

## ESD Suppressor, High Withstanding Type

Type: **EZAEG**

EZAEG3W



### Features

- Excellent ESD withstanding (Conforms with automotive ESD standards (ISO10605, air discharge 25 kV))
- Low capacitance 0.10 pF : 1608 (0603) size
- High rated voltage (DC 50 V) contributes to reduce the risk of communication error
- AEC-Q200 qualified
- RoHS compliant

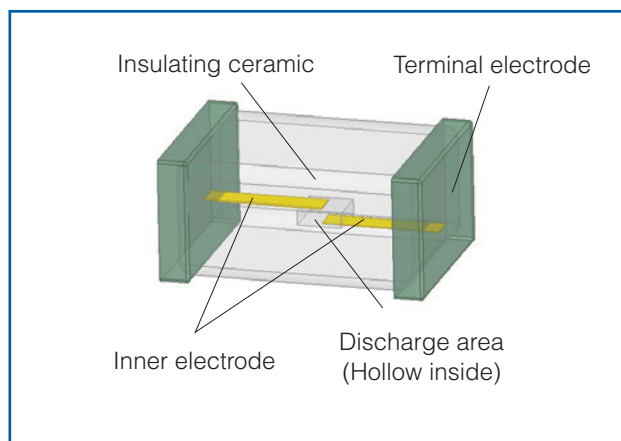
### Recommended Applications

- High speed data line for automotive (CAN, Ethernet, USB, LVDS)
- Automotive Antenna
- Amusement equipment

### Explanation of Part Numbers

|                |      |                |                      |   |              |              |                 |                 |                   |  |          |
|----------------|------|----------------|----------------------|---|--------------|--------------|-----------------|-----------------|-------------------|--|----------|
| 1              | 2    | 3              | 4                    | 5   | 6            | 7            | 8               | 9               | 10                | 11   |          |
| E              | Z    | A              | E                    | G   | 3            | W            | 1               | 1               | A                 | V  |          |
| Product Code   | Size |                | Design Specification |   | Peak Voltage |              | Special Feature |                 | Packaging Methods |  |          |
| ESD Suppressor | Code | Size mm (inch) | Code                 | Design Specification                          | Code         | Peak Voltage | Code            | Special Feature | Code              | Packaging  | Part No. |
|                | 3    | 1608 (0603)    | W                    | High with standing type<br>Rated voltage 50 V | 11           | 1000 V       | A               | Standard        | V                 | Punched Carrier Taping<br>4 mm Pitch, 4,000 pcs. | EZAEG3W  |

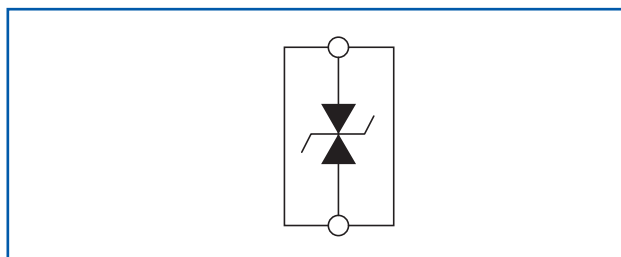
### Construction



### Dimensions in mm (not to scale)

| Part No.<br>(inch size) | Dimensions (mm) |           |           |           | Mass (Weight)<br>[g/1000 pcs.] |
|-------------------------|-----------------|-----------|-----------|-----------|--------------------------------|
|                         | L               | W         | T         | a         |                                |
| EZAEG3W<br>(0603)       | 1.60±0.15       | 0.80±0.15 | 0.80±0.15 | 0.30±0.20 | 3.8                            |

### Circuit Configuration



## Ratings

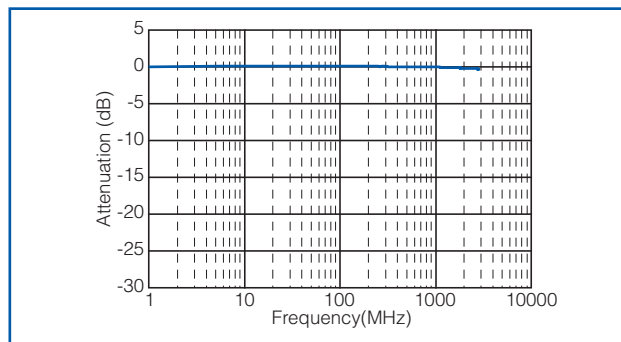
| Part Number (inch size) | Capacitance <sup>(1)</sup>                | Rated Voltage | Category Temperature Range |
|-------------------------|---|---------------|----------------------------|
| EZAEG3W11AV (0603)      | 0.10 <sup>+0.10</sup> <sub>-0.08</sub> pF | 50 V max.     | -55 to +125 °C             |

