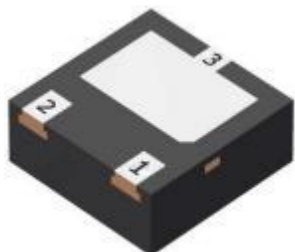


APPEARANCE



DFN2020-3 (Top View)

PIN CONFIGURATION



Pin configuration (Top view)

Descriptions

The APES12H180-20 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 equipment. The APES12H180-20 is safely dissipating ESD strikes to meet the ESD immunity testing of IEC61000-4-2 ($\pm 30KV$).

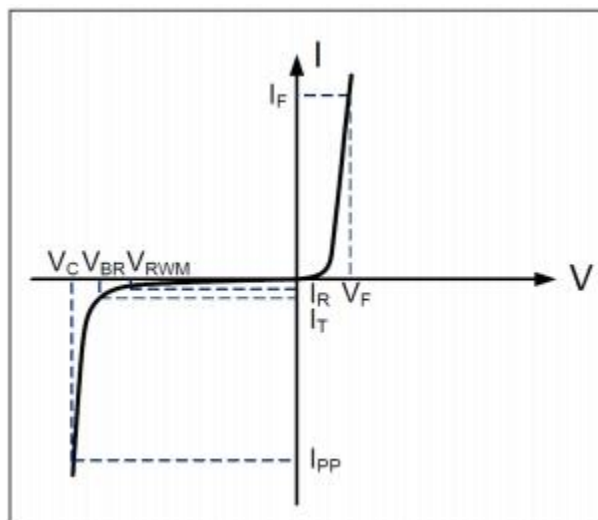
The APES12H180-20 is available in DFN2020-3 package. Standard products are Pb-free and Halogen-free.

Order information

Device	Package	Shipping
APES12H18-20	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



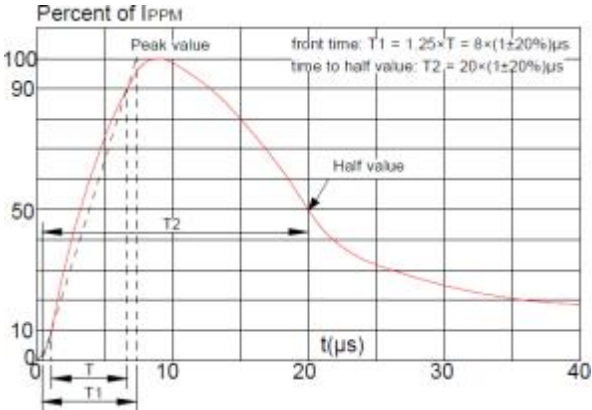
Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Peak pulse power (tp = 8/20μs)	Ppk	5400	W
Peak pulse current (tp = 8/20μs)	I _{PP}	180	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

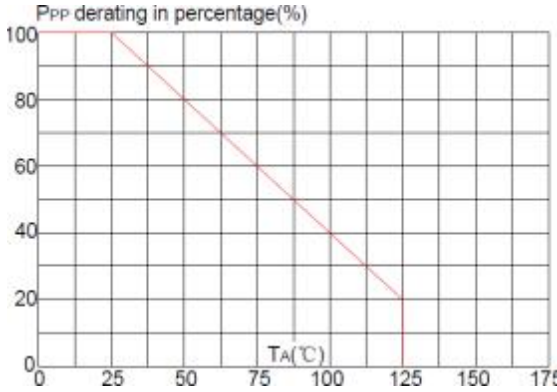
Electronics characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Units
Reverse Stand-off Voltage	VRWM				12	V
Reverse Breakdown Voltage	VBR	I _t =1mA	13.5	14.2	15.5	V
Reverse Leakage Current	I _R	VRWM=12V			0.8	uA
Clamping Voltage	V _C	I _{pp} =180A, t _p =8/20us			30	V
Junction Capacitance	C _j	VR=0V, f=1MHz		1300		pF

