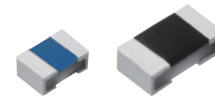


## ESD Suppressor

Type: **EZAEG**

EZAEG1N, 2N



### Features

- Good ESD withstanding (IEC61000-4-2 15 kV contact/air Discharge)
- ESD protection of high-speed data lines
- Low capacitance 0.04 pF : 0603(0201) size  
0.05 pF : 1005(0402) size
- Good ESD suppression characteristics
- RoHS compliant

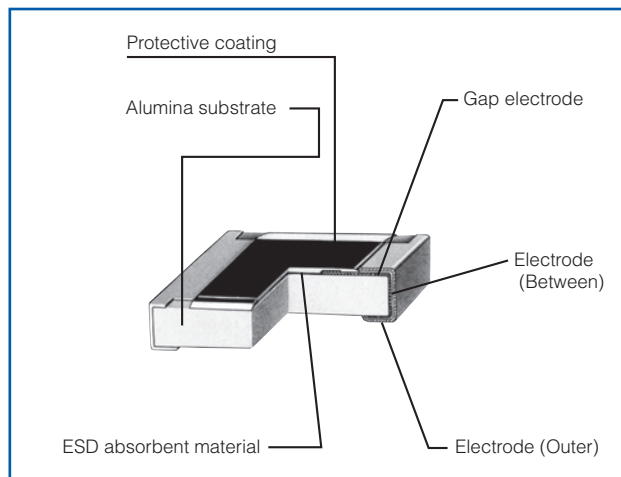
### Recommended Applications

- Smart phones, Mobile phones, RF Modules, NFC and GPS
- ESD suppression of high-speed differential data line such as Antena circuit, HDMI, SATA, USB, Display Port

### Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	
E	Z	A	E	G	2	N	5	0	A	X	
Product Code ESD Suppressor		Size Code Size mm (inch)		Design Specification Code Design Specification		Peak Voltage Code Peak Voltage		Special Feature Code Special Feature		Packaging Methods Code Packaging Part No.	
		1 0603 (0201)	N ESD withstanding 15 kV Rated Voltage 30 V		50	500 V	A	Standard	C	Pressed Carrier Taping 2 mm Pitch, 15,000 pcs.	EZAEG1N
		2 1005 (0402)							X	Pressed Carrier Taping 2 mm Pitch, 10,000 pcs.	EZAEG2N

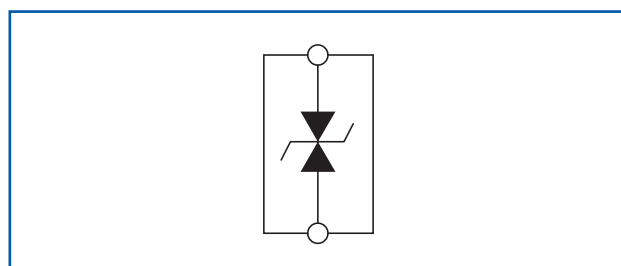
### Construction



### Dimensions in mm (not to scale)

Part No. (inch size)	Dimensions (mm)					Mass (Weight) [g/1000 pcs.]
	L	W	a	b	t	
EZAEG1N (0201)	0.60±0.03	0.30±0.03	0.15±0.10	0.15±0.10	0.23±0.03	0.12
EZAEG2N (0402)	1.00±0.10	0.50±0.05	0.20±0.10	0.27±0.10	0.38±0.05	0.60

### Circuit Configuration



## Ratings

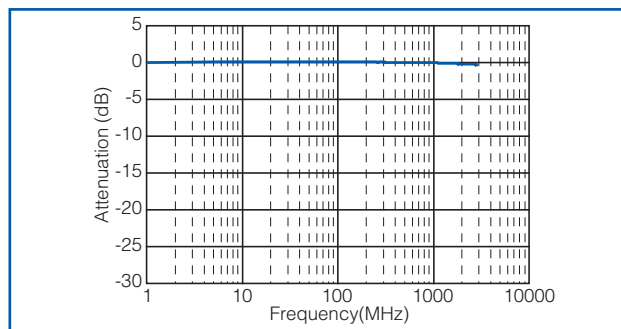
Part Number (inch size)	Capacitance <sup>(1)</sup>	Rated Voltage	Category Temperature Range
EZAEG1N50AC (0201)	0.04 <sup>+0.04</sup> <sub>-0.03</sub> pF	30 V max.	-55 to +125 °C
EZAEG2N50AX (0402)	0.05 <sup>+0.05</sup> <sub>-0.04</sub> pF		

