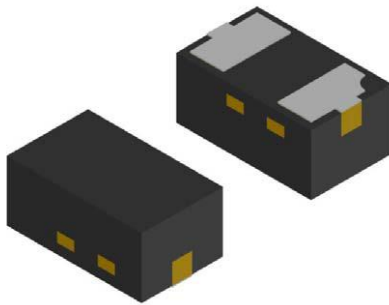
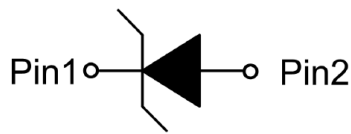


1-Line, Uni-directional, Transient Voltage Suppressor



DFN1006-2L

Features

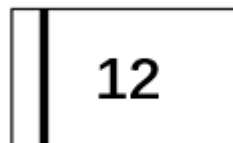
- Ultra small package
- Stand-off voltage: 12 V Max
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
- IEC61000-4-5(surge): 11A (8/20 μs)
- Ultra-low capacitance: $C_J = 57\text{ pF}$ typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

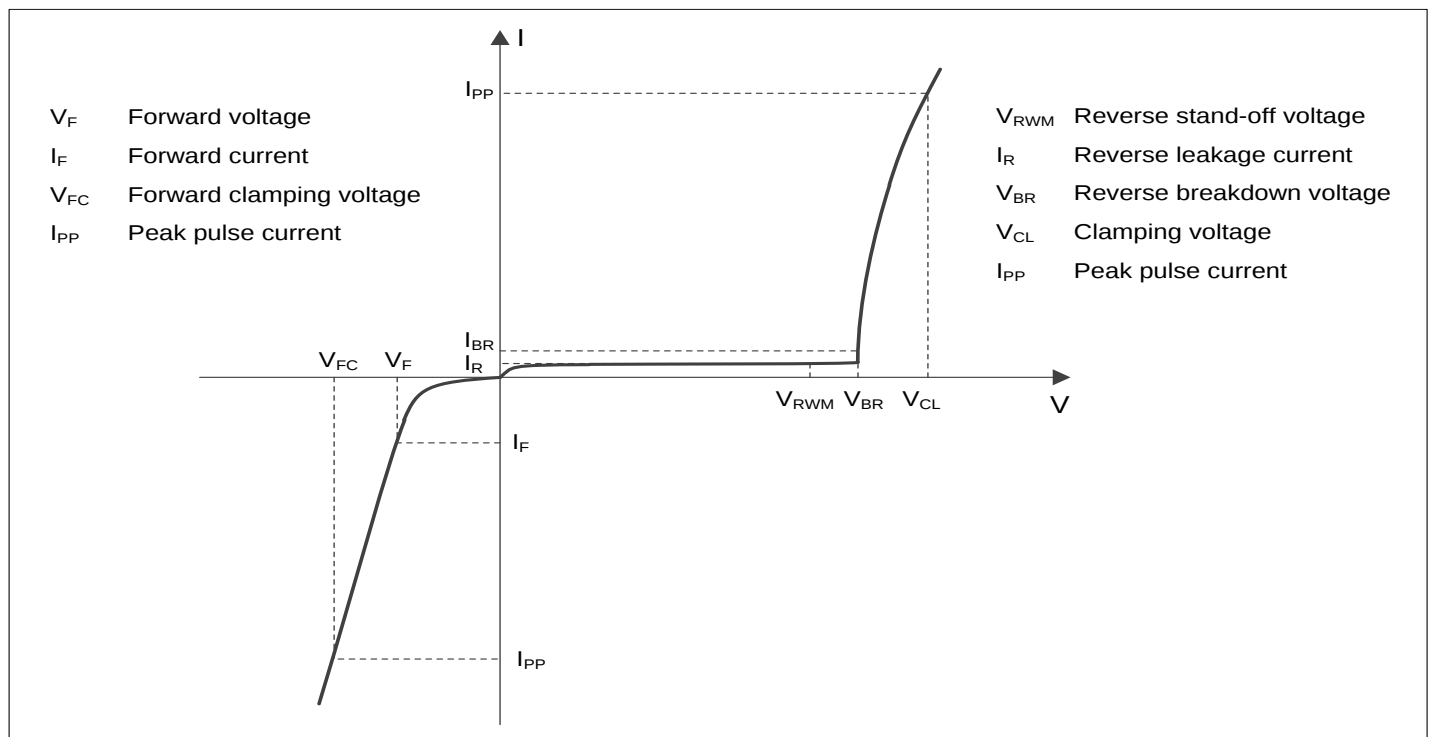
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players

Mechanical Characteristics

- Package: DFN1006-2L
- Case Material: "Green" Molding Compound.
- Marking Information: See Below



■ Definitions of electrical characteristics





ESD12VL

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

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	330	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	11	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	-55~125	°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				12
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	13.5		
Forward voltage	V_F	V	$I_F = 10mA$			1.2
Reverse leakage current	I_R	μA	$V_{RWM} = 12V$			0.5
Clamping voltage ³⁾	V_{CL}	V	$I_{PP} = 11A, t_p = 8/20\mu s$		25.6	30
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		57	

