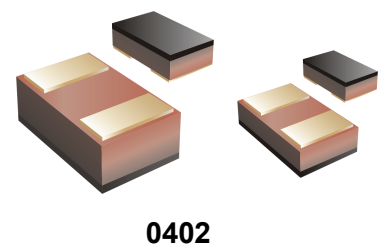


Description

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



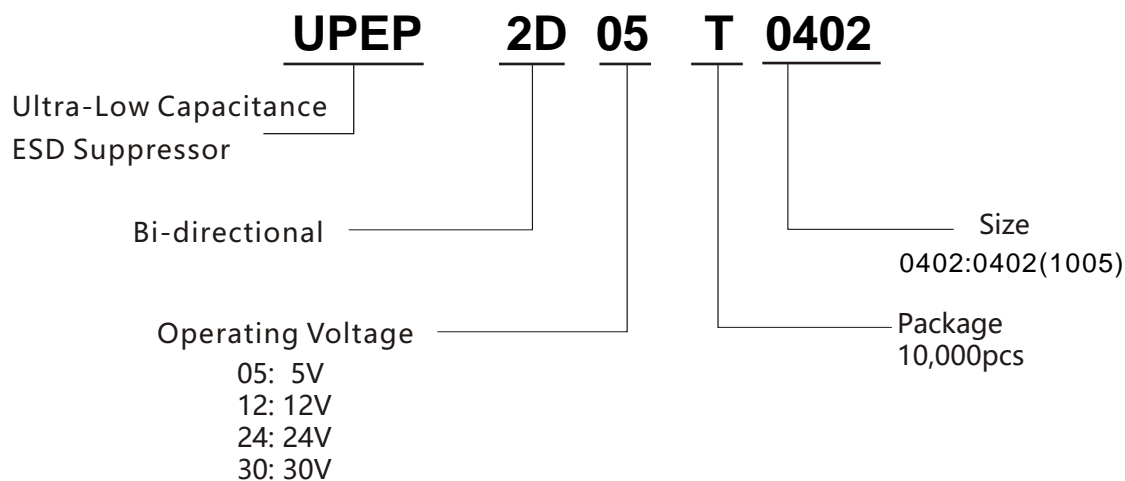
Application

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Port Interface (DP)
- Unified Display Interface (UDI)
- Mobile Display Digital Interface (MDDI)
- Gigabit Ethernet
- USB2.0 and USB3.0
- IEEE1394 interface



Bi-directional

Part Numbering System



Absolute Maximum Ratings

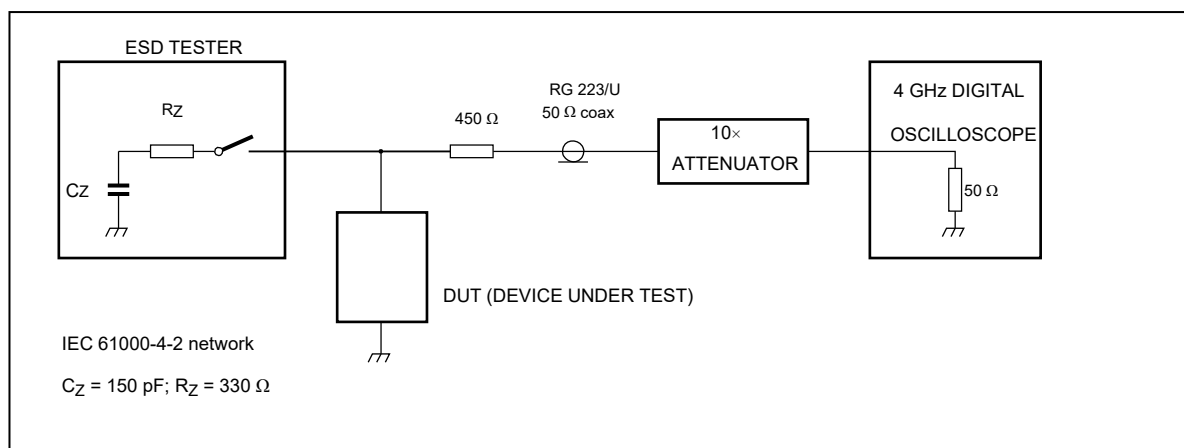
Parameter	Symbol	Value	Unit
Maximum Contact discharge voltage Per IEC61000-4-2	--	15KV	V
Maximum Air discharge voltage Per IEC61000-4-2	--	25KV	V
Maximum Operating temperature	T _{OPER}	-55 to+125	°C
Maximum Storage temperature	T _{STG}	-55 to+125	°C
Maximum lead temperature for soldering during 10s	T _L	260	°C

