Discription

The HESD5341N protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

It gives designer the flexibility to protect one unidirectional line in applications where arrays are not practical.



DFN1006-2L

Features

- ★ Transient protection for high-speed data lines
  IEC 61000-4-2(ESD) ±20kV (Contact)
  ±20kV (Air)
  IEC 61000-4-4(EFT) 40A (5/50 ns)
- ★ Peak power dissipation: 60W (8/20us)
- ★ Working voltages : 5V
- ★ Ultra-small package (1.0mmx0.6mmx0.5mm)
- ★ Protects one data, control line
- ★ Low capacitance: 0.4pF (Typical)
- ★ Low clamping voltage
- ★ Low leakage current



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
HESD5341N	DFN1006-2L	10000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	60	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Temperature Range	-55 to +150	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±20 ±20	KV
	IEC61000-4-4 (EFT)	40	A

Electrical Characteristics Ratings at 25°C

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	6.0			V
I_R	Reverse Leakage Current	V_{RWM} = 5V			100	nA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs			10	V
		I_{PP} = 4A, t_p = 8/20μs			15	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		0.60	0.80	pF

Typical Characteristics

Fig 1 Power Derating Curve

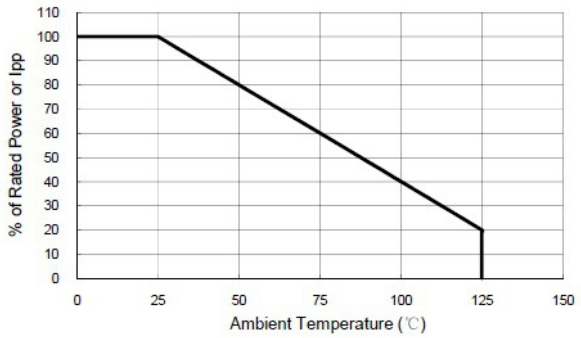


Fig 2 Clamping Voltage vs Peak Pulse Current

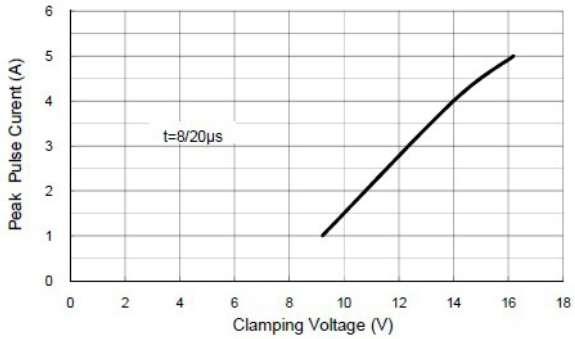


Fig 3 Voltage Sweeping

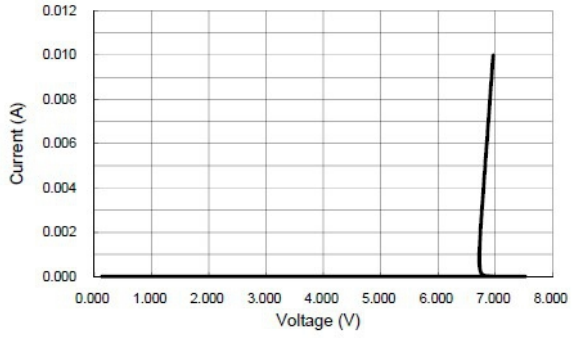


Fig 4 Voltage vs Capacitance

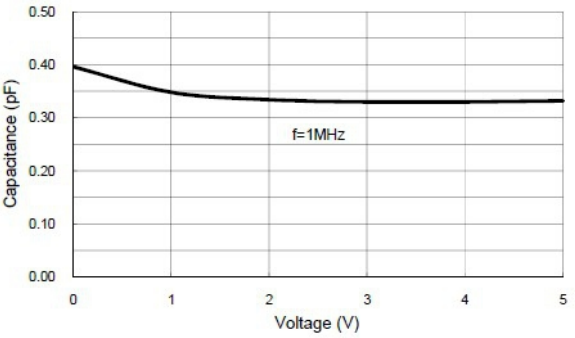


Fig 5 ESD Clamping
(+8kV Contact per IEC 61000-4-2)