(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

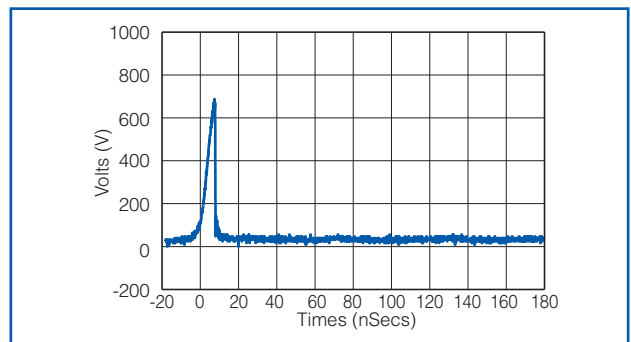
## Performance

| Test Item                    | Performance Requirements   | Test Conditions                                   |
|------------------------------|----------------------------|---|
| Peak Voltage                 | 1000 V max.                | ISO10605, air discharge 15 kV, Peak voltage value |
| Leakage Current              | 1 µA max.                  | Current at Rated voltage (DC 50 V)                |
| ESD withstanding             | Leakage current 10 µA max. | ISO10605, air discharge 25 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. | 85 °C, 85%RH, Rated voltage, 1000 h               |
| Endurance at 125 °C          | Leakage current 10 µA max. | 125 °C, Rated voltage, 1000 h                     |
| Resistance to Soldering Heat | Leakage current 10 µA max. | 270 °C, 10 s                                      |

## Frequency Characteristics

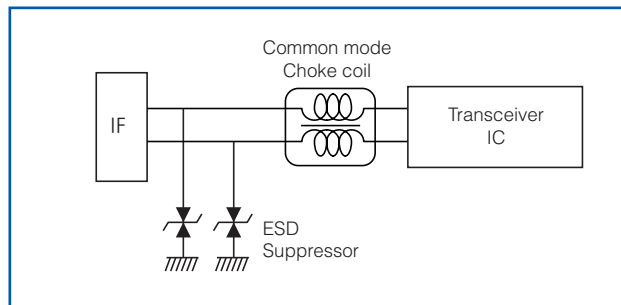


## ESD Suppression Voltage Waveform

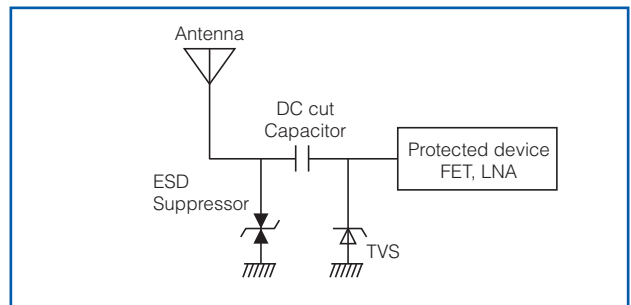


## Typical Circuits Requiring Protection

### ● Automotive network (CAN, Ethernet)

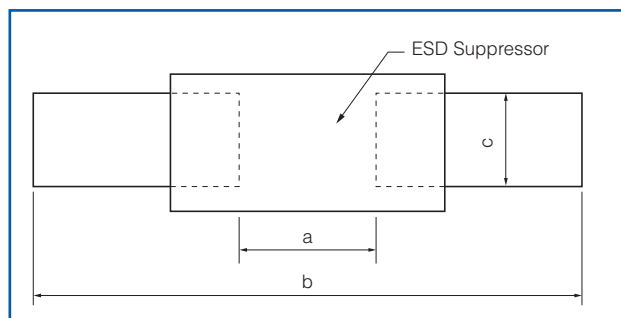


### ● Automotive antenna



## Recommended Land Pattern

Recommended land pattern design for ESD Suppressor is shown below.



| Part Number (inch size) | Dimensions (mm) |            |            |
|-------------------------|-----------------|------------|------------|
|                         | a               | b          | c          |
| EZAEG3W (0603)          | 0.8 to 1.0      | 2.0 to 2.6 | 0.8 to 1.0 |

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

Please see Data Files