

Multilayer Varistor  
for ESD pulse

Series **EZJS** : For Power line  
(ST:Strontium Titanate) (High capacitance)



■ Features

- Multilayer monolithic ceramic construction
- Excellent solderability and superior heat resistance
- Large surge current and energy capabilities in withstanding small size.

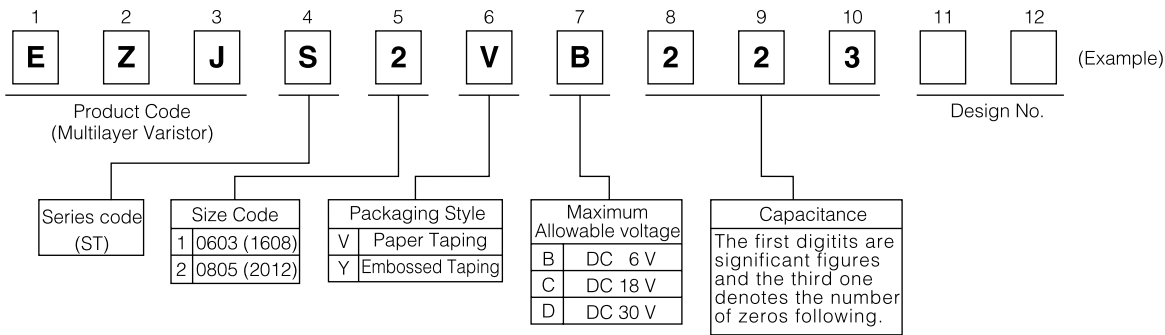
● Series EZJS

- Multilayer varistor of Strontium Titanate ceramic suppresses the pulse noise, especially high frequency noise(ESD, burst-noise) and protects the equipment from the transient surge.
- This Varistor is suitable for low-frequency signal circuit power and audio signal line due to large capacitance.

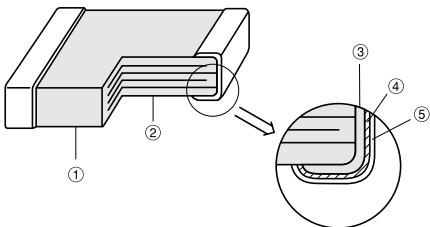
■ Precautions for Handling  
see Page 112 to 118

■ Packing method  
see Page 111, 182

■ Explanation of Part Numbers

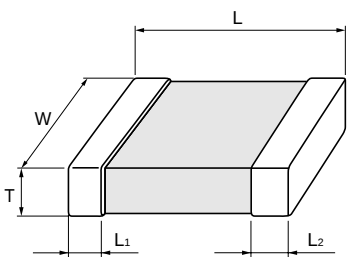


■ Construction



| No | Name                    |                        |
|----|-------------------------|------------------------|
| ①  | Semiconductive Ceramics |                        |
| ②  | Inner electrode         |                        |
| ③  | Electrode               | Substrate electrode    |
| ④  |                         | Intermediate electrode |
| ⑤  |                         | External electrode     |

■ Dimmension in mm(not to scale)



(Unit:mm)

| Size Code<br>(EIA) | Part Numbers | L         | W         | T         | L1, L2    |
|--------------------|--------------|-----------|-----------|-----------|-----------|
| 0603               | EZJS1□□□□□   | 1.60±0.15 | 0.8±0.1   | 0.8±0.1   | 0.3±0.2   |
| 0805               | EZJS2VB223   | 2.0±0.2   | 1.25±0.20 | 0.8±0.2   | 0.50±0.25 |
|                    | EZJS2VB822   |           |           | 1.25±0.20 |           |
|                    | EZJS2YD472   |           |           |           |           |

