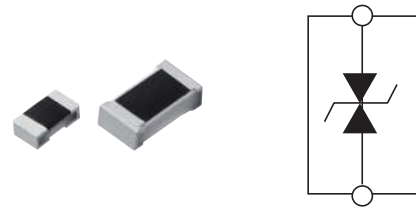


Features

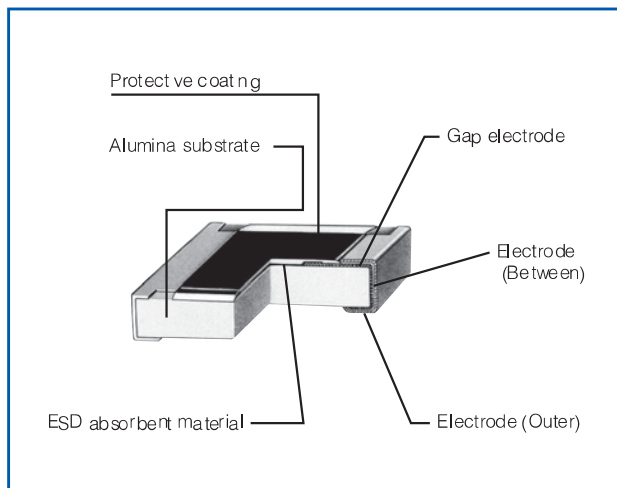
- ESD protection of high-speed data lines
- Low capacitance 0.15 pF : 1005(0402) size
0.15 pF : 1608(0603) size
- Good ESD suppression characteristics
- Good ESD withstand ng
- RoHS compliant



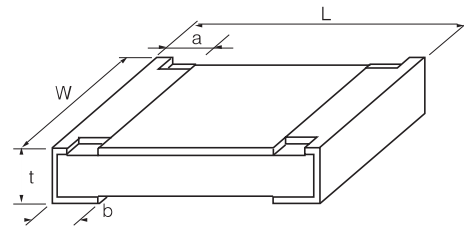
Recommended Applications

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

Construction



Dimensions in mm (not to scale)



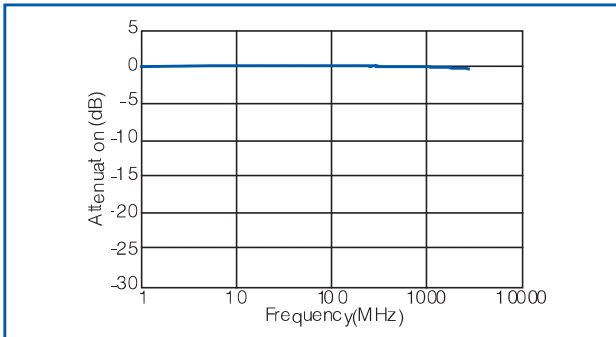
| Part No. (inch size) | Dimensions (mm) | | | | | Mass (Weight) [g/1000 pcs.] |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------------|
| | L | W | a | b | t | |
| (0402) | 1.00 ^{+0.10} | 0.50 ^{+0.05} | 0.20 ^{+0.10} | 0.25 ^{+0.10} | 0.38 ^{+0.05} | 0.6 |
| (0603) | 1.60 ^{+0.15} | 0.80 ^{+0.15} | 0.30 ^{+0.20} | 0.30 ^{+0.20} | 0.50 ^{+0.10} | 2.2 |

Electrical parameters (T_{amb}=25 °C)

