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PRODUCT DATASHEET

Electro-Static Discharge

JEN1006-5V-C ESD

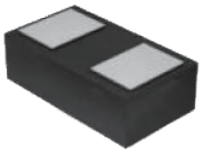
Features

- Ultra small package: 1.0x0.6×0.4mm(DFN1006)
- Capacitance: 15pF(Max.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): ±30KV
- IEC 61000-4-2 (ESD Contact): ±30KV
- IEC 61000-4-5 (Lightning 8/20μs): 8.0A

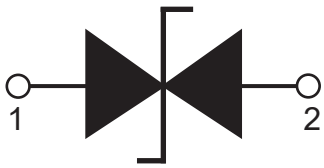
Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

Pin Description



Schematic Diagram



Limiting Values(T_A = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2;Contact Discharge	-	±30	kV
		IEC 61000-4-2;Air Discharge	-	±30	kV
P_{PP}	Peak Pulse Power	t_P=8/20μs	-	80	W
I_{PPM}	Rated Peak Pulse Current	t_P=8/20μs	-	8.0	A
T_A	Ambient Temperature Range	-	-55	125	°C
T_{stg}	Storage Temperature Range	-	-55	150	°C

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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	T_A=25°C	-	-	5.0	V
V_{BR}	Breakdown Voltage	I_R=1mA;T_A=25°C	5.6	-	8.4	V
I_R	Reverse Leakage Current	V_{RWM}=5V;T_A=25°C	-	-	0.1	μA
V_C	Clamping Voltage	I_{PP}=8A,t_P=8/20μs	-	-	10	V
C_J	Junction Capacitance	V_R=0V,f=1MHZ	-	-	15	pF

Typical Characteristics

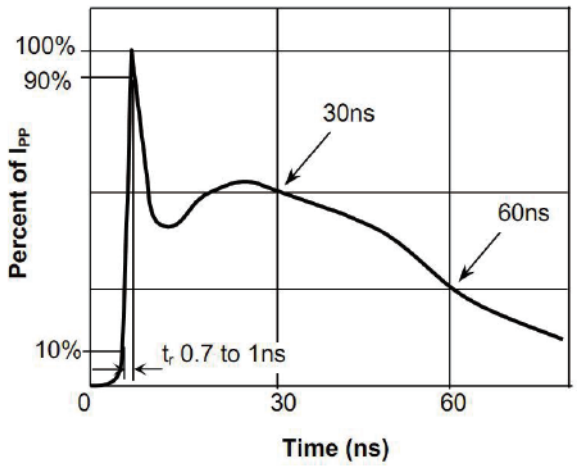


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

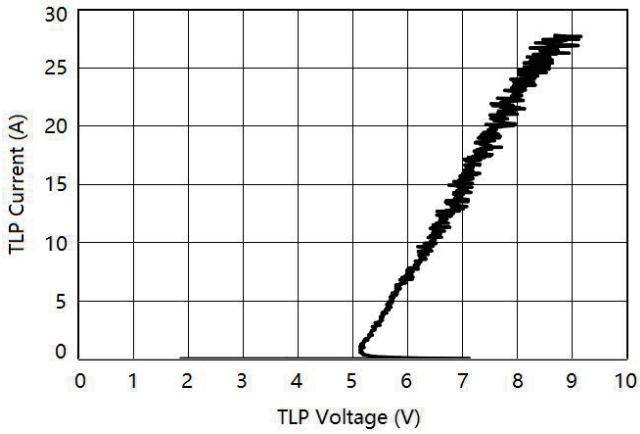


Fig.2 Transmission Line Pulse (TLP)

