



Discription

The HESDLC5VB1AF-C 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 bi-directional line in applications where arrays are not practical.



DFN1006-2L

Features

- ★ Transient protection for high-speed data lines
IEC 61000-4-2(ESD) $\pm 30\text{kV}$ (Contact)
 $\pm 30\text{kV}$ (Air)
IEC 61000-4-4(EFT) 40A (5/50 ns)
- ★ Peak power dissipation: 30W (8/20us)
- ★ Working voltages : 5V
- ★ Ultra-small package (1.0mmx0.6mmx0.5mm)
- ★ Protects one I/O line
- ★ Low clamping voltage
- ★ Low leakage current



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
HESDLC5VB1AF-C	DFN1006-2L	10000

Absolute Ratings($T_{amb} = 25^{\circ}\text{C}$)

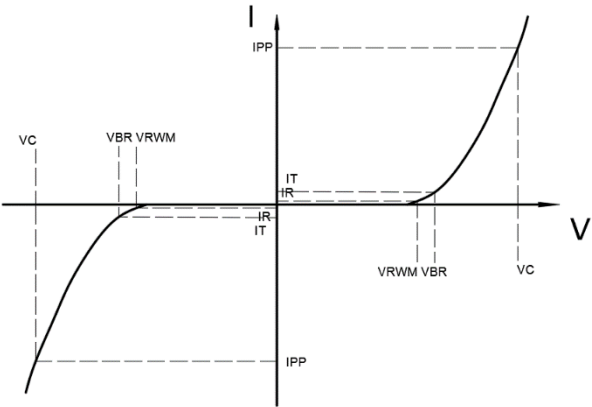
Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p = 8/20 \mu s$)	30	W
I_{PP}	Peak Pulse Current ($t_p = 8/20 \mu s$)	3	A
V_{ESD}	ESD(IEC61000-4-2 air discharge) @ 25°C	± 30	kV
V_{ESD}	ESD(IEC61000-4-2 contact discharge) @ 25°C	± 30	kV
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
T_{op}	Operating Temperature Range	-40 to +150	$^{\circ}\text{C}$
T_j	Maximum junction temperature	150	$^{\circ}\text{C}$



Electrical Characteristics Ratings at 25°C

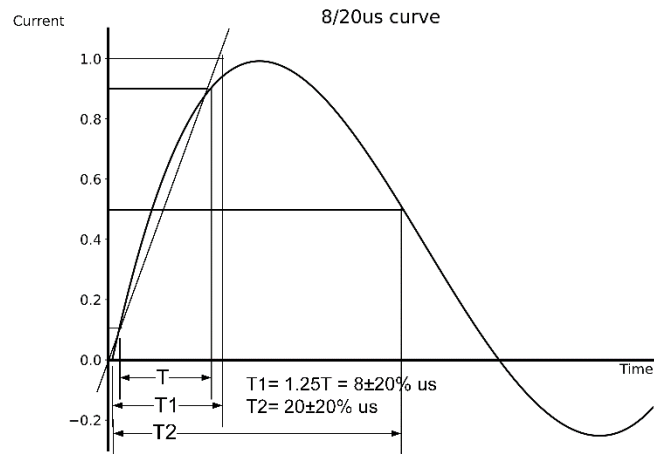
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0		8	V
Reverse Leakage Current	I_R	$V_{RWM}=5V$			0.2	μA
Clamping Voltage	V_C	$I_{PP}=1A$; $t_p=8/20\mu s$			8	V
Clamping Voltage	V_C	$I_{PP}=3A$; $t_p=8/20\mu s$			10	V
Junction Capacitance	C_J	I/O to GND; $V_R=0V$; $f=1MHz$		5.5		pF

