

# 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

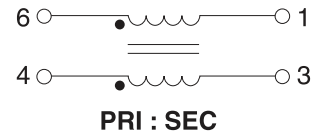
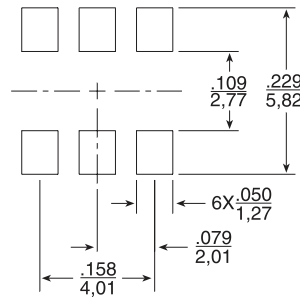
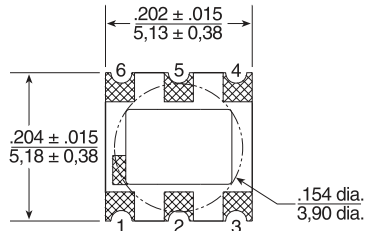
Standard Part Number	RoHS-6 Compliant Part No.	Impedance Ratio <sup>1</sup> (Pri:Sec ±2%)	Insertion Loss <sup>2</sup>			Return Loss			Phase Unbalance (50/1000MHz)	Amplitude Unbalance	
			10MHz (TYP/MAX)	50-750MHz (TYP/MAX)	750-1000MHz (TYP/MAX)	10MHz (TYP/MIN)	50-750MHz (TYP/MIN)	750-1000MHz (TYP/MIN)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

Notes: 1. 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).

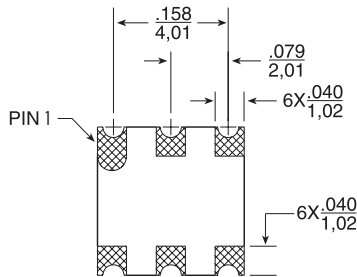
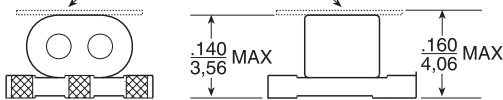
## Mechanical

## Schematic

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



NOTE: CX2024A has optional cover plate



Tape & Reel .....2000/reel

Tray .....100/tray

Power Rating .....30 mA MAX; 0.25 W MAX

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

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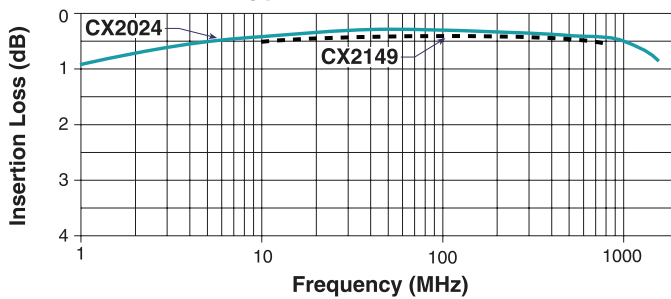
## Application Notes

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

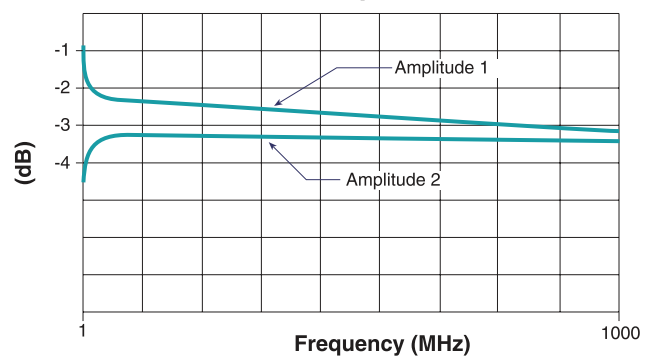
## Notes from Tables

- Impedance and turns ratios are specified primary :secondary.
- These transformers are verified to operate from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ . Contact Applications Engineering for performance data.

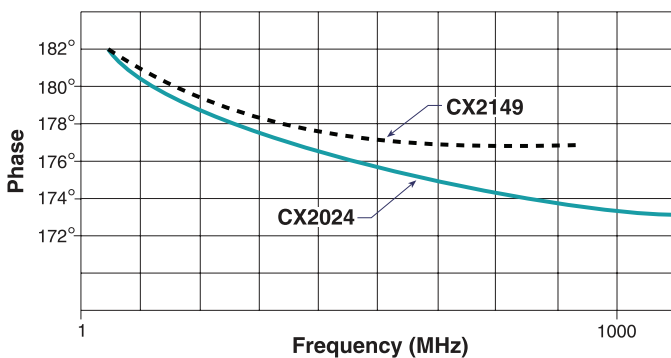
### Typical Insertion Loss



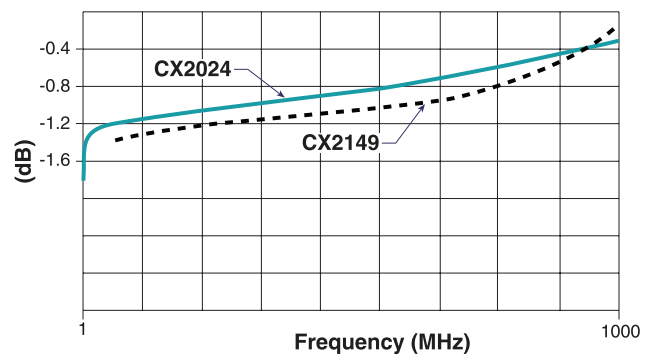
### Amplitude



### Phase Unbalance



### Amplitude Unbalance



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