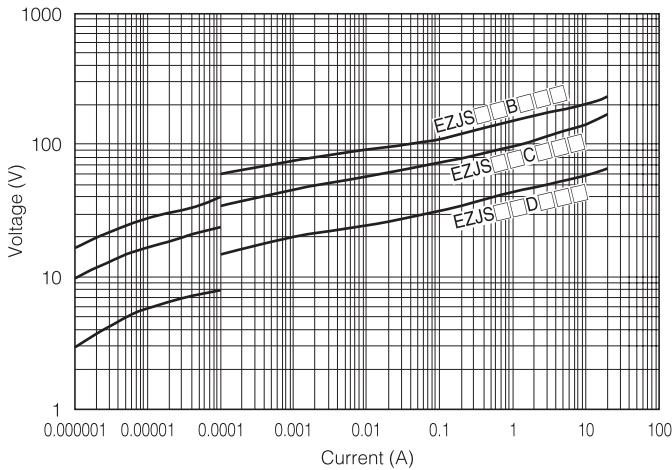
■ Ratings and Characteristics

| Size Code (EIA) | Part No.   | Maximum Allowable Voltage | Varistor Voltage @ 1mA | Capacitance @ 1 kHz | Maximum ESD IEC61000-4-2         |
|-----------------|------------|---------------------------|------------------------|---------------------|----------------------------------|
| 0603            | EZJS1VB822 | DC 6 V                    | 12 V                   | 8200 pF             | Contact Discharge Voltage: 30 kV |
|                 | EZJS1VC392 | DC 18 V                   | 30 V                   | 3900 pF             |                                  |
|                 | EZJS1VD182 | DC 30 V                   | 50 V                   | 1800 pF             |                                  |
| 0805            | EZJS2VB223 | DC 6 V                    | 12 V                   | 22000 pF            |                                  |
|                 | EZJZ2YC822 | DC 18 V                   | 30 V                   | 8200 pF             |                                  |
|                 | EZJS2YD472 | DC 30 V                   | 50 V                   | 4700 pF             |                                  |

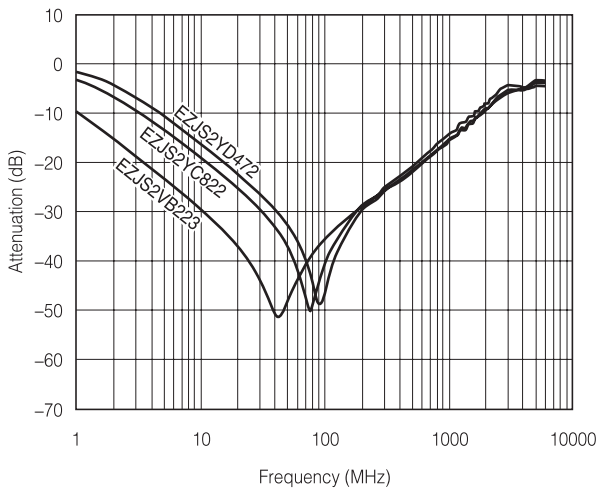
● Operating Temperature Range: -40 to 85 °C

■ Typical Characteristics

● Voltage vs. Current



■ Frequency Characteristics



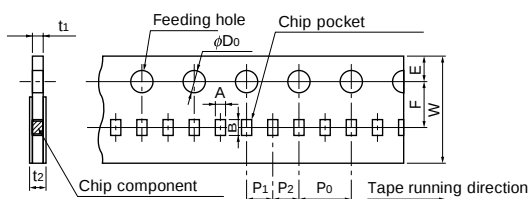
# 

## 

| Series | Size Code (EIA) | Thickness | Paper taping                 | Embossed taping             |
|--------|-----------------|-----------|------------------------------|-----------------------------|
| EZJZ   | 0201            | 0.3 mm    | Pitch: 2 mm 15,000 pcs./reel | —                           |
|        | 0402            | 0.5 mm    | Pitch: 2 mm 10,000 pcs./reel | —                           |
|        | 0603            | 0.8 mm    | Pitch: 4 mm 4,000 pcs./reel  | —                           |
|        | 2 Array Type    | 0.6 mm    | Pitch: 4 mm 4,000 pcs./reel  | —                           |
|        | 4 Array Type    | 0.85 mm   | Pitch: 4 mm 4,000 pcs./reel  | —                           |
| EZJS   | 0603            | 0.8 mm    | Pitch: 4 mm 4,000 pcs./reel  | —                           |
|        | 0805            | 0.8 mm    | Pitch: 4 mm 5,000 pcs./reel  | —                           |
|        |                 | 1.25 mm   | —                            | Pitch: 4 mm 2,000 pcs./reel |

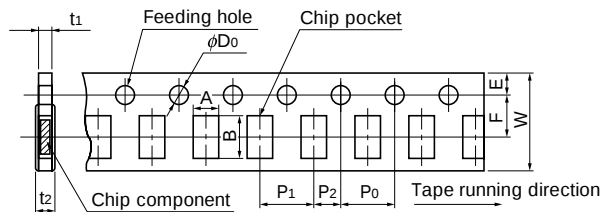
## 

P<sub>1</sub>: 2mm



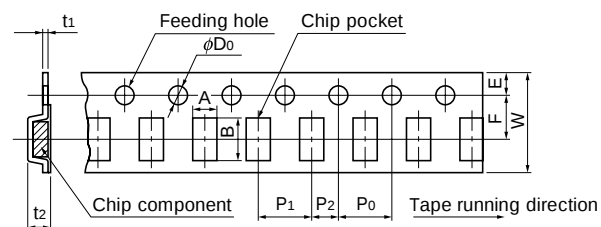
| Symbol    | A             | B             | W           | F             | E             | P <sub>1</sub> | P <sub>2</sub> | P <sub>0</sub> | φD               | t <sub>1</sub> | t <sub>2</sub> |
|-----------|---------------|---------------|-------------|---------------|---------------|----------------|----------------|----------------|------------------|----------------|----------------|
| Size Code |               |               |             |               |               |                |                |                |                  |                |                |
| 0201      | 0.37<br>±0.03 | 0.67<br>±0.03 | 8.0<br>±0.2 | 3.50<br>±0.05 | 1.75<br>±0.10 | 2.00<br>±0.05  | 2.00<br>±0.05  | 4.0<br>±0.05   | 1.5<br>+0.1<br>0 | 0.5<br>max.    | 0.8<br>max.    |
| 0402      | 0.62<br>±0.05 | 1.12<br>±0.05 | 8.0<br>±0.2 | 3.50<br>±0.05 | 1.75<br>±0.10 | 2.00<br>±0.05  | 2.00<br>±0.05  | 4.0<br>±0.05   | 1.5<br>+0.1<br>0 | 0.7<br>max.    | 1.0<br>max.    |

