

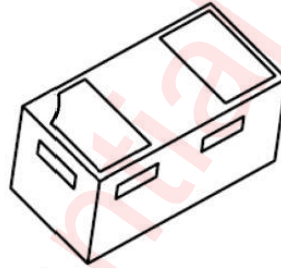
Bi-direction Transient Voltage Suppressors

Features

- Low reverse stand-off voltage: 5.0V
- Low reverse clamping voltage
- Low leakage current: 5nA
- No insertion loss to 1.0GHz
- Fast response time: <1ns
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

Package Configuration

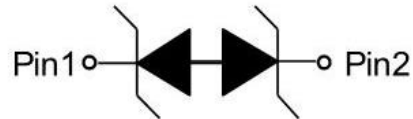
DFN1006-2L



Application

- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Peripherals
- Cellular handsets and accessories
- Portable instrumentation

Schematic diagram



Ordering Information

Part Number	Package	Marking	Moisture Sensitivity Level	Environmental Information
AW4TB00003DNR	DFN1006-2L	F1	MSL3	RoHS+HF

Absolute Maximum Ratings

$T_A = T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{\text{ESD}}^{\text{(NOTE 1)}}$	IEC 61000-4-2 ESD Voltage (Air Model)	± 30	kV
	IEC 61000-4-2 ESD Voltage (Contact Model)	± 30	
	JESD22-A114-B ESD Voltage (Per Human Body Model)	± 16	
	ESD Voltage (Machine Model)	± 0.4	
$P_{\text{PP}}^{\text{(NOTE 2)}}$	Peak Pulse Power	60	W
$I_{\text{PP}}^{\text{(NOTE 2)}}$	Peak Pulse Power	6	A
T_L	Lead Solder Temperature–Maximum (10 Second Duration)	260	$^\circ\text{C}$
T_J	Operating Temperature Range	-55 to +150	$^\circ\text{C}$
T_{STG}	Operating and Storage Temperature Range	-55 to +150	$^\circ\text{C}$

NOTE1: Device stressed with ten non-repetitive ESD pulses.

NOTE2: Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

ESD Standards Compliance

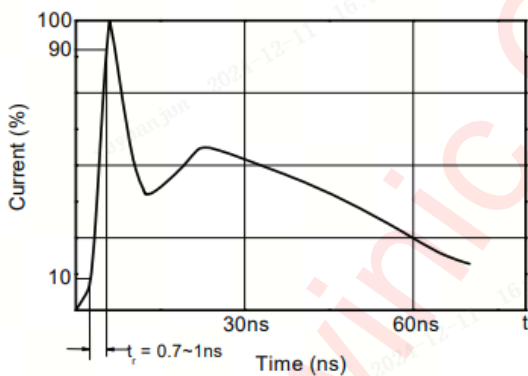
IEC61000-4-2 STANDARD

Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

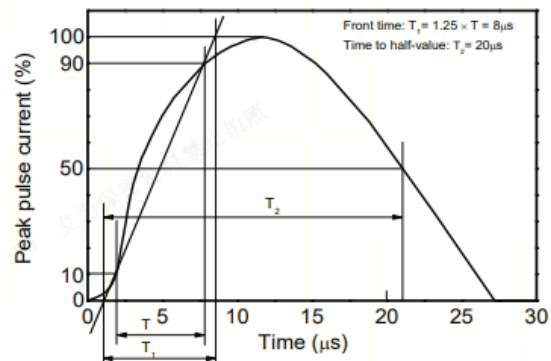
JESD22-A114-B STANDARD

ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999

Contact discharge current waveform per IEC61000-4-2

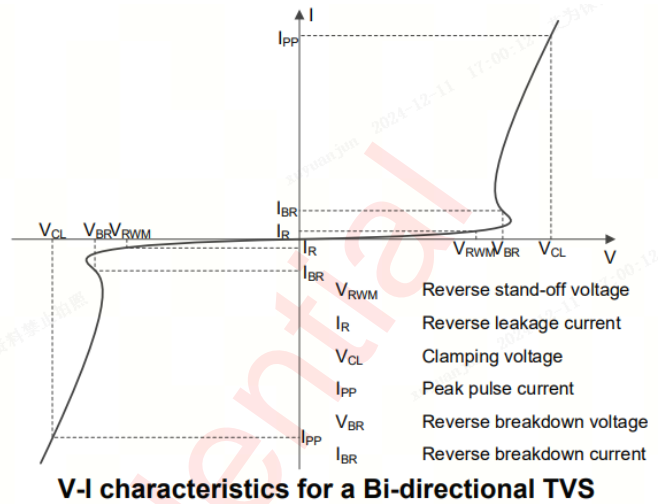


8/20μs waveform per IEC61000-4-5



Electrical Parameter

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_{BR}
I_{BR}	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage



