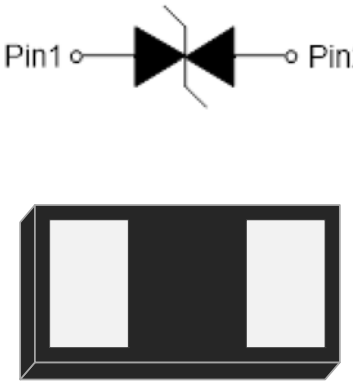
1-Line, Bi-directional, Transient Voltage Suppressor



DFN1006-2L

Features

- Stand-off voltage: 4.5V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 40A (8/20μs)
- Low leakage current
- Low clamping voltage
- Low clamping voltage:
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Keypads, Side Keys, LCD Displays

Mechanical Data

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

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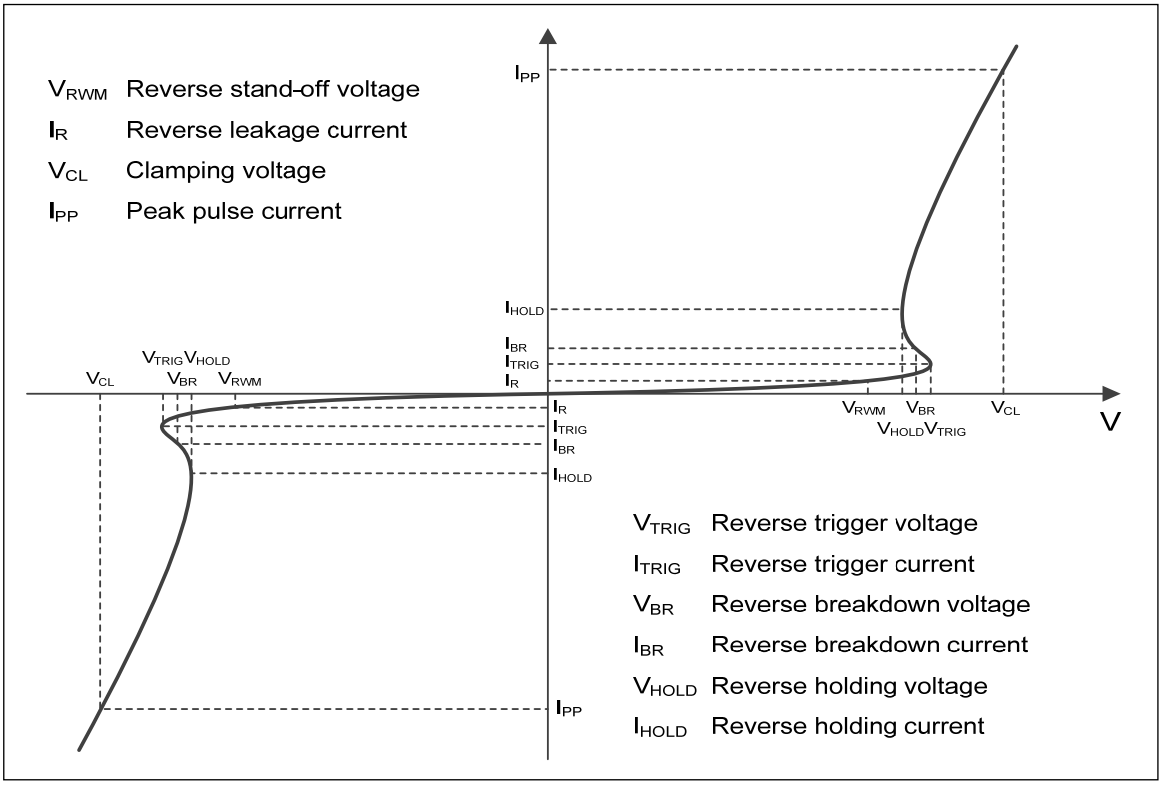
■Definitions of electrical characteristics



■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	400	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	40	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	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				4.5
Reverse leakage current	I_R	nA	V_{RWM} = 5V			200
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	4.8		
Clamping voltage [1)]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			6.5
		V	I_{PP} = 40A, t_p = 8/20μs			10
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		100	

Notes:
(1). 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
ESD4V5LBA3	F1	Approximate 0.9	10000	100000	400000	7” reel

■ Characteristics (Typical)

