

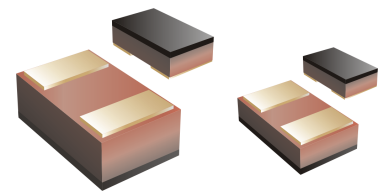
Description

The PROSEMI Polymer ESD Suppressors protect valuable high-speed data circuits from ESD damage without distorting data signals as a result of its ultra-low (0.05pF typical) capacitance.



Features

- ESD protection for high speed data lines to IEC61000-4-2
- ESD contact discharge typical 8KV, max 15KV
- ESD air discharge typical 15KV, max 25KV
- Surface mount
- Extremely low capacitance
- Very low leakage current
- Fast response time
- Bi-directional ESD protection
- Lead free solder termination
- The best ESD protection for high frequency, low voltage applications



DP-1006

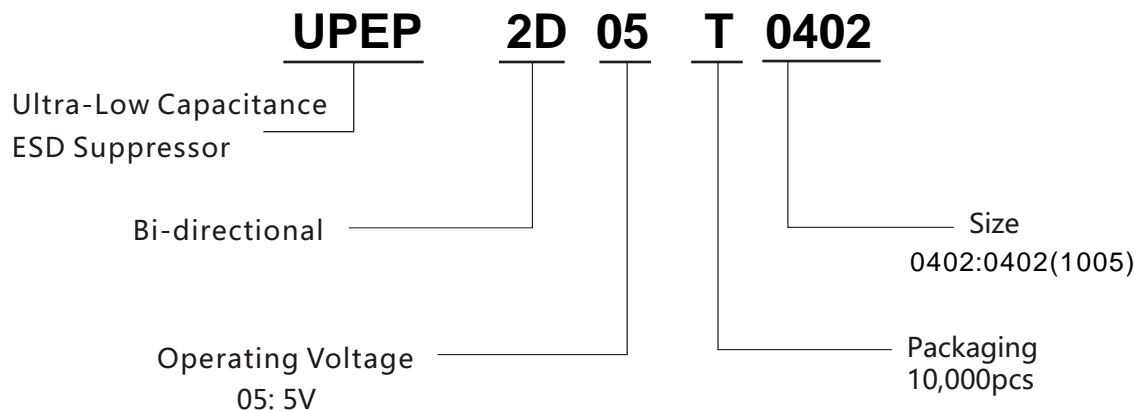
Application

- | | |
|-------------------|----------------------------|
| ● Antenna circuit | ● HDTV Hardware |
| ● USB2.0/3.0/3.1 | ● Laptop/Desktop Computers |
| ● IEEE-1394 | ● Network Hardware |
| ● DVI | ● Computer Peripherals |
| ● HDMI1.3/1.4/2.0 | ● Digital Cameras |
| ● Display | ● External Storage |
| ● A/V Equipment | ● Set-Top Boxes |



Bi-directional

Part Numbering System



Absolute Maximum Ratings

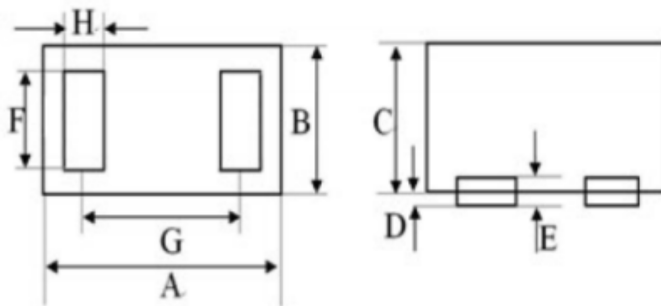
Parameter	Symbol	Value	Unit
Maximum Contact discharge voltage Per IEC61000-4-2	--	15KV	V
Maximum Air discharge voltage Per IEC61000-4-2	--	25KV	V
Maximum Operating temperature	T _{OPER}	-55 to+125	°C
Maximum Storage temperature	T _{STG}	-55 to+125	°C
Maximum lead temperature for soldering during 1 Os	T _L	260	°C

