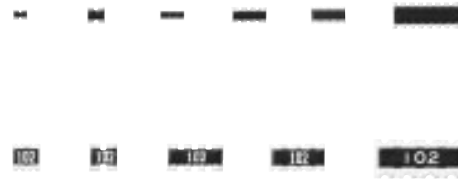


## Chip Resistor Array

Type: **EXB1 : 0201 Array**  
**EXB2 : 0402 Array**  
**EXB3 : 0603 Array**  
**EXBN : 0402 Array**  
**EXBV : 0603 Array**  
**EXBS : 0805 Array**



### ■ Features

- High density
  - 2 resistors in 0.8 mm × 0.6 mm size (EXB14V)
  - 4 resistors in 1.4 mm × 0.6 mm size (EXB18V)
  - 2 resistors in 1.0 mm × 1.0 mm size (EXB24V)
  - 4 resistors in 2.0 mm × 1.0 mm size (EXB28V, N8V)
  - 8 resistors in 3.8 mm × 1.6 mm size (EXB2HV)
  - 2 resistors in 1.6 mm × 1.6 mm size (EXB34V, V4V)
  - 4 resistors in 3.2 mm × 1.6 mm size (EXB38V, V8V)
  - 4 resistors in 5.1 mm × 2.2 mm size (EXBS8V)

### ● Improvement of placement efficiency

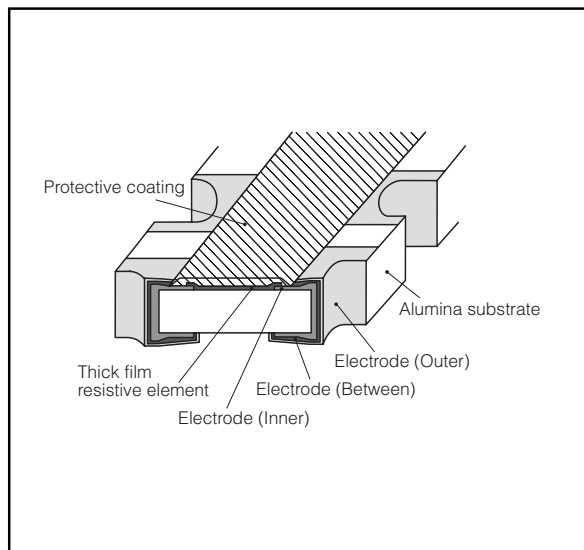
Placement efficiency of Chip Resistor Array is two, four or eight times of the flat type chip resistor

