

Transient Voltage Suppressors for ESD Protection

SE05N6C01HZ

Features

- ◆ Working voltage : 5V
- ◆ Low capacitance: 0.4pF (Typical)
- ◆ Low leakage current: 1.0μA @ V_{RWM}
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

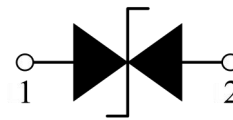
DFN1006



Applications

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

Functional Diagram



Mechanical Characteristics

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

Absolute Maximum Rating

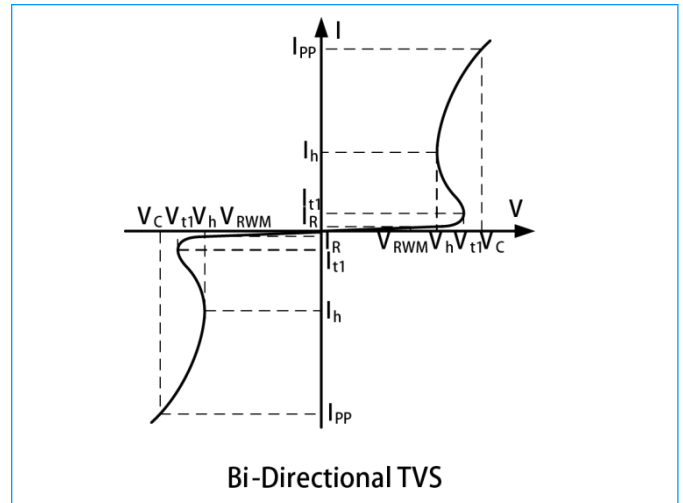
Symbol	Parameter	Value	Units
T_{LST}	Lead Soldering Temperature	260 (10 sec.)	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_{OPT}	Operating Temperature Range	-55 to +150	°C
V_{ESD}	ESD per IEC 61000-4-2(Air)	±20	KV
	ESD per IEC 61000-4-2 (Contact)	±15	

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I-V Curve Characteristics

Symbol	Parameter
I_{PP}	Maximum Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{t1}	Trigger Voltage
I_{t1}	Trigger Current @ V_{t1}
V_h	Holding Voltage
I_h	Holding Current @ V_h



Electrical Characteristics (@ $T_A=25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}	--	--	--	5	V
I_R	$V_{RWM}=5\text{V}$, $T=25^\circ\text{C}$	--	--	1	μA
V_{BR}	$I_T = 1\text{mA}$	5.6	--	9	V
V_C	$I_{PP}=4\text{A}$, $t_p=8/20\mu\text{s}$	--	--	22	V
C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	--	0.4	--	pF

Characteristic Curves

Fig1. Transmission Line Pulse (TLP)

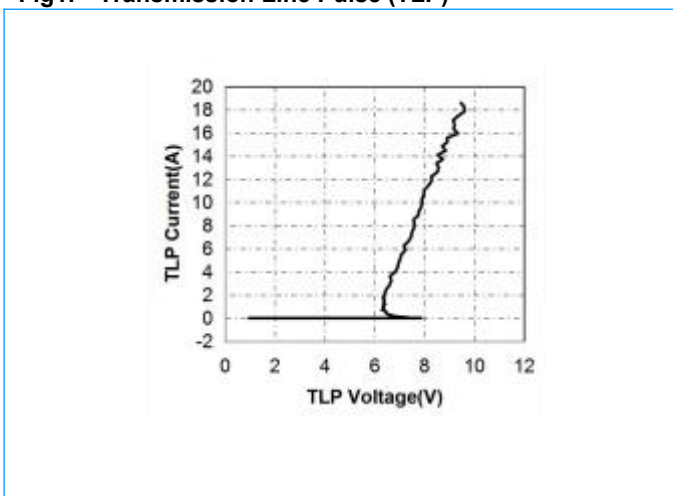
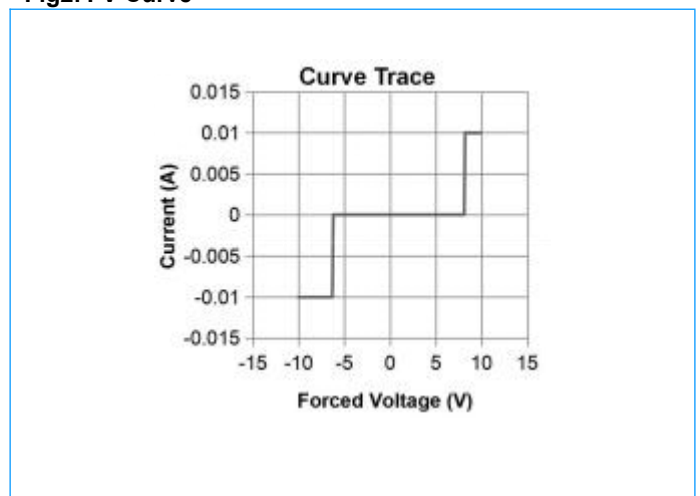


