Transient Voltage Suppressors for ESD Protection

Low Capacitance

Features

- Operating Voltage: 7.0V
- Low Leakage: nA Level
- Low Capacitance
- Extremely-Low Clamping Voltage
- RoHS compliant

DFN1006-2L

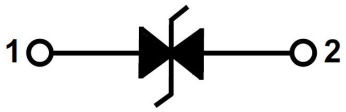
Applications

- Cellular Handsets & Accessories
- Digital Visual Interface (DVI)
- RF Circuits
- Display Port
- USB Ports

Mechanical Characteristics

- DFN1006-2L (1.0x0.6x0.5mm) Package
- Weight 0.5 Milligrams (Approximate)
- Quantity Per Reel : 10,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free
- Marking Code:G

Functional Diagram



Absolute Maximum Ratings (T_A=25℃ unless otherwise specified)

Symbol	Parameter	Value	Units
T_J	**Operating Temperature Range**	-55 to +125	℃
T_{STG}	**Storage Temperature Range**	-55 to +150	℃
V_{ESD}	**ESD per IEC61000-4-2 (Air)**	±25	kV
	ESD per IEC61000-4-2 (Contact)	±25	

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Electrical Characteristics (T_A = 25 unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}	--	--	--	7.0	V
Breakdown Voltage	V_{BR}	I_T = 1mA	7.6	--	9.0	V
Leakage Current	I_R	V_{RWM} = ±7.0V	--	--	0.1	μA
Clamping Voltage	V_C	I_{PP} = 1A , t_P = 8/20μs	--	9	12	V
Clamping Voltage	V_C	I_{PP} = 6.5A , t_P = 8/20μs	--	10	16	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	--	15	20	pF

