# SESDA6V8UL

## 2-Line, Ultra-low Capacitance, Uni-directional TVS

Transient Voltage Suppressors

### General Description

The SESDA6V8UL is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It isdesigned to replace multilayer varistors (MLV) in consumer equipments applications such as mobilephone, notebook, PAD, STB, LCD TV etc..

### Applications

- Computers/Mobilephone
- PAD/STB
- LCD TV

### Features

- Working voltage : 5V
- Small package
- Peak power (tp=8/20us) : 50W
- Low leakage current

### Complies with the following standards

**IEC61000-4-2**

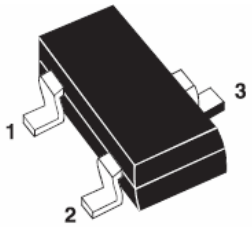
**Level 4 15 kV (air discharge)**

**8 kV(contact discharge)**

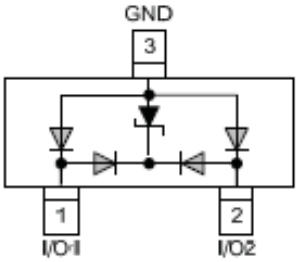
**MIL STD 883E - Method 3015-7 Class 3**

**25 kV HBM (Human Body Model)**

### Functional diagram




**SOT-23**

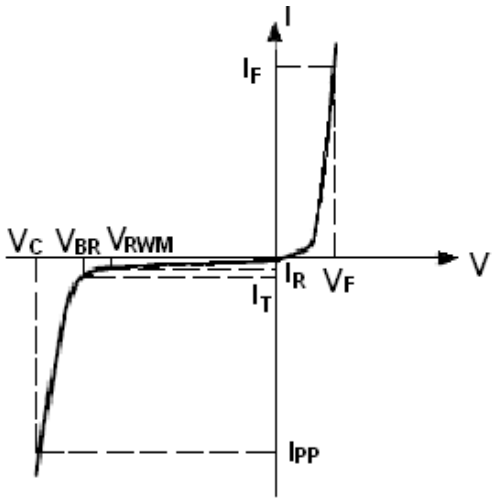



### Absolute Ratings ($T_{amb}$=25°C )

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $P_{PP}$ | Peak Pulse Power ($t_p$ = 8/20μs) | 50 | W |
| $T_L$ | Maximum lead temperature for soldering during 10s | 260 | °C |
| $T_{stg}$ | Storage Temperature Range | -55 to +155 | °C |
| $T_j$ | Maximum junction temperature | 150 | °C |
| Ipp | Peak Pulse Current ($t_p$ = 8/20μs) | 4 | A |
| $V_{PP}$ | Electrostatic discharge<br>IEC61000-4-2 air discharge<br>IEC61000-4-2 contact discharge | <br>15<br>8 | kV |

## Electrical Parameter

| Symbol | Parameter |
|---|---|
| $I_{PP}$ | Maximum Reverse Peak Pulse Current |
| $V_C$ | Clamping Voltage @ $I_{PP}$ |
| $V_{RWM}$ | Working Peak Reverse Voltage |
| $I_R$ | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $I_T$ | Test Current |
| $V_{BR}$ | Breakdown Voltage @ $I_T$ |

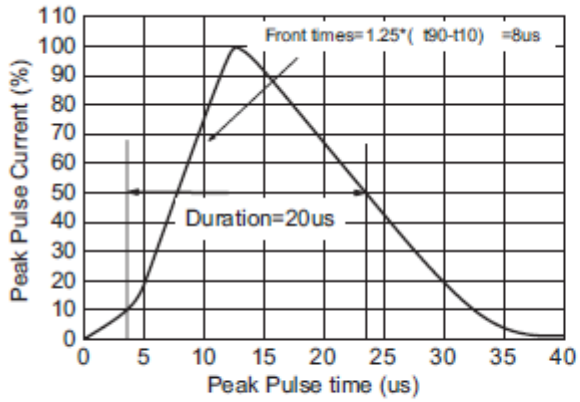



## Electrical Characteristics

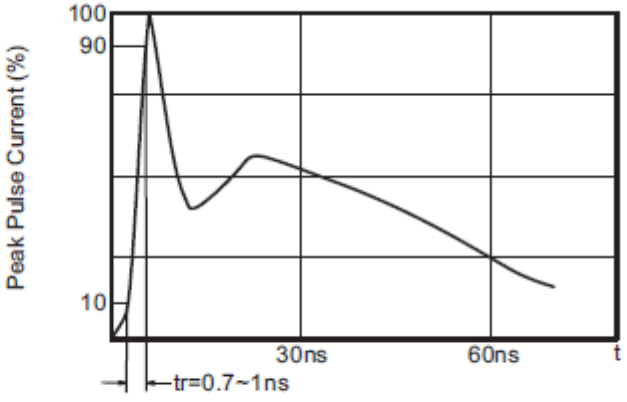
| Part Numbers | $V_{BR}$ | | | $I_T$ | $V_{RWM}$ | $I_R$ | C |
|---|---|---|---|---|---|---|---|
| | Min. | Typ. | Max. | | | | Typ. 0v bias |
| | V | V | V | mA | V | μA | pF |
| SESDA6V8UL | 6.1 | 7.0 | 8.5 | 1 | 5.0 | 1 | 0.8 |

1).8/20 waveform used. (see fig2.)