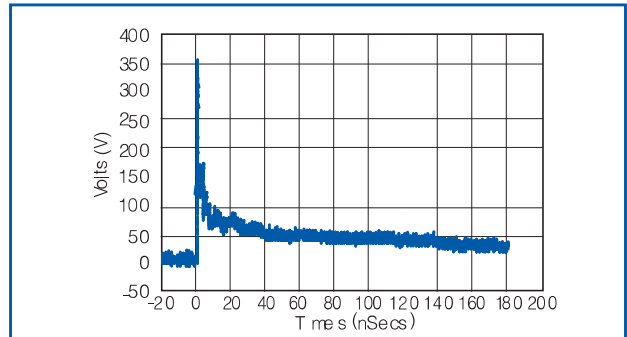
| Part Number | Working Voltage | Trigger Voltage | Clamping Voltage | Leakage Current | Capacitance |
|--------------|-----------------|-----------------|------------------|-----------------|----------------|
| | V _{dc} | V _T | V _C | I _L | C _P |
| | Max. | Typ. | Typ. | Typ. | Typ. |
| | V | V | V | nA | pF |
| PESD0603-050 | 5 | 150 | 35 | 1 | 0.15 |
| PESD0603-140 | 14 | 150 | 45 | 1 | 0.15 |
| PESD0603-240 | 24 | 150 | 50 | 1 | 0.15 |

- (1) Capacitance = The capacitance value shall be measured under the conditions specified below.
Frequency : 1 MHz±10 %, Voltage : 1 V_{rms}±0.2 V_{rms} Temperature : 25 °C±2 °C
- (2) Peak Voltage = The peak voltage value shall be measured under the following conditions. ESD test conditions : IEC61000-4-2, 8 kV contact discharge
- (3) Clamping Voltage = The clamping voltage value shall be measured at 30 ns after initiation of pulse and measured under the conditions specified below.
ESD test conditions : IEC61000-4-2, 8 kV contact discharge

Frequency Characteristics

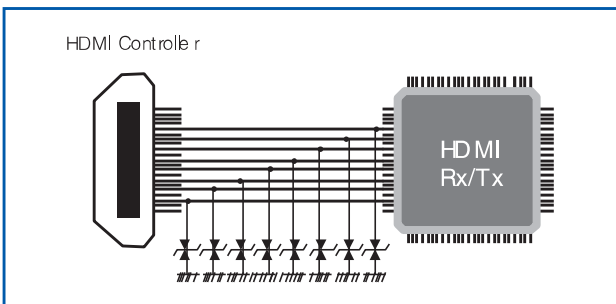


ESD Suppression Voltage Waveform

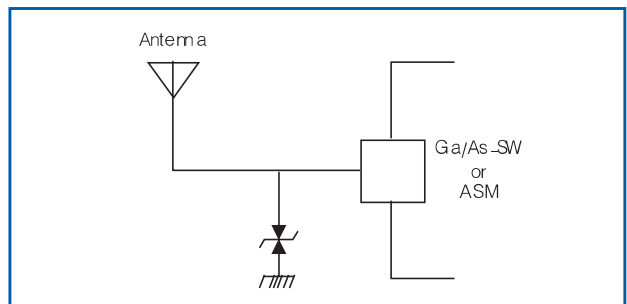


Typical Circuits Requiring Protection

● HDMI circuit

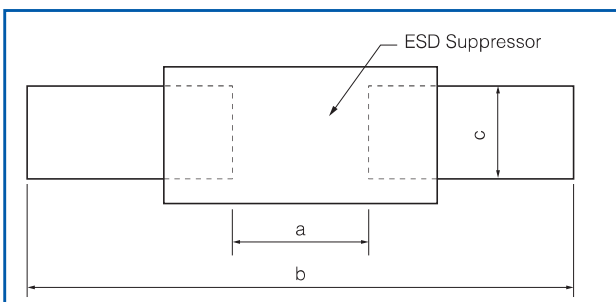


● Antenna circuit



Recommended Land Pattern

Recommended land pattern design for ESD Suppressor is shown below.



| Part Number (inch size) | Dimensions (mm) | | |
|----------------------------|-----------------|------------|------------|
| | a | b | c |
| (0402) | 0.5 to 0.6 | 1.4 to 1.6 | 0.4 to 0.6 |
| (0603) | 0.7 to 0.9 | 2.0 to 2.2 | 0.8 to 1.0 |