

# 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 1500MHz 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
			3dB	2dB	1dB			
CX2041	1:1CT	1:1CT	0.05-450	0.75-300	0.10-200	0.60	B	4-6
CX2040L	1:1	1:1	1.5-500	2.5-400	5-350	0.90	A	4-6
CX2043L	1.5:1	√1.5:1	–	–	1-1000	0.20	D	3-6
CX2044L	1.5:1	√1.5:1	–	1.0-500	5-100	0.20	A	1-3
CX2045L	1:2CT	1:1.414CT	–	–	3-300	0.80	B	4-6
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
CX2029	36:1CT	6:1CT	0.05-21	–	–	0.40	B	4-6

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

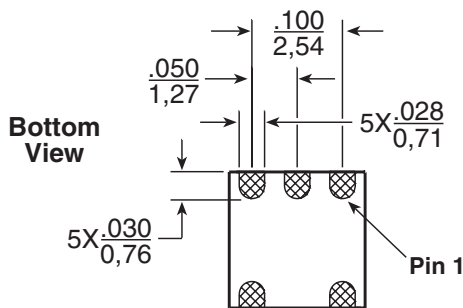
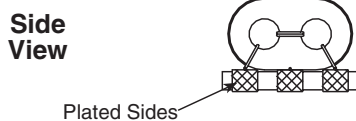
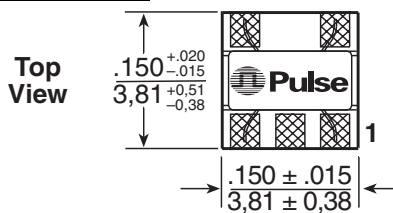
Part Number	Impedance Ratio <sup>1</sup> Pri:Sec (±2%)	Bandwidth <sup>2,3</sup> (MHz TYP)		Schematic	Primary Pins
		2dB	1dB		
CX2038L	75Ω:75Ω	Up to 1500	4.5-1000	C	4-6
CX2039L	50Ω:50Ω	Up to 1500	4.5-1000	C	4-6

NOTE: Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (ex: CX2041T).

## Mechanical

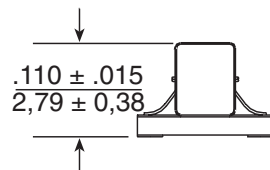
## Schematics

### RACKET-LITE

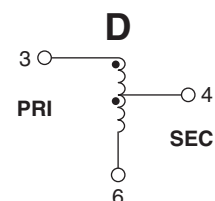
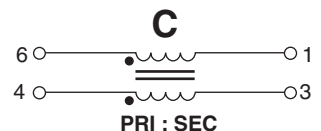
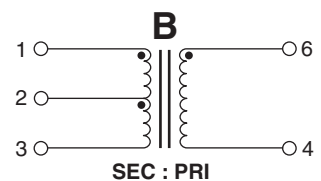
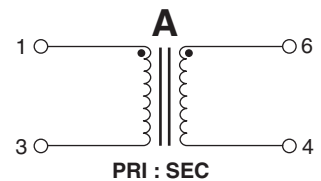


Tape & Reel .....1000 /reel  
 Tray .....100 /tray  
 Power Rating .....30 mA MAX; 0.25 W MAX