Electrical Characteristics (T_A=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
RatedVoltage	V _R	---	--	--	5	V
Clamping Voltage	V _C	IEC61000-4-2 8KV contact discharge	--	300	--	V
Trigger Voltage	V _T	IEC61000-4-2 8KV contact discharge	--	35	--	V
Leakage Current	I _L	DC 5V shall be applied on component	--	0.01	0.10	uA
Capacitance	C _P	V _R = 0V, f = 1MHz	--	0.05	--	pF

- *Note: 1. Trigger and clamping voltage are measured per IEC 61000-4-2, 8KV contact discharge method.
2. After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA.

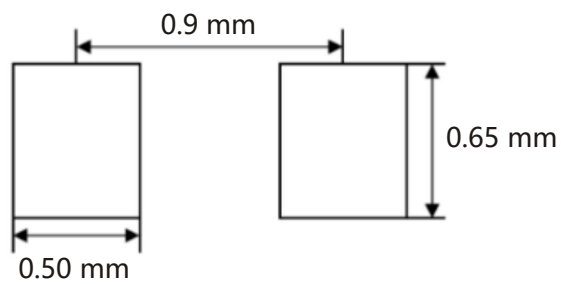
Dimensions



Unit:mm

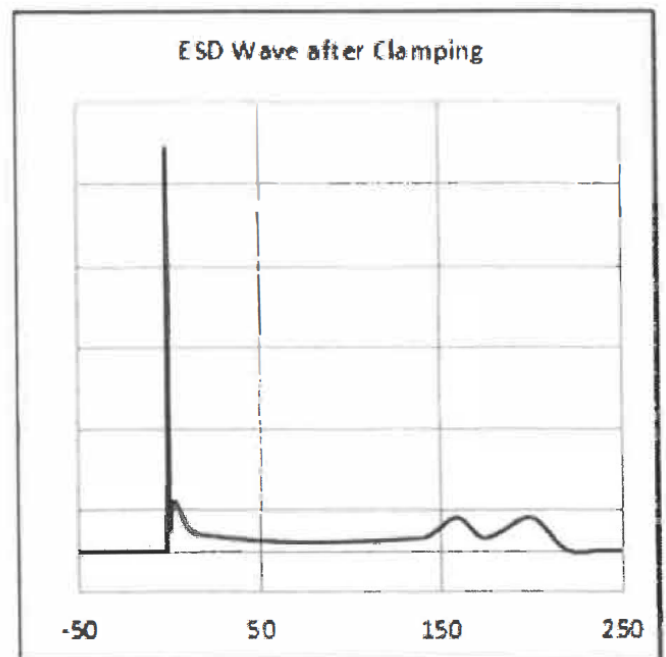
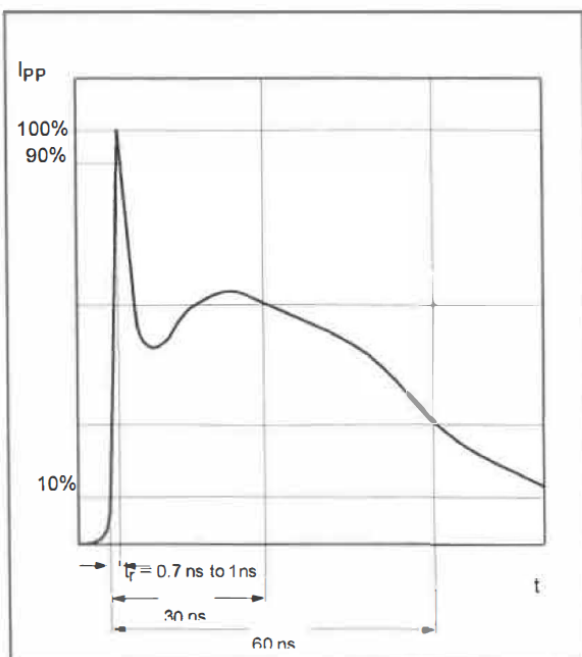
Symbol	Dimension (mm)	
	Dimension	Dimension
A	0.90	1.20
B	0.45	0.65
C	0.30	0.40
D	0.00	0.05
E	0.125Ref.	
F	0.40	0.50
G	0.65BSC	
H	0.25	0.35

