

# RF TRANSFORMERS

## Transformers for Wideband RF Applications



-  RoHS peak reflow temperature rating: 245°C
-  Miniature surface mount package
-  Various impedance ratios available
-  Excellent insertion loss
-  Ideal for Balanced-to-Unbalanced applications
-  Products from 0.05 to 1900 MHz bandwidth

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

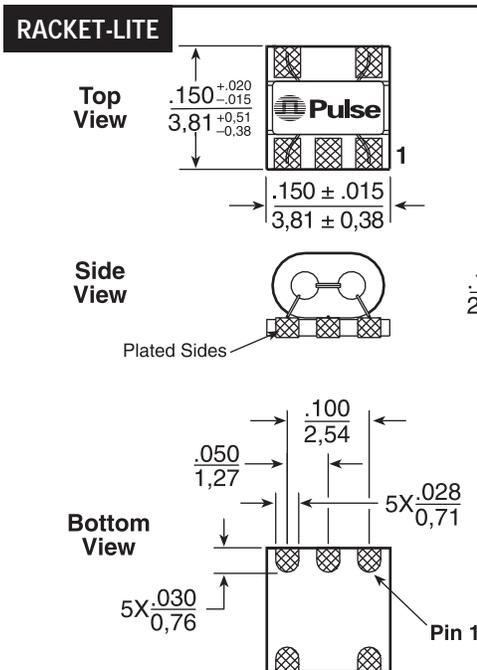
RoHS Compliant Part Number	Impedance Ratio <sup>1</sup> Pri:Sec	Turns Ratio Pri:Sec (±2%)	Bandwidth <sup>2,3</sup> (MHz TYP)			Insertion Loss @ Midband (dB TYP)	Schematic	Primary Pins
			3 dB	2 dB	1 dB			
CX2041NLT	1:1CT	1:1CT	0.05-450	0.75-300	0.10-200	0.60	B	4-6
CX2040LNL	1:1	1:1	1.5-500	2.5-400	5-350	0.90	A	4-6
CX2043LNL	1.5:1	$\sqrt{1.5}:1$	—	—	1-1000	0.20	D	3-6
CX2044LNL	1.5:1	$\sqrt{1.5}:1$	—	1.0-500	5-100	0.20	A	1-3
CX2045LNL	1:2CT	1:1.414CT	—	—	3-300	0.80	B	4-6
CX2047LNL	1:4CT	1:2CT	—	0.5-300	1.5-100	0.24	B	4-6
CX2049LNL	1:8CT	1:2.83CT	.25-500	0.3-400	0.5-200	1.16	B	4-6
CX2029LNL	36:1CT	6:1CT	0.05-21	—	—	0.40	B	4-6
CX2163LNL	1:1	1:1	800-1900	—	900-1400	1.50	E	1-3

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

RoHS Compliant Part Number	Impedance Ratio <sup>1</sup> Pri:Sec	Bandwidth <sup>2,3</sup> (MHz TYP)		Schematic	Primary Pins
		2 dB	1 dB		
CX2038LNL	75 Ω:75 Ω	Up to 1500	4.5-1000	C	4-6
CX2039LNL	50 Ω:50 Ω	Up to 1500	4.5-1000	C	4-6

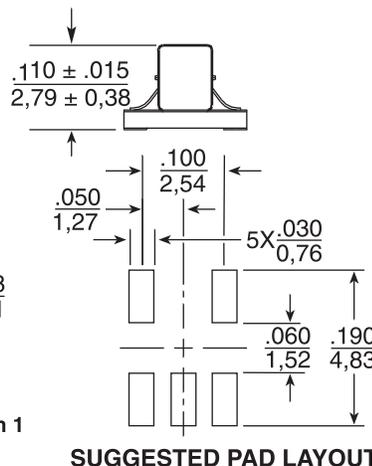
NOTE: Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number, e.g. CX2041NLT, CX2163NLT.