## Typical Characteristics

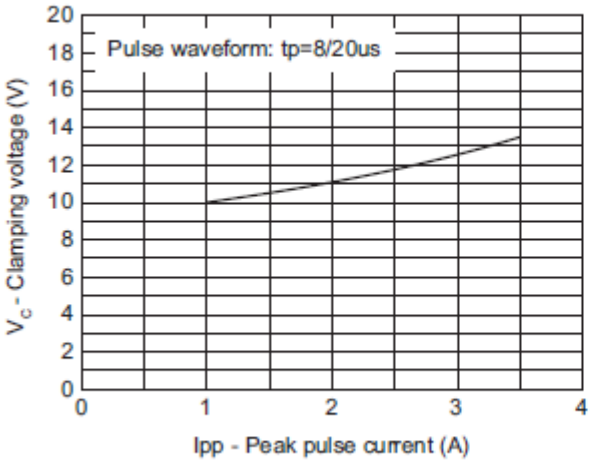



**8/20us waveform**

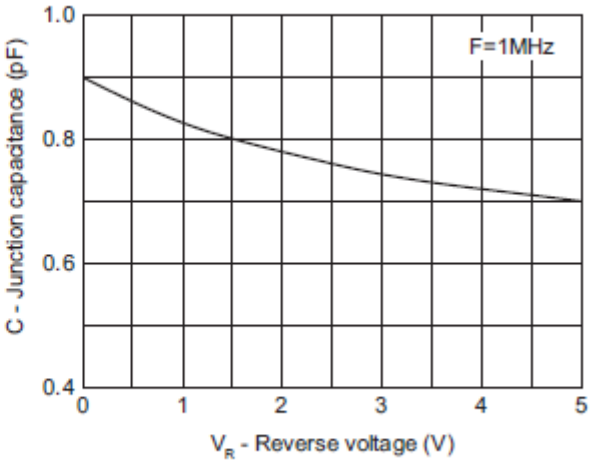



**IEC61000-4-2 waveform**

## Typical characteristics (Ta=25°C, unless otherwise noted)

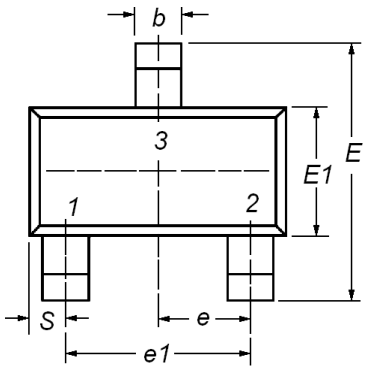


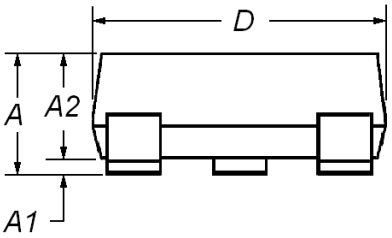

Clamping voltage vs. Peak pulse current



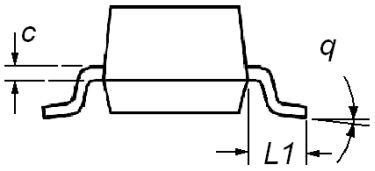

Capacitance vs. Reveres voltage

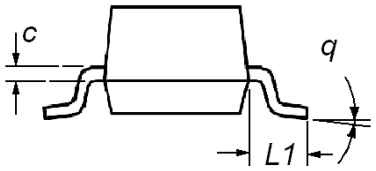
## SOT-23 mechanical data




| Dim | Millimeters | | |
|---|---|---|---|
| | Min | TYP | Max |
| A | 1.00 | 1.20 | 1.40 |
| A1 | 0 | 0.05 | 0.10 |
| A2 | 1.00 | 1.15 | 1.30 |
| b | 0.35 | 0.40 | 0.50 |
| c | 0.10 | 0.15 | 0.20 |
| D | 2.70 | 2.90 | 3.10 |
| E | 2.40 | 2.60 | 2.80 |
| E1 | 1.40 | 1.50 | 1.60 |
| e | 0.85 | 1.00 | 1.15 |
| e1 | 1.80 | 1.90 | 2.00 |
| L1 | 0.40 | . | |
| q | 0° | 5° | 10° |
| S | 0.45 | 0.50 | 0.55 |



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