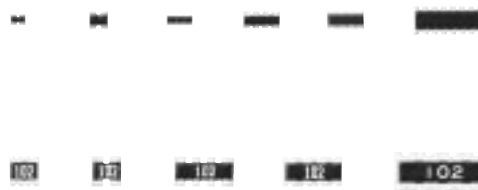


### Chip Resistor Array

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



#### ■ Features

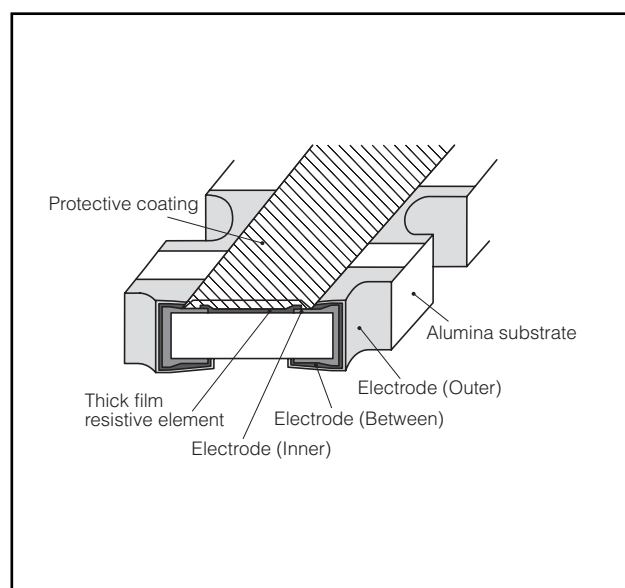
- High density
  - 2 resistors in 0.8 mm × 0.6 mm size (EXB14V)
  - 4 resistors in 1.4 mm × 0.6 mm size (EXB18V)
  - 2 resistors in 1.0 mm × 1.0 mm size (EXB24V)
  - 4 resistors in 2.0 mm × 1.0 mm size (EXB28V, N8V)
  - 8 resistors in 3.8 mm × 1.6 mm size (EXB2HV)
  - 2 resistors in 1.6 mm × 1.6 mm size (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

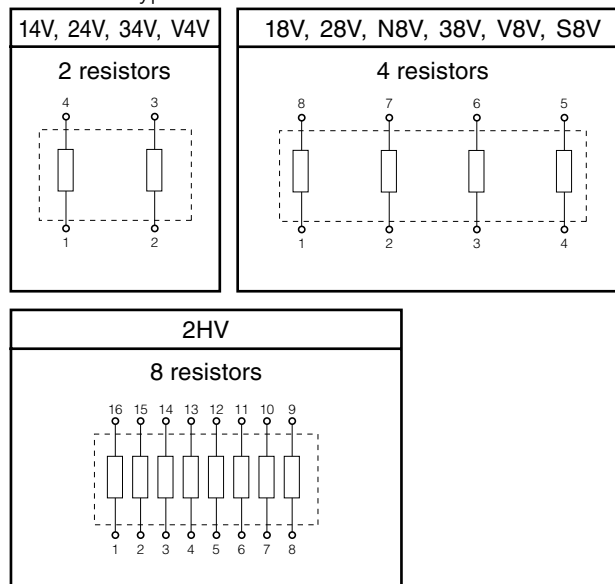
|                                         |                                   |            |                     |                 |                    |                                                                                                                                                                                                      |   |                         |                   |                                                   |                               |
|-----------------------------------------|-----------------------------------|------------|---------------------|-----------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------|-------------------|---------------------------------------------------|-------------------------------|
|                                         | 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 |                                   |            |                     | 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 %<br>0 Jumper      | Code              | Packaging                                         | Type                          |
|                                         | 1                                 | 0201 Array | Convex<br>Terminal  | 8 8 Terminal    |                    |                                                                                                                                                                                                      |   |                         | Nil               | Embossed Carrier Taping<br>4 mm pitch, 2,500 pcs. | EXBS8V                        |
|                                         | 2                                 | 0402 Array |                     | H 16 Terminal   |                    |                                                                                                                                                                                                      |   |                         | X                 | Punched Carrier Taping<br>2 mm pitch, 10,000 pcs. | EXB14V, 18V,<br>24V, 28V, N8V |
|                                         | 3                                 | 0603 Array | Concave<br>Terminal |                 |                    |                                                                                                                                                                                                      |   |                         | V                 | Punched Carrier Taping<br>4 mm pitch, 5,000 pcs.  | EXB2HV, 34V,<br>38V, V4V, V8V |
|                                         | N                                 | 0402 Array |                     |                 |                    |                                                                                                                                                                                                      |   |                         |                   |                                                   |                               |
|                                         | V                                 | 0603 Array |                     |                 |                    |                                                                                                                                                                                                      |   |                         |                   |                                                   |                               |
|                                         | S                                 | 0805 Array |                     |                 |                    |                                                                                                                                                                                                      |   |                         |                   |                                                   |                               |

