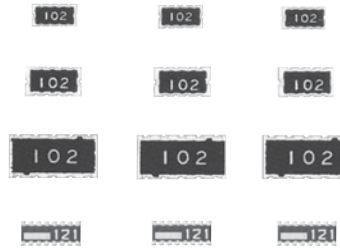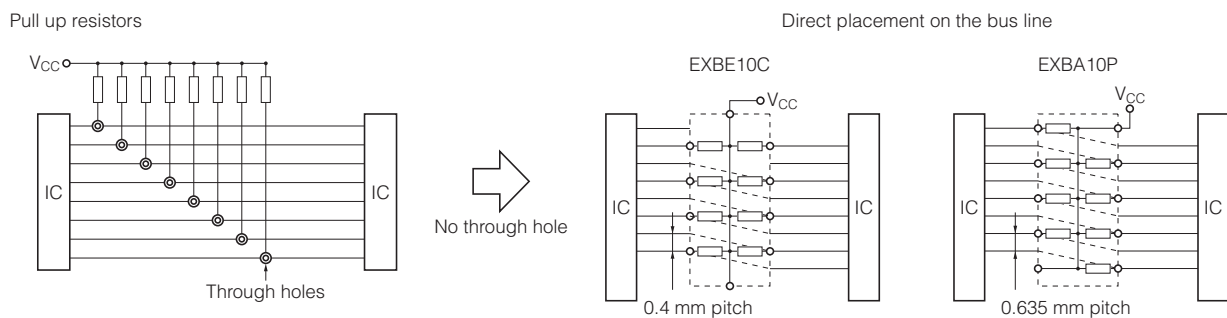# Chip Resistor Networks