Electrical Characteristics

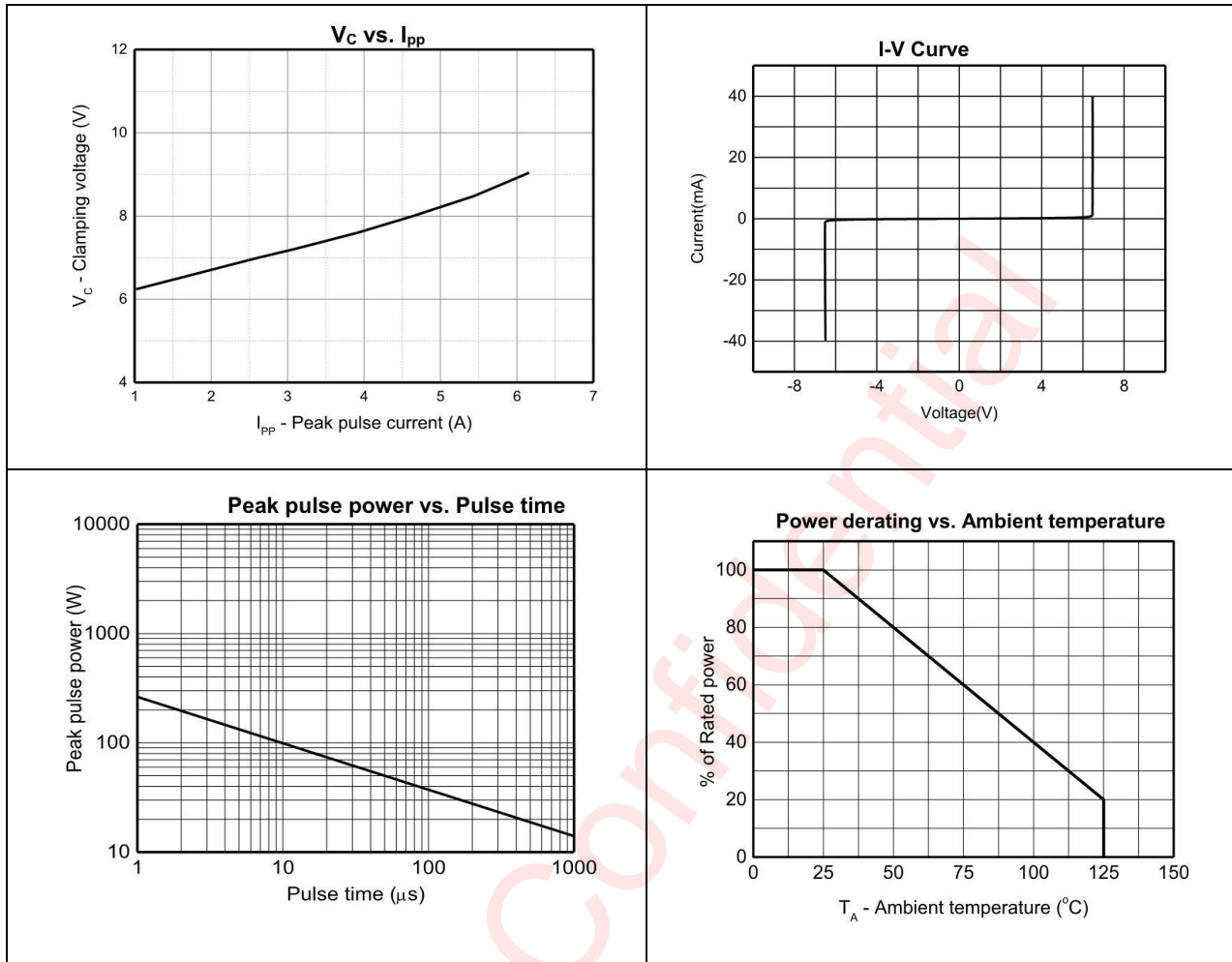
$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
$V_{RWM}^{(NOTE\ 3)}$	Reverse stand-off voltage		-	-	5	V
I_R	Reverse leakage current	$V_{RWM}=5\text{V}$	-	-	0.1	μA
V_{BR}	Breakdown Voltage	$I_T=1\text{mA}$	5.5	6.4	-	V
$V_C^{(NOTE\ 4)}$	Clamping voltage	$I_{PP}=1\text{A}$	-	7	10	V
		$I_{PP}=6\text{A}$	-	8.1	10	
C_J	Junction capacitance	$V_R=0\text{V}, f=1\text{MHz}$	-	13	-	pF

