# **Discription**

The PESDNC2FD3V3BA 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 105 Watts @ 8 x 20 μ s Pulse
- ★ Low Leakage current
- ★ Response Time is Typically < 1 ns
- ★ ESD Rating of Class 3 per Human Body Model



Circuit Diagram

# Orderingin formation

Product ID	Pack	Qty(PCS)		
PESDNC2FD3V3BA	DFN1006-2L	10000		

### Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20 μ s)	100	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	±30 ±30	KV
	IEC61000-4-4 (EFT)	40	Α



### **Electrical Characteristics**

	V <sub>RWM</sub> (V)	I <sub>R</sub> (μΑ) @ V <sub>RWM</sub>		/) @ I <sub>T</sub> te 1)	I <sub>T</sub>	V <sub>C</sub> (V) @ I <sub>PP</sub> = 1 A (Note 2)	V <sub>C</sub> (V) @MAX I <sub>PP</sub> (Note 2)	I <sub>PP</sub> (A) (Note 2)	P <sub>PK</sub> (W) (Note 2)		$R_{DYN}(\Omega)$ @ $t_{p}=100$ ns(TLP)
Device	Max	Max	Min	Max	mA	Max	Max	Max	Max	Тур.	Тур.
PESDNC2FD3V3BA	3.3	0.05	5	6.5	1.0	7	11	9	100	15	0.2

- 1.  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of 25°C.
- 2. Surge current waveform per Figure 1.

# **Typical Characteristics**

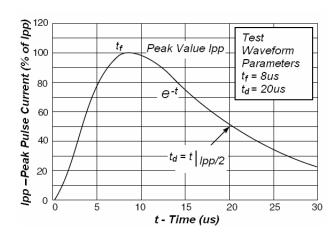


Fig1. Pulse Waveform

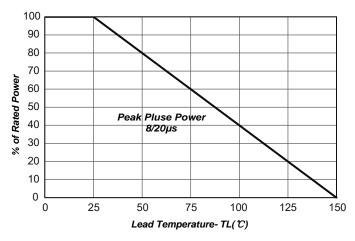


Fig2.Power Derating Curve

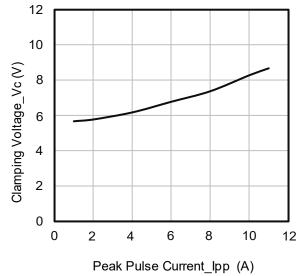


Fig3. Clamping Voltage vs. Peak Pulse Current

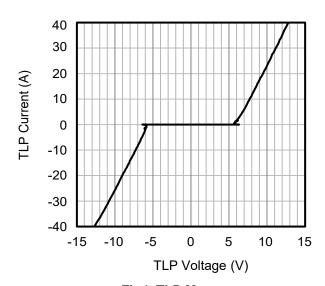
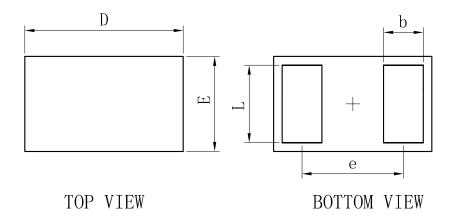
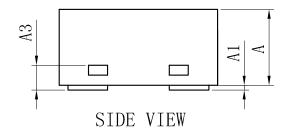


Fig4. TLP Measurement

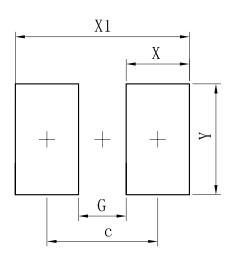
#### **OUTLINE AND DIMENSIONS**



DFN1006-2L					
Dim	Min	Тур	Max		
D	0. 95	1.00	1.05		
Е	0. 55	0.60	0.65		
е	-	0.64	ı		
L	0.44	0.49	0. 54		
b	0. 20	0. 25	0.30		
A	0.43	0.48	0. 53		
A1	0	. 1	0.05		
А3	0. 127REF.				
All Dimensions in mm					



### **SOLDERING FOOTPRINT**



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

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