## Mechanical

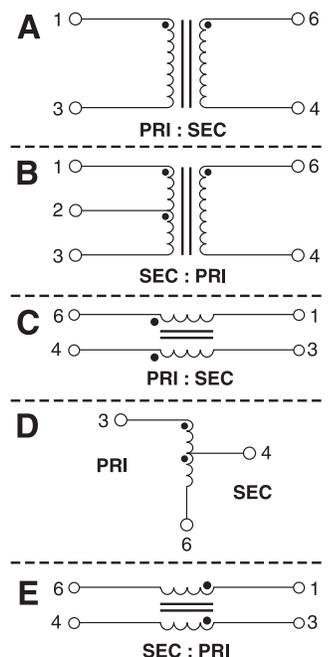


Tape & Reel . . . . . 2000 /reel  
 Tray . . . . . 100 /tray  
 Power Rating . . . 30 mA MAX; 0.25 W MAX

Dimensions: Inches mm  
 Unless otherwise specified, all tolerances are ± .010 / 0.25



## Schematic



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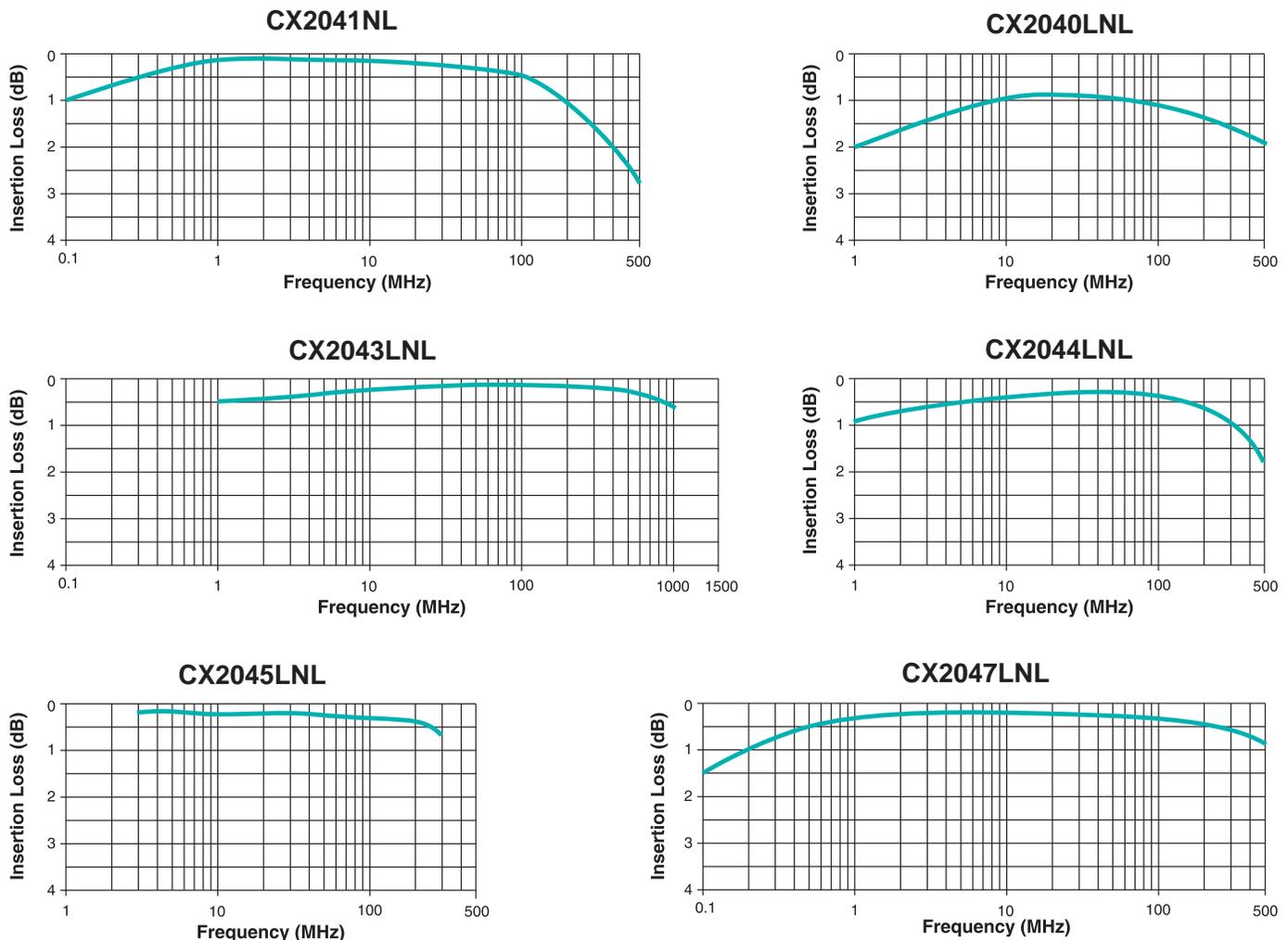
### Notes from Tables

