

## Features

- Ultra low capacitance: 67pF (typ)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- 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) 10A (8/20  $\mu\text{s}$ )
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant
- Lead Finish: NiPdAu

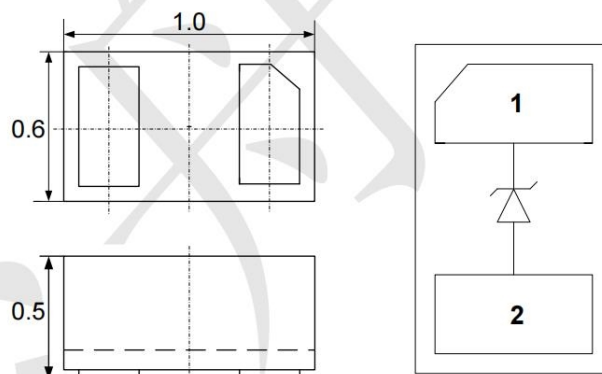
## Mechanical Characteristics

- Package: DFN1006-2 (0402)
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty : 10000/7Inch Or 5000/7Inch Tape & Reel

## Applications

- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applications
- mobile telephon

## Dimensions and Pin Configuration



**Absolute Maximum Ratings** (T<sub>amb</sub>=25°C unless otherwise specified)

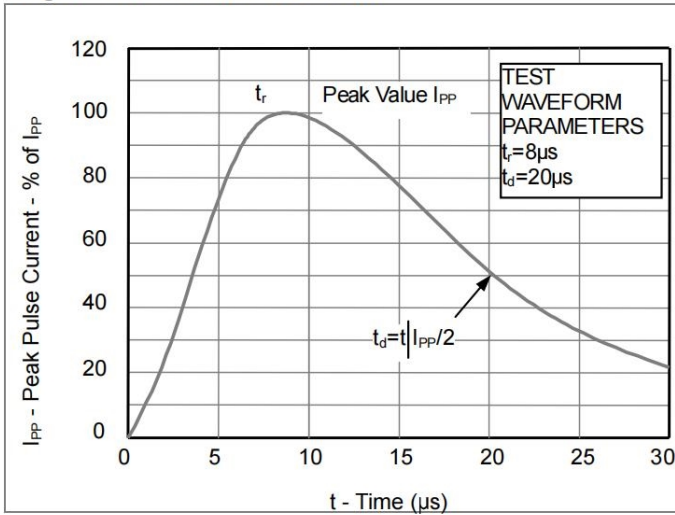
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs) (V <sub>cc</sub> -GND)	P <sub>pk</sub>	160	W
ESD per IEC61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD per IEC61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics** (T<sub>A</sub>=25°C unless otherwise specified)

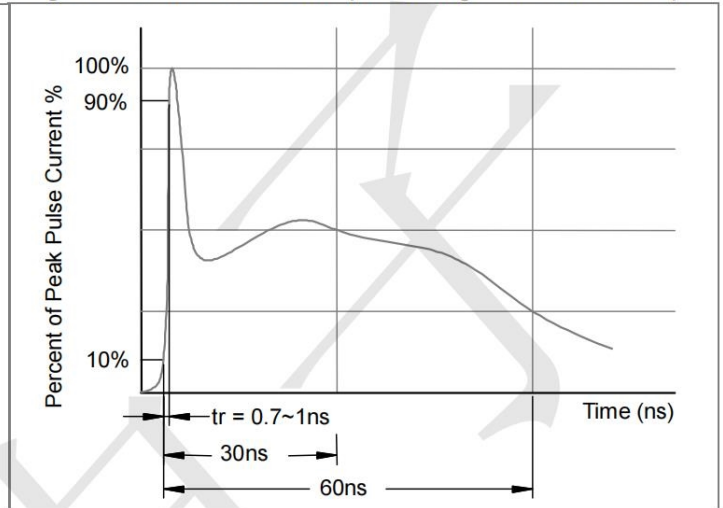
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			5	V	
Breakdown Voltage	V <sub>BR</sub>	6		9	V	I <sub>T</sub> =1mA
Leakage Current	I <sub>Leak</sub>			100	nA	V <sub>RWM</sub> =5V
Clamping Voltage	V <sub>C</sub>			11	V	I <sub>PP</sub> =4.5A, T <sub>p</sub> =8/20μs
Clamping Voltage	V <sub>C</sub>			14	V	I <sub>PP</sub> =10A, T <sub>p</sub> =8/20μs
Junction Capacitance (I/O to GND)	C <sub>J</sub>		67	90	pF	V <sub>R</sub> =0V, f=1MHz,

