

Transient Voltage Suppressors for ESD Protection

SE12N6R01GK

Features

- ⌞ Working voltage : 12V
- ⌞ Low capacitance: 4.5pF (Typical)
- ⌞ Low leakage current: 1.0μA @ V_{RWM}
- ⌞ Low clamping voltage
- ⌞ Response Time is < 1 ns

DFN1006



Applications

- ⌞ Cellular phones audio
- ⌞ MP3 players
- ⌞ Digital cameras
- ⌞ Portable applications

Pin Configuration



Mechanical Characteristics

- ⌞ DFN1006 Package
- ⌞ Molding Compound Flammability Rating : UL 94V-0
- ⌞ Quantity Per Reel : 10,000pcs
- ⌞ Reel Size : 7 inch

Absolute Maximum Rating

Symbol	Parameter	Value	Units
P_{PK}	Peak Pulse Power ($t_P=8/20\mu S$)	88	W
I_{PP}	Peak Pulse Current ($t_P=8/20\mu S$)	4	A
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_{OP}	Operating Temperature Range	-55 to +150	°C
V_{ESD}	ESD per IEC 61000-4-2(Air)	±30	KV
	ESD per IEC 61000-4-2 (Contact)	±30	

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Electrical Characteristics (@T_A=25°C, unless otherwise specified)

Symbol	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V _{RWM}	--	--	--	12	V
Reverse Breakdown Voltage	V _{BR}	I _T = 1mA	13.3	--	16.0	V
Reverse Leakage Current	I _R	V _{RWM} =12V	--	--	1.0	μA
Clamping Voltage	V _C	I _{PP} =1A, t _p =8/20μs	--	19.0	--	V
		I _{PP} =4A, t _p =8/20μs	--	22.0	24.0	V
Junction Capacitance	C _J	V _R =0V, f=1MHz	--	6.0	10.0	pF

