

### Features

- Protects one data or power line
- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30\text{kV}$
    - Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-5 (Lightning) 8A (8/20 $\mu\text{s}$ )
- RoHS Compliant

### Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players

### Mechanical Characteristics

- Package: DFN1006
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

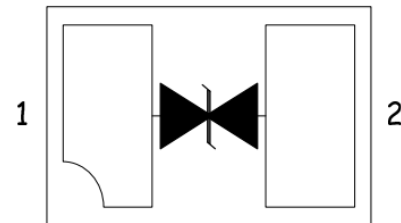
### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	Ppp	150	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 30$	Kv
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

### Dimensions DFN1006



### Pin Configuration



## Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
SPHV12-01ETG	AF	12	14	1	-	19	8	0.2	8

## Typical Performance Characteristics (TA=25°C unless otherwise Specified)

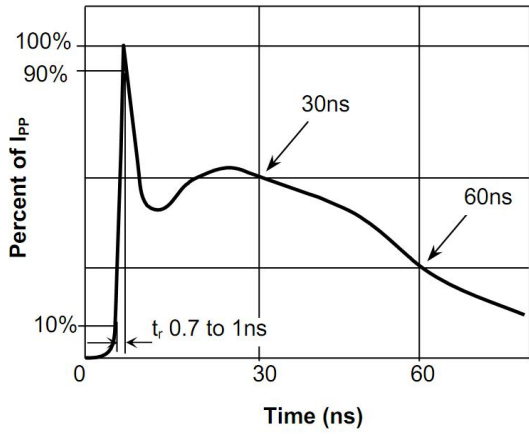


Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

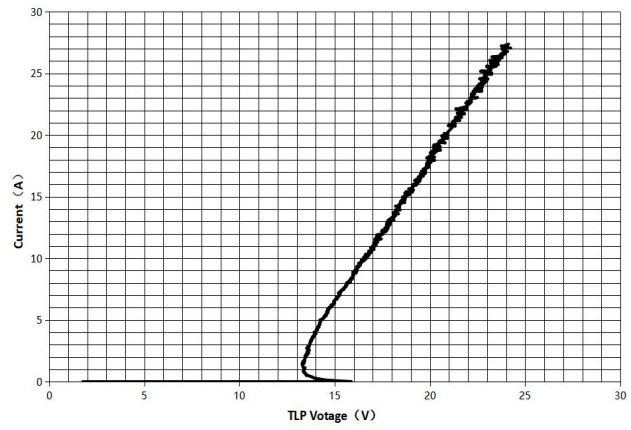


Fig.2 Transmission Line Pulse (TLP)

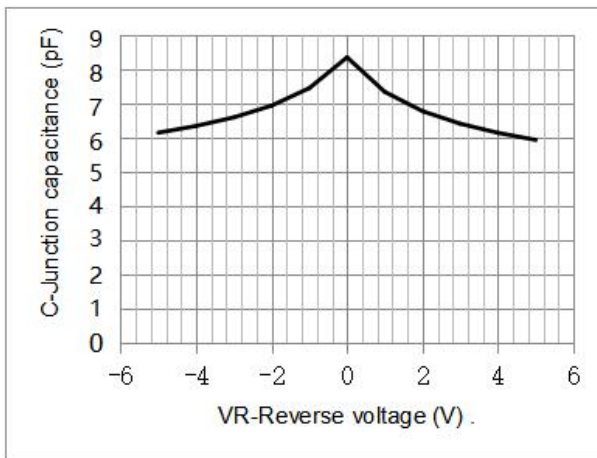


Fig.3 Capacitance vs. Reverse voltage

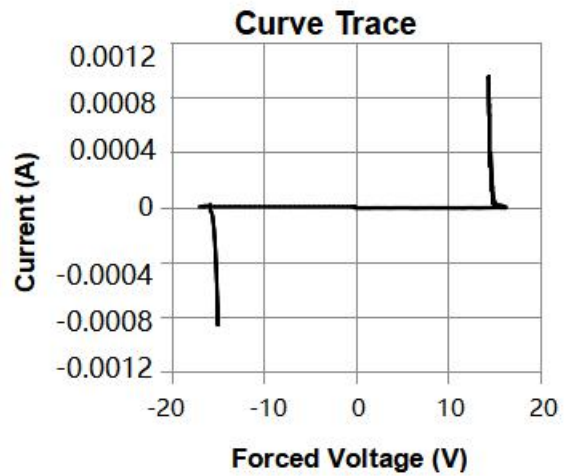
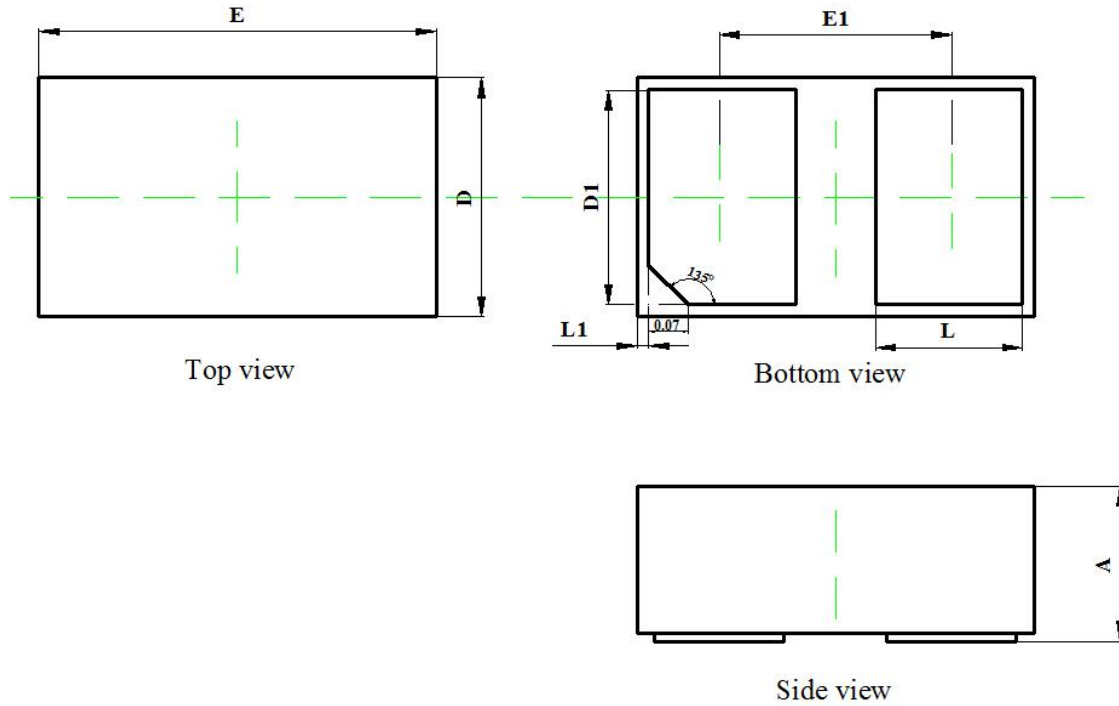


Fig.4 IV Curve ( forward voltage)

## DFN1006 PACKAGE OUTLINE & DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	0.350	0.450	0.014	0.018
<b>D</b>	0.550	0.650	0.022	0.026
<b>E</b>	0.950	1.050	0.037	0.041
<b>D1</b>	0.420	0.520	0.017	0.020
<b>E1</b>	0.550	0.650	0.022	0.026
<b>L</b>	0.270	0.370	0.011	0.015
<b>L1</b>	0.000	0.100	0.000	0.004

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