Fig2. I-V Curve



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Characteristic Curves (Continue)

Fig3. ESD Clamping of I/O_1to I/O_2
(+8kV Contact per IEC 61000-4-2)

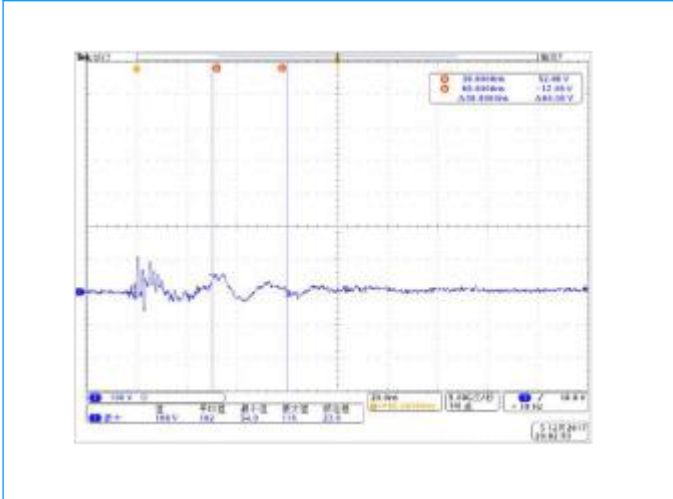
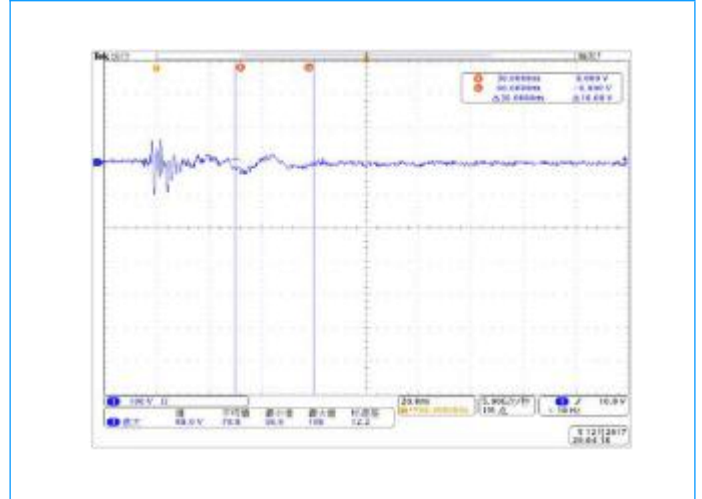
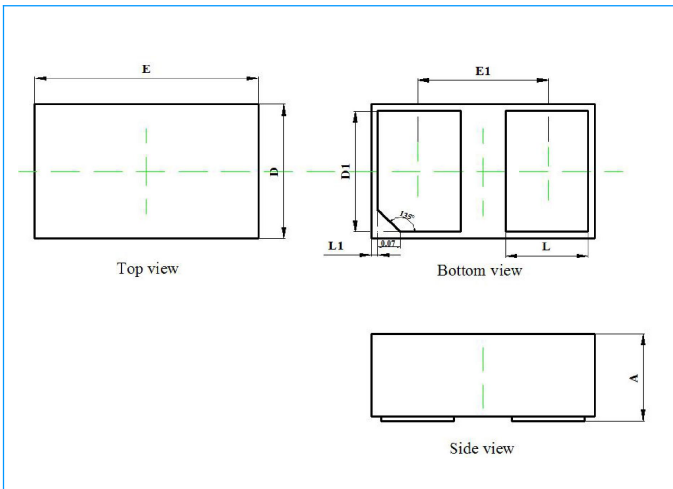


Fig4. ESD Clamping of I/O_1to I/O_2
(-8kV Contact per IEC 61000-4-2)



DFN1006-2L Package Outline & Dimensions



Symbol	Millimeter		Inches	
	Min	Max	Min	Max
A	0.350	0.450	0.014	0.018
D	0.55	0.65	0.022	0.026
E	0.95	1.05	0.037	0.041
D1	0.42	0.52	0.017	0.020
E1	0.55	0.65	0.022	0.026
L	0.27	0.37	0.011	0.015
L1	0.00	0.10	0.000	0.004