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

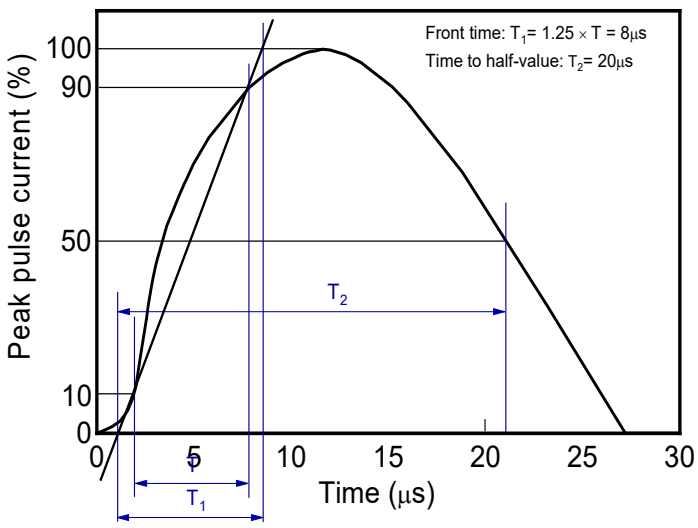


Fig.2 Contact discharge current waveform per IEC61000-4-2

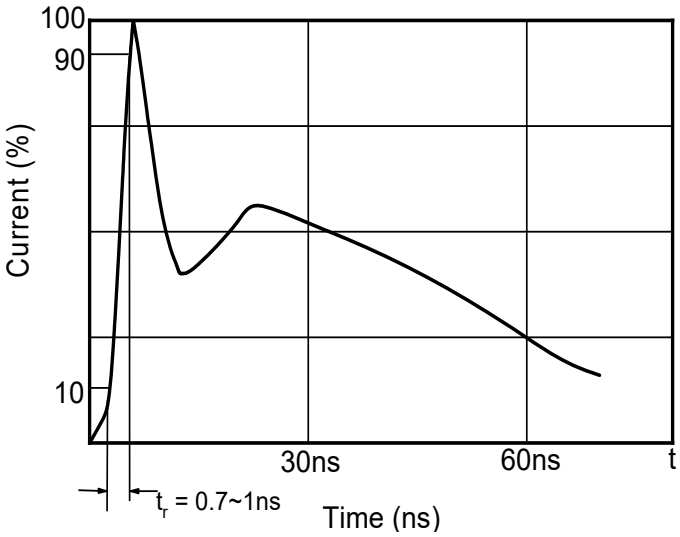


Fig.3 Clamping voltage vs. Peak pulse current

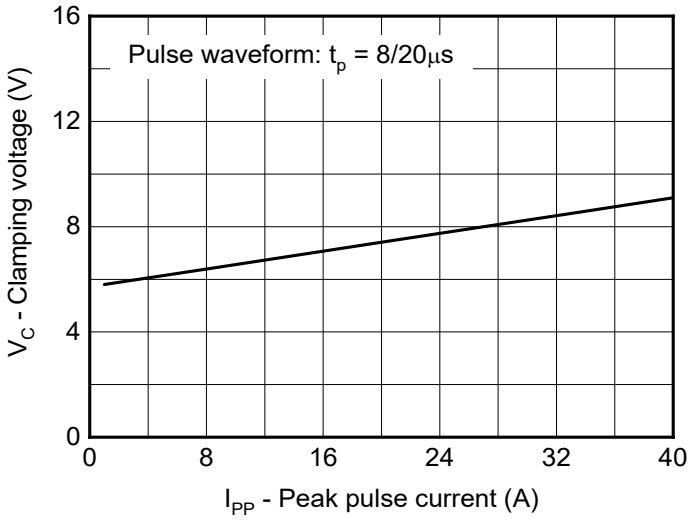


Fig.4 Capacitance vs. Reverse voltage

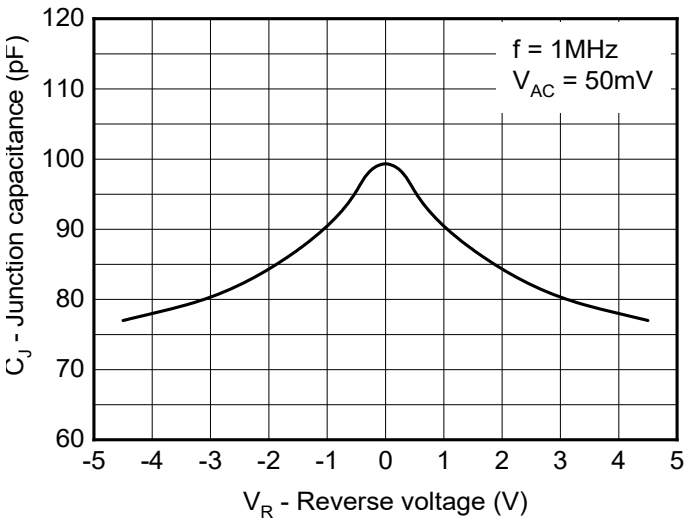


Fig.5 Non-repetitive peak pulse power vs. Pulse time

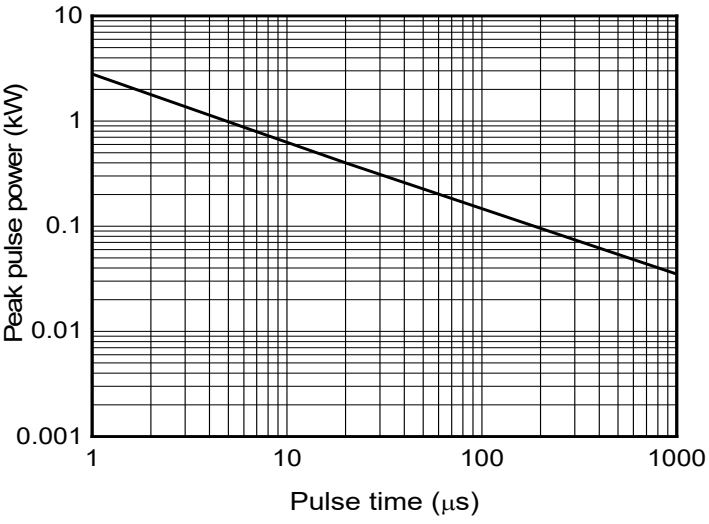
