

## Chip Attenuator 0302, 0404

Type: **EXB 14AT, 24AT**



### ■ Features

- Unbalanced  $\pi$  type attenuator circuit in one chip  
EXB14AT(0.8 mm × 0.6 mm), EXB24AT(1.0 mm × 1.0 mm)
- Reduced mounting area :  
EXB14AT : About 60% smaller than the area of an attenuator circuit consisting of three 0603 chip resistors, almost equal to the area of three 0402 chip resistors  
EXB24AT : About 50% smaller than the area of an attenuator circuit consisting of three 1005 chip resistors, almost equal to the area of three 0603 chip resistors
- Mounting cost reduction : (Only 1 chip placed as compared to 3)
- Attenuation : 1 dB to 10 dB

### ■ Recommended Applications

- Attenuation / level control / impedance matching of high frequency (communication signalling equipment cellular phones(GSM, CDMA, PDC, etc.), PHS, PDAs)

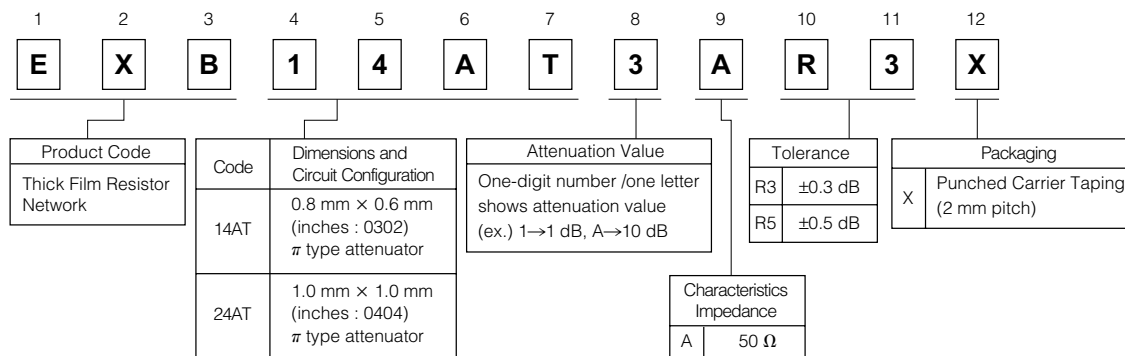
■ **Packaging Methods** Please see Pages 40 to 43

■ **Recommended Land Pattern** Please see Pages 44 to 45

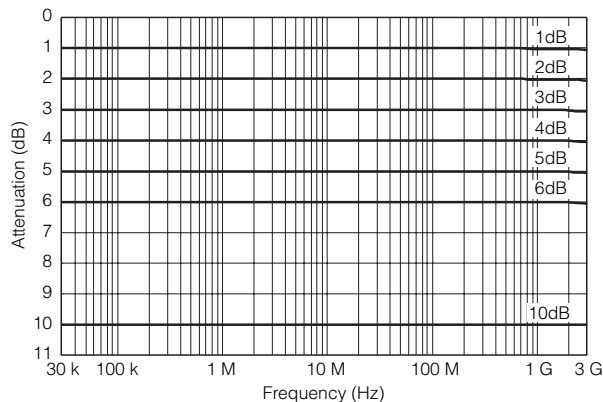
■ **Recommended Soldering Conditions** Please see Page 46

