






# RF BALUN TRANSFORMERS

## For Wideband RF Applications



-  Low cost construction
-  Miniature surface mount package
-  Excellent insertion loss
-  Ideal for balanced-to-unbalanced applications
-  Designed for:
  - CATV Distribution/Drop Amplifiers
  - Set Top Boxes
  - Residential Gateways

### Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

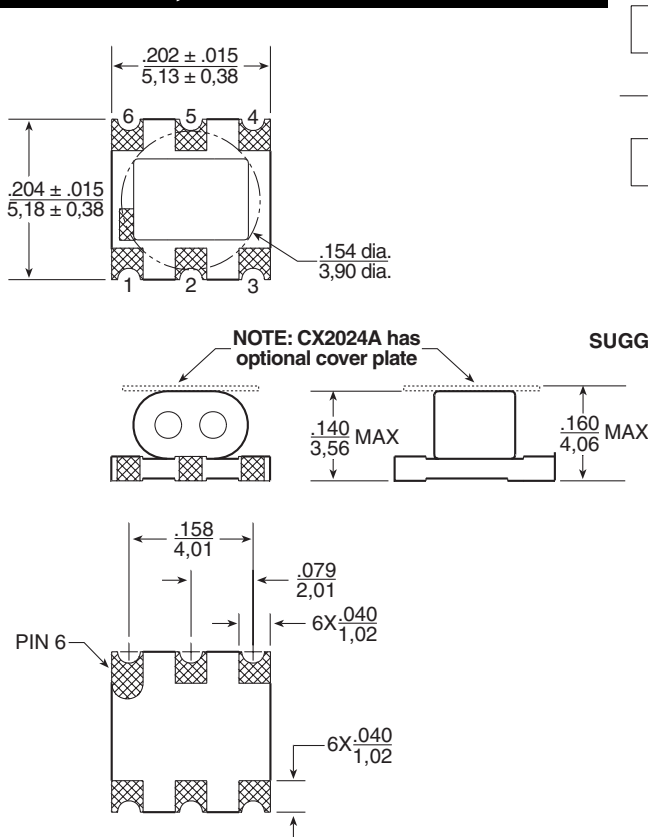
Standard Part Number	RoHS-6 Compliant Part No.	Impedance Ratio <sup>1</sup> (Pri:Sec ±2%)	Insertion Loss <sup>2</sup>			Return Loss			Phase Unbalance (50-1000MHz)	Amplitude Unbalance	
			10MHz (TYP/MAX)	50-750MHz (TYP/MAX)	750-1000MHz (TYP/MAX)	10MHz (TYP/MIN)	50-750MHz (TYP/MIN)	750-1000MHz (TYP/MIN)		(50MHz)	(100-1000MHz)
CX2024	CX2024NL	1:1	0.46/1.00dB	0.37/0.50dB	0.48/0.60dB	>40/20dB	>30/20dB	30/16dB	20° MAX	1.4dB MAX	1.25dB MAX
CX2024A	CX2024ANL	1:1	0.46/1.00dB	0.37/0.50dB	0.48/0.60dB	>40/20dB	>30/20dB	30/16dB	20° MAX	1.4dB MAX	1.25dB MAX
			50MHz (TYP/MAX)	208MHz (TYP/MAX)	870MHz (TYP/MAX)	50MHz (TYP/MIN)	208MHz (TYP/MIN)	870MHz (TYP/MIN)	50-870MHz	50MHz	100-870MHz
CX2149	CX2149NL	1:1	0.40/1.00dB	0.40/1.00dB	0.6/1.0dB	>30/20dB	30/20dB	22/18dB	±4° from 180°	1.4dB MAX	1.3dB MAX

NOTE: Part with cover plate is designated CX2024A. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (ex: CX2024T or CX2024AT).

