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PRODUCT DATASHEET

Electro-Static Discharge

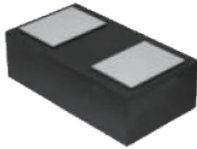
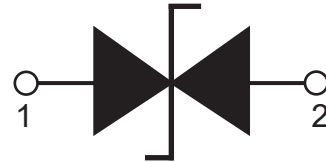
JEN1006-5V-C ESD

Features

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

Applications

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

Pin Description

Schematic Diagram

Limiting Values($T_A = 25\text{ }^\circ\text{C}$, 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
PPP	Peak Pulse Power	$t_p=8/20\mu s$	-	80	W
I _{PPM}	Rated Peak Pulse Current	$t_p=8/20\mu s$	-	8.0	A
T _A	Ambient Temperature Range	-	-55	125	$^\circ\text{C}$
T _{stg}	Storage Temperature Range	-	-55	150	$^\circ\text{C}$

Electrical Characteristics($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Working Voltage	$T_A=25\text{ }^\circ\text{C}$	-	-	5.0	V
V _{BR}	Breakdown Voltage	$I_R=1\text{mA}; T_A=25\text{ }^\circ\text{C}$	5.6	-	8.4	V
I _R	Reverse Leakage Current	$V_{RWM}=5\text{V}; T_A=25\text{ }^\circ\text{C}$	-	-	0.1	μA
V _C	Clamping Voltage	$I_{PP}=8\text{A}, t_p=8/20\mu s$	-	-	10	V
C _J	Junction Capacitance	$V_R=0\text{V}, f=1\text{MHZ}$	-	-	15	pF

Typical Characteristics

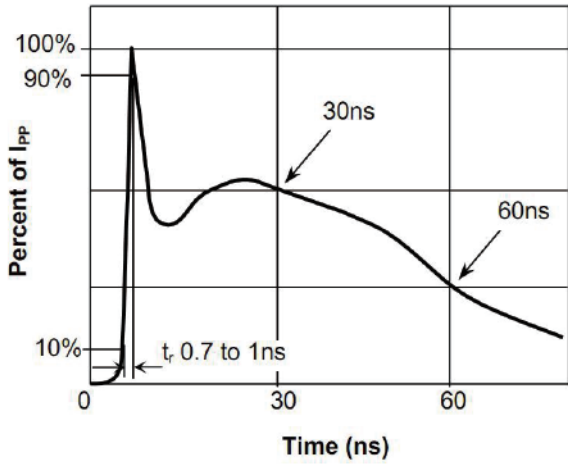


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

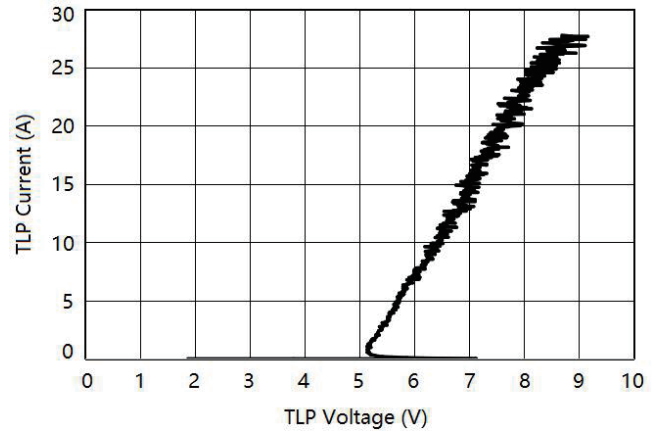


Fig.2 Transmission Line Pulse (TLP)