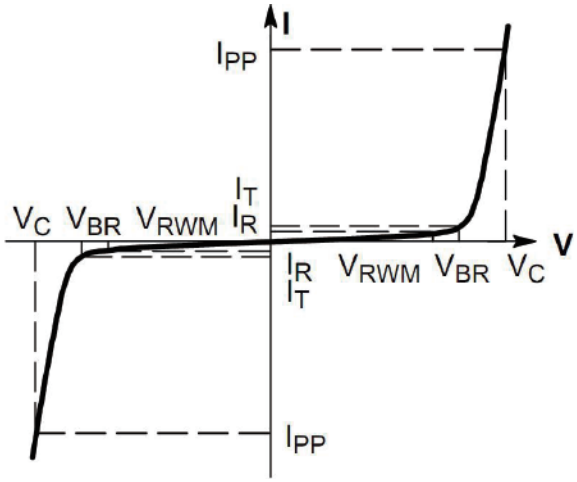


Fig.3 V-I Characteristics for Bidirectional Diode

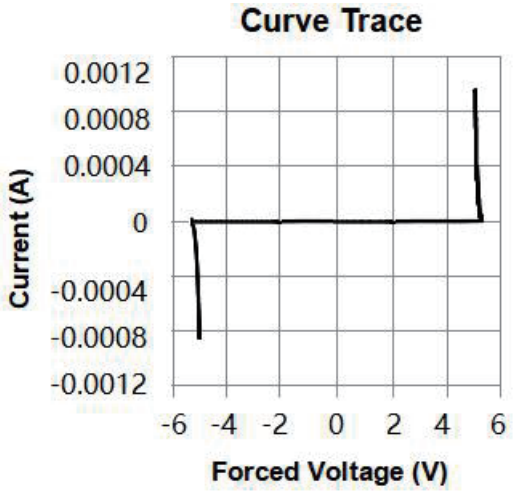


Fig.4 IV Curve

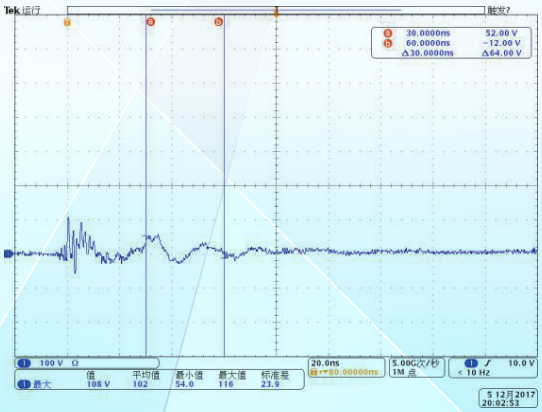


Fig.5 Clamping Voltage at IEC61000-4-2 +8kV Pulse Waveform

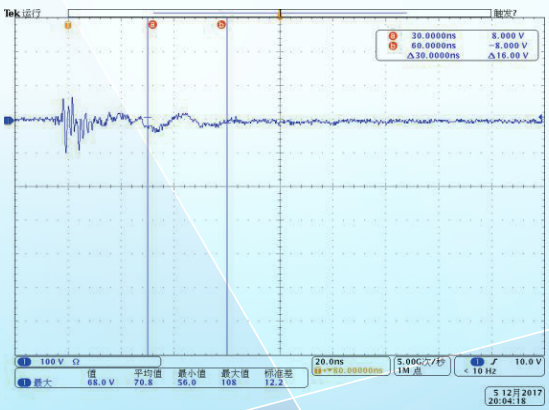
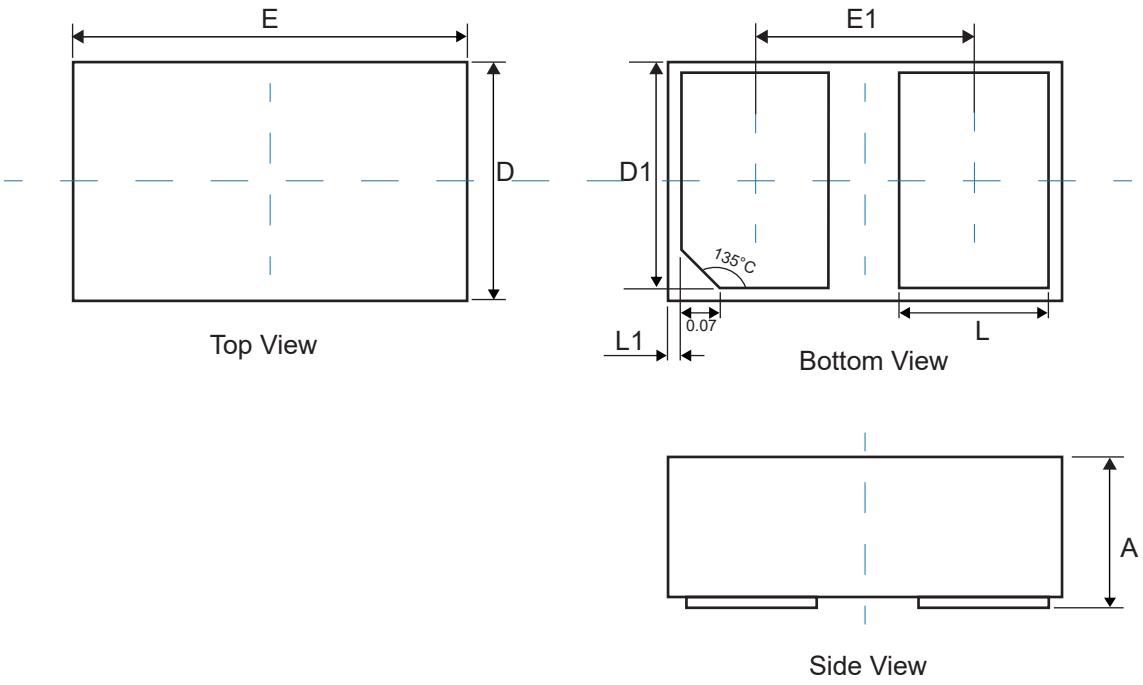


