

## Bidirectional TVS Diode

### DESCRIPTION

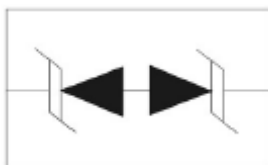
The SLESD4501CH is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

The SLESD4501CH has been specifically designed to protect sensitive components which are connected to power, data and transmission lines from overvoltage caused by ESD(electrostatic discharge), CDE (Cable Discharge Events),and EFT (electrical fast transients).

### ORDERING INFORMATION

- ✧ Device: SLESD4501CH
- ✧ Package: DFN1006
- ✧ Marking: FWC
- ✧ Material: Halogen free and RoHS compliant
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 10,000pcs

### PIN CONFIGURATION



### FEATURES

- ✧ ESD per IEC 61000-4-2 ±30 kV (Contact)
- ✧ ESD per IEC 61000-4-2 ±30 kV (Air)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ Peak power dissipation: 675W (8/20µs)
- ✧ Low clamping voltage
- ✧ Working voltages: 4.5V
- ✧ Low leakage current

### MACHANICAL DATA

- ✧ DFN1006 package
- ✧ Flammability Rating: UL 94V-0
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Packaging: Tape and Reel
- ✧ Reel size: 7 inch

### APPLICATIONS

- ✧ Cell Phone Handsets and Accessories
- ✧ Microprocessor based equipment
- ✧ Personal Digital Assistants (PDA's)
- ✧ Notebooks, Desktops, and Servers
- ✧ Portable Instrumentation
- ✧ Networking and Telecom
- ✧ Serial and Parallel Ports
- ✧ Peripherals

### PACKAGE OUTLINE



**ABSOLUTE MAXIMUM RATING**

Symbol	Parameter	Value	Units
V <sub>ESD</sub>	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	±30 ±30	kV
P <sub>PP</sub>	Peak Pulse Power (8/20µs)	675	W
T <sub>OPT</sub>	Operating Temperature	-55~150	°C
T <sub>STG</sub>	Storage Temperature	-55~150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C)**

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				4.5	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	4.8		7.8	V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 4.5V			1.0	µA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 30A, t <sub>p</sub> = 8/20µs			12	V
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 45A, t <sub>p</sub> = 8/20µs			15	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz			120	pF

## ELECTRICAL CHARACTERISTICS CURVE

Fig 1 8/20 $\mu$ s Waveform per IEC61000-4-5

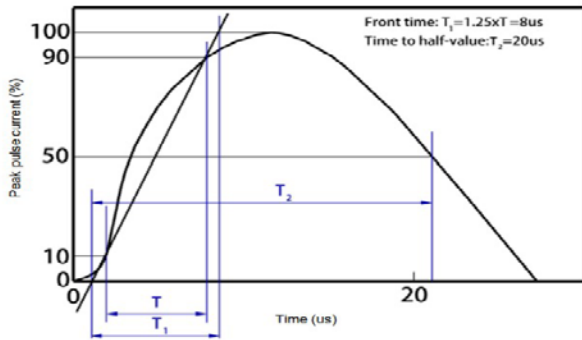


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

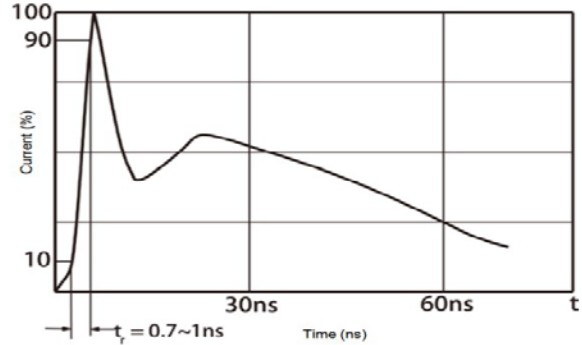


Fig 3 Voltage vs Capacitance

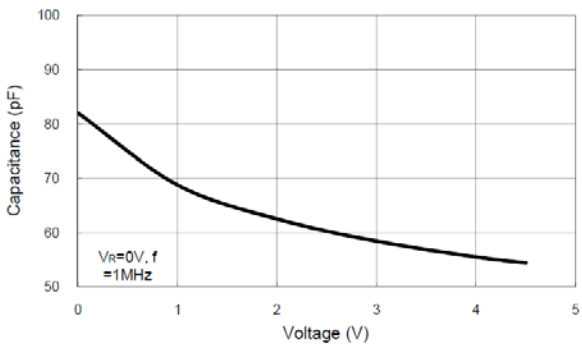
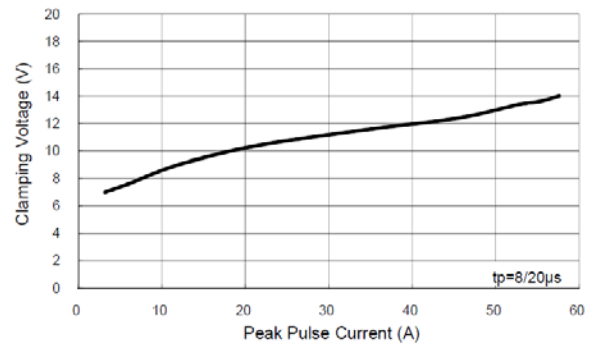
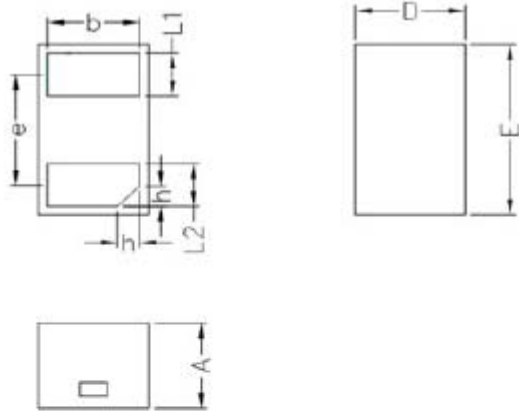


Fig 4 Peak Pulse Current vs Clamping Voltage



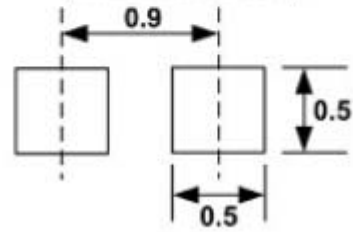
## DFN1006 PACKAGE OUTLINE DIMENSIONS



Unit: mm

	MIN	NOM	MAX
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
b	0.45	0.50	0.55
e	0.65BSC		
A	0.45	0.50	0.55
h	0.07	0.12	0.17

Dimension: Millimeter  
(Stencil thickness: 0.1)



**Soldering Footprint**