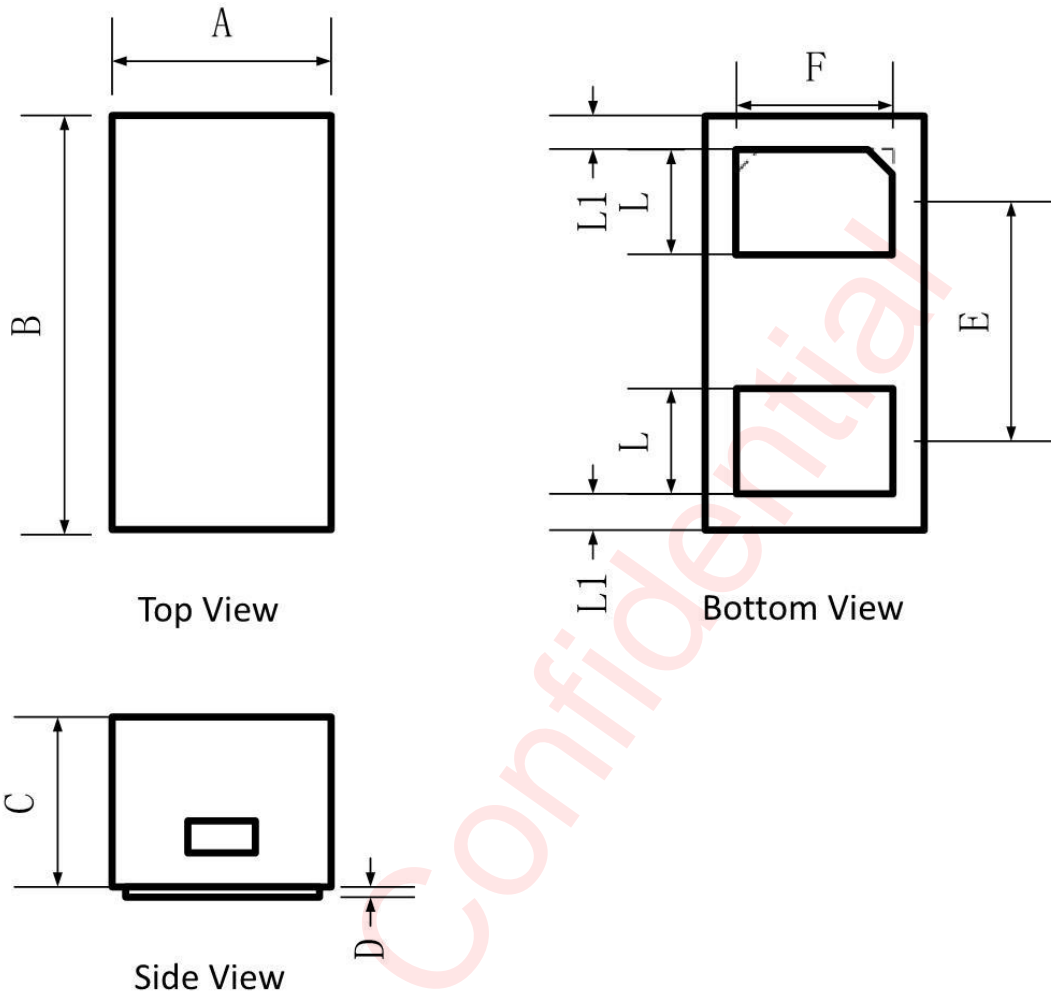
NOTE3: Other voltages available upon request.

NOTE4: Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

Electrical Characteristics Diagrams



Package Description



	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.48	0.60	0.65
B	0.95	1.00	1.08
C	0.37	0.47	0.55
D	0.00	0.03	0.05
E	-	0.65	-
F	0.35	0.50	0.55
L	0.15	0.25	0.35
L1	0.05REF		

Revision History

Version	Date	Change Record
V1.0	Nov 2023	Official released

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