Electrical Characteristics (T_A=25°C)

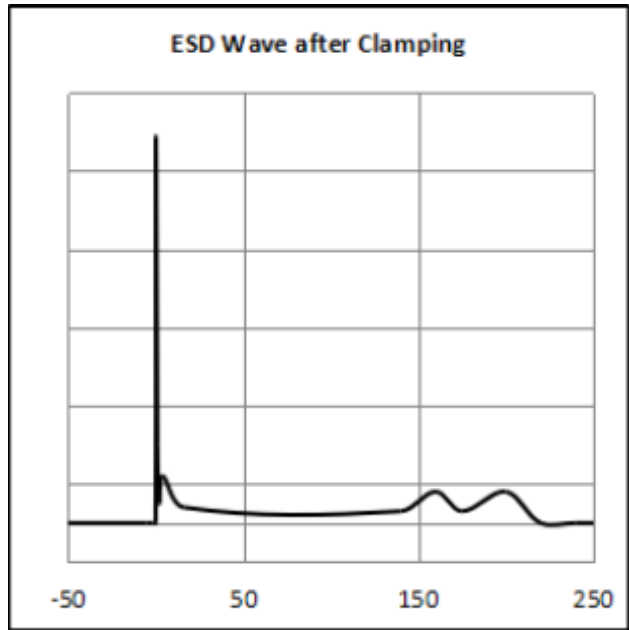
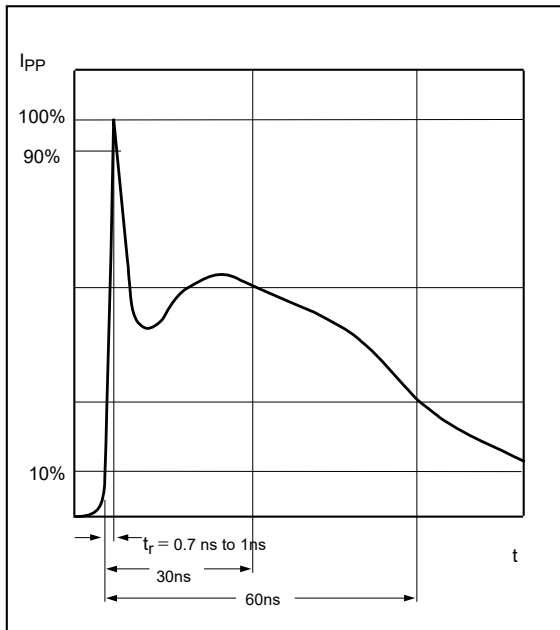
Parameter	Symbol	Test Conditions	Min	Type	Max	Unit
Rated Voltage	V _R	---	--	--	5/12/24/30	V
Clamping Voltage	V _C	IEC61000-4-2 8KV contact discharge	--	300	--	V
Trigger Voltage	V _T	IEC61000-4-2 8KV contact discharge	--	35	--	V
Leakage Current	I _L	DC 5V shall be applied on component	--	0.01	0.10	uA
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.