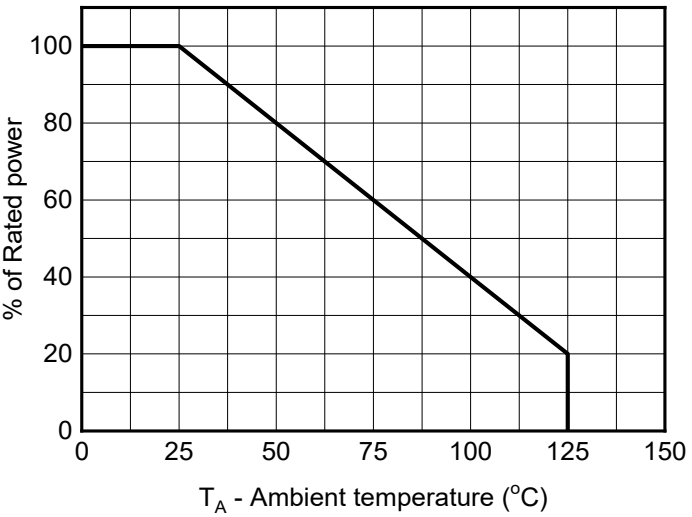
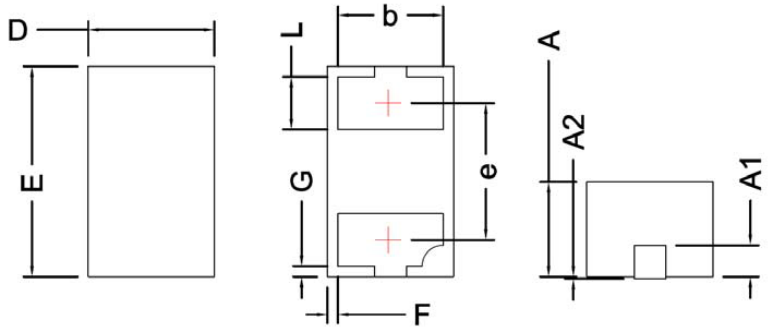


Fig.6 Power derating vs. Ambient temperature

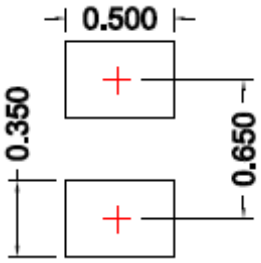


■ Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	0.50	0.60	0.70
E	0.90	1.00	1.10
A	0.45	0.50	0.55
A1		0.15 BSC	
A2			0.10
F	0.005		
G	0.005		
L	0.15	0.25	0.35
b	0.41	0.50	0.59
e		0.65 BSC	

■ Recommended PCB Layout



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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