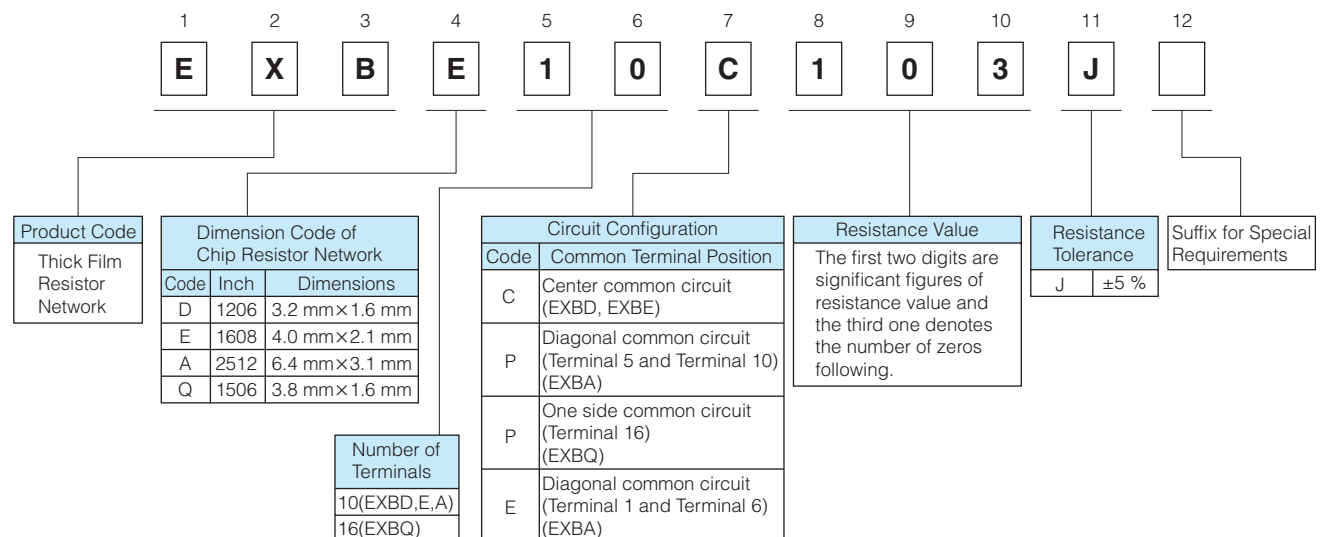Type: **EXBD**
EXBE
EXBA
EXBQ

Features

- High density placing for digital signal circuits
  - Bussed 8 or 15 resistors for pull up/down circuits
    EXBD: 3.2 mm × 1.6 mm × 0.55 mm, 0.635 mm pitch
    EXBE: 4.0 mm × 2.1 mm × 0.55 mm, 0.8 mm pitch
    EXBA: 6.4 mm × 3.1 mm × 0.55 mm, 1.27 mm pitch
    EXBQ: 3.8 mm × 1.6 mm × 0.45 mm, 0.5 mm pitch
  - Available direct placing on the bus line by means of half pitch spacing without through-holes on PWB
    ("High density placing" is shown below)
- High speed mounting using conventional placing machine
- Reference Standard…IEC 60115-9, JIS C 5201-9, EIAJ RC-2130
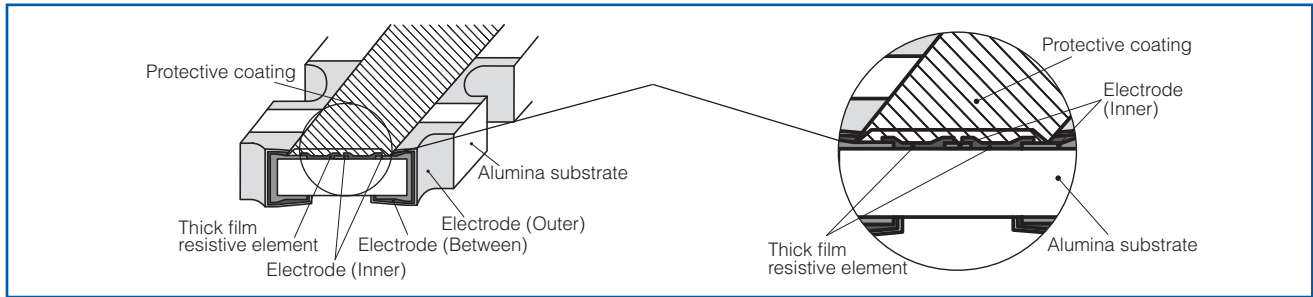- RoHS compliant

[High density placing]

Pull up resistors

Direct placement on the bus line

EXBE10C

EXBA10P

No through hole

0.4 mm pitch

0.635 mm pitch

Through holes

■ **As for Packaging Methods, Land Pattern, Soldering Conditions and Safety Precautions,**
Please see Data Files

Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	X	B	E	1	0	C	1	0	3	J	

Product Code

Thick Film Resistor Network

Dimension Code of Chip Resistor Network

Code	Inch	Dimensions
D	1206	3.2 mm×1.6 mm
E	1608	4.0 mm×2.1 mm
A	2512	6.4 mm×3.1 mm
Q	1506	3.8 mm×1.6 mm

Number of Terminals

10(EXBD,E,A)
16(EXBQ)

Circuit Configuration

Code	Common Terminal Position
C	Center common circuit (EXBD, EXBE)
P	Diagonal common circuit (Terminal 5 and Terminal 10) (EXBA)
P	One side common circuit (Terminal 16) (EXBQ)
E	Diagonal common circuit (Terminal 1 and Terminal 6) (EXBA)

Resistance Value

The first two digits are significant figures of resistance value and the third one denotes the number of zeros following.

Resistance Tolerance

J	±5 %

Suffix for Special Requirements

Construction (Example : EXBD)

Dimensions in mm (not to scale)

EXBD	EXBE	EXBA	EXBQ
Mass (Weight)[1000 pcs.] : 10 g	Mass (Weight)[1000 pcs.] : 16 g	Mass (Weight)[1000 pcs.] : 40 g	Mass (Weight)[1000 pcs.] : 9 g

Circuit Configuration

EXBD, EXBE	EXBA		EXBQ
	EXBA10P	EXBA10E	
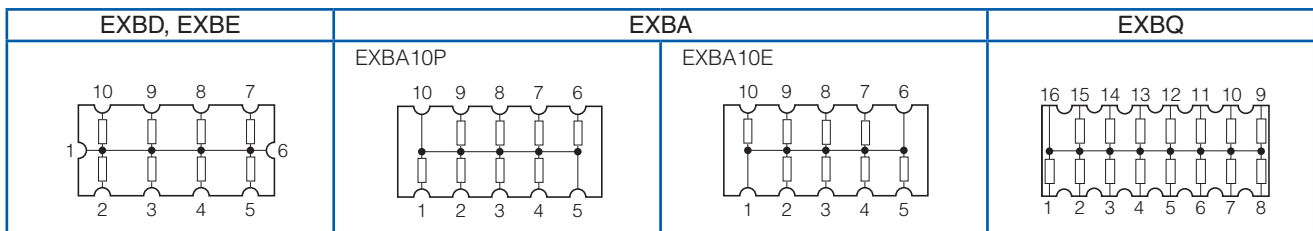
Ratings

Item	Specifications			
Series	EXBD	EXBE	EXBA	EXBQ
Resistance Range	47 Ω to 1 MΩ (E12)			100 Ω to 470 kΩ (E6 series)
Resistance Tolerance	±5%			
Number of Terminals	10 terminals			16 terminals
Number of Resistors	8 element			15 element
Power Rating at 70 °C	0.05 W/element	0.063 W/element		0.025 W/element
Limiting Element Voltage[1]	25V		50 V	25V
Maximum Overload Voltage[2]	50 V		100 V	50 V
T. C. R.	±200 × 10^{-6}/ °C			
Category Temperature Range	–55 °C to +125 °C			

(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 determinedfrom SOTV=2.5 × RCWV* or Maximum Overload Voltage listed above whichever less.

Power Derating Curve

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