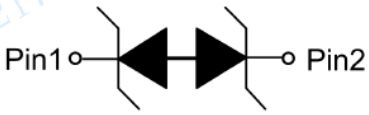
1-Line, Bi-directional, Transient Voltage Suppressor



DFN1006-2L

Features

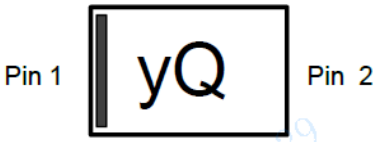
- Ultra small package
- Stand-off voltage: 36V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±19kV (contact)
  IEC61000-4-5(surge): 2A (8/20μs)
- Ultra-low capacitance: CJ = 20 pF typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

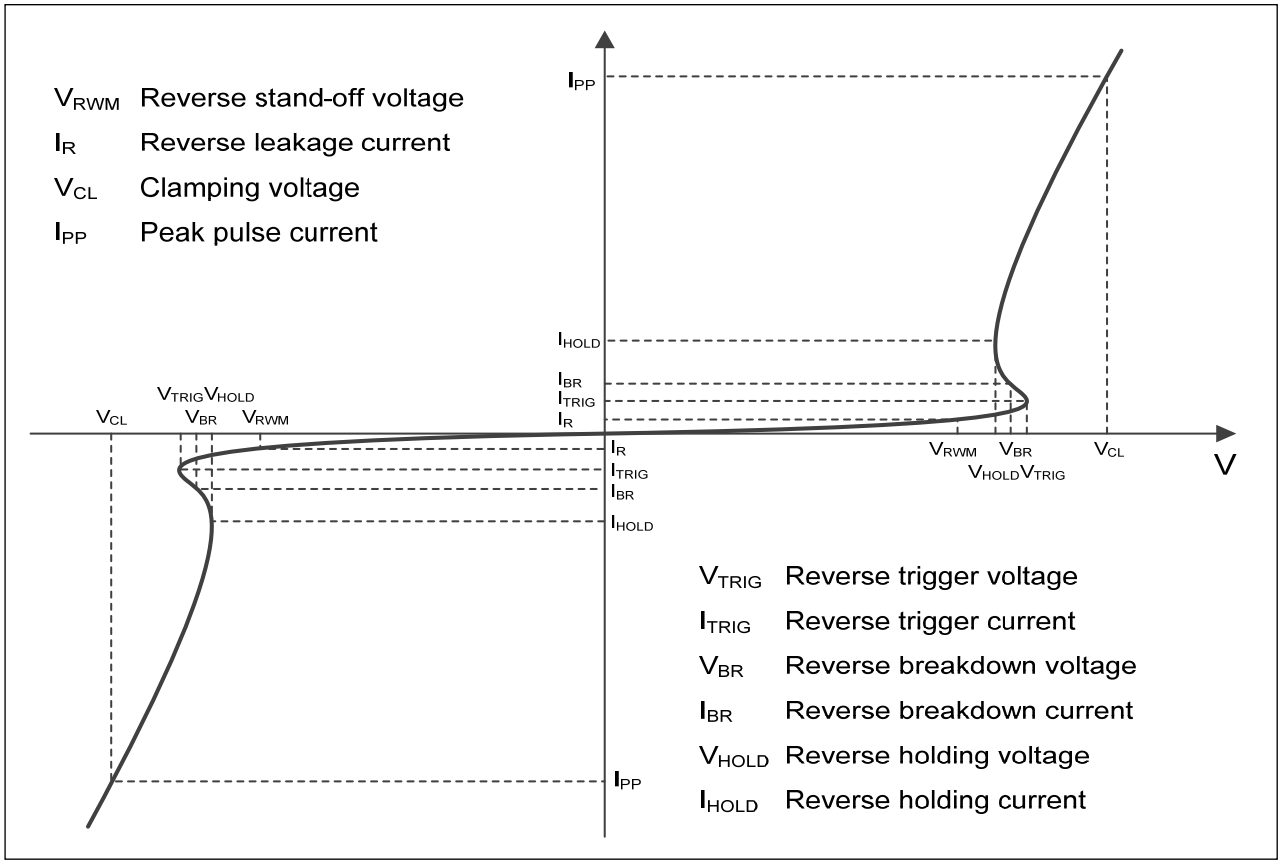
- Cellular handsets
- Tablets
- Laptops
- Other portable devices
- Network communication devices

Mechanical Characteristics

- Package: DFN1006-2L
- 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}	100	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	2	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±19	KV
ESD according to IEC61000-4-2 contact discharge		±19	KV
Junction temperature	T_J	-55~125	°C
Storage temperature	T_{STG}	-55~150	°C

