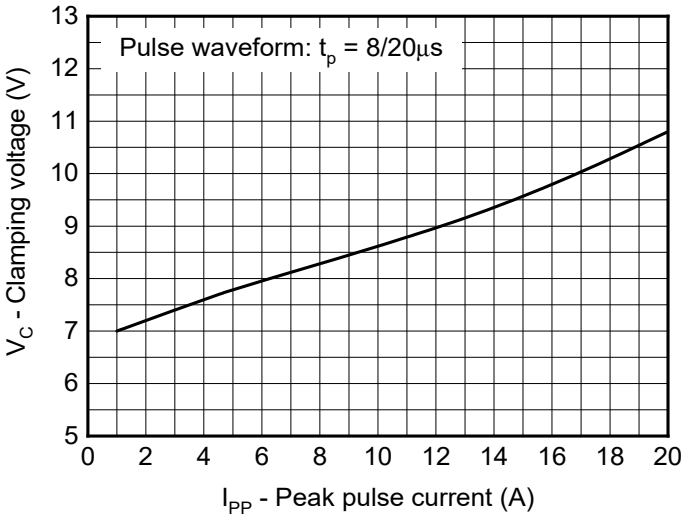
8/20μs waveform per IEC61000-4-5



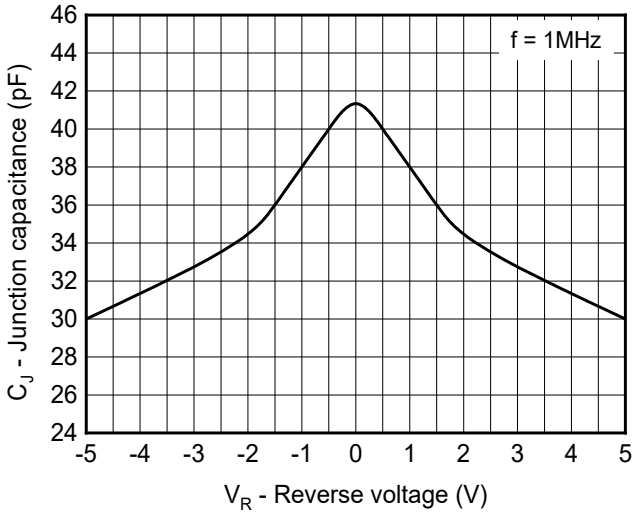
Contact discharge current waveform per IEC61000-4-2



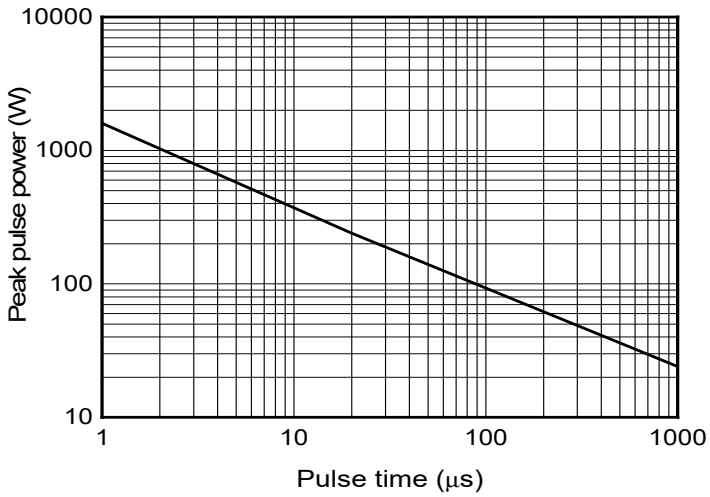
Clamping voltage vs. Peak pulse current



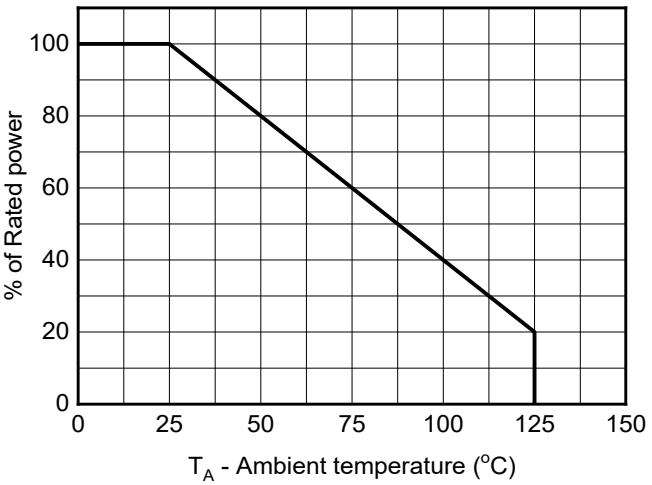
Capacitance vs. Reverse voltage



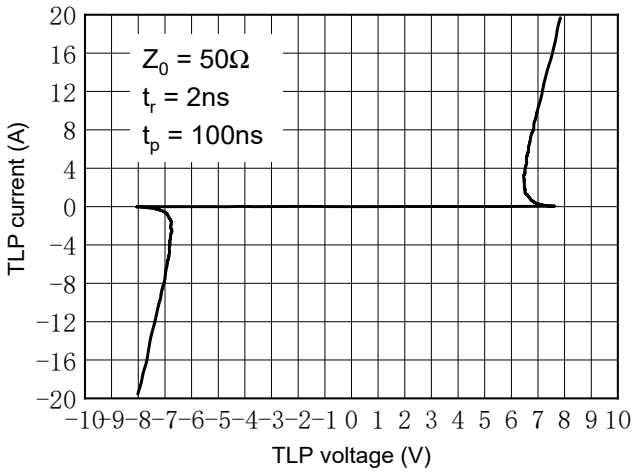
Non-repetitive peak pulse power vs. Pulse time



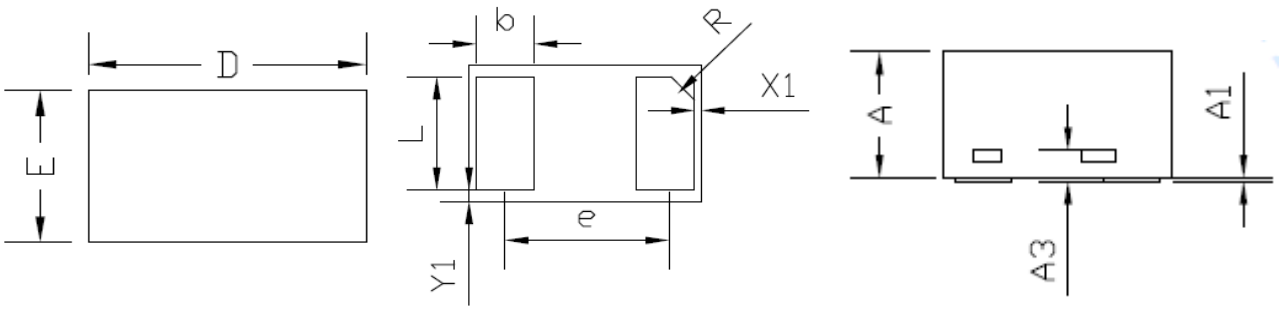
Power derating vs. Ambient temperature



TLP Measurement

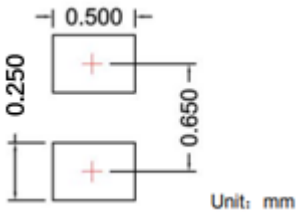


■ Outline Dimensions



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

■ Soldering Footprint



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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