8 9

10

11

. 30 k 100 k 1 M

10 M

Frequency (Hz)

100 M

#### **Chip Attenuator** 0302, 0404 Type: EXB 14AT, 24AT Features • Unbalanced $\pi$ type attenuator circuit in one chip EXB14AT(0.8 mm $\times$ 0.6 mm), EXB24AT(1.0 mm $\times$ 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 **RoHS** compliant 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 2 1 3 5 6 7 8 9 10 11 12 Е Х В 1 4 Α Т 3 Α R 3 Х Product Code Dimensions and Attenuation Value Tolerance Packaging Code Circuit Configuration One-digit number /one letter Thick Film Resistor Punched Carrier Taping R3 ±0.3 dB Х 0.8 mm × 0.6 mm Network shows attenuation value (2 mm pitch) R5 ±0.5 dB (inches : 0302) 14AT (ex.) 1→1 dB, A→10 dB $\pi$ type attenuator 1.0 mm x 1.0 mm Characteristics Impedance 24AT (inches: 0404) $\pi$ type attenuator А $50 \Omega$ Attenuation-Frequency Characteristics Circuit Configuration (EXB14AT, EXB24AT) 0 Unbalanced $\pi$ type 1dB 1 2dB $\bigcirc 4$ 03 2 R1 3dB 3 . 4dB Attenuation (dB) 4 . 5dB 5 6dB 6 7 R2 R

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.

10dB

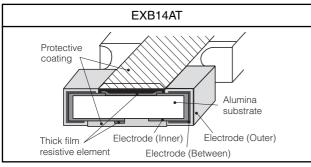
1G 3G

Ó 2

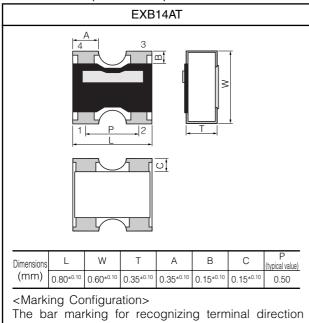
Ó 1

# Panasonic

### Construction



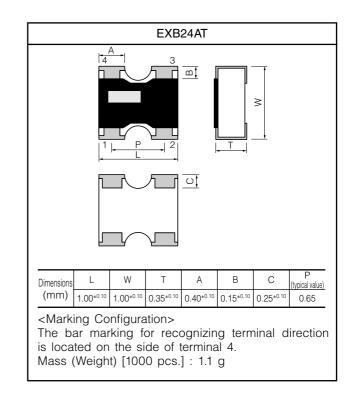
## Dimensions (not to scale)



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

### Ratings

EXB24AT	
Thick film resistive element	a substrate ode (Outer)
Electrode (Inner) Electrode (Be	tween)

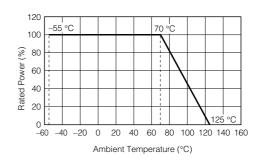


Туре	EXB14AT, EXB24AT
Attenuation Value	1 dB, 2 dB, 3 dB, 4 dB, 5 dB, 6 dB, 10 dB*
Attenuation Value Tolerance	1 dB, 2 dB, 3 dB, 4 dB, 5 dB : ±0.3 dB 6 dB, 10 dB : ±0.5 dB
Characteristic Impedance	50 Ω
Power Rating	0.04 W /package
Frequency Range at 70 °C	DC to 3.0 GHz
VSWR (Voltage Standing Wave Ratio)	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.



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