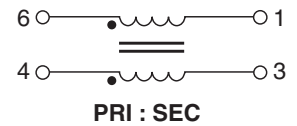
### Mechanical

### Schematic

#### CX2024/NL, CX2024A/NL & CX2149/NL



SUGGESTED PAD LAYOUT



Tape & Reel . . . . . 2000 /reel  
 Tray . . . . . 100 /tray  
 Power Rating . . . . . 30 mA MAX; 0.25 W MAX

Dimensions: Inches  
 mm  
 Unless otherwise specified, all tolerances are ±  $\frac{.010}{0.25}$

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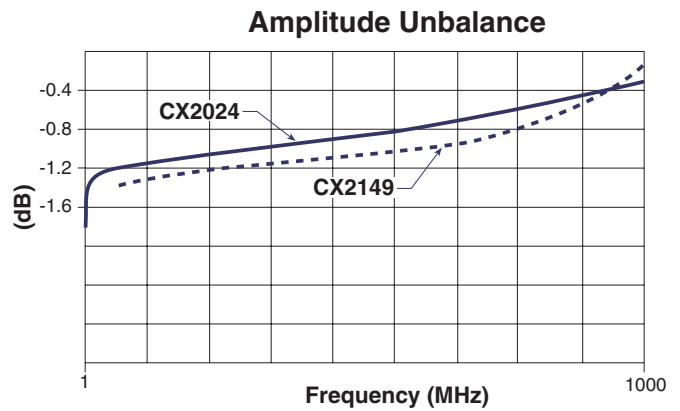
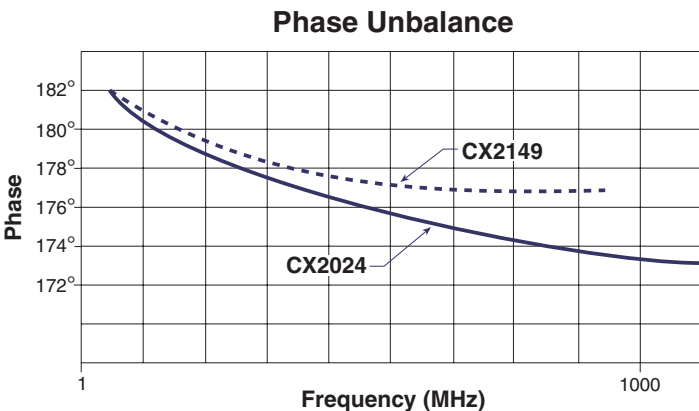
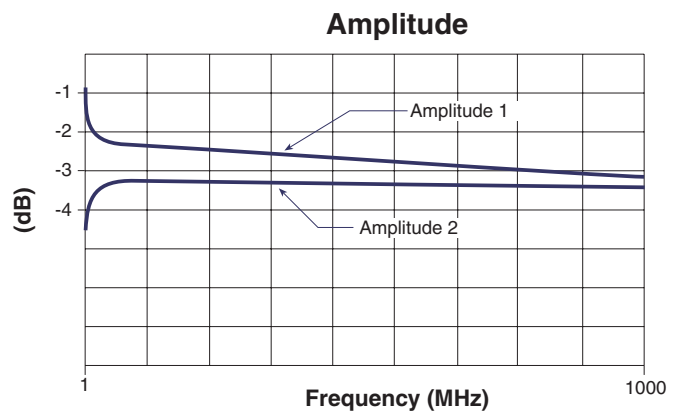
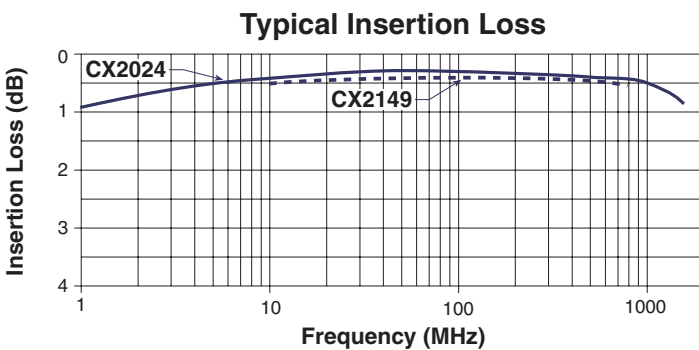


### Application Notes

- A. Bandwidth specifications for **CX2024**, **CX2024A** and **CX2149** are for a 75  $\Omega$  system.
- B. Materials used in the products are UL94-V0 recognized. Products meet requirements of IEC 695-2-2 (Needle Flame Test).
- C. For additional impedance ratios and frequency ranges, please contact Applications Engineering.
- D. Pick and place operation: smooth upper surface of device allows automatic pick and place.

### Notes from Tables

- 1. Impedance and turns ratios are specified primary:secondary.
- 2. These transformers are verified to operate from -40°C to +85°C. Contact Applications Engineering for performance data.



### For More Information:

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