







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

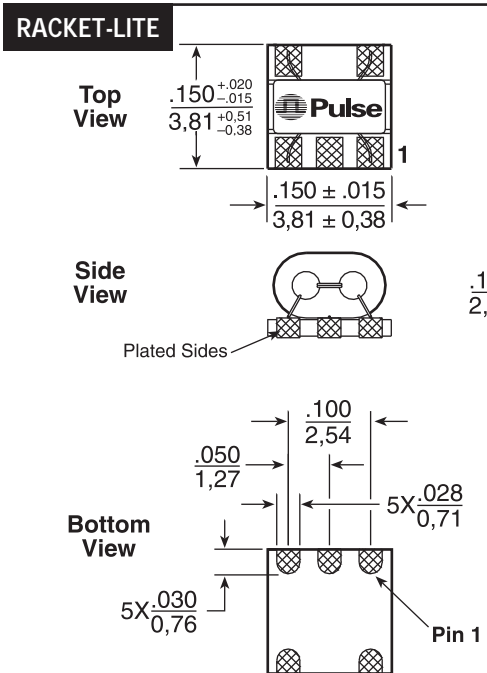
RoHS Compliant Part Number	Impedance Ratio ¹ Pri:Sec	Turns Ratio Pri:Sec (±2%)	Bandwidth ^{2,3} (MHz TYP)			Insertion Loss @ Midband (dB TYP)	Schematic	Primary Pins
			3 dB	2 dB	1 dB			
CX2041NL	1:1CT	1:1CT	0.05-450	0.75-300	0.10-200	0.60	B	4-6
CX2040LNL	1:1	1:1	1.5-500	2.5-400	5-350	0.90	A	4-6
CX2043LNL	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 ¹ Pri:Sec	Bandwidth ^{2,3} (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

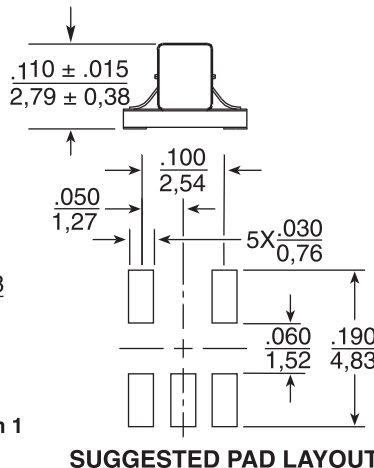
NOTE: Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number, e.g. CX2041NLT, CX2163NLT.

