

# RF TRANSFORMERS

## Transformers for Wideband RF Applications



- Miniature surface mount package
- Various impedance ratios available
- Excellent insertion loss
- Ideal for Balanced-to-Unbalanced applications
- Products from 0.5 to 1500 MHz bandwidth

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

Part Number		Impedance Ratio <sup>1</sup> Pri:Sec (±2%)	Turns Ratio Pri:Sec (±2%)	Bandwidth <sup>2,3</sup> (MHz TYP)			Insertion Loss @ Midband (dB TYP)	Schematic	Primary Pins
Regular	Low Cost			3 dB	2 dB	1 dB			
-	CX2041	1:1	1:1	0.05-450	0.75-300	0.10-200	0.60	B	4-6
CX2040	CX2040L	1:1	1:1	1.5-500	2.5-400	5-350	0.90	A	4-6
CX2043	CX2043L	1.5:1	√1.5:1	-	-	1-1000	0.20	D	3-6
CX2044	CX2044L	1.5:1	√1.5:1	-	1.0-500	5-100	0.20	A	1-3
CX2045	CX2045L	1:2	1:1.414	-	-	3-300	0.80	B	4-6
CX2047	CX2047L	1:4CT	1:2CT	-	0.5-300	1.5-100	0.24	B	4-6
-	CX2049L	1:8CT	1:2.83CT	0.1-500	0.3-400	0.5-200	1.16	B	4-6

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

Part Number		Impedance Ratio <sup>1</sup> Pri:Sec (±2%)	Bandwidth <sup>2,3</sup> (MHz TYP)		Schematic	Primary Pins
CX2038	CX2038L		2 dB	1 dB		
CX2038	CX2038L	75Ω:75Ω	Up to 1500	4.5-1000	C	4-6
CX2039	CX2039L	50Ω:50Ω	Up to 1500	4.5-1000	C	4-6

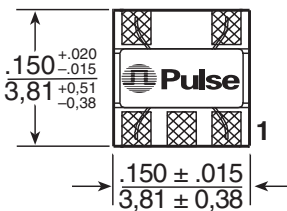
NOTE: Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (ex: CX2040T).

## Mechanical

## Schematics

### RAQ

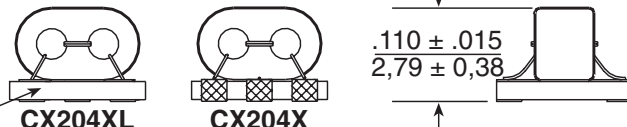
Top View



Tape & Reel ..... 1000 /reel  
 Tray ..... 100 /tray  
 Power Rating ..... 30 mA MAX; 0.25 W MAX

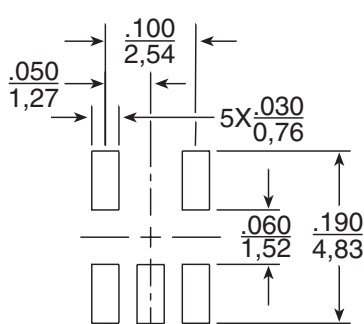
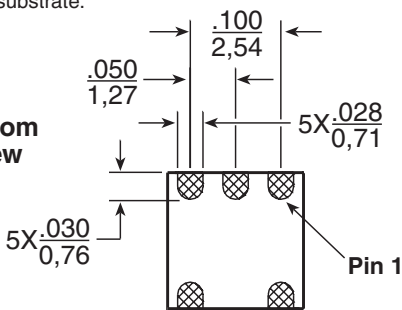
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

Side View

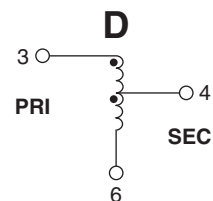
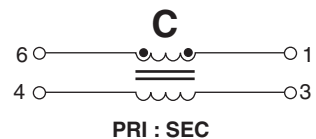
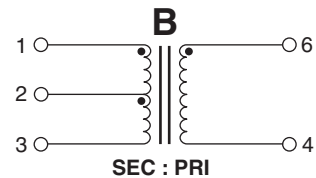
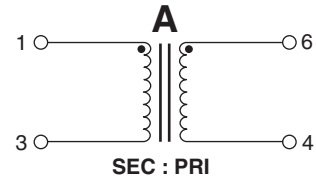


There are no plated areas on side of substrate.