### ● Reference Standard...IEC 60115-9, JIS C 5201-9, EIAJ RC-2129

### ■ Explanation of Part Numbers

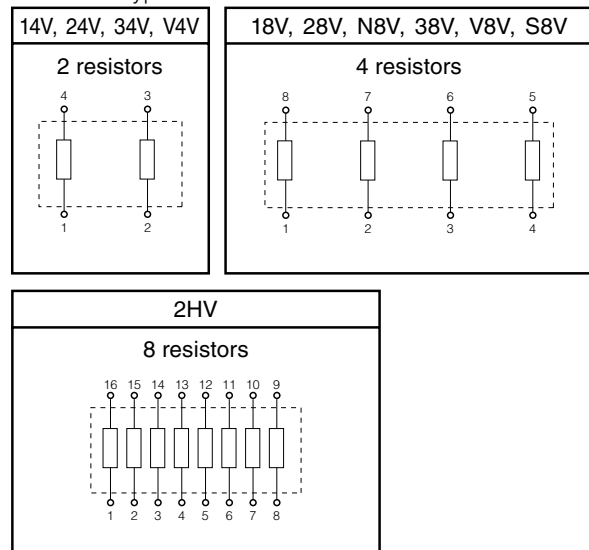
|                                         |                                   |                     |               |                 |            |                  |                                                                                                                                                                                                      |          |                         |                                                   |                                                   |                               |
|-----------------------------------------|-----------------------------------|---------------------|---------------|-----------------|------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|---------------------------------------------------|---------------------------------------------------|-------------------------------|
|                                         | 1                                 | 2                   | 3             | 4               | 5          | 6                | 7                                                                                                                                                                                                    | 8        | 9                       | 10                                                | 11                                                |                               |
|                                         | E                                 | X                   | B             | V               | 8          | V                | 4                                                                                                                                                                                                    | 7        | 2                       | J                                                 | V                                                 |                               |
| Product Code                            | Chip Resistor Array<br>Type: inch |                     |               | No. of Terminal | Schematics |                  | Resistance Value                                                                                                                                                                                     |          | Resistance<br>Tolerance | Packaging Methods                                 |                                                   |                               |
| Thick Film<br>Chip Resistor<br>Networks | 1 0201 Array                      |                     |               | 4 4 Terminal    | V          | Isolated<br>type | The first two digits are<br>significant figures of<br>resistance value and<br>the third one denotes<br>the number of zeros<br>following. Jumper is<br>expressed by R00<br><br>Example : 222 → 2.2 kΩ | J ±5 %   | Nil                     | Embossed Carrier Taping<br>4 mm pitch, 2,500 pcs. | EXBS8V                                            |                               |
|                                         | 2 0402 Array                      | Convex<br>Terminal  | 8 8 Terminal  |                 |            |                  |                                                                                                                                                                                                      |          |                         |                                                   |                                                   |                               |
|                                         | 3 0603 Array                      |                     | H 16 Terminal |                 |            |                  |                                                                                                                                                                                                      |          |                         |                                                   |                                                   |                               |
|                                         | N 0402 Array                      | Concave<br>Terminal |               |                 |            |                  |                                                                                                                                                                                                      |          |                         |                                                   |                                                   |                               |
|                                         | V 0603 Array                      |                     |               |                 |            |                  |                                                                                                                                                                                                      |          |                         |                                                   |                                                   |                               |
| S 0805 Array                            |                                   |                     |               |                 |            |                  |                                                                                                                                                                                                      |          |                         |                                                   |                                                   |                               |
|                                         |                                   |                     |               |                 |            |                  |                                                                                                                                                                                                      | 0 Jumper |                         | X                                                 | Punched Carrier Taping<br>2 mm pitch, 10,000 pcs. | EXB14V, 18V,<br>24V, 28V, N8V |
|                                         |                                   |                     |               |                 |            |                  |                                                                                                                                                                                                      |          |                         | V                                                 | Punched Carrier Taping<br>4 mm pitch, 5,000 pcs.  | EXB2HV, 34V,<br>38V, V4V, V8V |

### ■ Construction (Example : Concave Terminal)



### ■ Schematics

#### ● Isolated type

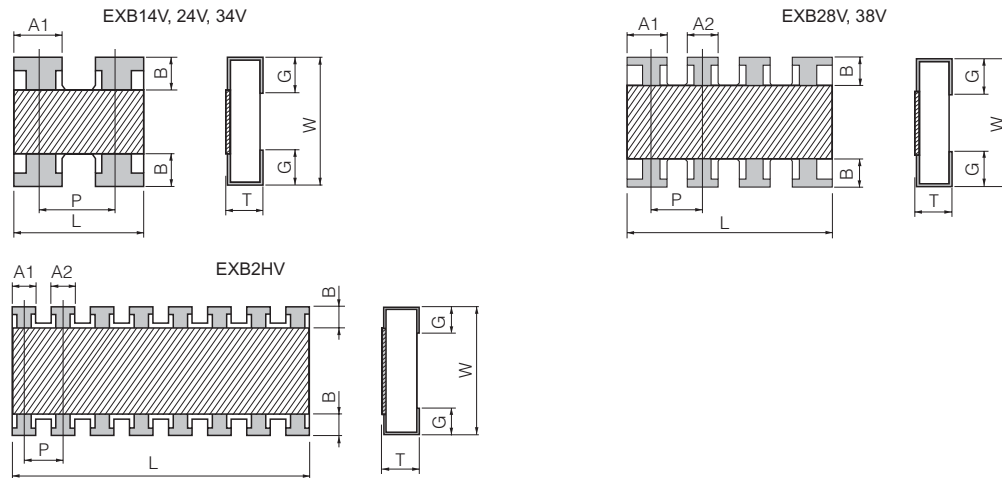


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■ Dimensions in mm (not to scale)

