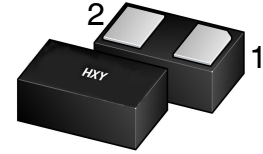




### Discription

The HESDNC24VB1AF-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:  
1.00 mm x 0.60 mm
- ★ Low Body Height: 0.50 mm
- ★ Low Leakage
- ★ Response Time is Typically < 1 ns
- ★ ESD Rating of Class 3 per Human Body Model
- ★ IEC61000-4-2 Level 4 ESD Protection
- ★ We declare that the material of product compliance with RoHS requirements and Halogen Free.



Circuit Diagram

### Ordering information

Product ID	Pack	Qty(PCS)
HESDNC24VB1AF-A	DFN1006-2L	10000

### Absolute Ratings (T<sub>amb</sub>=25°C )

Symbol	Parameter	Value	Units
P <sub>pp</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20μs)	300	W
T <sub>L</sub>	Maximum lead temperature for soldering during 10s	260	°C
T <sub>stg</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>op</sub>	Operating Temperature Range	-40 to +125	°C
T <sub>j</sub>	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	±30 ±30 KV

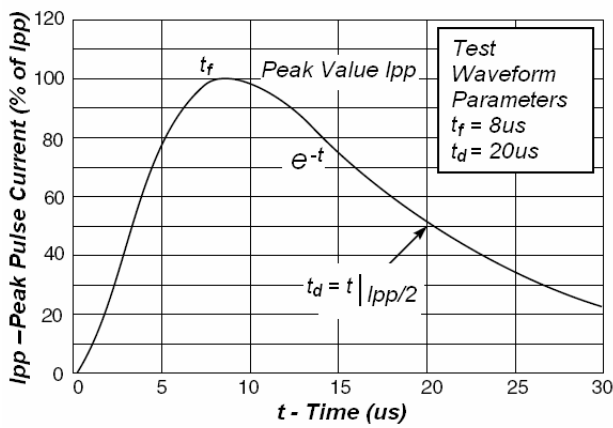


**Electrical Parameter** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

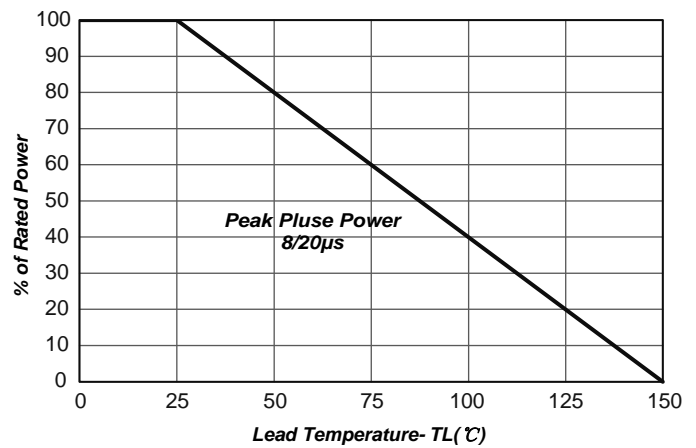
Device	$V_{RWM}$ (V)	$I_R$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$V_{BR}$ (V) * @ $I_T = 1\text{mA}$		$I_{PP}$ (A) **	$V_C$ (V) ** @ $I_{PP} = 5\text{A}$	$P_{PK}$ (W) **	$C$ (pF) $V_R = 0\text{V}, f = 1\text{MHz};$
	Max	Max	Min	Max	Max	Max	Max	Typ
HESDNC24VB1AF-A	24	0.1	25	29.5	5	60	300	15

\*  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$ .