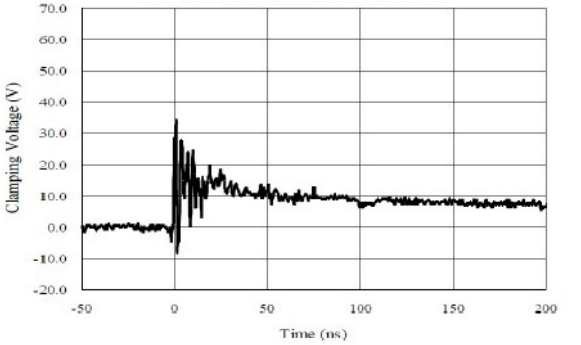
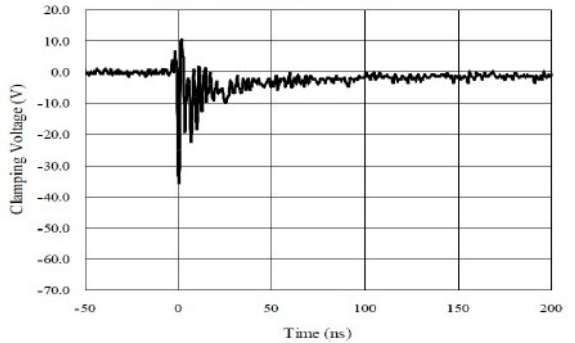
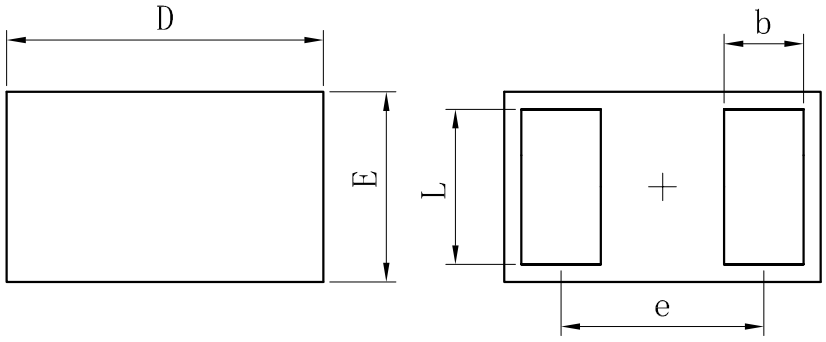


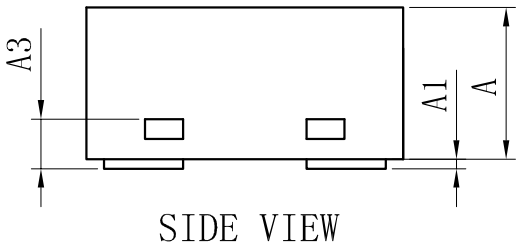
Fig 6 ESD Clamping
(-8kV Contact per IEC 61000-4-2)



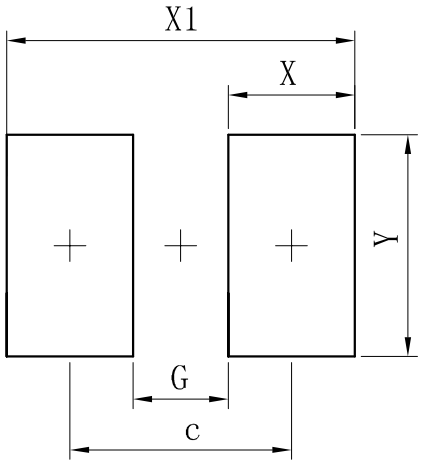
Outline And Dimensions



DFN1006-2L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	–	0.64	–
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	–	0.05
A3	0.127REF.		
All Dimensions in mm			



Soledering Footprint



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

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BD237STU C4D08120E-TR IDL10G65C5XUMA2 TPD1E0B04DPYR HBAS40-05LT1G S3D08065E ISL28133FHZ-T7 PTVSHC3D5VU TPS7A0533PDBZR-HXY 1SMB5934B CH440G SGM3798YG/TR TLV74318PDBVR-HXY 2N7002-HXY C6D06065Q-TR MJD127G S4D15120H 1SMB5930BT3G AOD403-HXY E4D10120A IRLML2244TRPBF-HXY MUR1040FCT C3M0040120D DMPH6250SQ-13 DSC06065 ISL28233FUZ-T7 MSC040SMA120B4 Si2323DS-T1-E3-HXY SG3525-HXY SS5150