Characteristic Curves

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

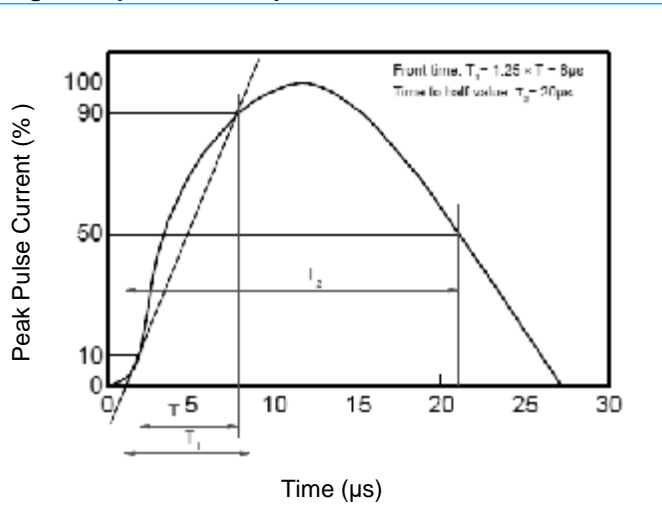


Fig2. Contact Discharge Current Waveform per IEC61000-4-2

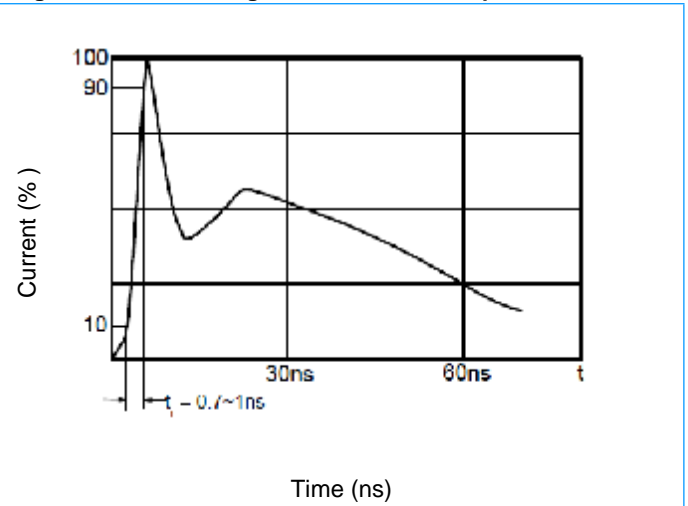


Fig3. Clamping Voltage vs. Peak Pulse Current

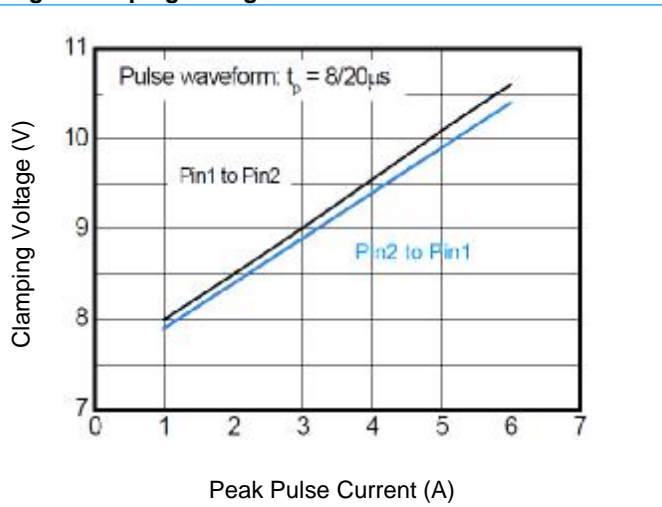
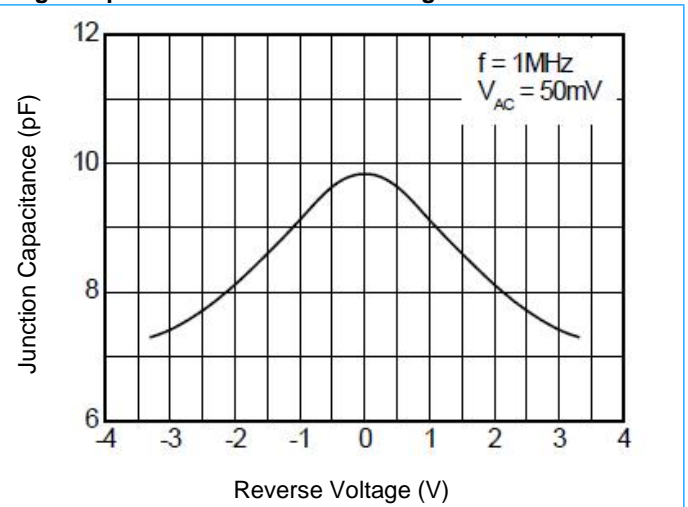


Fig4. Capacitance vs. Reverse Voltage



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Characteristic Curves (Continue)