Mechanical

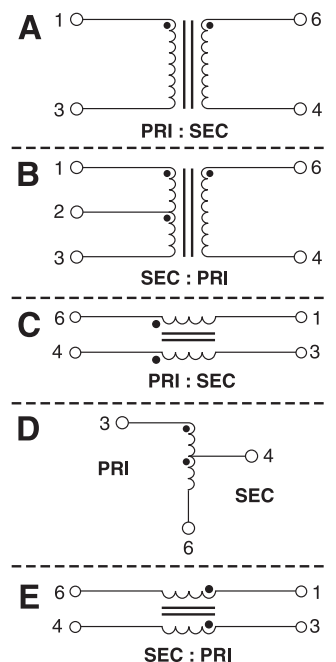


Tape & Reel 2000 /reel
 Tray 100 /tray
 Power Rating . . . 30 mA MAX; 0.25 W MAX

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



Schematic



RF TRANSFORMERS

Transformers for Wideband RF Applications



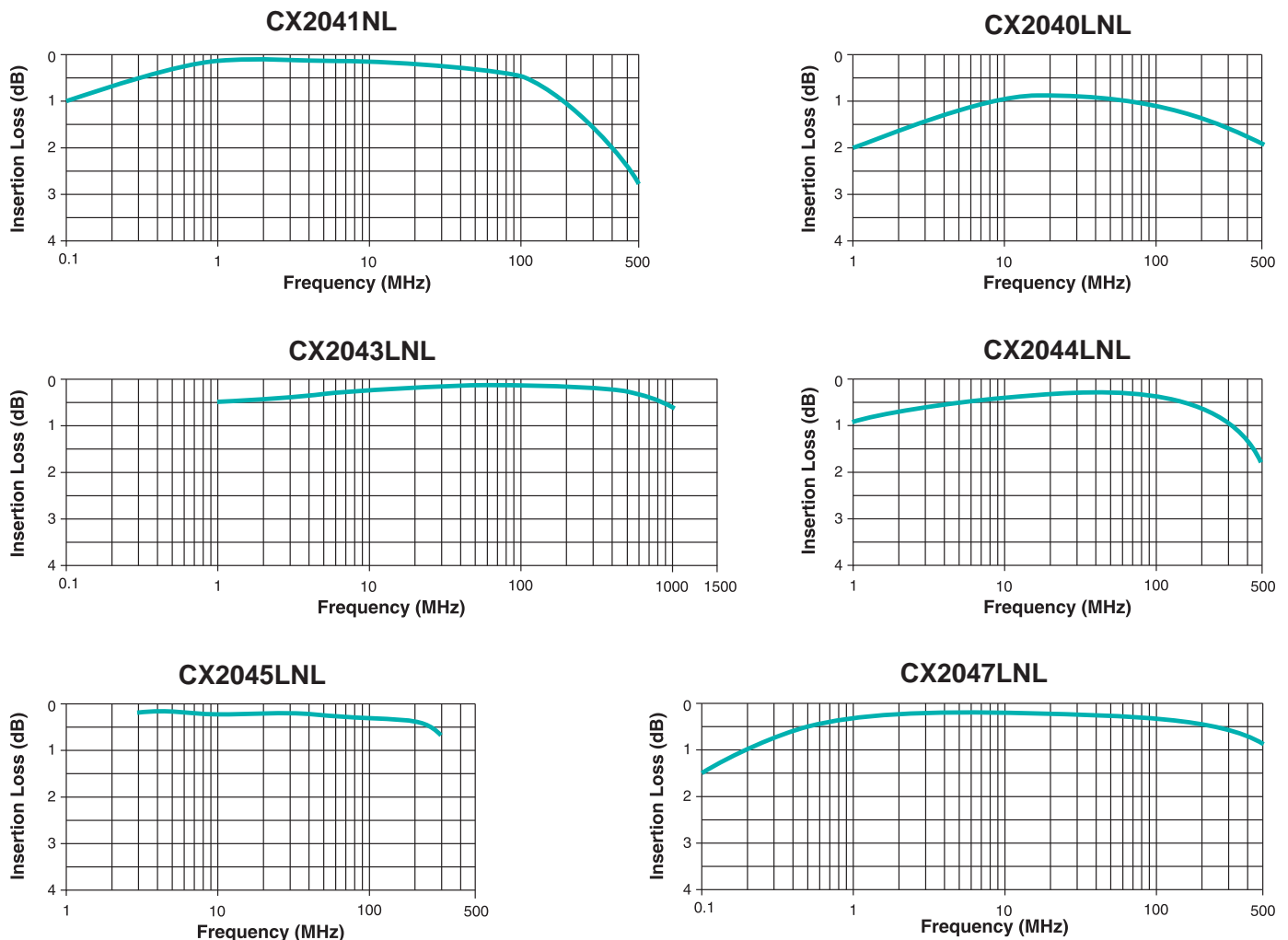
Notes from Tables

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

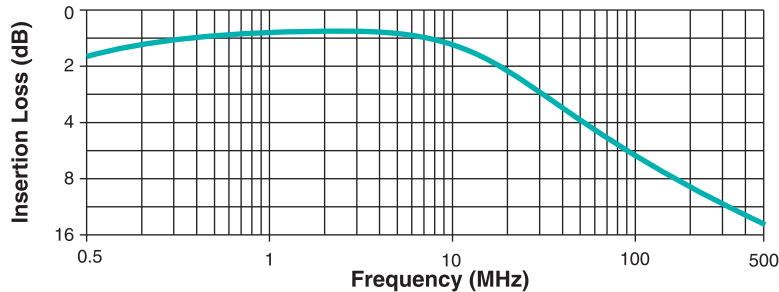
- A. Bandwidth specifications for **CX2040LNL** and **CX2047LNL** are for a 50 Ω system.
- B. Materials used in the products are UL94-V0 recognized. Products meet requirements of IEC 695-2-2 (Needle Flame Test).
- C. **CX2038LNL**, **CX2039LNL**, and **CX2043LNL** transformer configurations do not provide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

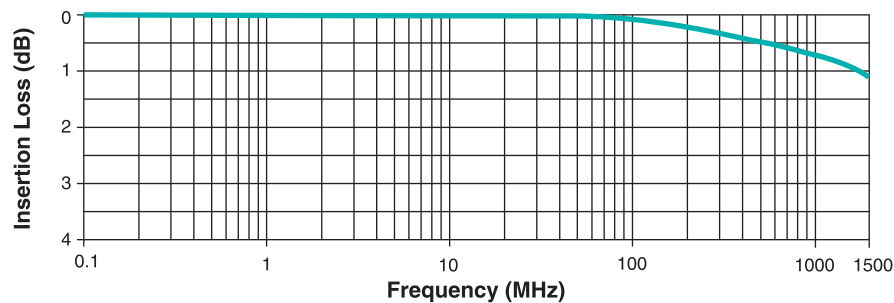


Typical Insertion Loss @ 25°C

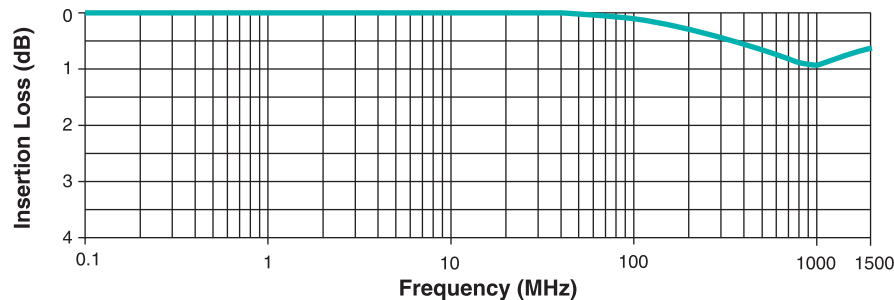
CX2029NL



CX2038LNL



CX2039LNL



For More Information:

Pulse Worldwide Headquarters	Pulse Europe	Pulse China Headquarters	Pulse North China	Pulse South Asia	Pulse North Asia
12220 World Trade Dr. San Diego, CA 92128 U.S.A.	Zeppelinstrasse 15 D-71083 Herrenberg Germany	B402, Shenzhen Academy of Aerospace Technology Bldg. 10th Kejinan Rd. High-Tech Zone Nanshan District Shenzhen, PR China 518057	Room 2704/2705 Super Ocean Finance Ctr. 2067 Yan An Rd. West Shanghai 200336 China	135 Joo Seng Rd. #03-02 PM Industrial Bldg. Singapore 368363	3F, No. 198 Zhongyuan Rd. Zhongli City Taoyuan County 320 Taiwan R. O. C.
www.pulseeng.com Tel: 858 674 8100 Fax: 858 674 8262	Tel: 49 7032 7806 0 Fax: 49 7032 7806 135	Tel: 86 755 33966678 Fax: 86 755 33966700	Tel: 86 21 62787060 Fax: 86 2162786973	Tel: 65 6287 8998 Fax: 65 6287 8998	Tel: 886 3 4356768 Fax: 886 3 4356823 (Pulse) Fax: 886 3 4356820 (FRE)

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, 2010. Pulse Engineering, Inc. All rights reserved.