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

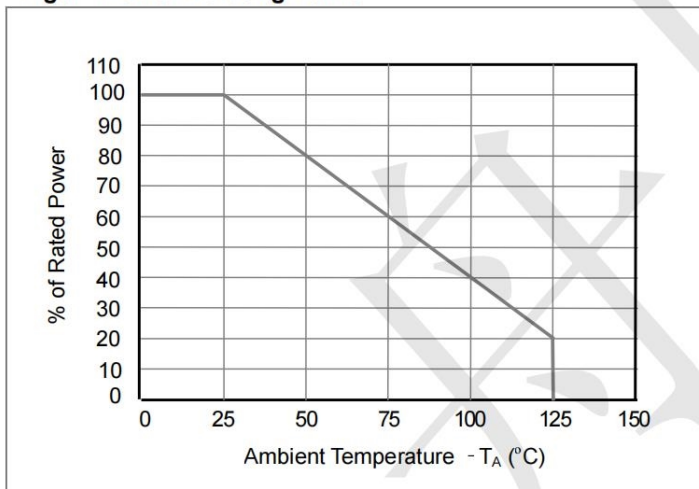
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**





**TECH PUBLIC**

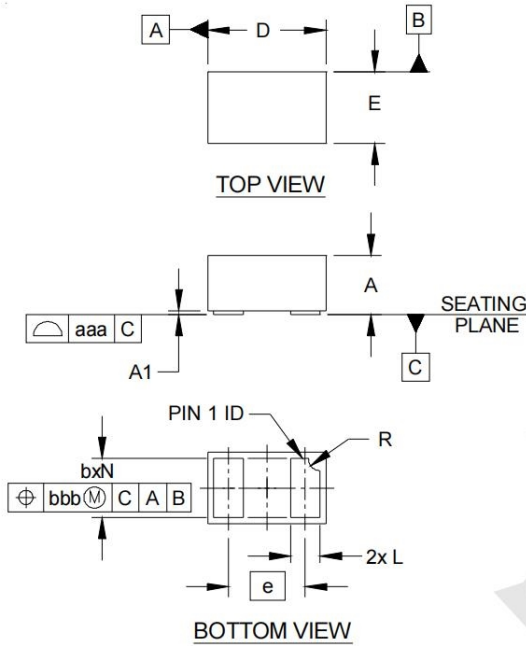
—台丹电子—

**TPESD5V0S1UL**

1-Line Uni-directional TVS Diode

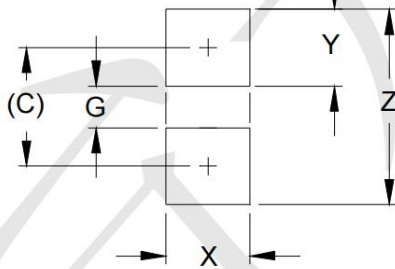
[www.sot23.com.tw](http://www.sot23.com.tw)

**Outline Drawing - DFN1006-2**



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.016	.020	.022	0.40	0.50	0.55
A1	.000	.001	.002	0.00	0.03	0.05
b	.018	.020	.022	0.45	0.50	0.55
D	.035	.039	.043	0.90	1.00	1.10
E	.020	.024	.028	0.50	0.60	0.70
e	.026 BSC			0.65 BSC		
L	.008	.010	.012	0.20	0.25	0.30
R	.002	.004	.006	0.05	0.10	0.15
N	2			2		
aaa	.003			0.08		
bbb	.004			0.10		

**Land Pattern - DFN1006-2**



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.033)	(0.85)
G	.012	0.30
X	.024	0.60
Y	.022	0.55
Z	.055	1.40