#### ■ Construction (Example : Concave Terminal)



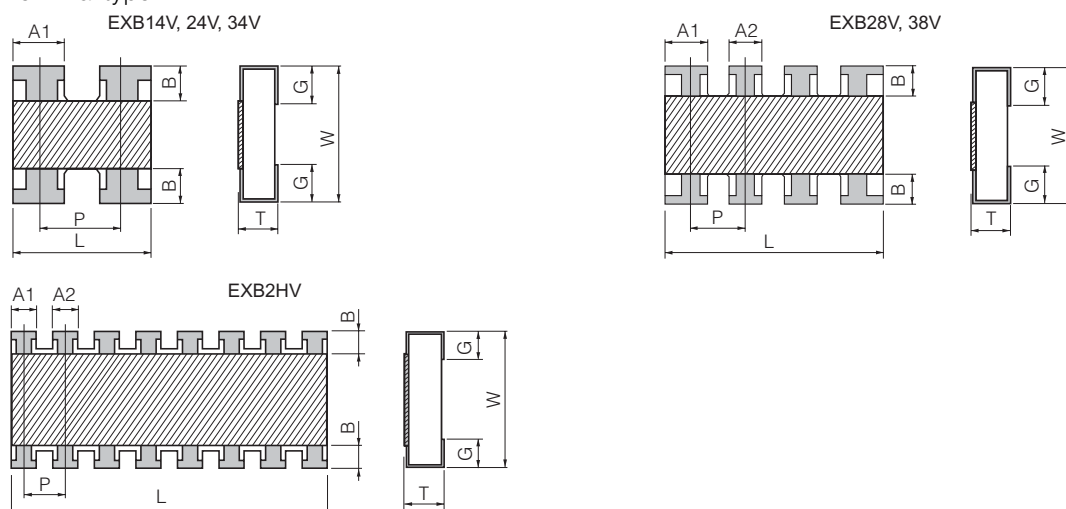
#### ■ Schematics

- Isolated type



## ■ Dimensions in mm (not to scale)

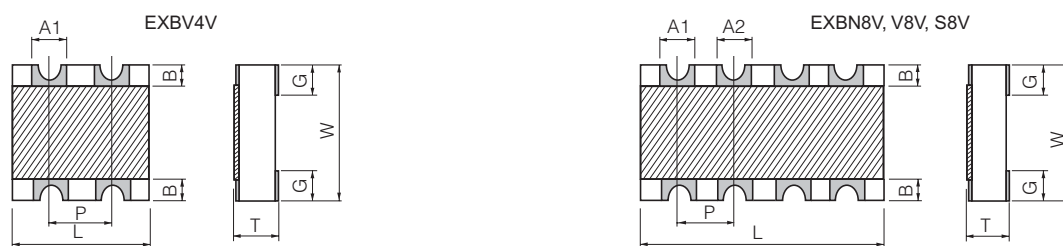
### (1) Convex Terminal type



| 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±0.10       | 0.60±0.10 | 0.35±0.10 | 0.35±0.10 | —         | 0.15±0.10 | (0.50) | 0.15±0.10 | 0.5                            |
| EXB24V (0402×2)     | 1.00±0.10       | 1.00±0.10 | 0.35±0.10 | 0.40±0.10 | —         | 0.18±0.10 | (0.65) | 0.25±0.10 | 1.2                            |
| EXB28V (0402×4)     | 2.00±0.10       | 1.00±0.10 | 0.35±0.10 | 0.45±0.10 | 0.35±0.10 | 0.20±0.10 | (0.50) | 0.25±0.10 | 2.0                            |
| EXB2HV (0402×8)     | 3.80±0.10       | 1.60±0.10 | 0.45±0.10 | 0.35±0.10 | 0.35±0.10 | 0.30±0.10 | (0.50) | 0.30±0.10 | 9.0                            |
| EXB34V (0603×2)     | 1.60±0.20       | 1.60±0.15 | 0.50±0.10 | 0.65±0.15 | —         | 0.30±0.20 | (0.80) | 0.30±0.20 | 3.5                            |
| EXB38V (0603×4)     | 3.20±0.20       | 1.60±0.15 | 0.50±0.10 | 0.65±0.15 | 0.45±0.15 | 0.30±0.20 | (0.80) | 0.35±0.20 | 7.0                            |

### (2) Concave Terminal type

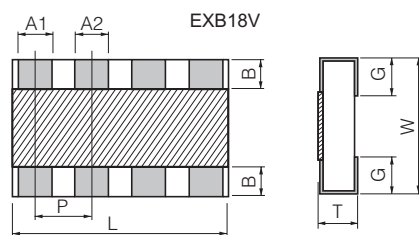
( ) Reference



| 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±0.10                              | 1.00±0.10                              | 0.45±0.10 | 0.30±0.10 | 0.30±0.10 | 0.20±0.15 | (0.50) | 0.30±0.15 | 3.0                            |
| EXBV4V (0603×2)     | 1.60 <sup>+0.20</sup> <sub>-0.10</sub> | 1.60 <sup>+0.20</sup> <sub>-0.10</sub> | 0.60±0.10 | 0.60±0.10 | —         | 0.30±0.15 | (0.80) | 0.45±0.15 | 5.0                            |
| EXBV8V (0603×4)     | 3.20 <sup>+0.20</sup> <sub>-0.10</sub> | 1.60 <sup>+0.20</sup> <sub>-0.10</sub> | 0.60±0.10 | 0.60±0.10 | 0.60±0.10 | 0.30±0.15 | (0.80) | 0.45±0.15 | 10                             |
| EXBS8V (0805×4)     | 5.08 <sup>+0.20</sup> <sub>-0.10</sub> | 2.20 <sup>+0.20</sup> <sub>-0.10</sub> | 0.70±0.20 | 0.80±0.15 | 0.80±0.15 | 0.50±0.15 | (1.27) | 0.55±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±0.10       | 0.60±0.10 | 0.35±0.10 | 0.20±0.10 | 0.20±0.10 | 0.10±0.10 | (0.40) | 0.20±0.10 | 1.0                            |

( ) Reference

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.  
Should a safety concern arise regarding this product, please be sure to contact us immediately.

00 Sep. 2010

### ■ 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.