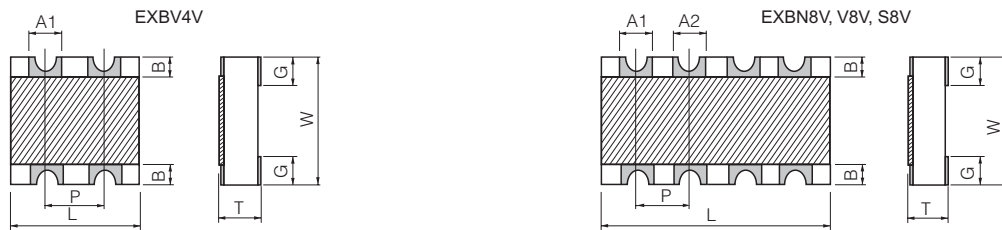
(1) Convex Terminal type



| Type<br>(inch size) | Dimensions (mm) |                 |                 |                 |                 |                 |        |                 | Mass (Weight)<br>[g/1000 pcs.] |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|-----------------|--------------------------------|
|                     | L               | W               | T               | A1              | A2              | B               | P      | G               |                                |
| EXB14V (0201×2)     | 0.80 $\pm$ 0.10 | 0.60 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | —               | 0.15 $\pm$ 0.10 | (0.50) | 0.15 $\pm$ 0.10 | 0.5                            |
| EXB24V (0402×2)     | 1.00 $\pm$ 0.10 | 1.00 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.40 $\pm$ 0.10 | —               | 0.18 $\pm$ 0.10 | (0.65) | 0.25 $\pm$ 0.10 | 1.2                            |
| EXB28V (0402×4)     | 2.00 $\pm$ 0.10 | 1.00 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.45 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.20 $\pm$ 0.10 | (0.50) | 0.25 $\pm$ 0.10 | 2.0                            |
| EXB2HV (0402×8)     | 3.80 $\pm$ 0.10 | 1.60 $\pm$ 0.10 | 0.45 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.30 $\pm$ 0.10 | (0.50) | 0.30 $\pm$ 0.10 | 9.0                            |
| EXB34V (0603×2)     | 1.60 $\pm$ 0.20 | 1.60 $\pm$ 0.15 | 0.50 $\pm$ 0.10 | 0.65 $\pm$ 0.15 | —               | 0.30 $\pm$ 0.20 | (0.80) | 0.30 $\pm$ 0.20 | 3.5                            |
| EXB38V (0603×4)     | 3.20 $\pm$ 0.20 | 1.60 $\pm$ 0.15 | 0.50 $\pm$ 0.10 | 0.65 $\pm$ 0.15 | 0.45 $\pm$ 0.15 | 0.30 $\pm$ 0.20 | (0.80) | 0.35 $\pm$ 0.20 | 7.0                            |

(2) Concave Terminal type

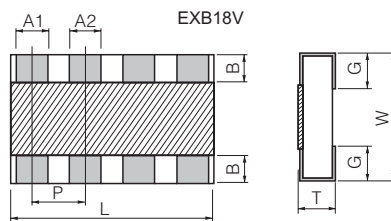
( ) Reference



| Type<br>(inch size) | Dimensions (mm) |                 |                 |                 |                 |                 |        |                 | Mass (Weight)<br>[g/1000 pcs.] |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|-----------------|--------------------------------|
|                     | L               | W               | T               | A1              | A2              | B               | P      | G               |                                |
| EXBN8V (0402×4)     | 2.00 $\pm$ 0.10 | 1.00 $\pm$ 0.10 | 0.45 $\pm$ 0.10 | 0.30 $\pm$ 0.10 | 0.30 $\pm$ 0.10 | 0.20 $\pm$ 0.15 | (0.50) | 0.30 $\pm$ 0.15 | 3.0                            |
| EXBV4V (0603×2)     | 1.60 $\pm$ 0.20 | 1.60 $\pm$ 0.20 | 0.60 $\pm$ 0.10 | 0.60 $\pm$ 0.10 | —               | 0.30 $\pm$ 0.15 | (0.80) | 0.45 $\pm$ 0.15 | 5.0                            |
| EXBV8V (0603×4)     | 3.20 $\pm$ 0.20 | 1.60 $\pm$ 0.20 | 0.60 $\pm$ 0.10 | 0.60 $\pm$ 0.10 | 0.60 $\pm$ 0.10 | 0.30 $\pm$ 0.15 | (0.80) | 0.45 $\pm$ 0.15 | 10                             |
| EXBS8V (0805×4)     | 5.08 $\pm$ 0.20 | 2.20 $\pm$ 0.20 | 0.70 $\pm$ 0.20 | 0.80 $\pm$ 0.15 | 0.80 $\pm$ 0.15 | 0.50 $\pm$ 0.15 | (1.27) | 0.55 $\pm$ 0.15 | 30                             |

