

APPEARANCE



SOD-523 (Top View)

PIN CONFIGURATION



Pin configuration (Top view)

Descriptions

The APES12H10-52 is a Uni-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 quipment. The APES12H10-52 is safely dissipating ESD strikes to meet the ESD immunity testing of IEC61000-4-2 ($\pm 30KV$).

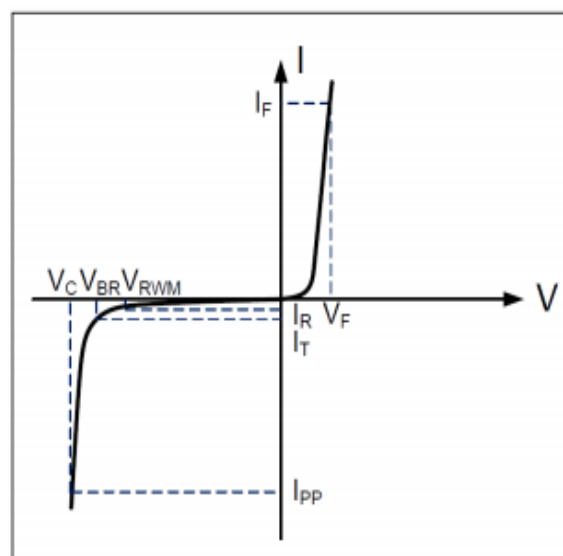
The APES12H10-52 is available in SOD-523 package. Standard products are Pb-free and Halogen-free.

Order information

| Device | Package | Shipping |
|--------------|---------|----------------|
| APES12H10-52 | SOD-523 | 3000/Tape&Reel |

Electrical Parameters (T=25°C)

| Symbol | Parameter |
|-----------|-------------------------------------|
| V_{RWM} | Reverse Stand-off Voltage |
| I_R | Reverse Leakage Current @ V_{RWM} |
| V_{BR} | Reverse Breakdown Voltage @ I_T |
| I_T | Test Current |
| I_{PP} | Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| I_F | Forward Current |
| V_F | Forward Voltage @ I_F |



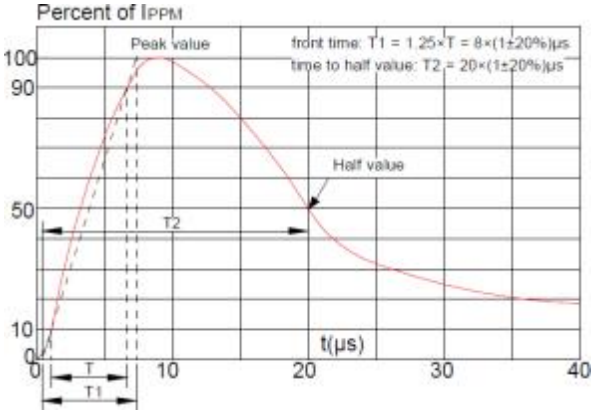
Absolute maximum ratings

| Parameter | Symbol | Rating | Unit |
|---|------------------|---------|------|
| Peak pulse power (tp = 8/20μs) | Ppk | 240 | W |
| Peak pulse current (tp = 8/20μs) | I _{PP} | 10 | A |
| ESD according to IEC61000-4-2 air discharge | V _{ESD} | ±30 | kV |
| ESD according to IEC61000-4-2 contact discharge | | ±30 | kV |
| Junction temperature | T _J | 150 | ℃ |
| Operating temperature | T _{OP} | -55~125 | ℃ |
| Storage temperature | T _{STG} | -55~150 | ℃ |