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



SUGGESTED PAD LAYOUT



# RF TRANSFORMERS

## Transformers for Wideband RF Applications



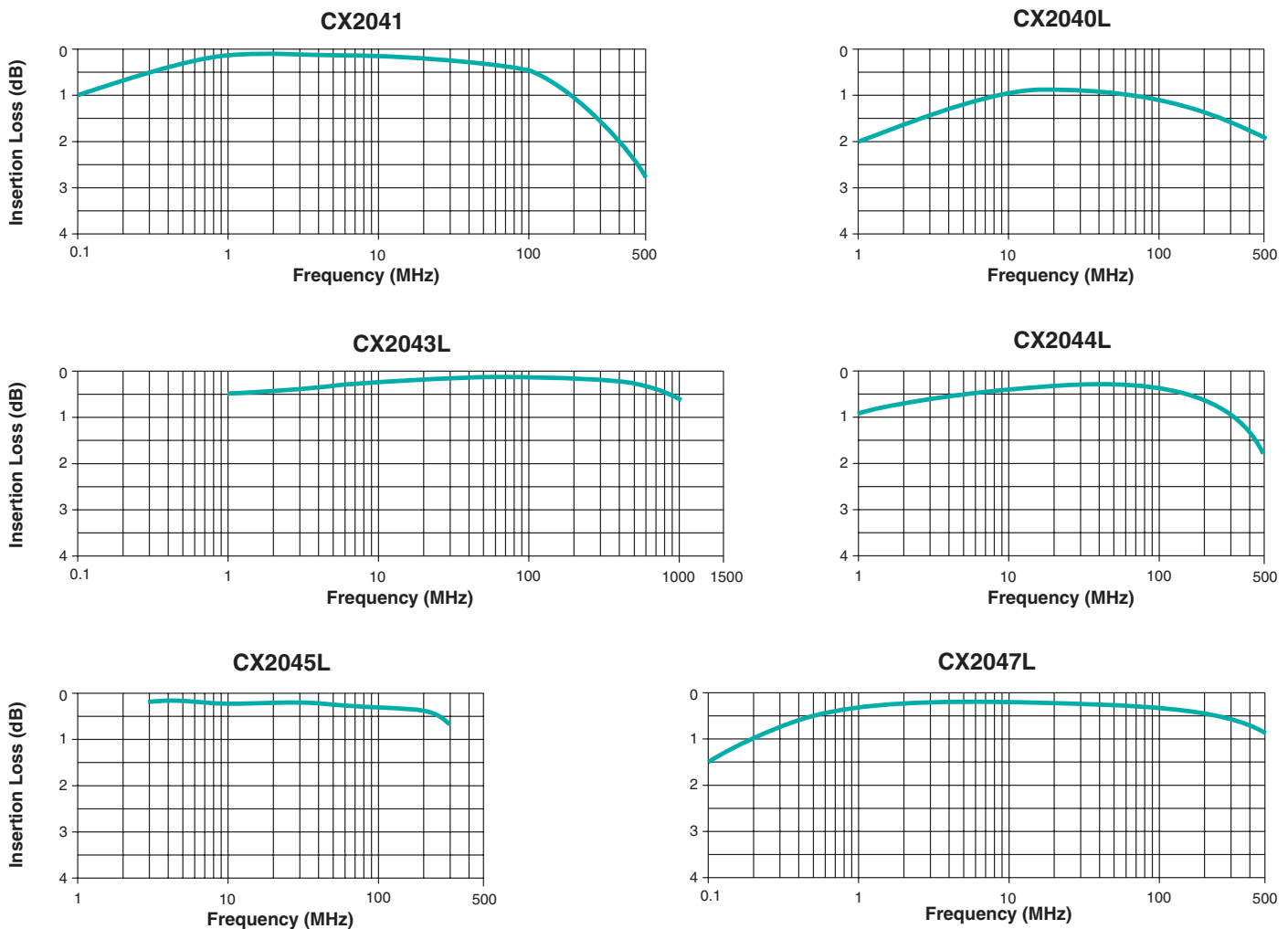
### Application Notes

- 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

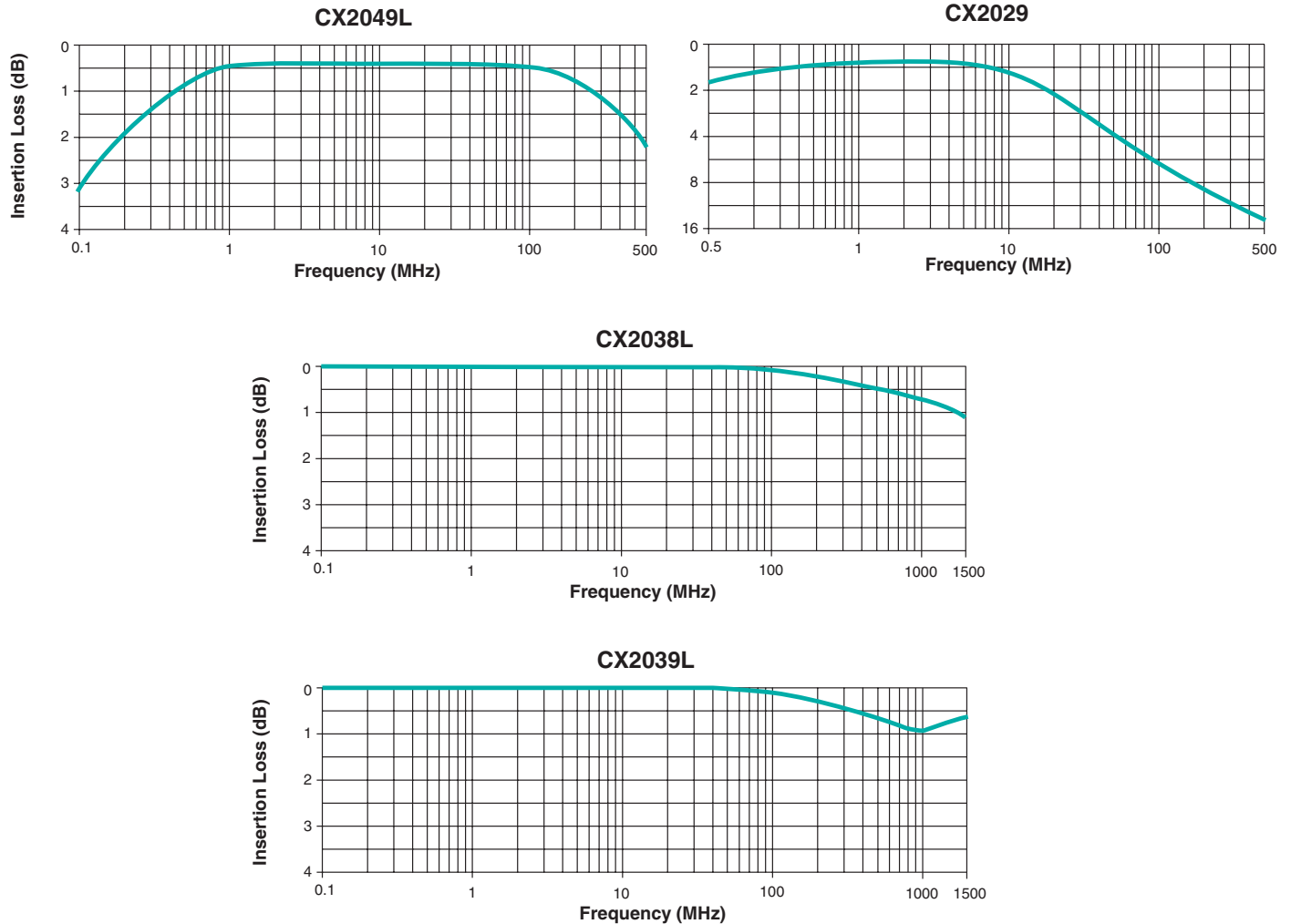


# RF TRANSFORMERS

## Transformers for Wideband RF Applications



### Typical Insertion Loss @ 25°C



### For More Information:

Pulse Worldwide Headquarters	Pulse Northern Europe	Pulse Southern Europe	Pulse China Headquarters	Pulse North China	Pulse South Asia	Pulse North Asia
12220 World Trade Drive San Diego, CA 92128 U.S.A. <a href="http://www.pulseeng.com">www.pulseeng.com</a> TEL: 858 674 8100 FAX: 858 674 8262	3 Huxley Road Surrey Research Park Guildford, Surrey GU2 5RE United Kingdom TEL: 44 1483 401700 FAX: 44 1483 401701	Zone Industrielle F-39270 Orgelet France TEL: 33 3 84 35 04 04 FAX: 33 3 84 25 46 41	No. 1 Industrial District Changan, Dongguan China TEL: 86 769 5538070 FAX: 86 769 5538870	Room 1002 No. 819 Nanjing West Rd Shanghai China TEL: 86 21 32181071 FAX: 86 21 32181396	150 Kampong Ampat #07-01/02 KA Centre Singapore 368324 TEL: 65 6287 8998 FAX: 65 6280 0080	3F-4, No. 81, Sec. 1 Hsin Tai Wu Road Hsi-Chih Taipei Hsien Taiwan TEL: 886 2 26980228 FAX: 886 2 26980948

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

© Copyright, 2005. Pulse Engineering, Inc. All rights reserved.

[www.pulseeng.com](http://www.pulseeng.com)

C203.B (8/05)