Characteristic Curves

Fig1. 8/20 us Pulse Waveform

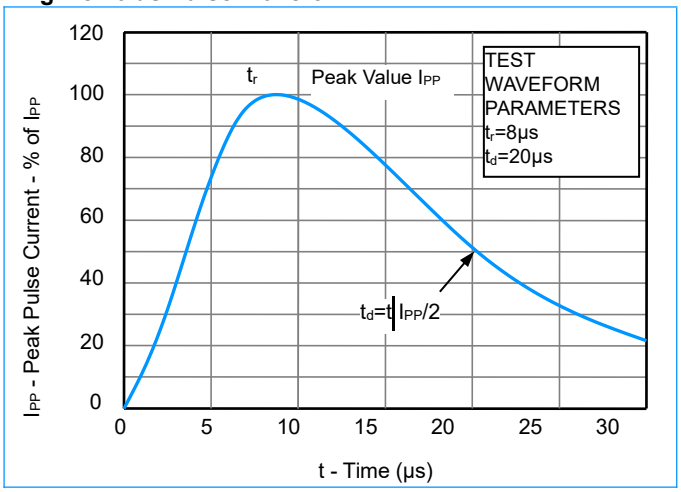


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

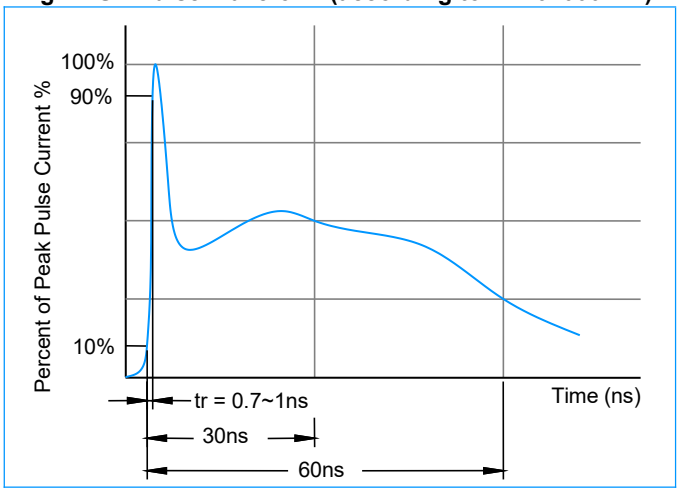


Fig4. Clamped +8 kV ESD Voltage Waveform

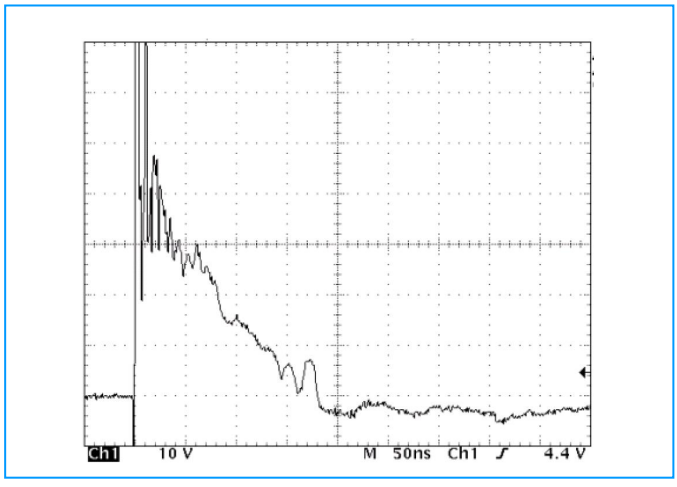
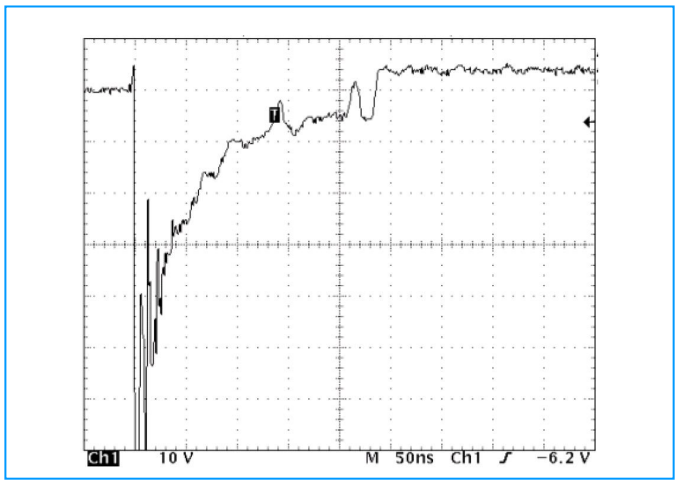


Fig5. Clamped -8 kV ESD Voltage Waveform



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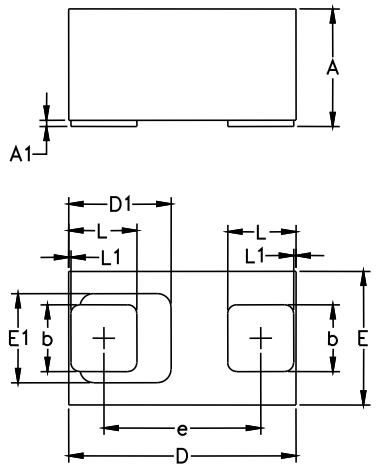
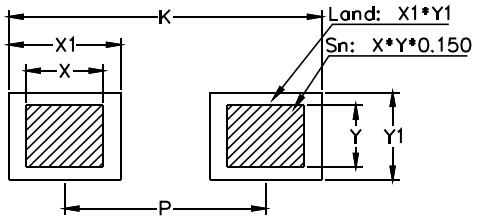
DFN1006-2L Package Outline & Dimensions



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.450	0.550	0.018	0.022
A1	0.010	0.070	0.000	0.003
D	0.950	1.050	0.037	0.041
E	0.550	0.650	0.022	0.026
D1	0.450 REF		0.018 REF	
E1	0.400 REF		0.016 REF	
b	0.275	0.325	0.011	0.013
e	0.675	0.725	0.027	0.029
L	0.275	0.325	0.011	0.013
L1	0.010 REF		0.000 REF	

Soldering Footprint



Symbol	Millimeters	Inches
K	1.4±0.05	0.055±0.002
P	0.9±0.025	0.035±0.001
X	0.354±0.025	0.014±0.001
Y	0.283±0.025	0.011±0.001
X1	0.5±0.025	0.020±0.001
Y1	0.4±0.025	0.016±0.001