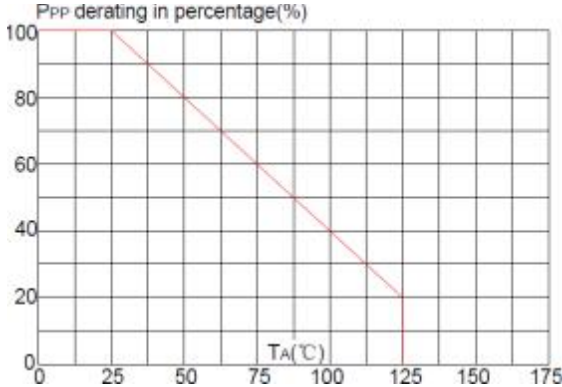
Electronics characteristics (Ta=25℃)

| Parameter | Symbol | Condition | Min | Typ | Max | Units |
|---------------------------|----------------|---------------------------------|------|-----|-----|-------|
| Reverse Stand-off Voltage | VRWM | | | | 12 | V |
| Reverse Breakdown Voltage | VBR | I _t =1mA | 13.5 | | 15 | V |
| Reverse Leakage Current | I _R | VRWM=12V | | | 0.1 | uA |
| Clamping Voltage | VC | I _{pp} =10A, tp=8/20us | | | 24 | V |
| Junction Capacitance | C _j | VR=0V, f=1MHz | | 45 | | pF |

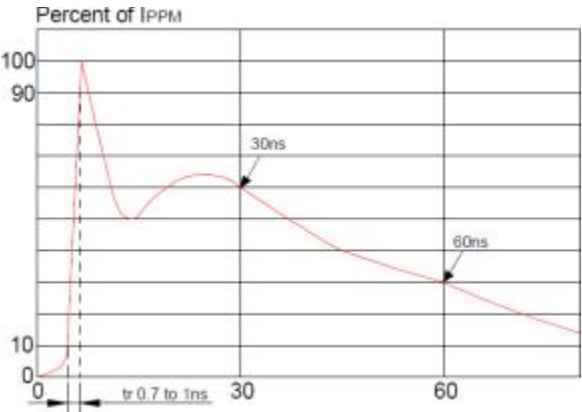
Typical characteristics (Ta=25°C)



Pulse Waveform (8/20us)

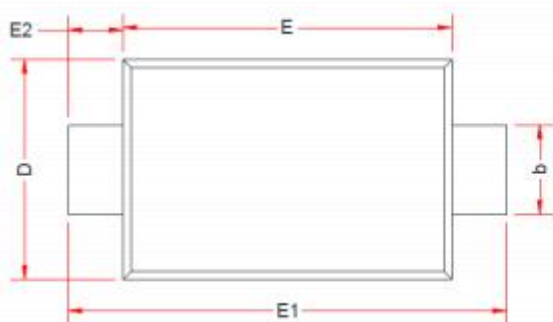


Pulse Derating Curve

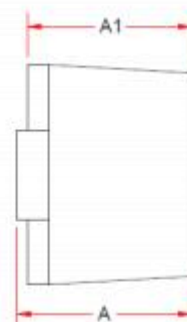


ESD Clamping(8kV Contact Discharge)

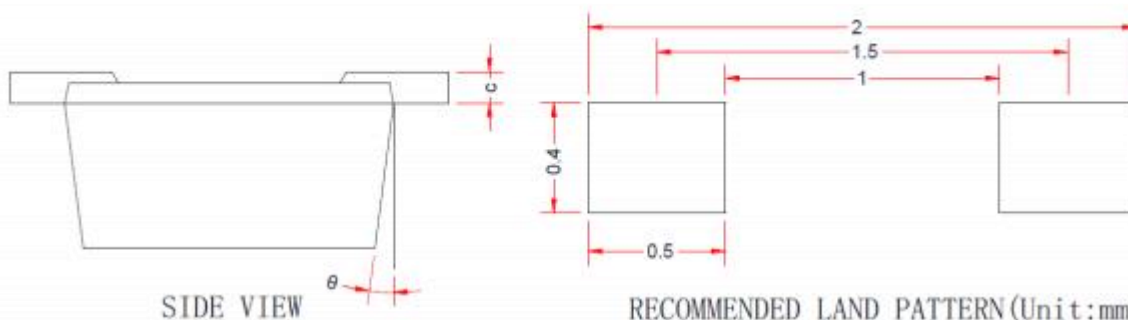
PACKAGE OUTLINE DIMENSIONS(SOD-523)



TOP VIEW



SIDE VIEW



SIDE VIEW

RECOMMENDED LAND PATTERN (Unit:mm)

| 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. | | |
| θ | 7 °C Ref. | | |

Note:

This recommended land pattern is for reference purpose only.