Fig5. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2

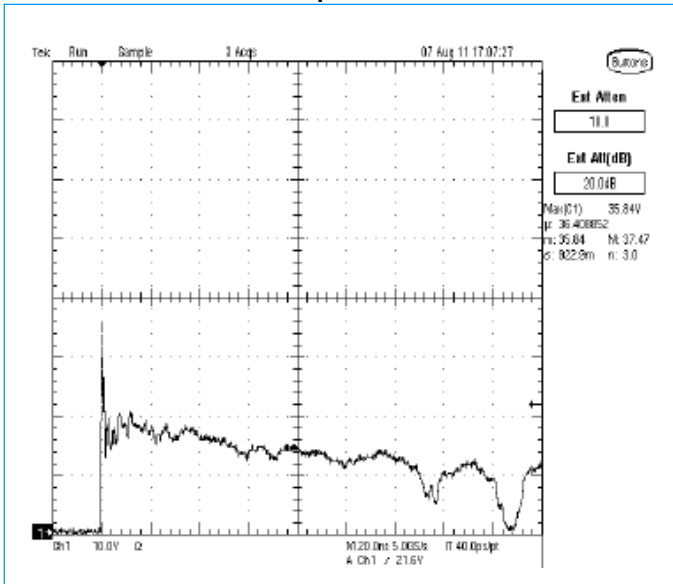
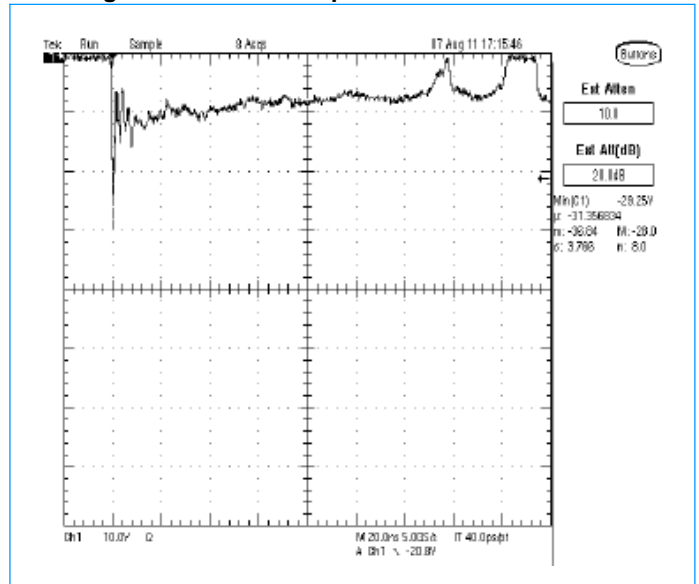
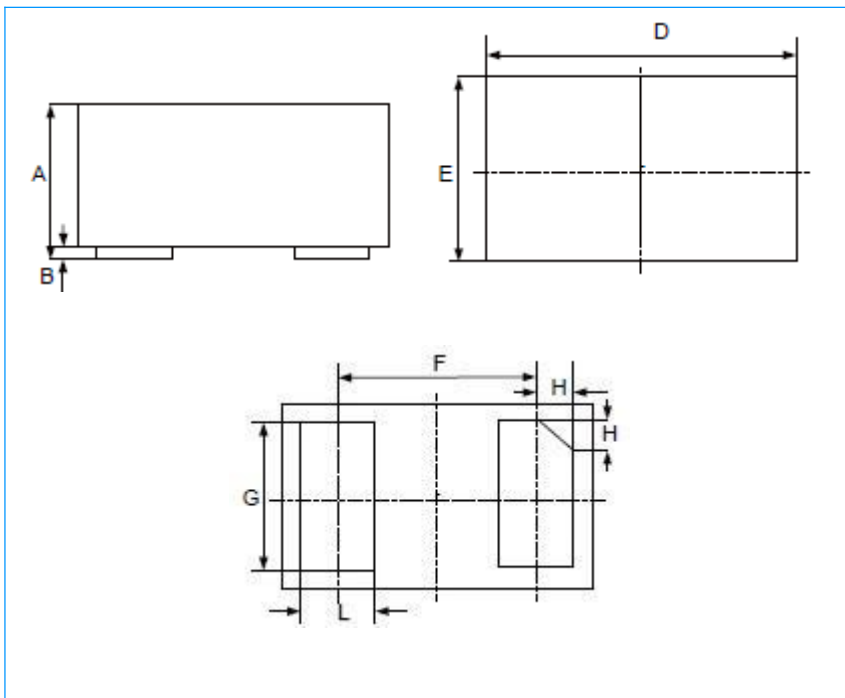


Fig6. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000-4-2



DFN1006 Package Outline & Dimensions



Symbol	Dimensions in millimeter	
	Min.	Max.
A	0.34	0.55
B	0.00	0.05
D	0.95	1.08
E	0.55	0.68
F	0.65 (Typ.)	
G	0.40	0.60
H	0.07	0.17
L	0.20	0.30