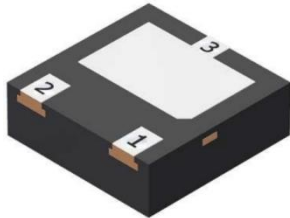
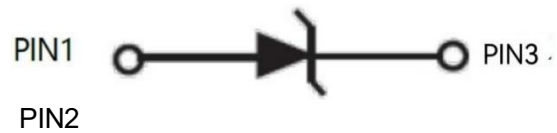


APPEARANCE



DFN2020-3 (Top View)

PIN CONFIGURATION



Pin configuration (Top view)

Descriptions

The APES24H28-20 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 APES24H28-20 is safely dissipating ESD strikes to meet the ESD immunity testing of IEC61000-4-2 ($\pm 30KV$).

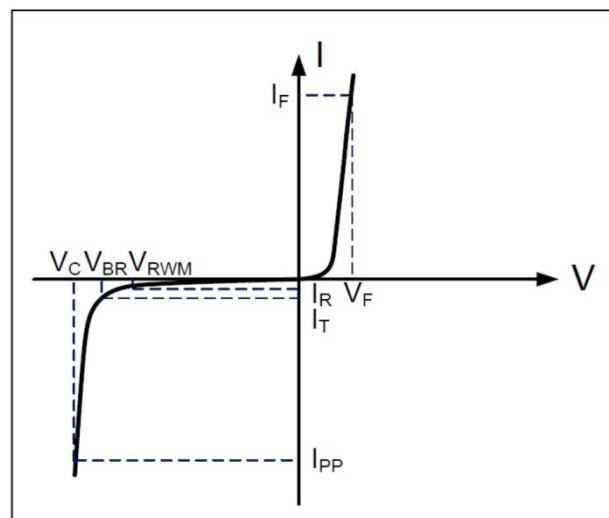
The APES24H28-20 is available in DFN1610 package. Standard products are Pb-free and Halogen-free.

Order information

| Device | Package | Shipping |
|--------------|-----------|----------------|
| APES24H28-20 | DFN2020-3 | 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 |



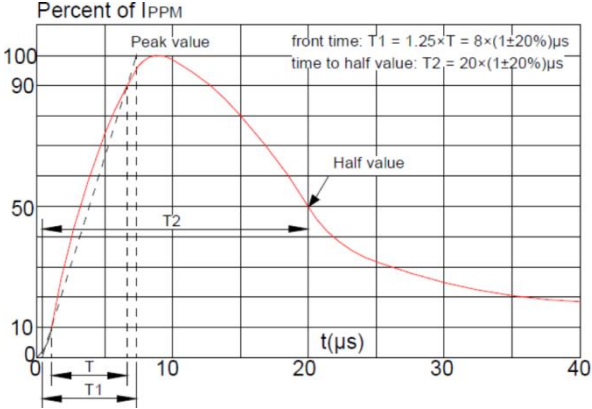
Absolute maximum ratings

| Parameter | Symbol | Rating | Unit |
|---|------------------|---------|------|
| Peak pulse power (tp = 8/20μs) | Ppk | 1400 | W |
| Peak pulse current (tp = 8/20μs) | I _{PP} | 28 | 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 | °C |
| Operating temperature | T _{OP} | -55~125 | °C |
| Storage temperature | T _{STG} | -55~150 | °C |

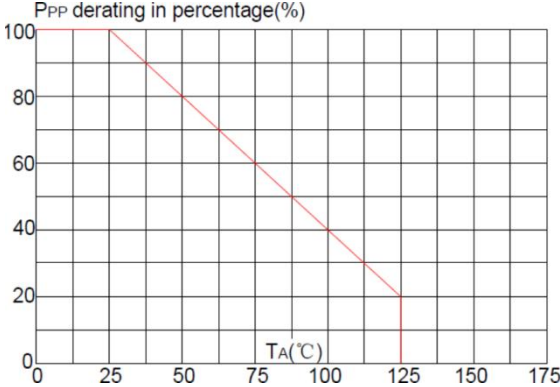
Electronics characteristics (Ta=25°C)

| Parameter | Symbol | Condition | Min | Typ | Max | Units |
|---------------------------|----------------|---------------------------------|-----|-----|-----|-------|
| Reverse Stand-off Voltage | VRWM | | | | 24 | V |
| Reverse Breakdown Voltage | VBR | I _t =1mA | 26 | 28 | 30 | V |
| Reverse Leakage Current | I _R | VRWM=24V | | | 0.2 | uA |
| Clamping Voltage | V _C | I _{pp} =28A, tp=8/20us | | | 50 | V |
| Junction Capacitance | C _j | VR=0V, f=1MHz | | 200 | | pF |