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				36
Punch-Through Voltage	V_{PT}	V	I_T=1mA	39		
Reverse leakage current	I_R	μA	V_{RWM} =36V			0.1
Clamping voltage 3)	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs		48	50
		V	I_{PP} = 2A, t_p = 8/20μs		50.4	52
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		20	25

(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
ESD36VLB	Approximate 0.9	10000	40000	400000	Tae& reel

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

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

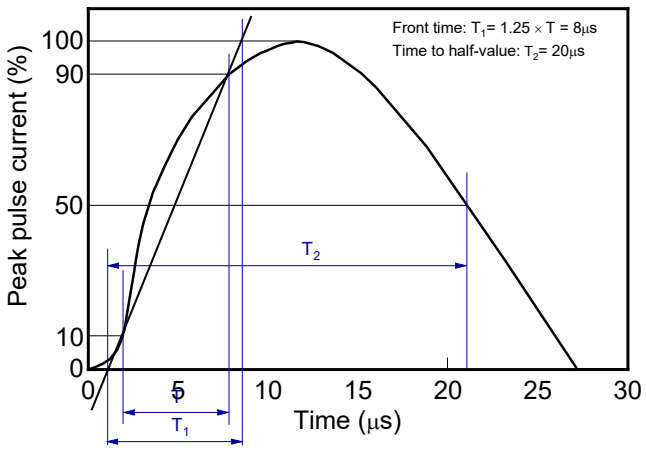


Fig2, Contact discharge current waveform per IEC61000-4-2

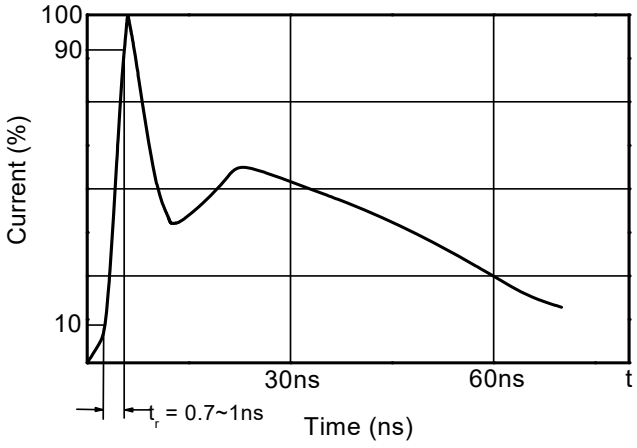


Fig3, Clamping voltage vs. Peak pulse current

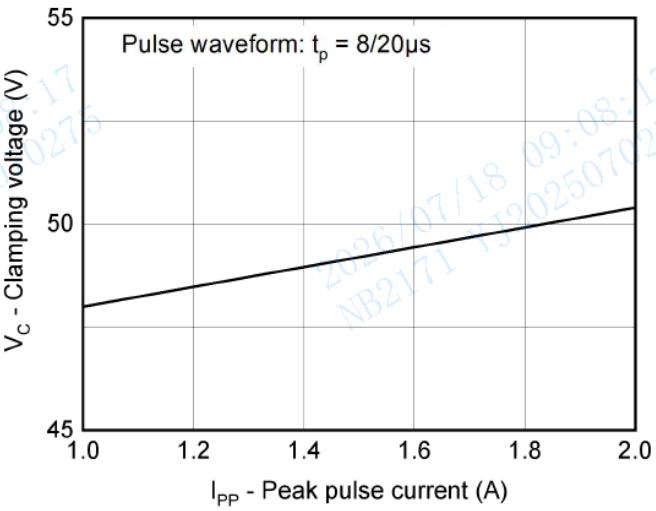


Fig4, Capacitance vs. Reverse voltage