(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)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD12VL	Approximate 0.9	10000	40000	400000	Tae& reel



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

Fig1. 8/20μs waveform per IEC61000-4-5

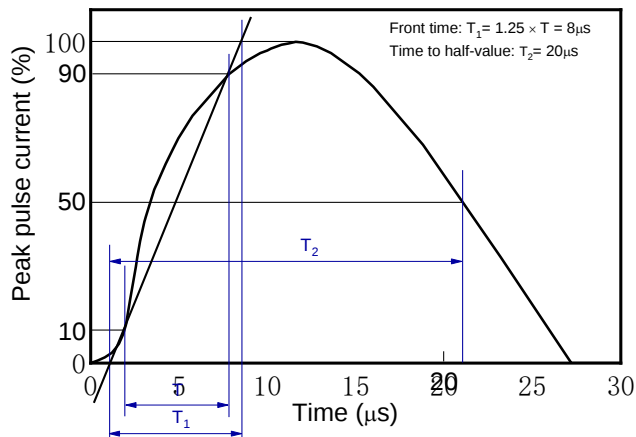


Fig2. Contact discharge current waveform per IEC61000-4-2

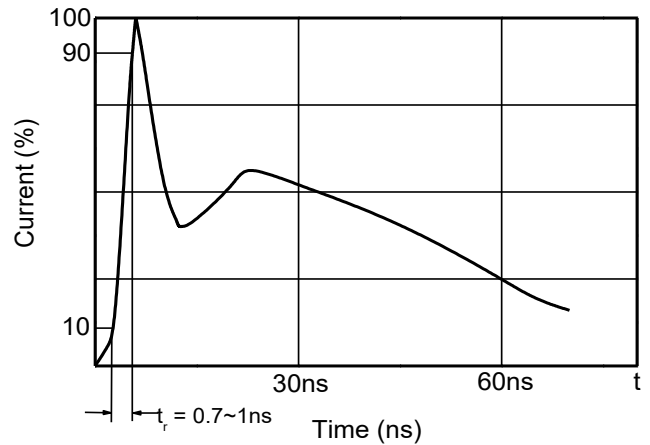


Fig3. Clamping voltage vs. Peak pulse current

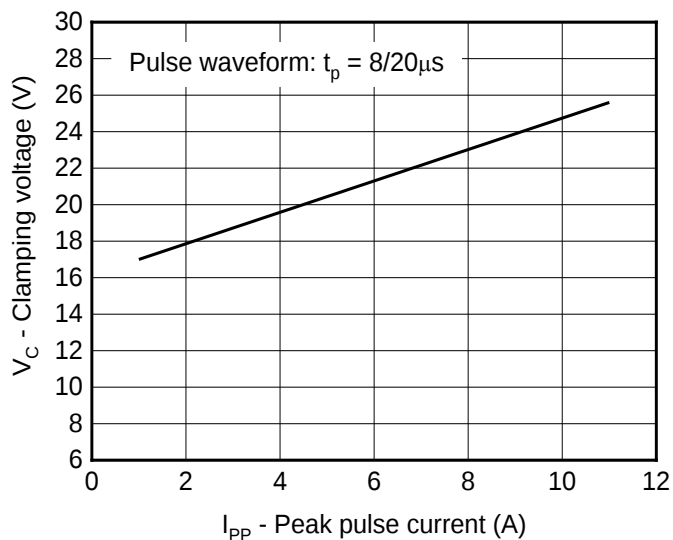


Fig4. Capacitance vs. Reverse voltage

