Model No.

EPP**

ESD Protection De

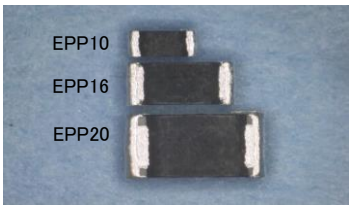
■Features

・Surface mountchip components forelectrostatic protection.

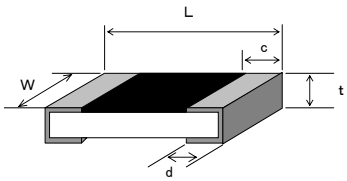
・Installed betweensignal linesandGND,itinstantlysuppresses ESD,
protects the circuit.

antenna peripherals andHDMI(High-Definition Multimedia Interface) terminals
・Antenna peripheral equipment, HDMI (High-Speed Interface) terminals, etc.

Features ultra-low capacitance characteristicsmaking it



■Dimensions



(Unit: mm)

Product Name	L	W	t	c	d
EPP10	1.00±0.10	0.50±0.05	0.40±0.10	0.20±0.10	0.25±0.10
EPP16	1.60±0.15	0.80+0.20/−0.10	0.55±0.10	0.25±0.20	0.25±0.20
EPP20	2.00+0.20/−0.10	1.25+0.20/−0.10	0.55±0.10	0.40±0.20	0.40±0.20

■Specifications

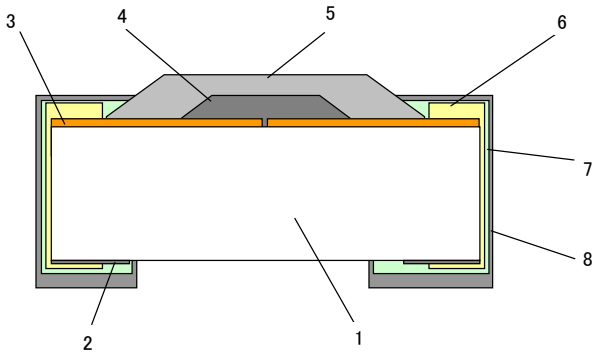
Test Condition: Compliant with IEC-61000-4-2 15kV air discharge (20 times)

Item	EPP10	EPP16	EPP20
Peak voltage	600V or less (900V or less)	700V or less (900V or less)	900V or less
Peak current	20A or more	20A or more	20A or more
nsulation Resistance	10 MΩ or more	10 MΩ or more	10 MΩ or more
Capacitance	≤0.3 pF (0.11 pF typ.)	≤0.3 pF (0.16 pF typ.)	0.3 pF or less (0.20 pF typ.)
SD Withstand Voltag	15kV (Air Discharge)	15kV (Air Discharge)	15kV (Air Discharge)

( ) indicates the second or subsequent time.

■Construction

No.	Component Name
1	Ceramic Substrate
2	Back Electrode
3	Surface Electrode
4	ESD Absorber
5	Protective coat
6	Side Electrode
7	Ni Plating
8	Sn Plating

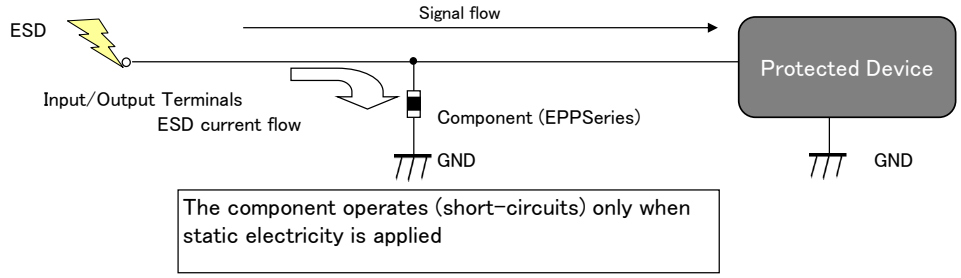


■What is ESD?

ESDstands forElectro-Static-Discharge, meaning static electricity discharge.

It features extremely high voltage levels lasting only a short time, with peak waveform voltages reachingseveral

■Usage Examples



Non-operating state: To maintain low capacitance and high Insulation Resistance, even in circuits handling high-frequency signals,
There is no impact on the passing signal.
During Operation: When static electricity is applied, internal discharge instantly bypasses the ESD current,

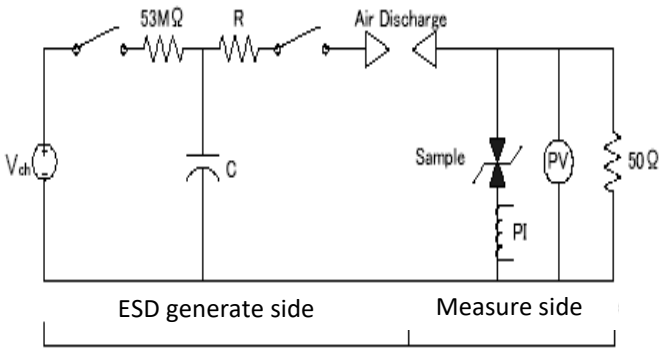
■Explanation of Electrostatic Discharge Testing

Test Method/Conditions: Compliant with IEC-61000-4-2 15kV air discharge
and apply ESD via air discharge. Measure the peak voltage across the ESD device terminals,
Measure peak current. Then, apply DC 15V (for 1005 Size) between the electrodes of the electrostatic protection device
Measure the leakage current. Repeat this 20 times.

Protection Characteristics Peak Voltage... An indicator showing how much of the voltage from the invading ESD the component w as able to suppress
Low peak voltage → Protection characteristics: ○
High Peak Voltage → Protection Characteristics: ×

Protection Characteristics Peak Current... An indicator showing how much of the invading ESD current the component could bypa ss
Low Peak Current → Protection Characteristics: ×
High Peak Current → Protective Characteristics: ○

Insulation Characteristics: Insulation Resistance... An indicator showing how low the leakage current is
Low Resistance → Insulation ×
High Resistance → Insulation ○



Peak Voltage and Current Measurement Method