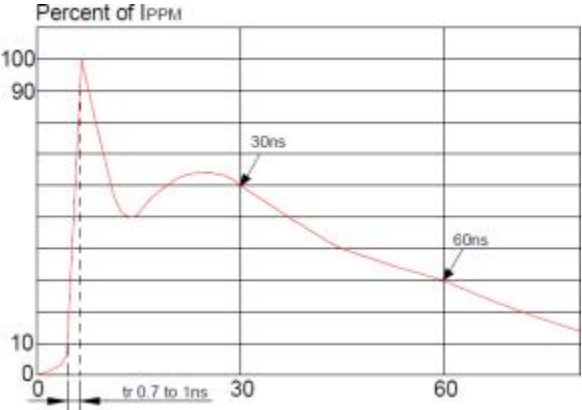
Typical characteristics (Ta=25°C)



Pulse Waveform (8/20us)

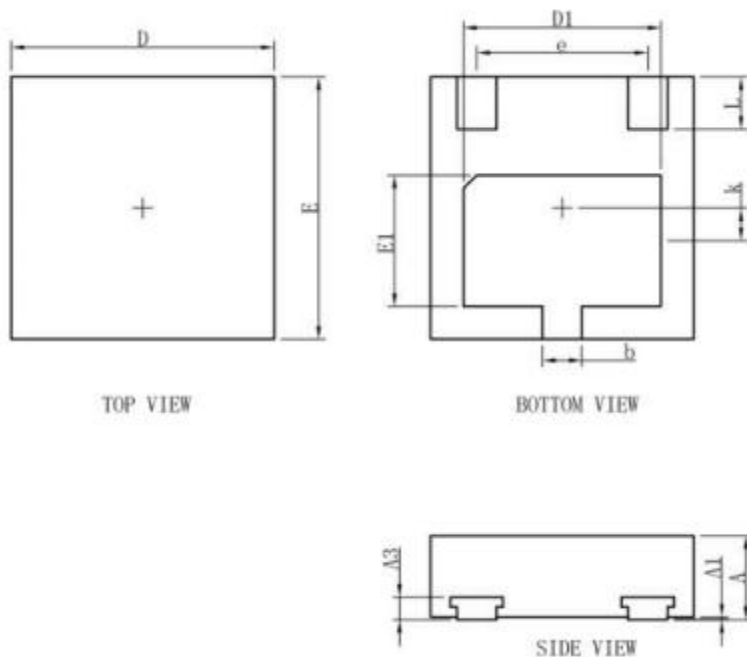


Pulse Derating Curve



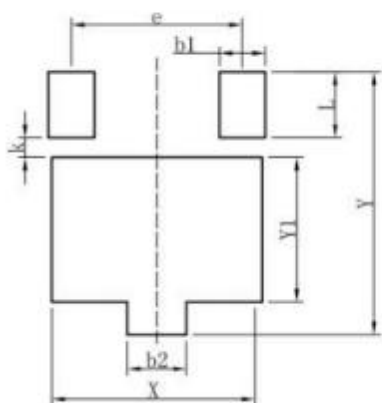
ESD Clamping(8kV Contact Discharge)

PACKAGE OUTLINE DIMENSIONS(DFN2020-3)



DFN2020-3			
Dim	Min.	Typ.	Max.
A	0.60	0.65	0.70
A1	0.00	0.02	0.05
A3	0.152REF.		
D	1.95	2.00	2.05
E	1.95	2.00	2.05
D1	1.45	1.50	1.55
E1	0.95	1.00	1.05
b	0.25	0.30	0.35
e	1.30TYP.		
k	0.20	0.25	0.30
L	0.35	0.40	0.45
All Dimensions in mm			

SOLDERING FOOTPRINT



DFN2020-3	
Dim	(mm)
X	1.60
Y	2.00
b1	0.35
b2	0.45
L	0.50
Y1	1.10
k	0.15
e	1.30

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