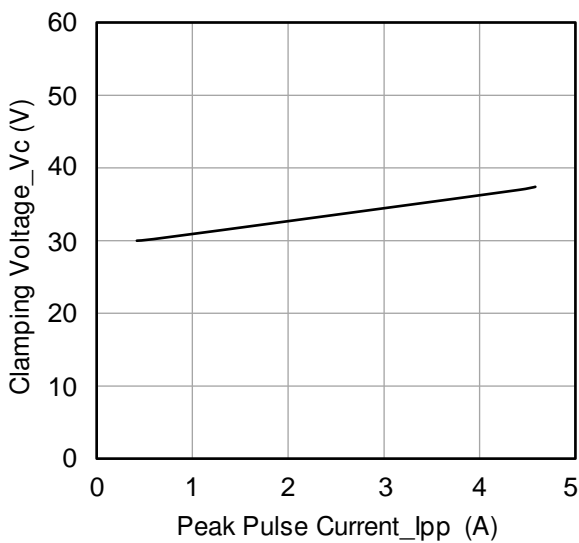
\*\* Surge current waveform per Figure 1.



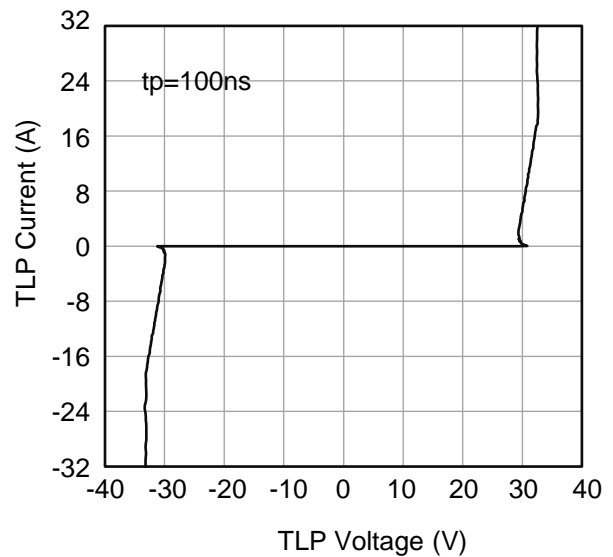
**Fig1. Pulse Waveform**



**Fig2. Power Derating Curve**



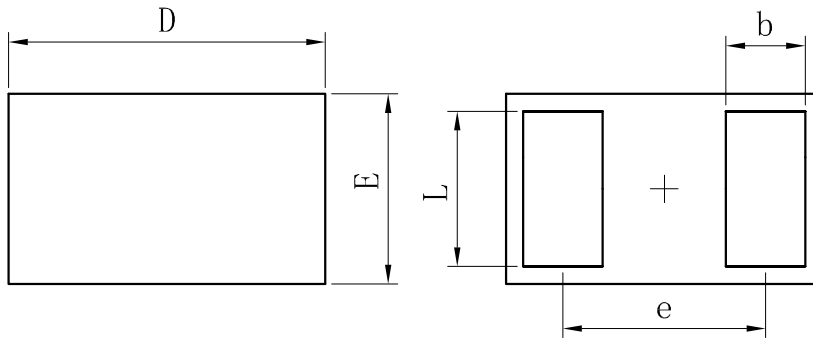
**Fig 3. Clamping Voltage vs. Peak Pulse Current**



**Fig 4. TLP Measurement**



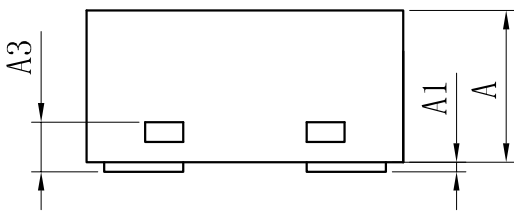
**OUTLINE AND DIMENSIONS**



TOP VIEW

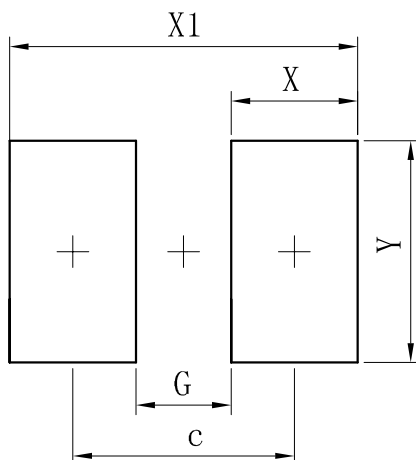
BOTTOM VIEW

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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