

HIGH FREQUENCY FLAT COIL PLANAR TRANSFORMER

Industrial Grade



- ⊗ Power Rating: up to 300W
- ⊗ Height: 10.4mm to 11.9mm
- ⊗ Max Footprint: 29.5mm x 26.7mm
- ⊗ Max Frequency Range: 200kHz to 700kHz
- ⊗ Isolation (Primary to Secondary): 1750V_{DC}
- ⊗ Moisture Sensitivity Level: 1

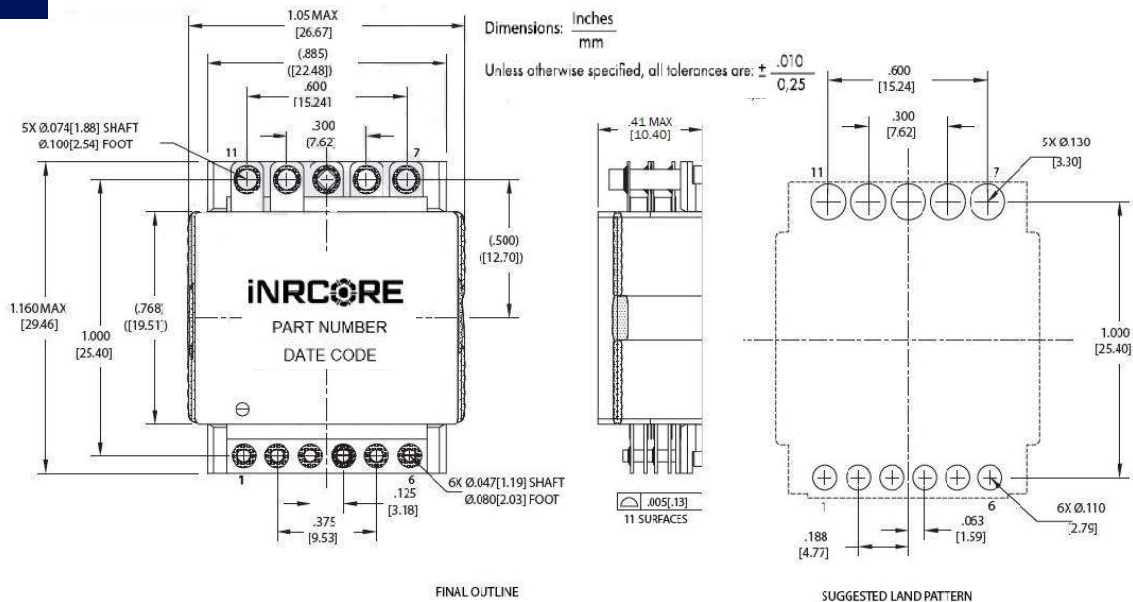
Electrical Specifications @ 25 °C – Operating Temperature – 40°C to +125 °C

Part Number	Turns Ratio		Schematic	Primary* Inductance (μH MIN)	Leakage** Inductance (μH MAX)	DCR (mΩ) MAX				Height MAX (mm)
	Primary	Secondary				Primary A	Primary B	Primary Aux.	Secondary	
R8401NL	4T & 4T	4T (1T:1T:1T:1T)	A1	211	0.3	6.8	6.8	-	4.5	10.4
R8402 NL	5T & 5T			330	0.45	8.5	8.5	-		
R8403 NL	6T & 6T			423	0.6	10.2	10.2	-		
R8404 NL	7T & 7T			588	0.83	11.8	11.8	-		
R8405NL	8T & 8T			768	1.2	13.4	13.4	-		
R8406 NL	4T & 4T	1T & 1T	A2	211	0.45	6.8	6.8	-	0.56 & 0.56	10.4
R8407NL	5T & 5T			330	0.84	8.5	8.5	-		
R8408NL	6T & 6T			432	1.0	10.2	10.2	-		
R8409NL	7T & 7T			588	1.2	11.8	11.8	-		
R8410NL	8T & 8T			768	1.7	13.4	13.4	-		

Notes: 1. Optional Tape & Reel packaging can be ordered by adding a "T" suffix at the end of the part number (i.e. R8408NLT)