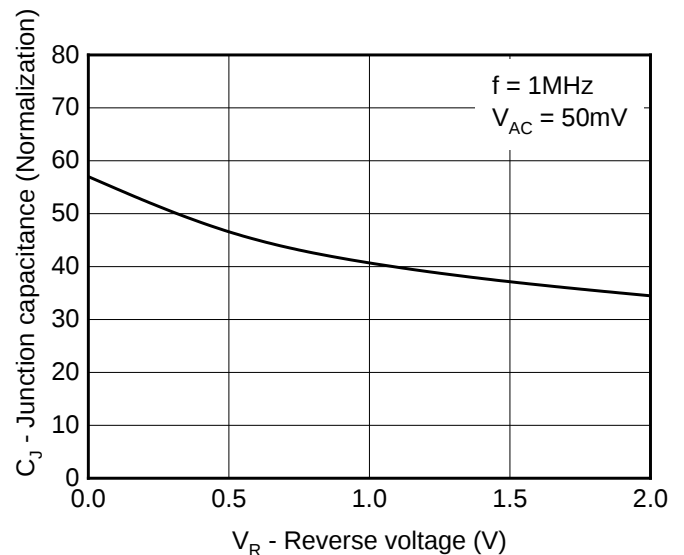


Fig5. Non-repetitive peak pulse power vs. Pulse time

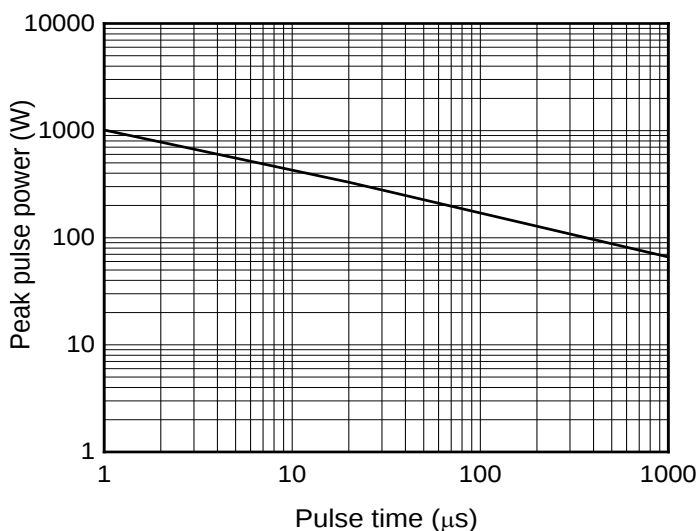


Fig6. Power derating vs. Ambient temperature

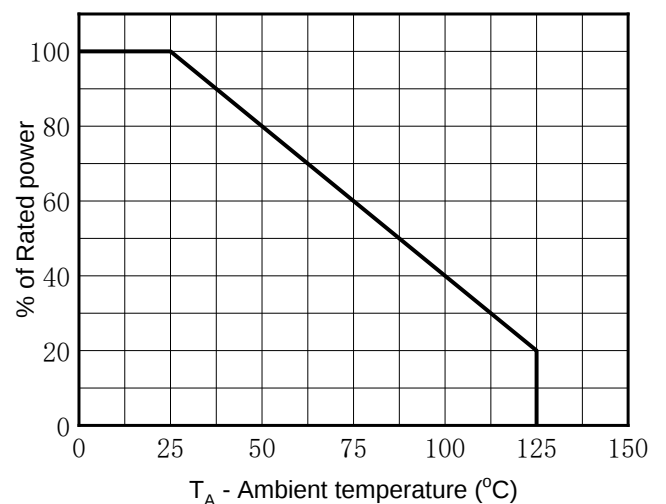
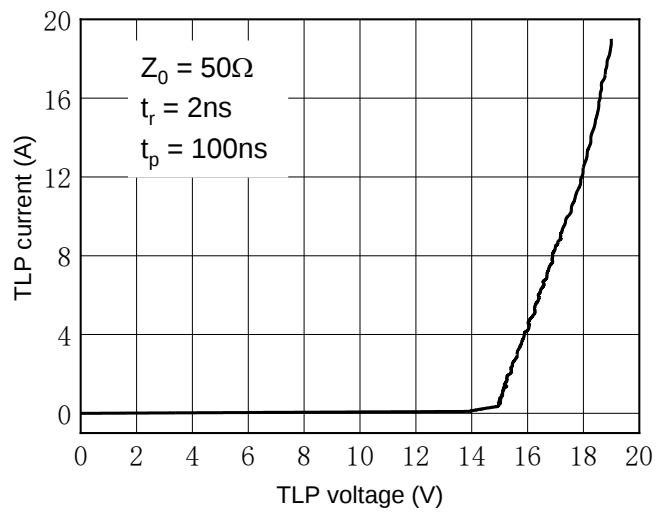
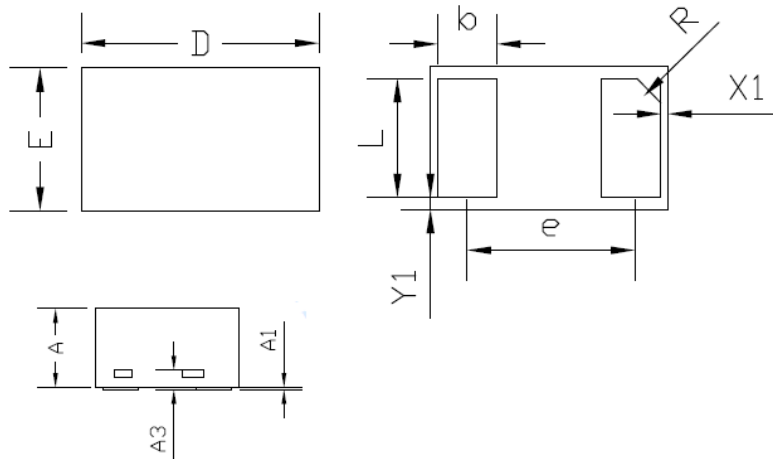




Fig7. TLP Measurement

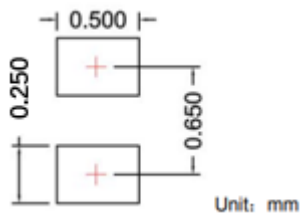


■ Outline Dimensions



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

■ 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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