1. Impedance and 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.

### Application Notes

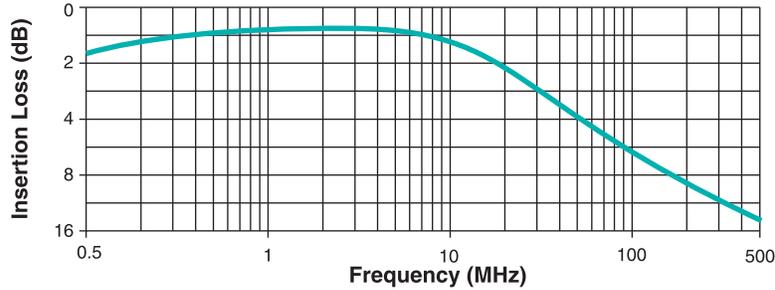
- A. Bandwidth specifications for **CX2040LNL** and **CX2047LNL** are for a 50 Ω system.
- B. Materials used in the products are UL94-V0 recognized. Products meet requirements of IEC 695-2-2 (Needle Flame Test).
- C. **CX2038LNL**, **CX2039LNL**, and **CX2043LNL** transformer configurations do not provide 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.

### Typical Insertion Loss @ 25°C

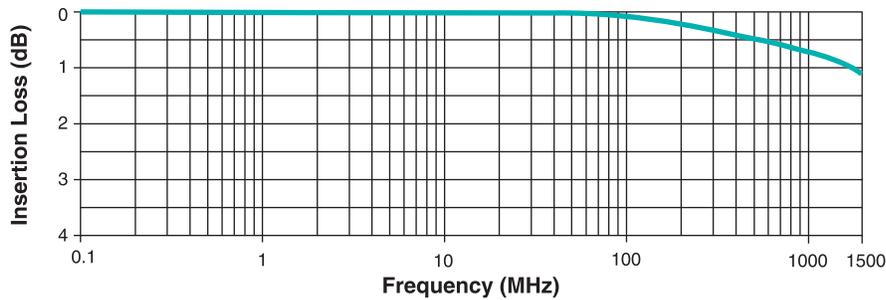


## Typical Insertion Loss @ 25°C

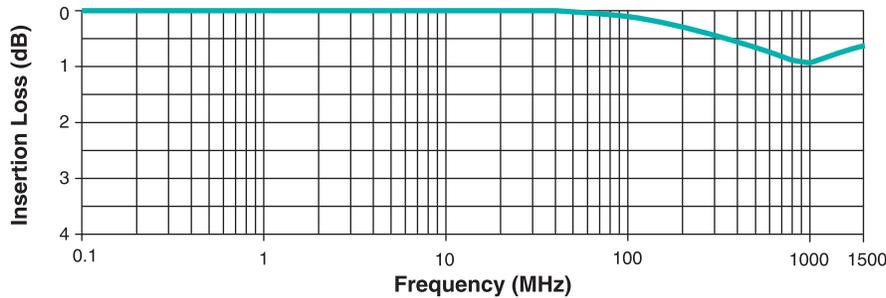
**CX2029NL**



**CX2038LNL**



**CX2039LNL**



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