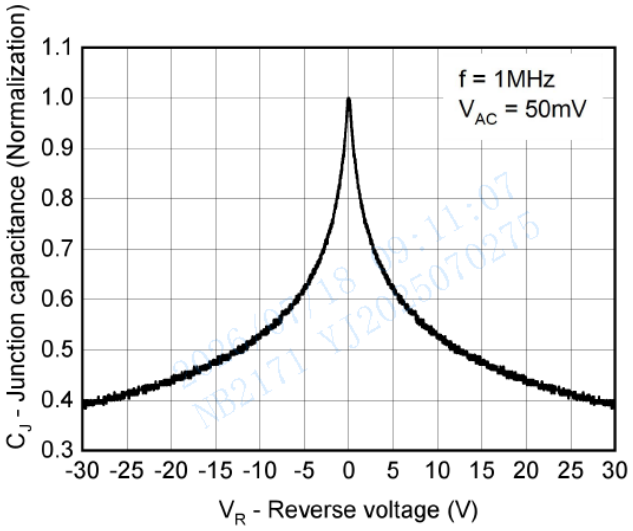


Fig5, Non-repetitive peak pulse power vs. Pulse time

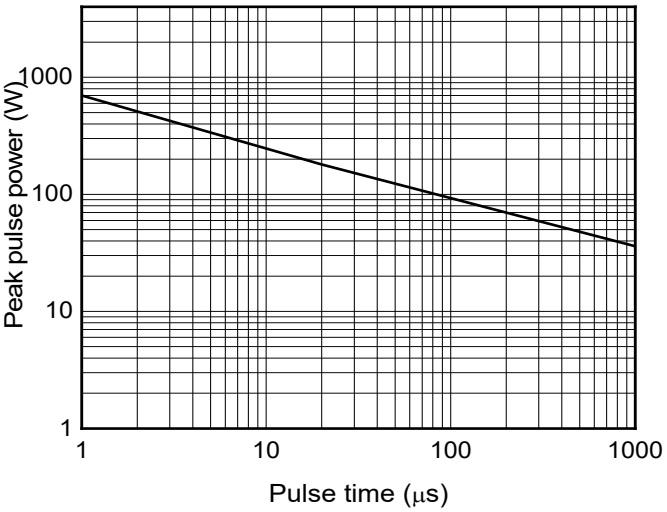
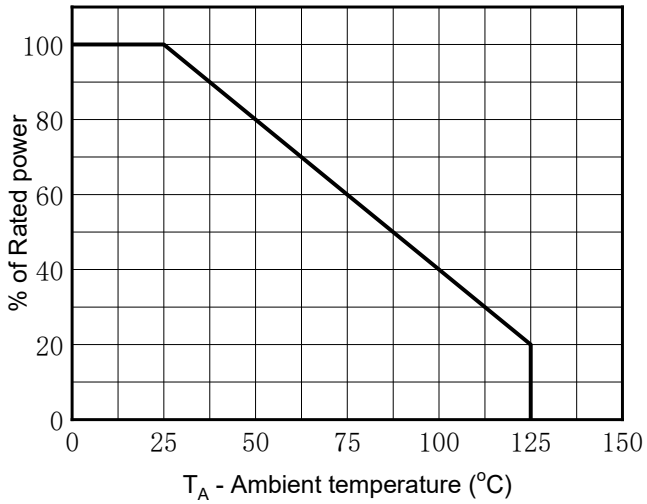
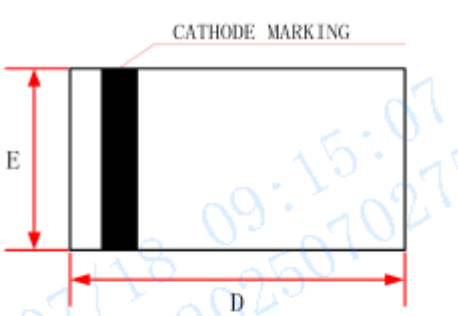


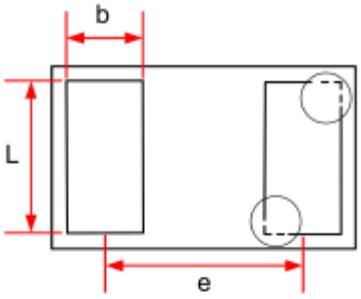
Fig6, Power derating vs. Ambient temperature



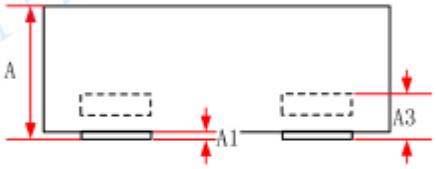
■ Outline Dimensions



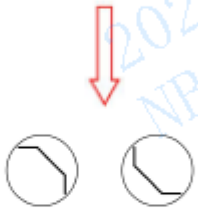
Top View



Bottom View

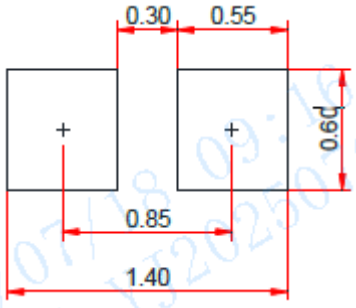


Side View



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.400	0.450	0.500
A1	0.000	0.020	0.050
A3	0.077	0.127	0.177
D	0.950	1.000	1.05
E	0.550	0.600	0.65
b	0.200	0.250	0.300
L	0.450	0.500	0.550
e	0.650 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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