Bottom View



SUGGESTED PAD LAYOUT



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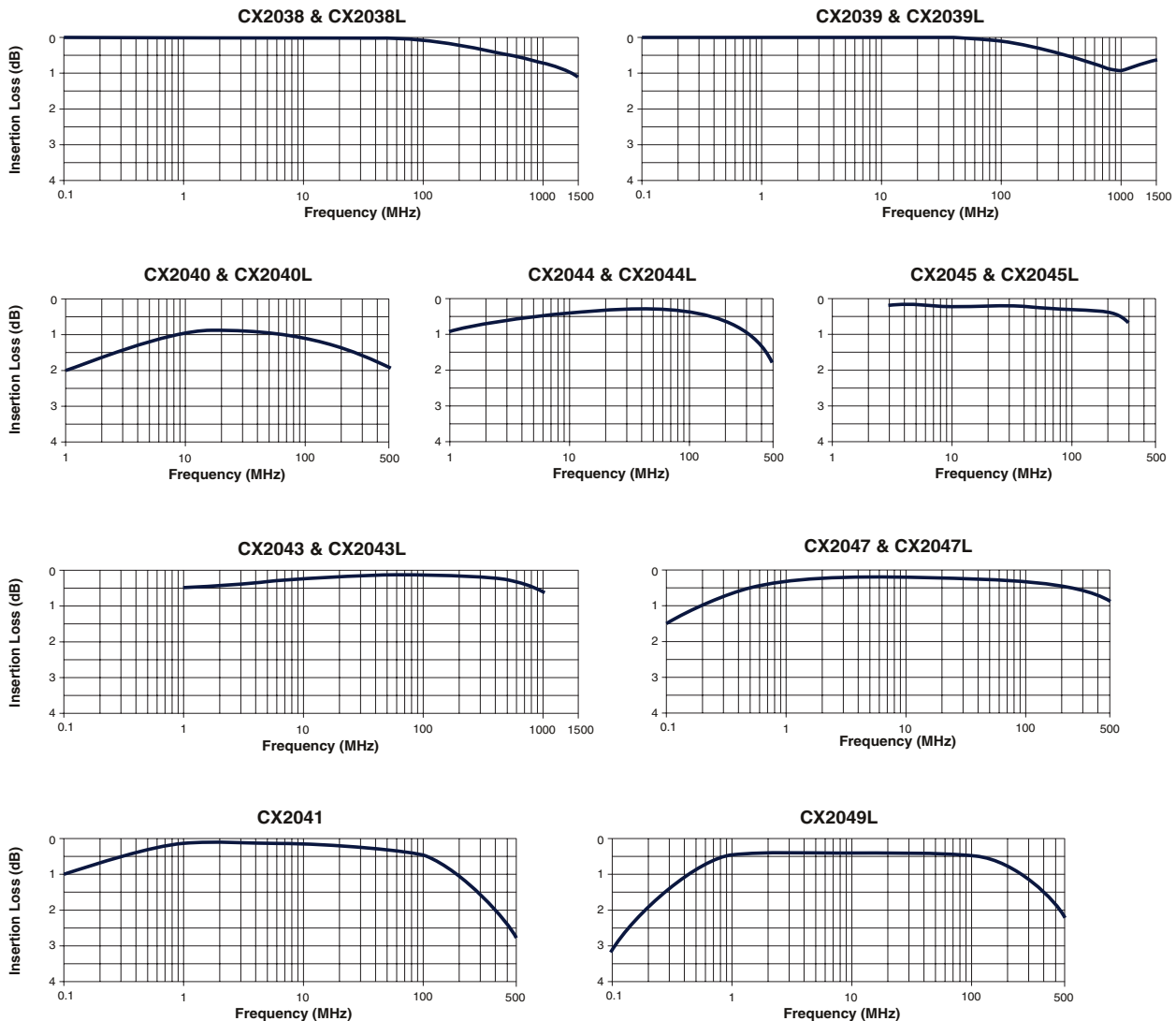
### Application Notes

- A. Bandwidth specifications for **CX2040** and **CX2047** are for a 50Ω system.
- B. Materials used in the products are UL94-V0 recognized. Products meet requirements of IEC 695-2-2 (Needle Flame Test).
- C. **CX2038**, **CX2039** and **CX2043** transformer configurations do not provide DC isolation between primary and secondary windings.
- D. For additional impedance ratios and frequency ranges, please contact Pulse Applications Engineering.
- E. Pick and place operation: smooth upper surface of device allows automatic pick and place.
- F. For availability of Lead-Free version of this product, please contact Pulse.

### Notes from Tables

- 1. Impedance & turns ratios are specified primary:secondary. (CT=Center Tap).
- 2. Bandwidth is referenced to midband loss.
- 3. These transformers are verified to operate from -40°C to +85°C. Contact Pulse Applications Engineering for performance data.

### Typical Insertion Loss @ 25°C



### For More Information :

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