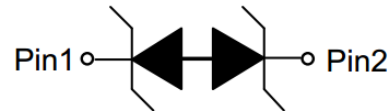


**APPEARANCE****SOD-523 (Top View)****PIN CONFIGURATION****Pin configuration (Top view)****Descriptions**

The APED5.0M4.0-52 is a Bi-directional transient voltage suppressor (TVS) to protect sensitive electronic components from electrostatic discharge (ESD). It is particularly well-suited for cellular phones, PMP, MID, PDA, digital cameras and other electronic equipment. The APED5.0M4.0-52 is safely dissipating ESD strikes to meet the ESD immunity testing of IEC61000-4-2 ( $\pm 25\text{KV}$ ).

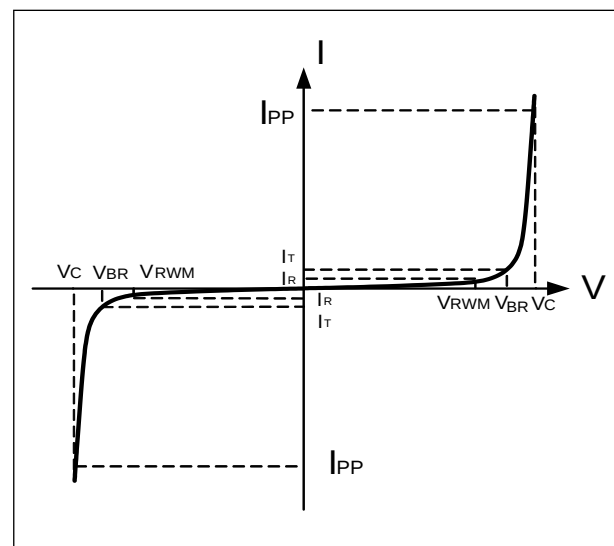
The APED5.0M4.0-52 is available in SOD-523 package. Standard products are Pb-free and Halogen-free.

**Order information**

| Device         | Package | Shipping       |
|----------------|---------|----------------|
| APED5.0M4.0-52 | SOD-523 | 3000/Tape&Reel |

**Electrical Parameters (T=25°C )**

| Symbol           | Parameter                                  |
|------------------|--------------------------------------------|
| $V_{\text{RWM}}$ | Reverse Stand-off Voltage                  |
| $I_{\text{R}}$   | Reverse Leakage Current @ $V_{\text{RWM}}$ |
| $V_{\text{BR}}$  | Reverse Breakdown Voltage @ $I_{\text{T}}$ |
| $I_{\text{T}}$   | Test Current                               |
| $I_{\text{PP}}$  | Reverse Peak Pulse Current                 |
| $V_{\text{C}}$   | Clamping Voltage @ $I_{\text{PP}}$         |

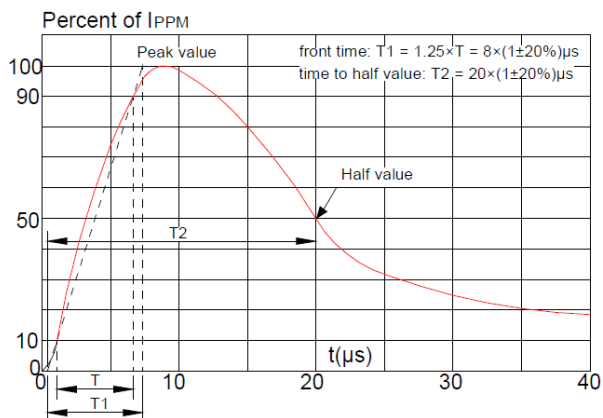
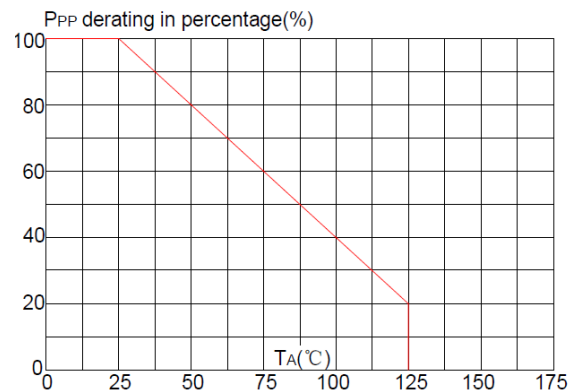
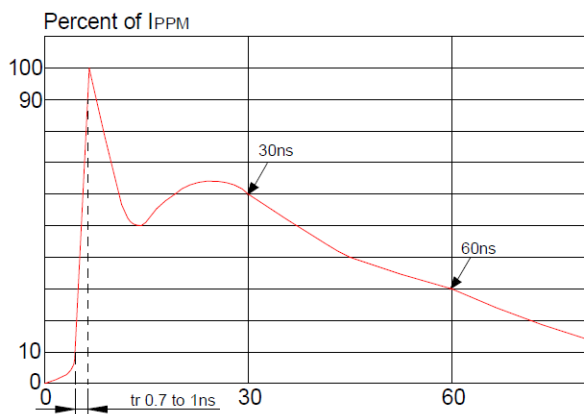