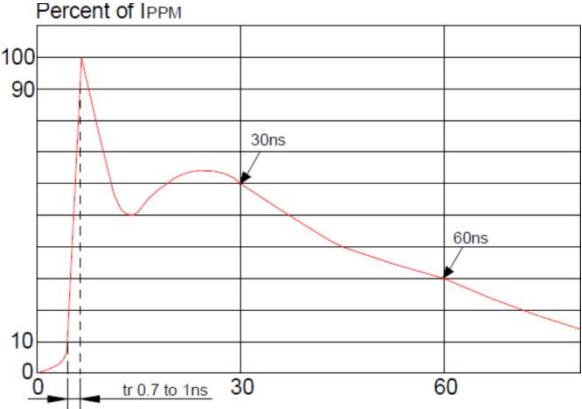
Typical characteristics (Ta=25°C)



Pulse Waveform (8/20us)

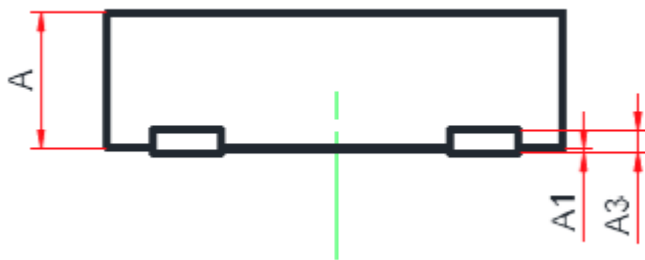
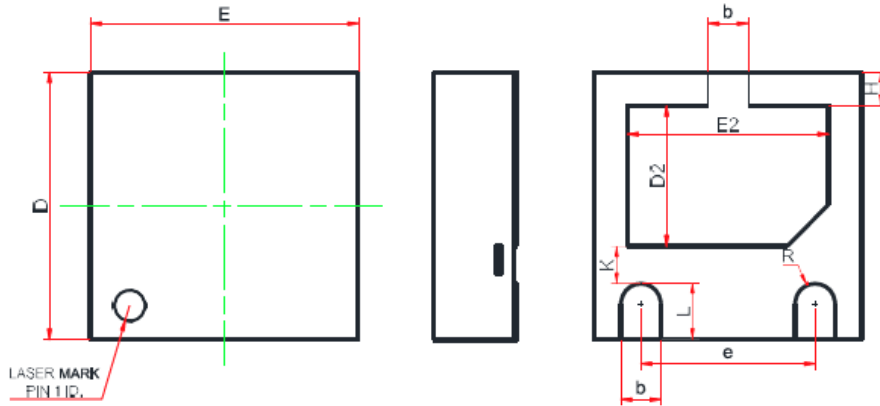


Pulse Derating Curve

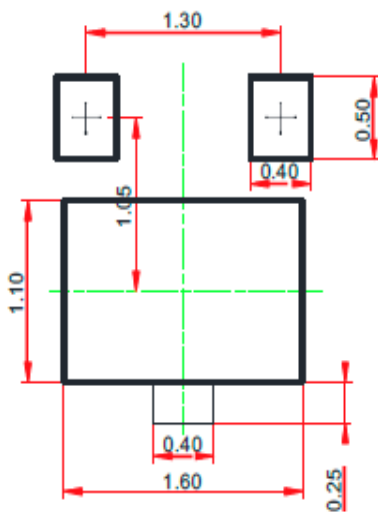


ESD Clamping(8kV Contact Discharge)

PACKAGE OUTLINE DIMENSIONS(DFN2020-3)



SOLDERING FOOTPRINT



| Symbol | Dimensions In Millimeters | | |
|--------|---------------------------|------|------|
| | Min. | Typ. | Max. |
| A | 0.51 | 0.55 | 0.60 |
| A1 | 0.00 | 0.02 | 0.05 |
| A3 | 0.15 REF. | | |
| b | 0.25 | 0.30 | 0.35 |
| D | 1.90 | 2.00 | 2.10 |
| E | 1.90 | 2.00 | 2.10 |
| D2 | 0.85 | 1.00 | 1.10 |
| E2 | 1.35 | 1.50 | 1.60 |
| e | 1.20 | 1.30 | 1.40 |
| H | 0.20 | 0.25 | 0.30 |
| K | 0.20 | 0.30 | 0.40 |
| L | 0.35 | 0.40 | 0.45 |
| R | 0.15 | - | - |

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