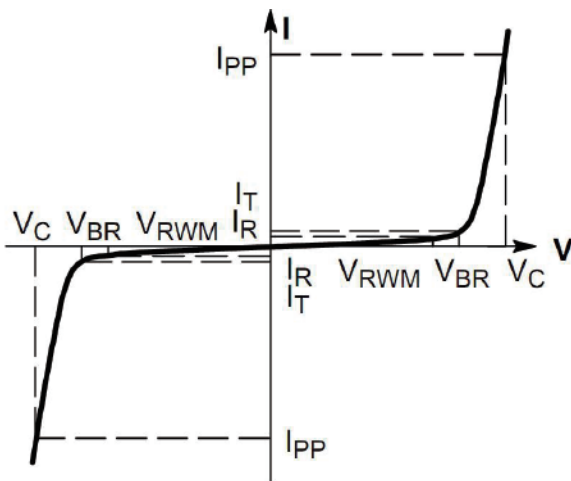


Fig.3 V-I Characteristics for Bidirectional Diode

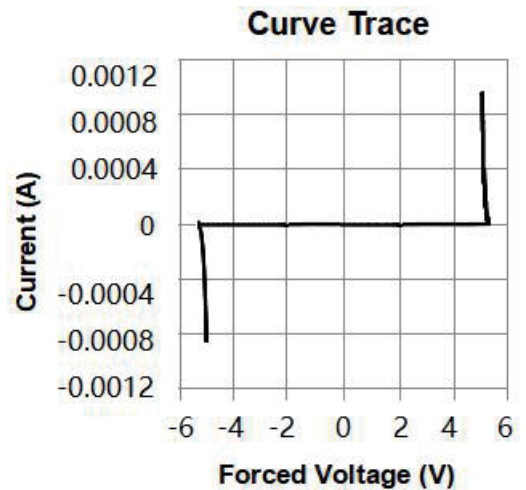


Fig.4 IV Curve

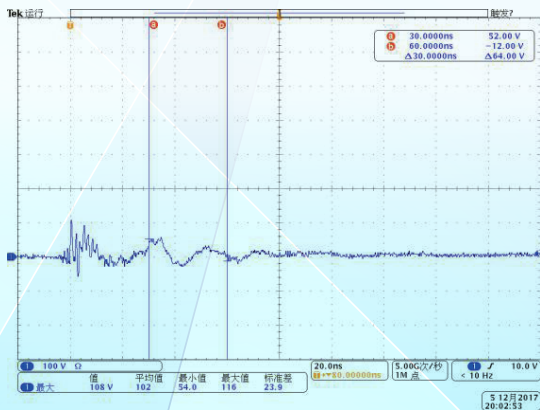


Fig.5 Clamping Voltage at IEC61000-4-2 +8kV Pulse Waveform

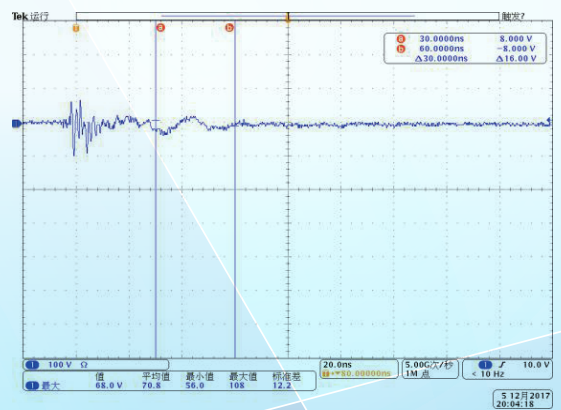
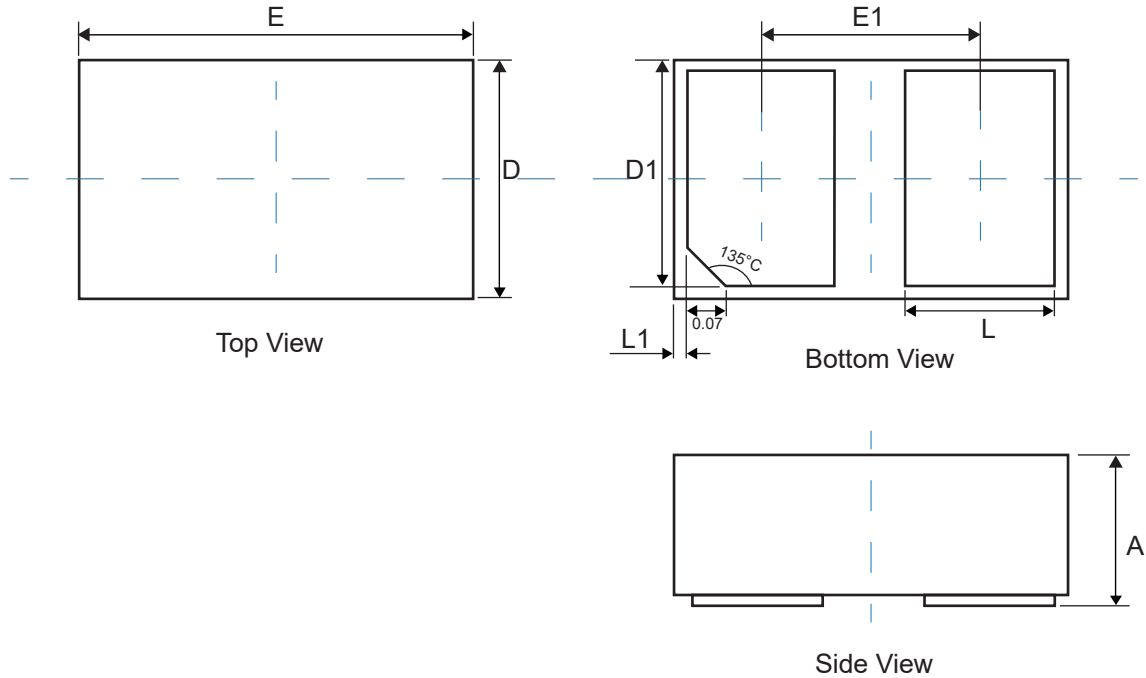


Fig.6 Clamping Voltage at IEC61000-4-2 -8kV Pulse Waveform