**Absolute maximum ratings**

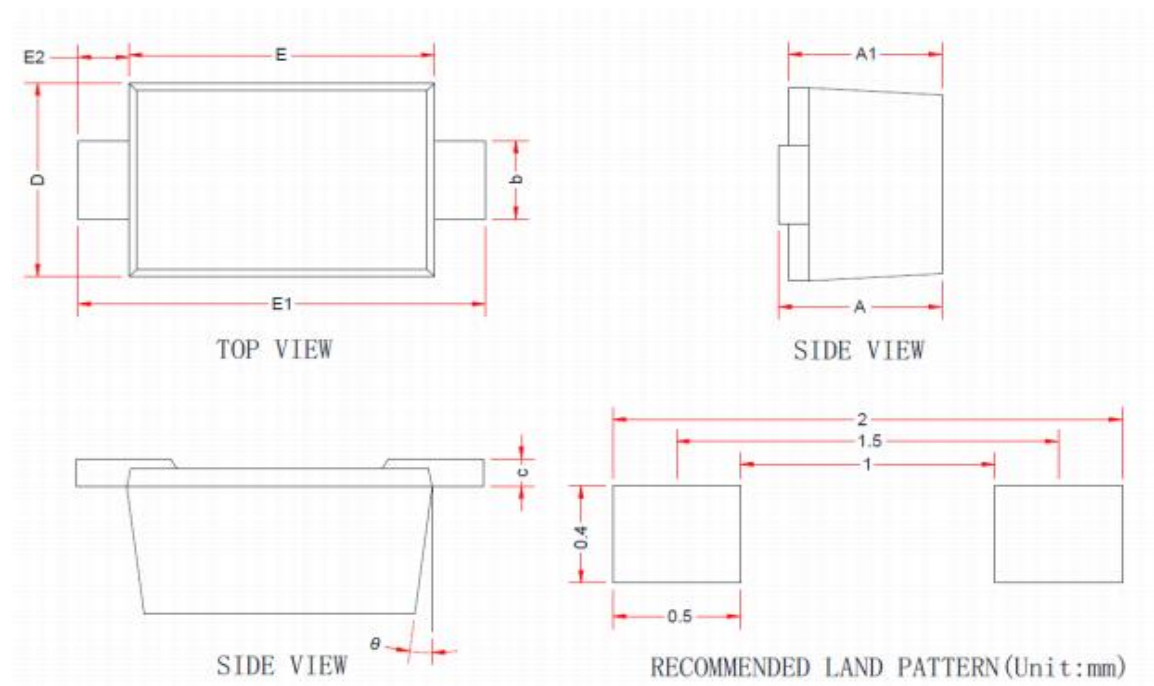
| Parameter                                       | Symbol           | Rating  | Unit |
|-------------------------------------------------|------------------|---------|------|
| Peak pulse power ( $t_p = 8/20\mu s$ )          | Ppk              | 45      | W    |
| Peak pulse current ( $t_p = 8/20\mu s$ )        | I <sub>PP</sub>  | 4.0     | A    |
| ESD according to IEC61000-4-2 air discharge     | V <sub>ESD</sub> | ±25     | kV   |
| ESD according to IEC61000-4-2 contact discharge |                  | ±25     | kV   |
| Junction temperature                            | T <sub>J</sub>   | 150     | °C   |
| Operating temperature                           | T <sub>OP</sub>  | -55~125 | °C   |
| Storage temperature                             | T <sub>STG</sub> | -55~150 | °C   |

**Electronics characteristics (Ta=25°C)**

| Parameter                 | Symbol         | Condition                                     | Min | Typ | Max | Units |
|---------------------------|----------------|-----------------------------------------------|-----|-----|-----|-------|
| Reverse Stand-off Voltage | VRWM           |                                               |     |     | 5.0 | V     |
| Reverse Breakdown Voltage | VBR            | I <sub>t</sub> =1mA                           | 5.6 | 6.1 | 8.0 | V     |
| Reverse Leakage Current   | I <sub>R</sub> | VRWM=±5.0V                                    |     |     | 0.1 | uA    |
| Clamping Voltage          | VC             | I <sub>pp</sub> =4.0A, t <sub>p</sub> =8/20us |     |     | 12  | V     |
| Junction Capacitance      | C <sub>j</sub> | VR=0V, f=1MHz                                 |     | 12  |     | pF    |

**Typical characteristics (Ta=25°C)****Pulse Waveform (8/20us)****Pulse Derating Curve****ESD Clamping(8kV Contact Discharge )**

PACKAGE OUTLINE DIMENSIONS (SOD-523)



| Symbol   | Dimensions in Millimeters |      |      |
|----------|---------------------------|------|------|
|          | Min.                      | Typ. | Max. |
| A        | 0.51                      | -    | 0.77 |
| A1       | 0.50                      | 0.60 | 0.70 |
| b        | 0.25                      | -    | 0.40 |
| c        | 0.08                      | -    | 0.15 |
| D        | 0.75                      | 0.80 | 0.85 |
| E        | 1.10                      | 1.20 | 1.30 |
| E1       | 1.50                      | 1.60 | 1.70 |
| E2       | 0.20 Ref.                 |      |      |
| $\theta$ | 7 °C Ref.                 |      |      |

Note:  
This recommended land pattern is for reference purpose only.