HESDNC7VB1AF-A
ESD PROTECTION DIODE

Discription

The HESDNC7VB1AF-A 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

★Small Body Outline Dimensions
★Low Body Height
★Peak Power up to 80 Watts @ 8 x 20 μs Pulse
Low Leakage
★Response Time is Typically < 1 ns
★IEC61000−4−2 Level 4 ESD Protection
★IEC61000−4−4 Level 4 EFT Protection
★ We declare that the material of product compliance with RoHS requirements.

Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
HESDNC7VB1AF-A	DFN1006-2L	10000

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20μs)	130	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	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±20 ±15	KV
	IEC61000-4-4 (EFT)	40	A

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

Device	V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)		I_T	V_C (V) @ I_{PP}=3 A*	V_C (V) @ Max I_{PP}*	I_{PP} (A)*	P_{PK} (W)*	C (pF)	$R_{(dynamic)}$ @16A(TLP)
	Max	Max	Min	Max	mA	Typ	Max	Max	Max	Typ	Typ
HESDNC7VB1AF-A	7.0	1.0	7.2	9	1.0	13	17	9	153	8	0.24

*Surge current waveform per Figure 2.

1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25℃.

Typical Characteristics

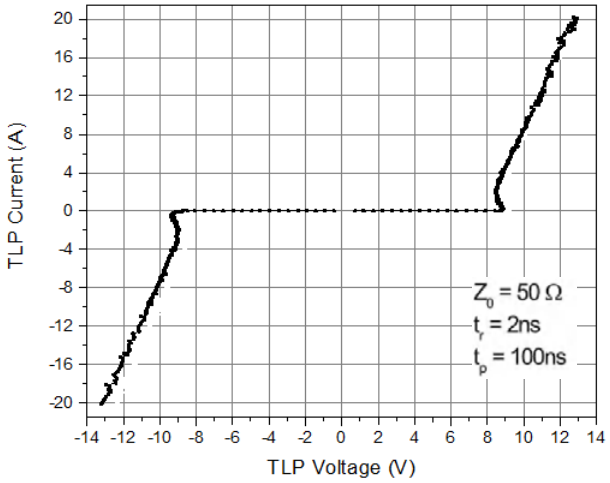


Fig1.TLP Measurement

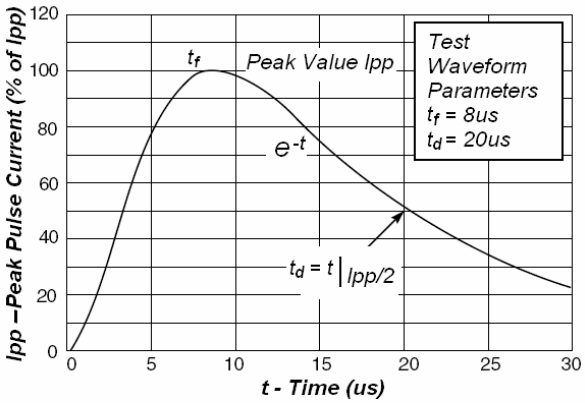


Fig2. Pulse Waveform

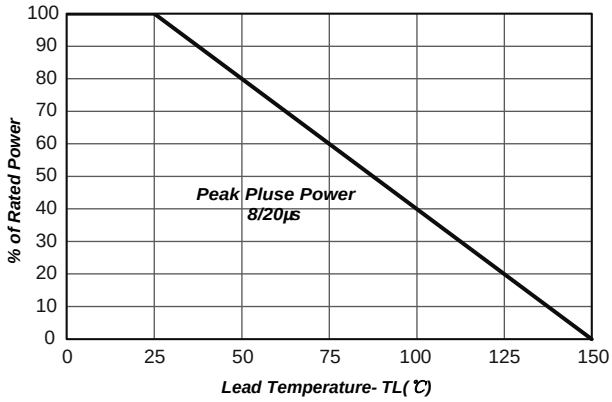
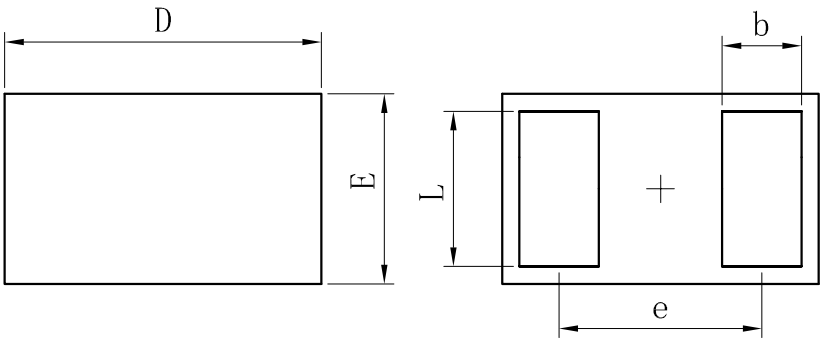


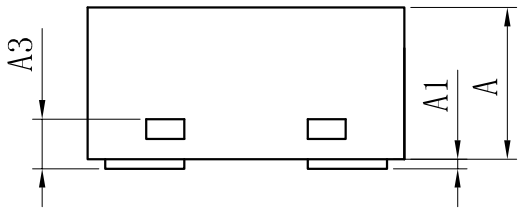
Fig3.Power Derating Curve

Outline and Dimensions



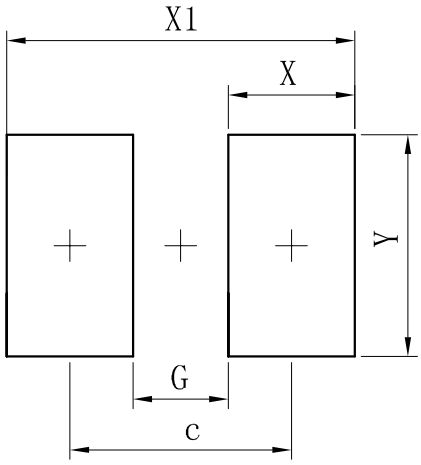
TOP VIEW BOTTOM VIEW

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			



SIDE VIEW

Soldering Footprint



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

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