

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 ¹ Pri:Sec (±2%) | Turns Ratio Pri:Sec (±2%) | Bandwidth ^{2,3} (MHz TYP) | | | Insertion Loss @ Midband (dB TYP) | Schematic | Primary Pins |
|-------------|--|---------------------------------|---------------------------------------|---------|---------|---|-----------|--------------|
| | | | 3dB | 2dB | 1dB | | | |
| CX2040 | 1:1 | 1:1 | 1.5-500 | 2.5-400 | 5-350 | 0.90 | A | 4-6 |
| CX2043 | 1.5:1 | √1.5:1 | — | — | 1-1000 | 0.20 | D | 3-6 |
| CX2044 | 1.5:1 | √1.5:1 | — | 1.0-500 | 5-100 | 0.20 | A | 1-3 |
| CX2045 | 1:2CT | 1:1.414CT | — | — | 3-300 | 0.80 | B | 4-6 |
| CX2047 | 1:4CT | 1:2CT | — | 0.5-300 | 1.5-100 | 0.24 | B | 4-6 |

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

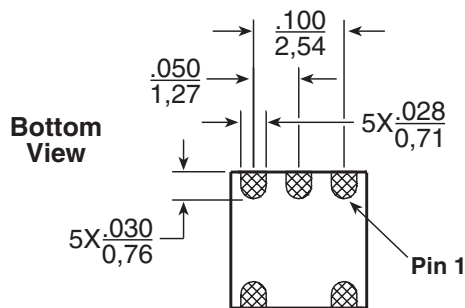
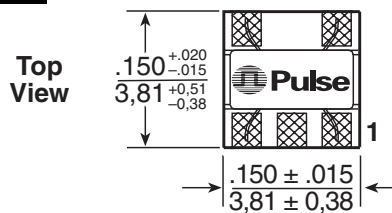
| Part Number | Impedance Ratio ¹ Pri:Sec (±2%) | Bandwidth ^{2,3} (MHz TYP) | | Schematic | Primary Pins |
|-------------|--|---------------------------------------|----------|-----------|--------------|
| | | 2dB | 1dB | | |
| CX2038 | 75Ω:75Ω | Up to 1500 | 4.5-1000 | C | 4-6 |
| CX2039 | 50Ω:50Ω | 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

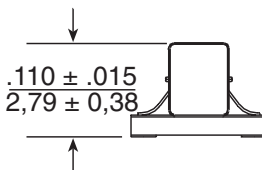
Schematics

RAQ

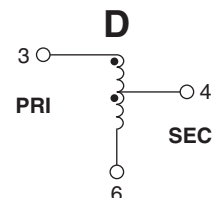
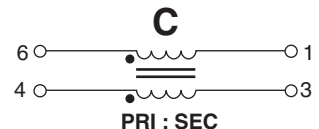
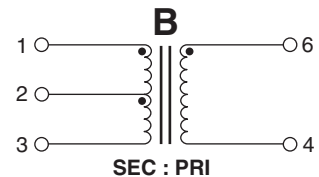
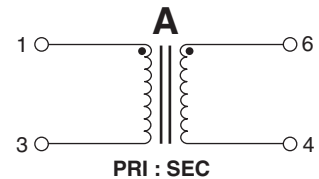


Tape & Reel1000 /reel
Tray100 /tray
Power Rating30 mA MAX; 0.25 W MAX

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



SUGGESTED PAD LAYOUT



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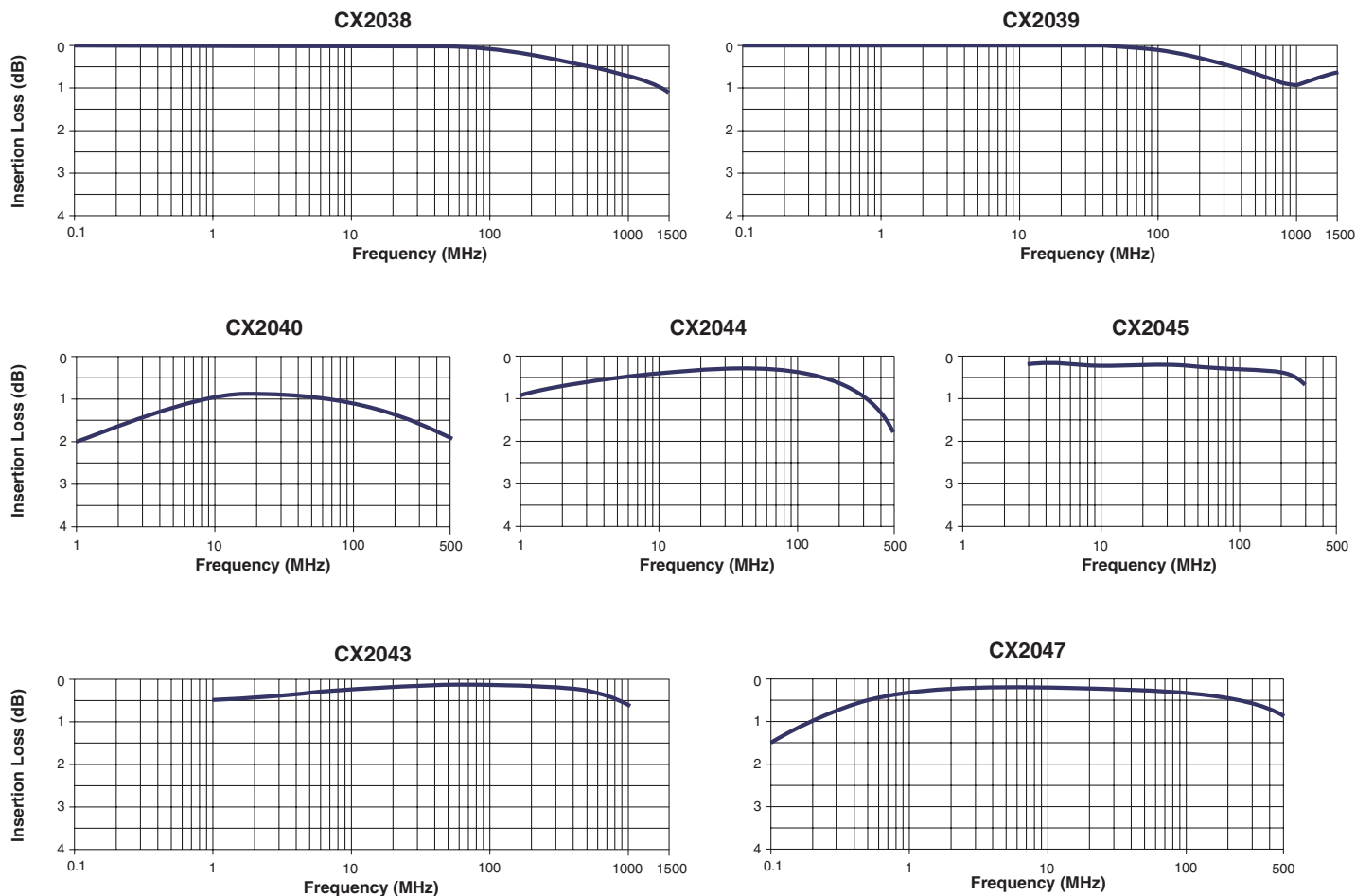
Application Notes

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

Notes from Tables

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

Typical Insertion Loss @ 25°C



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