P<sub>1</sub>: 4mm



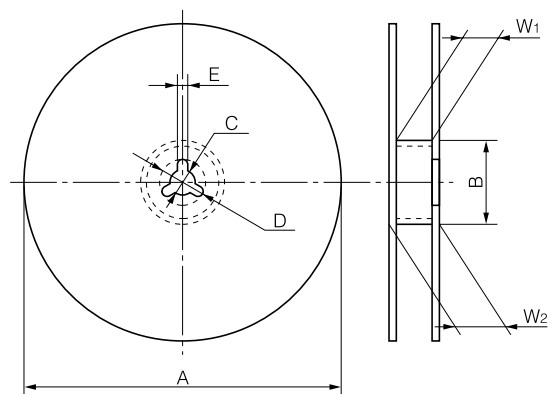
| Symbol       | A             | B             | W           | F             | E             | P <sub>1</sub> | P <sub>2</sub> | P <sub>0</sub> | φD               | t <sub>1</sub> | t <sub>2</sub> |
|--------------|---------------|---------------|-------------|---------------|---------------|----------------|----------------|----------------|------------------|----------------|----------------|
| Size Code    |               |               |             |               |               |                |                |                |                  |                |                |
| 0603         | 1.18<br>±0.10 | 1.63<br>±0.10 | 8.0<br>±0.2 | 3.50<br>±0.05 | 1.75<br>±0.10 | 4.0<br>±0.1    | 2.00<br>±0.05  | 4.0<br>±0.1    | 1.5<br>+0.1<br>0 | 1.1<br>max.    | 1.4<br>max.    |
| 0805         | 1.65<br>±0.2  | 2.4<br>±0.2   | 8.0<br>±0.2 | 3.50<br>±0.05 | 1.75<br>±0.10 | 4.0<br>±0.1    | 2.00<br>±0.05  | 4.0<br>±0.1    | 1.5<br>+0.1<br>0 | 1.1<br>max.    | 1.4<br>max.    |
| 4 Array Type |               |               |             |               |               |                |                |                |                  |                |                |
| 0504         | 1.0<br>±0.1   | 1.8<br>±0.1   | 8.0<br>±0.2 | 3.50<br>±0.05 | 1.75<br>±0.10 | 4.0<br>±0.1    | 2.00<br>±0.05  | 4.0<br>±0.1    | 1.5<br>+0.1<br>0 | 1.1<br>max.    | 1.4<br>max.    |
| 2 Array Type |               |               |             |               |               |                |                |                |                  |                |                |

## 



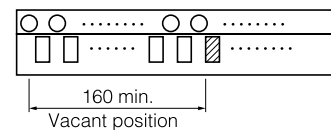
| Symbol    | A             | B             | W           | F             | E             | P <sub>1</sub> | P <sub>2</sub> | P <sub>0</sub> | φD               | t <sub>1</sub> | t <sub>2</sub> |
|-----------|---------------|---------------|-------------|---------------|---------------|----------------|----------------|----------------|------------------|----------------|----------------|
| Size Code |               |               |             |               |               |                |                |                |                  |                |                |
| 0805      | 1.55<br>±0.20 | 2.35<br>±0.20 | 8.0<br>±0.2 | 3.50<br>±0.05 | 1.75<br>±0.10 | 4.0<br>±0.1    | 2.00<br>±0.05  | 4.0<br>±0.1    | 1.5<br>+0.1<br>0 | 0.6<br>max.    | 1.5<br>max.    |

## 

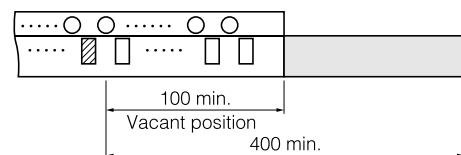


| Symbol    | A                                | B         | C        | D        | E       | W <sub>1</sub> | W <sub>2</sub> |
|-----------|----------------------------------|-----------|----------|----------|---------|----------------|----------------|
| Dim. (mm) | φ180 <sup>+0</sup> <sub>-1</sub> | φ60.0±0.5 | 13.0±0.5 | 21.0±0.8 | 2.0±0.5 | 9.0±0.3        | 11.4±1.00      |

## 



## 



Unit : mm