Mechanical

R84XXNL



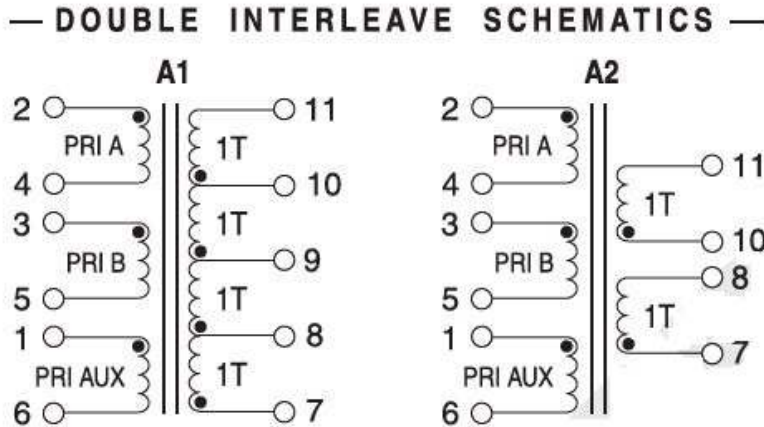
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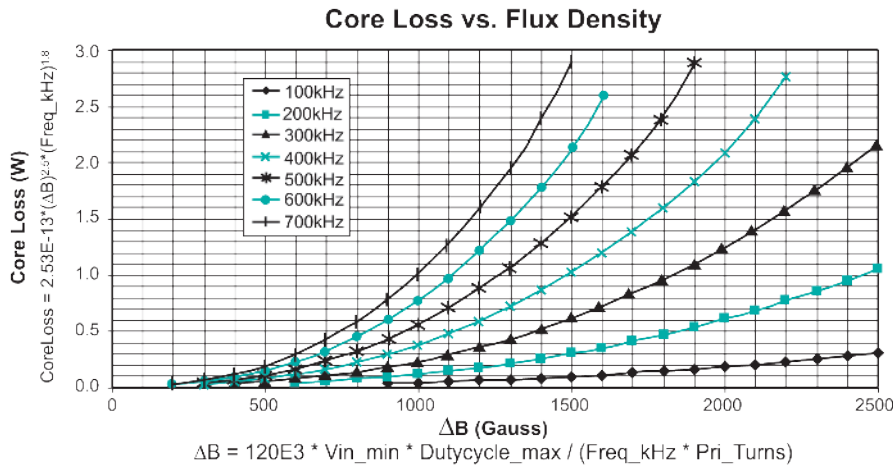
Electrical Schematic

R84XXNL



Notes from Tables

1. Inductance is measured with primary windings connected in series (2 to 5, with 3 and 4 shorted.)
2. Leakage inductance is measured on winding (2-5) with (3-4) and (7,8,9,10,11) shorted.
3. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the complete number (R8401NLT or R8401NLT).
4. To determine if the transformer is suitable for your application, it is necessary to ensure that the temperature rise of the component (ambient plus temperature rise) not exceed it's operating temperature. To determine the approximate temperature rise of the transformer refer to the graphs below.

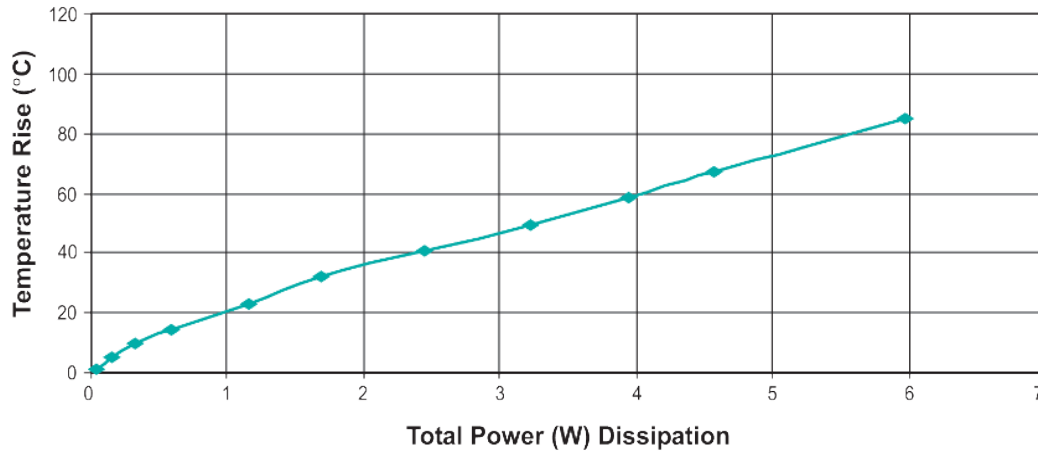


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Temperature Rise vs. Power (W) Dissipation



$$\text{Total Power Dissipation (W)} = .001 * (\text{DCR}_{\text{primary}} * \text{I}_{\text{RMS_primary}}^2 + \text{DCR}_{\text{secondary}} * \text{I}_{\text{RMS_secondary}}^2) + \text{Core Loss (W)}$$

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