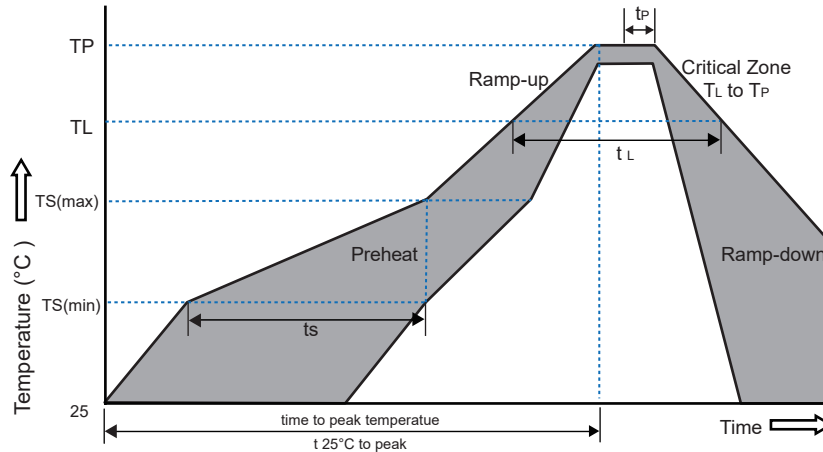
Physical Dimensions(mm.)


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

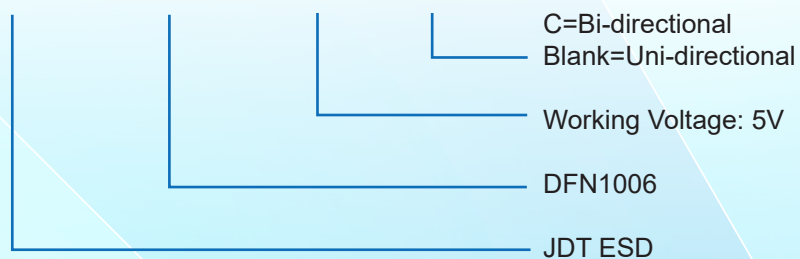
Soldering Parameters



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)(t_s)	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



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