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## General Purpose Uni-directional TVS

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### **Compliance Standard**

- ◆ IEC 61000-4-2 (ESD)  
30KV - Contact Discharge  
30KV - Air Discharge
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC 61000-4-5 (Surge) 5.0 (8/20us)

### **Applications**

- ◆ DC Power Application
- ◆ Embedded System
- ◆ Handheld Device
- ◆ Computer

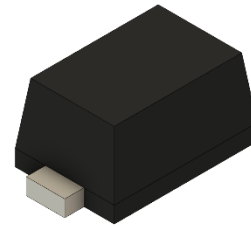
### **Features**

- ◆ 110W Peak Pulse Power
- ◆ Low Clamping Voltage
- ◆ Low Leakage Current
- ◆ Single Line, Bi-Directional

### **Mechanical Characteristics**

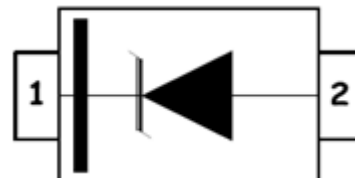
- ◆ SOD-523 Package
- ◆ Weight 2 Milligram (Approximate)
- ◆ Flammability Rating UL94V-0
- ◆ Lead Free Plating
- ◆ Reel Size 7"
- ◆ 3000 PCS Per Reel

#### **Package**



SOD-523

#### **Pin Configuration**



## DEVICE CHARACTERISTICS

| <i>Maximum Rating</i>       |                  |           |      |
|-----------------------------|------------------|-----------|------|
| Parameter                   | Symbol           | Value     | Unit |
| Peak Pulse Power            | P <sub>PP</sub>  | 110       | Watt |
| Lead Soldering Temperature  | T <sub>L</sub>   | 260 (10s) | °C   |
| Operating Temperature Range | T <sub>J</sub>   | -55~150   | °C   |
| Storage Temperature Range   | T <sub>STG</sub> | -55~150   | °C   |

| <i>Electrical Characteristics (@25 °C)</i> |         |                            |                          |                          |                        |                        |                        |
|--------------------------------------------|---------|----------------------------|--------------------------|--------------------------|------------------------|------------------------|------------------------|
| Part Number                                | Marking | V <sub>RWM</sub><br>(Volt) | V <sub>B</sub><br>(Volt) | V <sub>C</sub><br>(Volt) | I <sub>PP</sub><br>(A) | I <sub>R</sub><br>(uA) | C <sub>J</sub><br>(pF) |
| NLSDA15T1                                  | KP      | 15.0                       | 16.6                     | 22.0                     | 5.0                    | 1.0                    | 50.0                   |

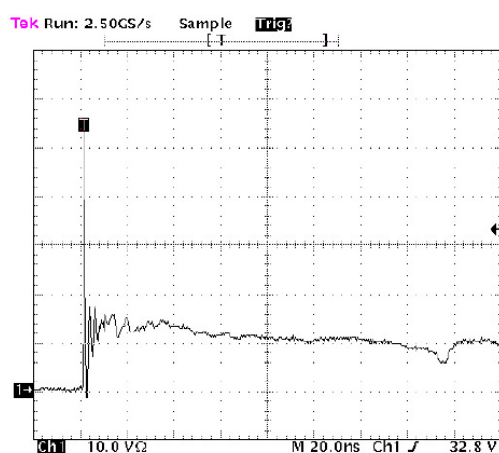


Figure1. Clamping waveform of positive 8KV ESD contact

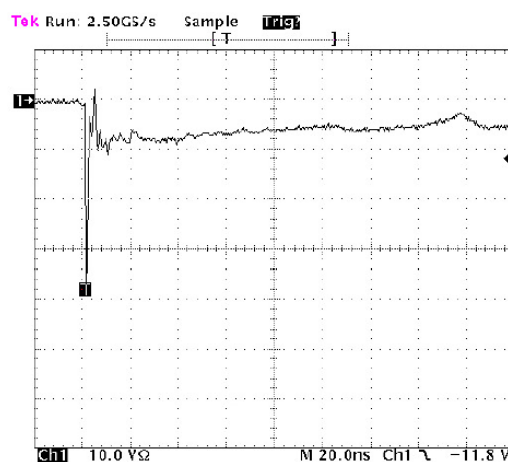
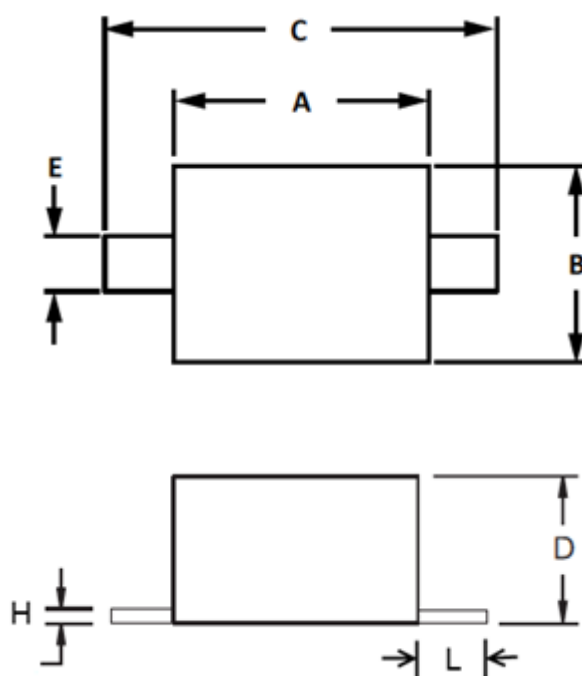


Figure2. Clamping waveform of negative 8KV ESD contact

## DEVICE OUTLINE

| <i>Outline Dimension</i> |             |      |        |        |
|--------------------------|-------------|------|--------|--------|
| Symbol                   | Millimeters |      | Inches |        |
|                          | Min         | Max  | Min    | Max    |
| A                        | 1.10        | 1.30 | 0.043  | 0.051  |
| B                        | 0.70        | 0.90 | 0.028  | 0.035  |
| C                        | 1.50        | 1.70 | 0.059  | 0.067  |
| D                        | 0.50        | 0.70 | 0.020  | 0.028  |
| E                        | 0.25        | 0.35 | 0.010  | 0.014  |
| H                        | 0.07        | 0.20 | 0.0028 | 0.0079 |
| L                        | 0.15        | 0.25 | 0.006  | 0.010  |
|                          |             |      |        |        |



## LAYOUT PAD DIMENSION

| <i>Layout PAD Dimension</i> |             |      |        |       |
|-----------------------------|-------------|------|--------|-------|
| Symbol                      | Millimeters |      | Inches |       |
|                             | Min         | Max  | Min    | Max   |
| A                           | 1.80        | 2.00 | 0.071  | 0.079 |
| B                           | 0.40        | 0.42 | 0.016  | 0.017 |
| C                           | 0.40        | 0.50 | 0.016  | 0.020 |



| <i>Revision History</i> | <i>Description</i>           |
|-------------------------|------------------------------|
| v2.0                    | Re-organize datasheet layout |
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|                         |                              |
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