(3) Flat Terminal type

( ) Reference



| Type<br>(inch size) | Dimensions (mm) |                 |                 |                 |                 |                 |        |                 | Mass (Weight)<br>[g/1000 pcs.] |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|-----------------|--------------------------------|
|                     | L               | W               | T               | A1              | A2              | B               | P      | G               |                                |
| EXB18V (0201×4)     | 1.40 $\pm$ 0.10 | 0.60 $\pm$ 0.10 | 0.35 $\pm$ 0.10 | 0.20 $\pm$ 0.10 | 0.20 $\pm$ 0.10 | 0.10 $\pm$ 0.10 | (0.40) | 0.20 $\pm$ 0.10 | 1.0                            |

( ) Reference

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## ■ Ratings

| Item                  |                         | Specifications                      |
|-----------------------|-------------------------|-------------------------------------|
| Resistance Range      |                         | 10 Ω to 1 MΩ: E24 series            |
| Resistance Tolerance  |                         | J: ±5 %                             |
| Number of Terminals   | 14V,24V,V4V,34V         | 4 terminal                          |
|                       | 18V,28V,N8V,38V,V8V,S8V | 8 terminal                          |
|                       | 2HV                     | 16 terminal                         |
| Number of Resistors   | 14V,24V,V4V,34V         | 2 terminal                          |
|                       | 18V,28V,N8V,38V,V8V,S8V | 4 terminal                          |
|                       | 2HV                     | 8 terminal                          |
| Power Rating at 70 °C | 14V,N8V                 | 0.031 W/element                     |
|                       | 18V                     | 0.031 W/element<br>(0.1 W/package)  |
|                       | 24V,28V,V4V,34V,V8V,38V | 0.063 W/element                     |
|                       | S8V                     | 0.1 W/element                       |
|                       | 2HV                     | 0.063 W/element<br>(0.25 W/package) |

| Item                                    |                             | Specifications                  |       |
|-----------------------------------------|-----------------------------|---------------------------------|-------|
| Limiting Element Voltage <sup>(1)</sup> | 14V,18V                     | 12.5 V                          |       |
|                                         | 2HV                         | 25 V                            |       |
|                                         | 24V,28V,N8V,38V,34V,V4V,V8V | 50 V                            |       |
|                                         | S8V                         | 100 V                           |       |
| Max. Over-load Voltage <sup>(2)</sup>   | 14V,18V                     | 25 V                            |       |
|                                         | 2HV                         | 50 V                            |       |
|                                         | 24V,28V,N8V,38V,34V,V4V,V8V | 100 V                           |       |
|                                         | S8V                         | 200 V                           |       |
| T.C.R.                                  |                             | ±200×10 <sup>-6</sup> /°C       |       |
| Category Temperature Range              |                             | -55 °C to 125 °C                |       |
| Jumper Array                            | Rated Current               | 14V,18V                         | 0.5 A |
|                                         |                             | 2HV,24V,28V,N8V,38V,34V,V4V,V8V | 1 A   |
|                                         |                             | S8V                             | 2 A   |
|                                         | Max. Overload Current       | 14V,18V                         | 1 A   |
|                                         |                             | 2HV,24V,28V,N8V,38V,34V,V4V,V8V | 2 A   |
|                                         |                             | S8V                             | 4 A   |

(1) Rated Continuous Working Voltage (RCWV) shall be determined from  $RCWV = \sqrt{\text{Power Rating} \times \text{Resistance Value}}$ , or Limiting Element Voltage listed above, whichever less.

(2) Overload (Short-time Overload) Test Voltage (SOTV) shall be determined from  $SOTV = 2.5 \times \text{Power Rating}$  or max. Overload (Voltage) listed above whichever less.

## Power Derating Curve

For resistors operated in ambient temperature above 70 °C, power rating shall be derated in accordance with the figure on the right.

