Ultra-low Capacitance Series
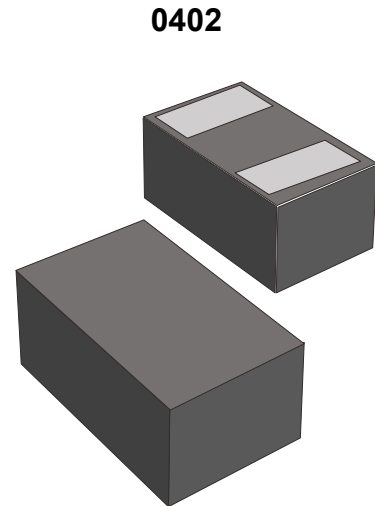
Features

◆ Fast response time (< 1ns)

◆ Bi-directional configurations

◆ Thick film technology

◆ Capacitance: 0.05pF typical

◆ Low clamping voltage

◆ Low leakage current

◆ AEC-Q101 qualified (Automotive grade with suffix "Q".)

◆ Exsemi technology

◆ Complies with following standards:

  – IEC 61000-4-2 (ESD) immunity test

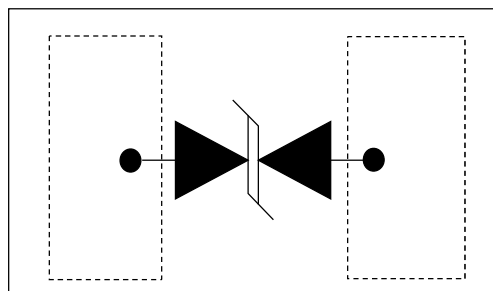   Air discharge: ±15KV

    Contact discharge: ±8KV

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Applications

◆ 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

Mechanical Data

◆ Outline: 0402

◆ Packaging: Tape and Reel

◆ RoHS/WEEE Compliant

Schematic & PIN Configuration

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Rated Voltage	V_R	5	V
ESD per IEC 61000−4−2 (Air)	$V_{ESD\text{-}Air}$	15	KV
ESD per IEC 61000−4−2 (Contact)	$V_{ESD\text{-}Contact}$	8	KV
Lead Soldering Temperature (10s)	T_L	260	℃
Operating Temperature Range	T_J	-55 to 125	℃
Storage Temperature Range	T_{STG}	-55 to 125	℃

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Trigger Voltage	V_T	V_{ESD} = 8KV , Contact		300		V
Clamping Voltage	V_C	V_{ESD} = 8KV , Contact		35		V
Leakage Current	I_L	V_R = 5V		0.01	0.1	uA
Capacitance	C_P	V_{DC} = 0V , f=1MHz		0.05		pF

Notes:

 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

Typical Characteristics
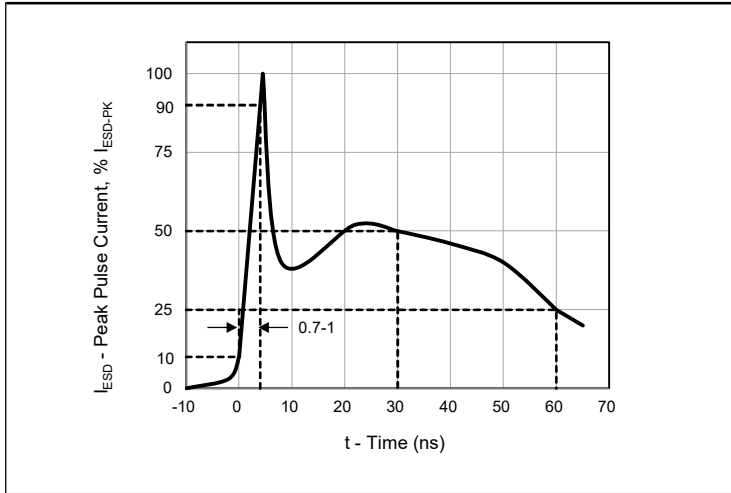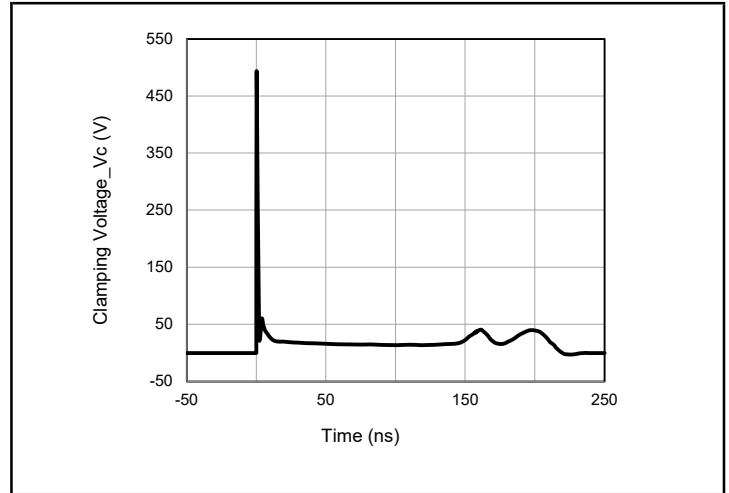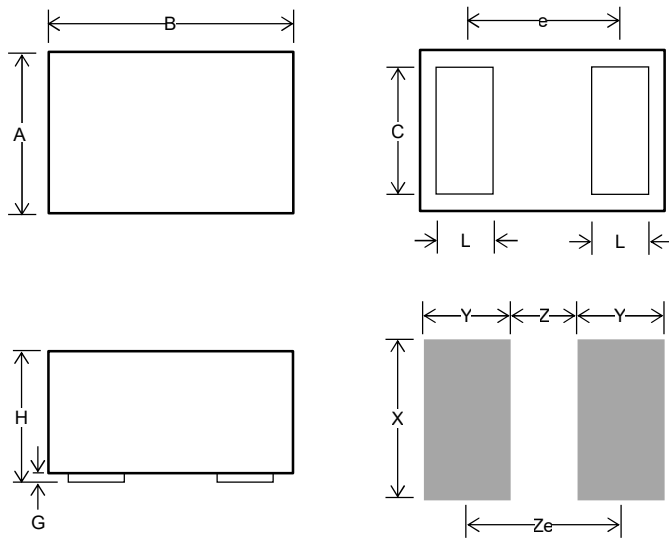
Fig.1 - ESD Pulse Waveform (IEC61000-4-2)

Fig.2 - 8KV ESD Clamping Voltage (IEC61000-4-2)

Outline Drawing

0402			
SYMBOL	Millimeters		
	MIN	NOM	MAX
A	0.45	0.5	0.55
B	0.95	1	1.05
C	0.41	0.43	0.45
H	0.32	0.36	0.4
L	0.28	0.3	0.32
e		0.64	
X		0.55	
Y		0.4	
Z		0.25	
Ze		0.65	

Ordering Information

Order Code	Package	Base Quantity	Delivery Mode
EPD0402V05	0402	10000 PCS/Reel	Tape and Reel