■ **Safety Precautions** Please see Page 47

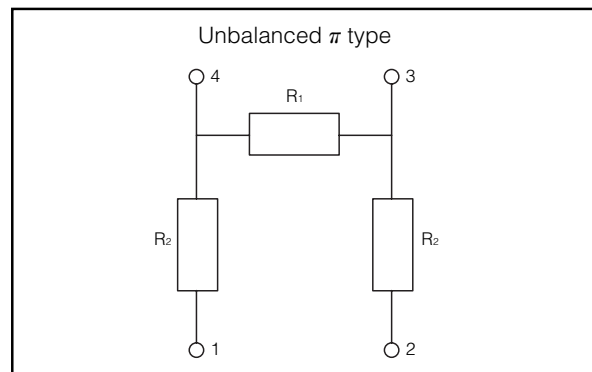
### ■ Explanation of Part Numbers



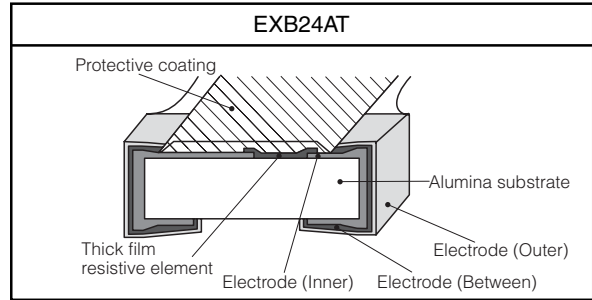
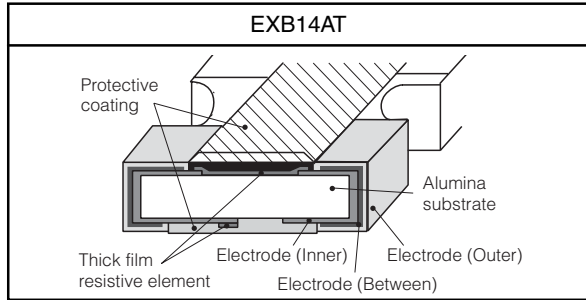
### ■ Attenuation-Frequency Characteristics (EXB14AT, EXB24AT)



### ■ Circuit Configuration



### Construction



### Dimensions (not to scale)

EXB14AT

Dimensions (mm)	L	W	T	A	B	C	P (typical value)
	0.80 <sup>+0.10</sup>	0.60 <sup>+0.10</sup>	0.35 <sup>+0.10</sup>	0.35 <sup>+0.10</sup>	0.15 <sup>+0.10</sup>	0.15 <sup>+0.10</sup>	0.50

<Marking Configuration>  
The bar marking for recognizing terminal direction is located on the side of terminal 3, 4.  
Mass (Weight) [1000 pcs.] : 0.7 g

EXB24AT

Dimensions (mm)	L	W	T	A	B	C	P (typical value)
	1.00 <sup>+0.10</sup>	1.00 <sup>+0.10</sup>	0.35 <sup>+0.10</sup>	0.40 <sup>+0.10</sup>	0.15 <sup>+0.10</sup>	0.25 <sup>+0.10</sup>	0.65

<Marking Configuration>  
The bar marking for recognizing terminal direction is located on the side of terminal 4.  
Mass (Weight) [1000 pcs.] : 1.1 g

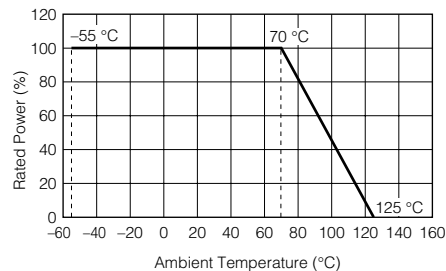
### Ratings

Type	EXB14AT, EXB24AT
Attenuation Value	1 dB, 2 dB, 3 dB, 4 dB, 5 dB, 6 dB, 10 dB*
Attenuation Value Tolerance	1 dB, 2 dB, 3 dB, 4 dB, 5 dB : ±0.3 dB 6 dB, 10 dB : ±0.5 dB
Characteristic Impedance	50 Ω
Power Rating	0.04 W /package
Frequency Range at 70 °C	DC to 3.0 GHz
VSWR (Voltage Standing Wave Ratio)	1.3 max.
Number of Resistors	3 resistors
Number of Terminals	4 terminals
Category Temperature Range	-55 °C to +125 °C

\* Please inquire about the other Attenuator value

### 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.



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.