Soldering Pad

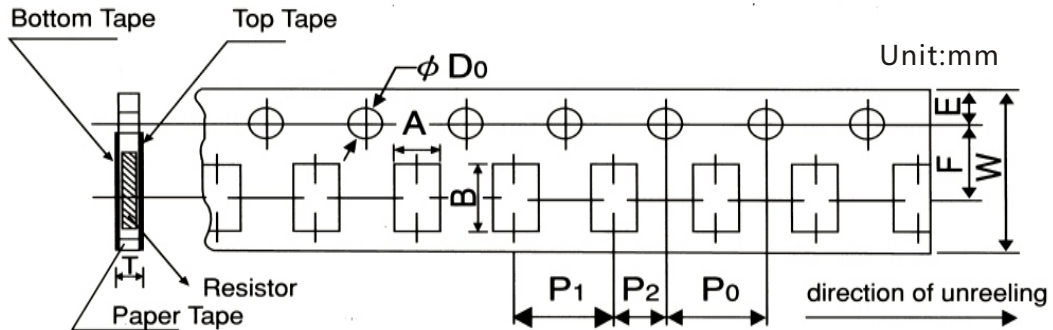


Note: Print solder in thickness of 0.08mm to 0.10mm

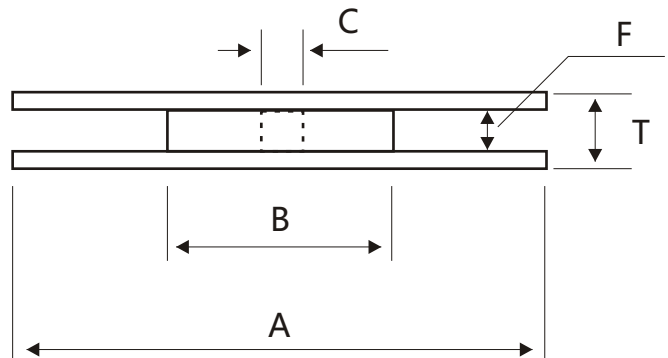
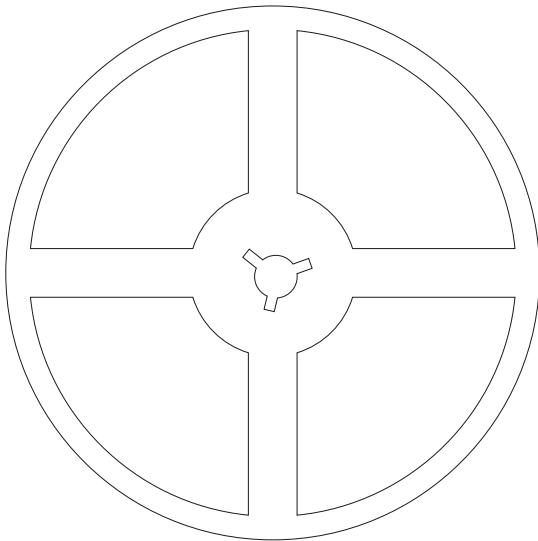
ESD Clamping Test Waveforms



Carrier Tape Dimensions



Type	A	B	W	F	E	P ₁	P ₂	P ₀	D ₀	T
UPEP (0402)	0.68±0.05	1.17±0.05	8.0±0.2	3.5±0.05	1.75±0.1	2.0±0.1	2.0±0.05	4.0±0.1	$\phi 1.5^{+0.1}_{-0}$	0.45±0.1



A	B	C	F	T
180±1.5	51.0±1.0	13.0±1.0	9.4±1.0	12.4±2.0

Storage Conditions and Shelf Life

Temperature: 5°C~35°C, Humidity: 40%~75%
2 years from manufacturing date

Packaging

UPEP2D05T0402:quantity10,000 pieces

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