(1) Capacitance = The capacitance value shall be measured under the conditions specified below.  
 Frequency : 1 MHz±10 %, Voltage : 1 Vrms±0.2 Vrms, Temperature : 25 °C±2 °C

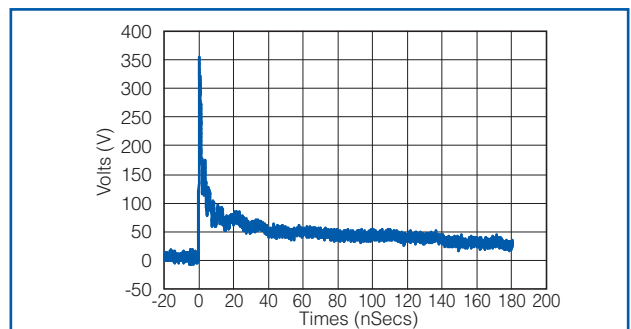
## Performance

Test Item	Performance Requirements	Test Conditions
Peak Voltage	500 V max.	IEC61000-4-2, contact discharge 8 kV, Peak voltage value
Clamping Voltage	100 V max.	IEC61000-4-2, contact discharge 8 kV, voltage at 30 ns after initiation of pulse
Leakage Current	1 µA max.	Current at Rated voltage (DC 30 V)
ESD withstanding	Leakage current 10 µA max.	IEC61000-4-2, contact discharge 15 kV or air discharge 15 kV, +/- 50 times
Rapid Change of Temperature	Leakage current 10 µA max.	-55 °C (30 min.) / +125 °C (30 min.), 100 cycles
Load Life in Humidity	Leakage current 10 µA max.	60 °C, 90% to 95%RH, Rated voltage, 1000 h
Endurance at 85 °C	Leakage current 10 µA max.	85 °C, Rated voltage, 1000 h
Resistance to Soldering Heat	Leakage current 10 µA max.	270 °C, 10 s

## Frequency Characteristics

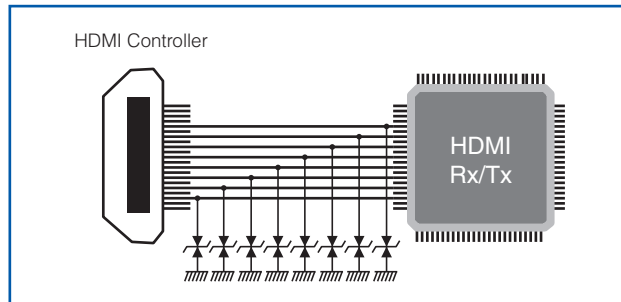


## ESD Suppression Voltage Waveform

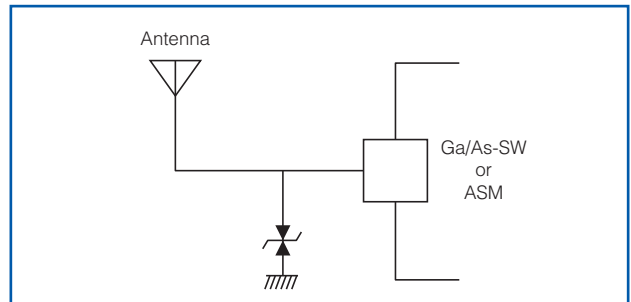


## Typical Circuits Requiring Protection

### ● HDMI circuit

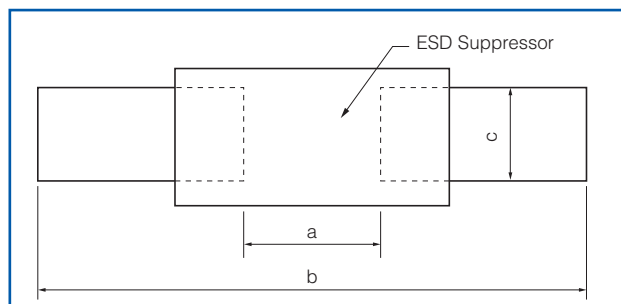


### ● Antenna circuit



## Recommended Land Pattern

Recommended land pattern design for ESD Suppressor is shown below.



Part Number (inch size)	Dimensions (mm)		
	a	b	c
EZAEG1N (0201)	0.3 to 0.4	0.8 to 0.9	0.25 to 0.35
EZAEG2N (0402)	0.5 to 0.6	1.4 to 1.6	0.40 to 0.60

## ■ As for Packaging Methods, Soldering Conditions and Safety Precautions,

Please see Data Files

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