

### 1-Line Ultra Low Capacitance TVS Diode Array

www.sot23.com.tw

## Features

- \* Ultra small package: 1.0x0.6x0.5mm
- \* Ultra low capacitance: 0.18pF typical
- \* 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: ±23kV
  Contact discharge: ±20kV
- IEC61000-4-5 (Lightning) 3A (8/20µs)
- \* RoHS Compliant
- Lead Finish: NiPdAu

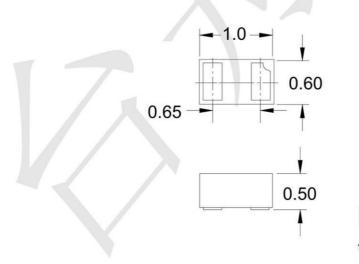
## **Mechanical Characteristics**

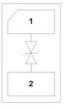
- \* Package: DFN1006-2 (0402)
- \* Lead Finish: Matte Tin
- \* Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- \* Terminal Connections: See Diagram Below
- \* Shipping Qty :10000/7Inch Tape & Reel

## Applications

- Smart phones
- \* Display Ports
- \* MDDI Ports
- \* USB Ports
- \* Digital Video Interface (DVI)
- \* PCI Express and Serial SATA Ports

### **Dimensions and Pin Configuration**





# Marking:G Or B\* \*=date code

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	60	W
Peak Pulse Current (8/20µs)	Ipp	3	А
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	Vesd	±23 ±20	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

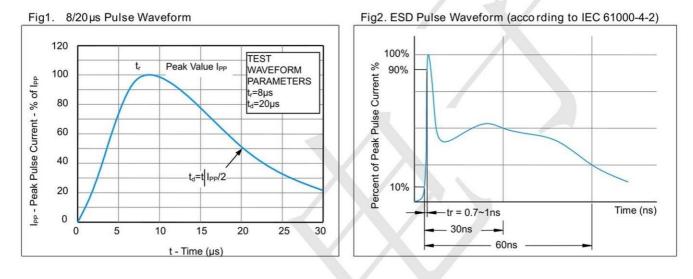
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6	7.5	9	V	IT = 1mA
Reverse Leakage Current	IR	$\mathbf{N}$		0.2	μA	VRWM = 5V
Clamping Voltage	Vc			12	V	IPP = 1A (8 x 20µs pulse)
Clamping Voltage	Vc			19	V	IPP = 3A (8 x 20⊡s pulse)
Junction Capacitance	CJ		0.18		pF	VR = 0V, f = 1MHz IO to IO

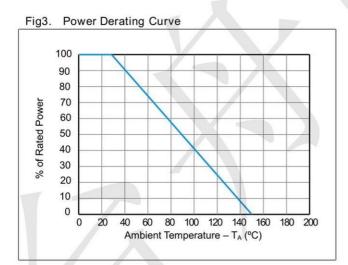


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#### Typical Performance Characteristics (T<sub>A</sub>=25°C unless otherwise Specified)





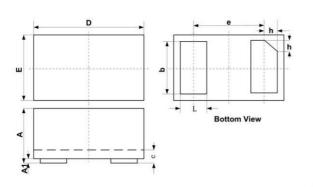
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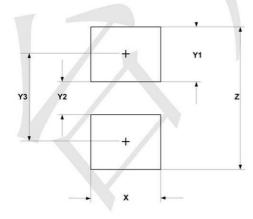
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#### DFN1006-2 Package Outline Drawing (0402)



	1007				
		DIMEN	SIONS		
MI	LLIMETE	RS		INCHES	
MIN	NOM	MAX	MIN	NOM	MAX
0.45	0.50	0.55	0.018	0.020	0.022
0.00	0.02	0.05	0.000	0.001	0.002
0.45	0.50	0.55	0.018	0.020	0.022
0.12	0.15	0.18	0.005	0.006	0.007
0.95	1.00	1.05	0.037	0.039	0.041
	0.65 BSC		(	.026 BS	C
0.55	0.60	0.65	0.022	0.024	0.026
0.20	0.25	0.30	0.008	0.010	0.012
0.07	0.12	0.17	0.003	0.005	0.007
	MIN 0.45 0.00 0.45 0.12 0.95 0.55 0.20	MIN      NOM        0.45      0.50        0.00      0.02        0.45      0.50        0.12      0.15        0.95      1.00        0.65 BSC        0.55      0.60        0.20      0.25	MILLIMETERS        MIN      NOM      MAX        0.45      0.50      0.55        0.00      0.02      0.05        0.45      0.50      0.55        0.12      0.15      0.18        0.95      1.00      1.05        0.55      0.60      0.65        0.20      0.25      0.30	MIN      NOM      MAX      MIN        0.45      0.50      0.55      0.018        0.00      0.02      0.05      0.000        0.45      0.50      0.55      0.018        0.00      0.02      0.05      0.000        0.45      0.50      0.55      0.018        0.12      0.15      0.18      0.005        0.95      1.00      1.05      0.037        0.65 BSC      0      0.65      0.022        0.20      0.25      0.30      0.008	MILLIMETERS      INCHES        MIN      NOM      MAX      MIN      NOM        0.45      0.50      0.55      0.018      0.020        0.00      0.02      0.05      0.000      0.001        0.45      0.50      0.55      0.018      0.020        0.12      0.15      0.18      0.005      0.006        0.95      1.00      1.05      0.037      0.039        0.65 BSC      0.026 BSC      0.026 BSC        0.55      0.60      0.65      0.022      0.024        0.20      0.25      0.30      0.008      0.010

#### Suggested Land Pattern



SYM	DIMENSIONS		
	MILLIMETERS	INCHES	
Х	0.60	0.024	
Y1	0.50	0.020	
Y2	0.30	0.012	
Y3	0.80	0.032	
Z	1.30	0.052	

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