

Bidirectional TVS Diode

DESCRIPTION

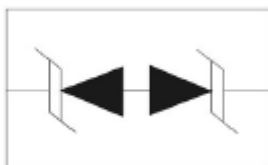
The SLESD4501CH is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal 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 _{ESD} | ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air) | ±30 ±30 | kV |
| P _{PP} | Peak Pulse Power (8/20μs) | 675 | W |
| T _{OPT} | Operating Temperature | -55~150 | °C |
| T _{STG} | Storage Temperature | -55~150 | °C |

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C)

| Symbol | Parameter | Test Condition | Min | Typ | Max | Units |
|------------------|---------------------------|--|-----|-----|-----|-------|
| V _{RWM} | Reverse Working Voltage | | | | 4.5 | V |
| V _{BR} | Reverse Breakdown Voltage | I _T = 1mA | 4.8 | | 7.8 | V |
| I _R | Reverse Leakage Current | V _{RWM} = 4.5V | | | 1.0 | μA |
| V _C | Clamping Voltage | I _{PP} = 30A, t _p = 8/20μs | | | 12 | V |
| V _C | Clamping Voltage | I _{PP} = 45A, t _p = 8/20μs | | | 15 | V |
| C _J | Junction Capacitance | V _R = 0V, f = 1MHz | | | 120 | pF |

ELECTRICAL CHARACTERISTICS CURVE

Fig 1 8/20 μ s Waveform per IEC61000-4-5

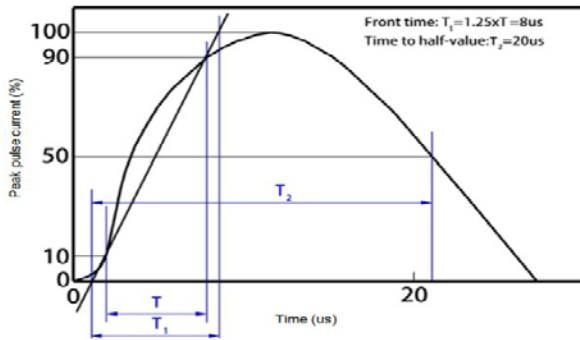


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

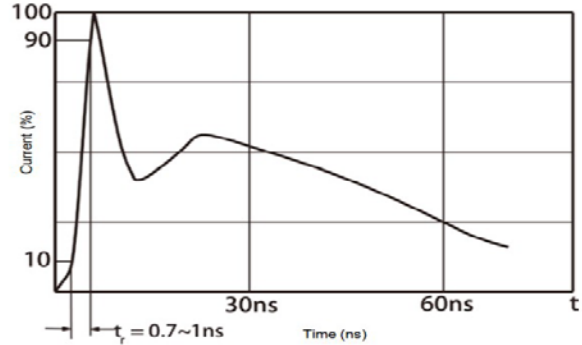


Fig 3 Voltage vs Capacitance

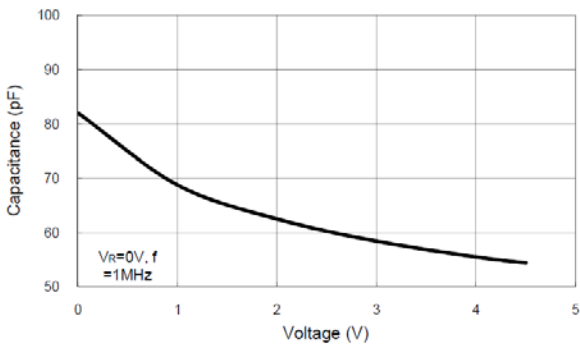
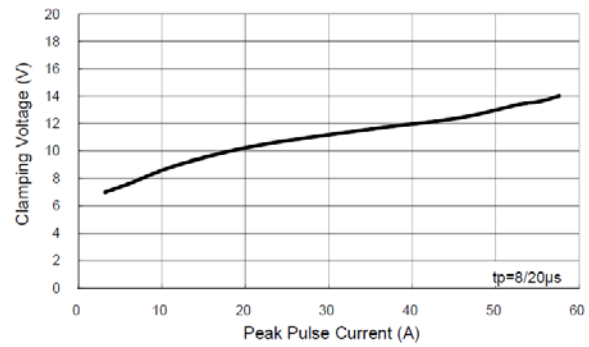
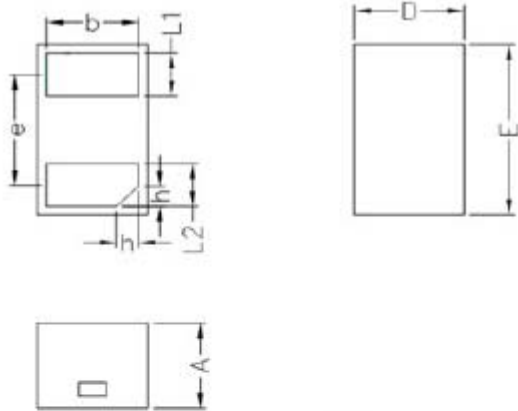


Fig 4 Peak Pulse Current vs Clamping Voltage



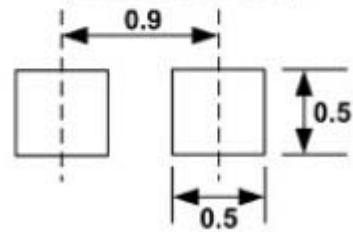
DFN1006 PACKAGE OUTLINE DIMENSIONS



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

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