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}

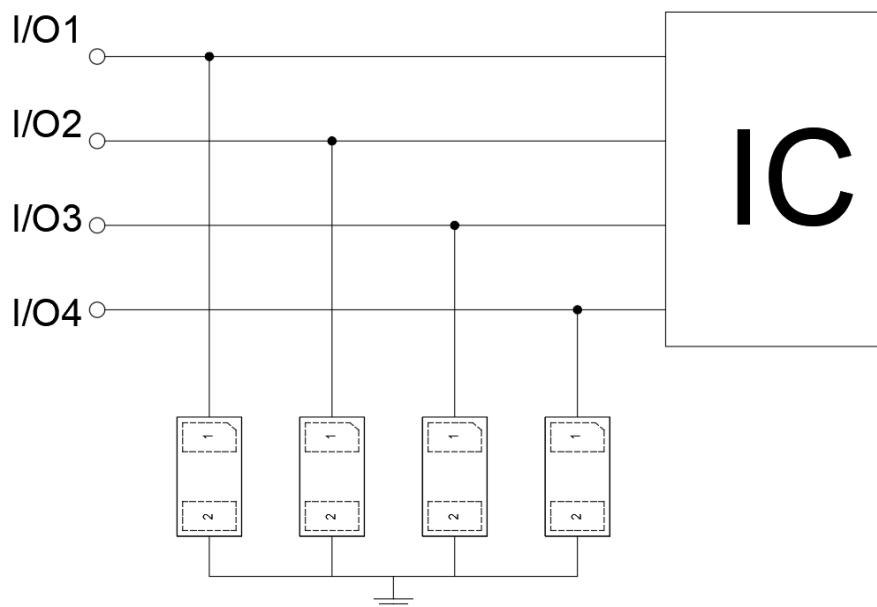




Typical Characteristics

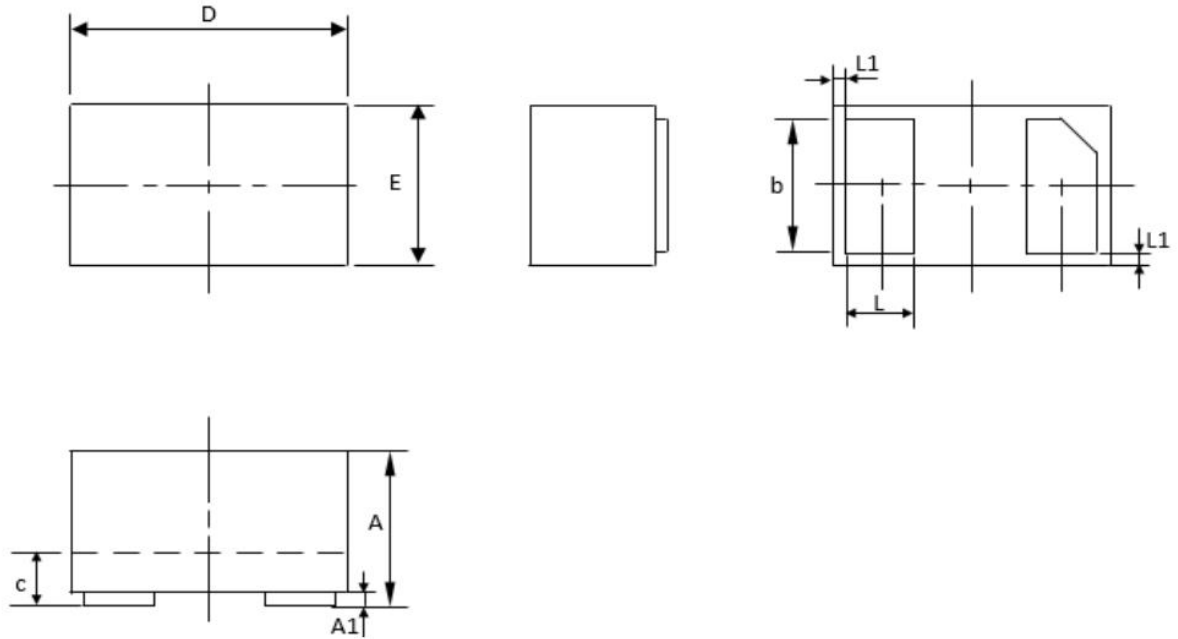


Typical Application





Outline And Dimensions



DFN1006-2L			
Dim	Min	Typ.	Max
A	0.46	0.48	0.50
A1	0	0.02	0.05
b	0.45	0.5	0.55
c	0.1	0.12	0.14
D	0.95	1.00	1.05
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.035	0.05	0.065
h	0.07	0.12	0.17
All Dimensions in mm			



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