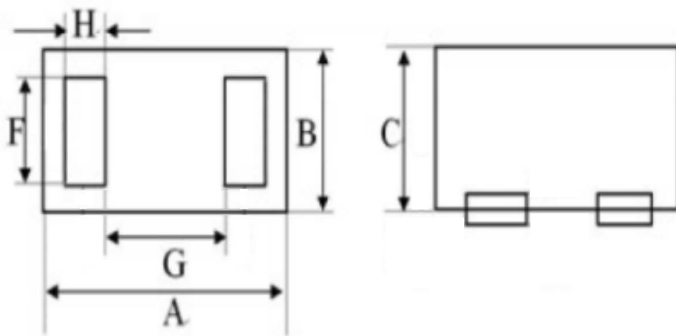
ESD Clamping Test



ESD Clamping Test Waveforms

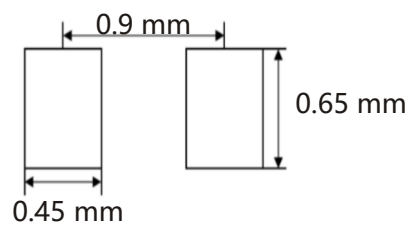


Dimensions



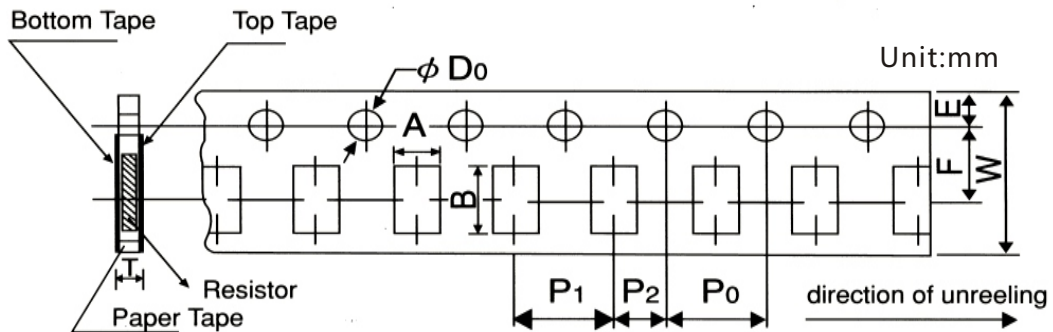
Symbol	Dimension			Unit
	Min	Typ	Max	
A	0.90	1.00	1.10	mm
B	0.4	0.50	0.60	
C	0.3	0.35	0.40	
H	0.25	0.30	0.35	
F	0.40	0.45	0.50	
G	0.30	0.35	0.40	

Soldering Pad

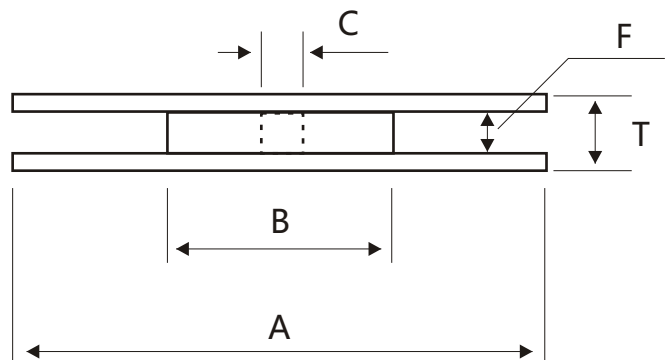
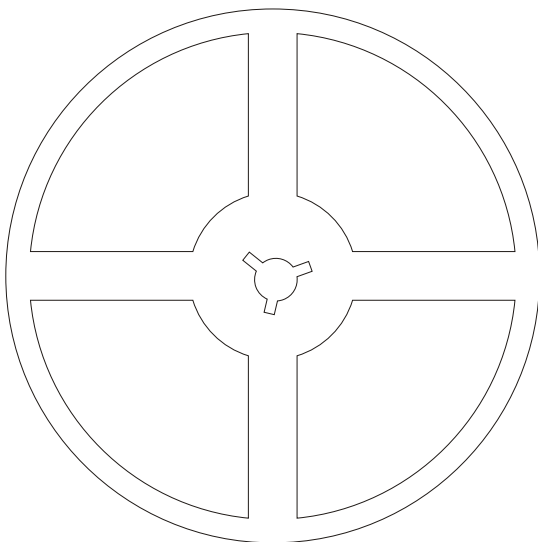


Note: Print solder in thickness of 0.08mm to 0.10mm

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	Φ1.5±0.1	0.45±0.1



Unit:mm

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

UPEP2DxxT0402 : quantity 10,000 pieces