Fig.6 Clamping Voltage at IEC61000-4-2 -8kV Pulse Waveform

Physical Dimensions(mm.)

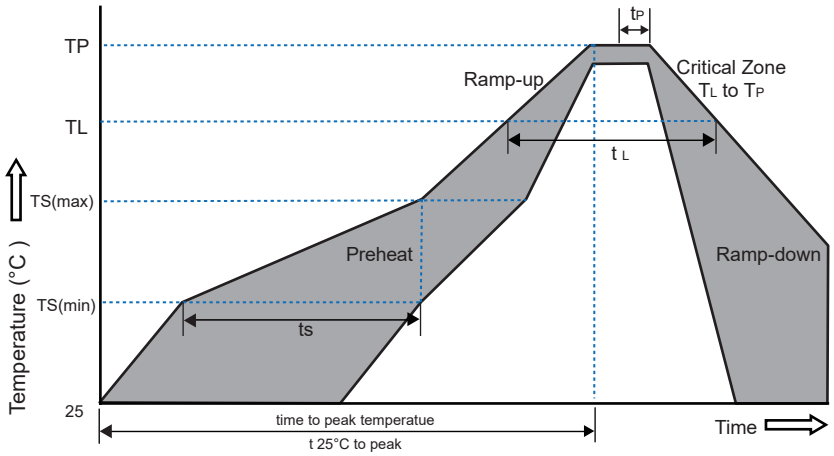


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.350	0.450	0.014	0.018
D	0.550	0.650	0.022	0.026
E	0.950	1.050	0.037	0.041
D1	0.420	0.520	0.017	0.020
E1	0.550	0.650	0.022	0.026
L	0.270	0.370	0.011	0.015
L1	0.000	0.100	0.000	0.004

Packaging Quantity

Part Number	Size(mm)	Delivery Form	Delivery Quantity
JEN1006-5V-C	1.00x0.60x0.40	7"T&R	10,000

Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time(Min to Max)(ts)	60~180 secs.
Average ramp up rate (Liquid us Temp(T_L) to peak)		3°C/sec. Max
Ts(max) to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature (t_L)	60~150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (TP)		8 min. Max
Do not exceed		+260°C

Part Number System

JE N1006 - 5V - C

- C=Bi-directional
  Blank=Uni-directional
- Working Voltage: 5V
- DFN1006
- JDT ESD

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JDT FUSE:

JFC1206-1450FS JFC2410-1400TS ASMD2920-300-30V JESD0603V24 A600-160 JFC2410-2150TS ASMD0603-020 ASMD1210-110-16V ASMD1812-050-60V ASMD1812-300 JEN1006-9V-C ESD36V32D-A JFC2410-2100TS A30-110 ASMD1206-100-24V ASMD2920-260 ASMD1812-020-60V JEN2510-3.3V-UL4 ASMD0805-010-30V ASMD1206-075-30V A250-200 A250-800 A72-250 ASMD0603-035 A16-1400 JED323-15V-C ASMD0603-050-12V A30-300 ASMD0603-010-30V ASMD2920-260-24V