Model Schematics

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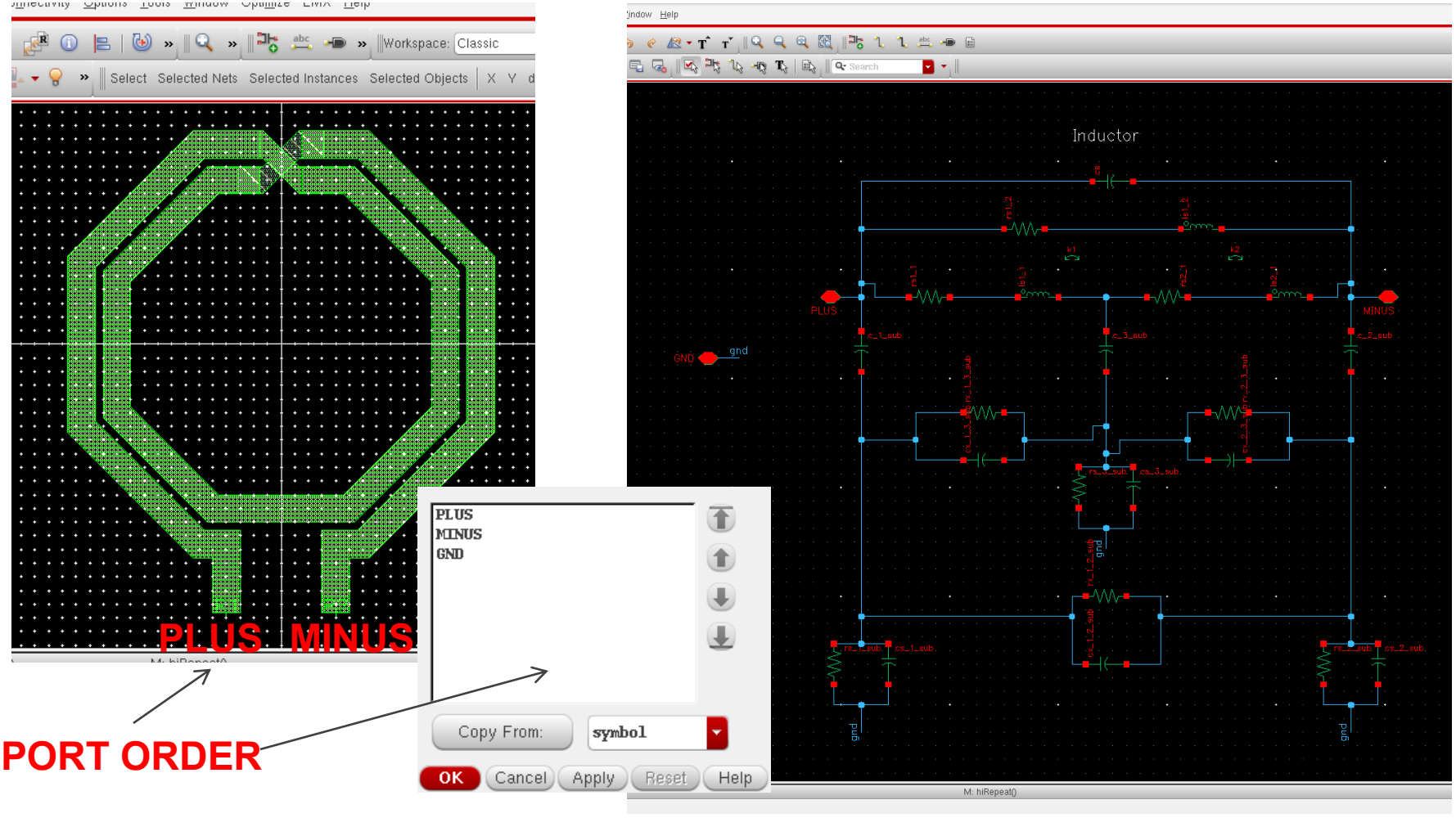
Model Documentation

- This document shows the correspondence between the order of ports used in the layout and the underlying model topology used for circuit model generation and plotting in the EMX Virtuoso GUI.
- The schematic view of the underlying model is shown.
- These schematics can be found in the EMX_models directory within the emxinterface
- Note: Modelgen fits the model to the S-parameters so that the model is "pseudo-physical" (don't read too much into the individual component values). The model is a black box model that is passive.
- The layout views contain pictures of structures using Integrand's Pcell library.

Inductor



Same Model used for Symmetric and Spiral. In the Symmetric Model Component values are forced to be symmetric.

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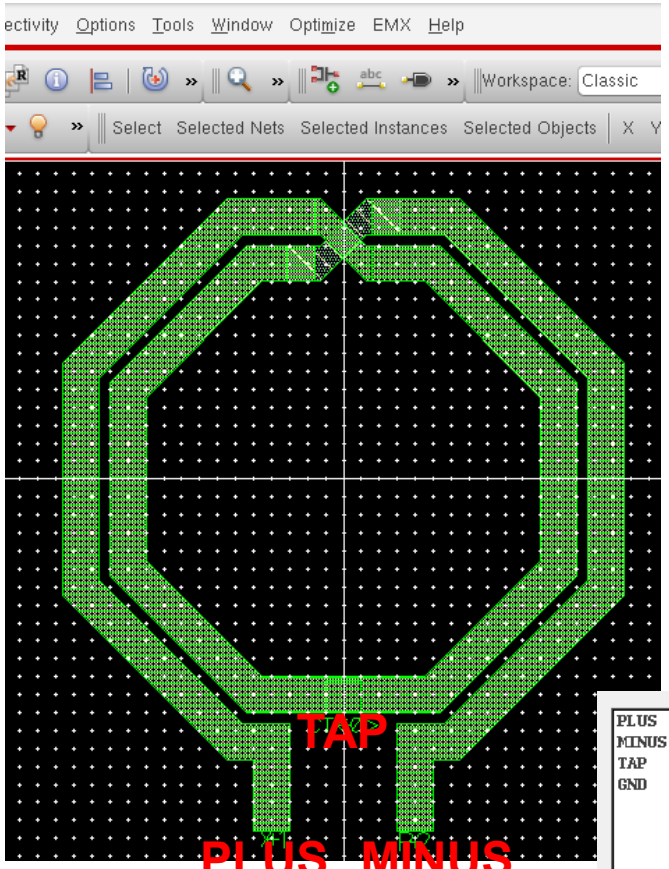
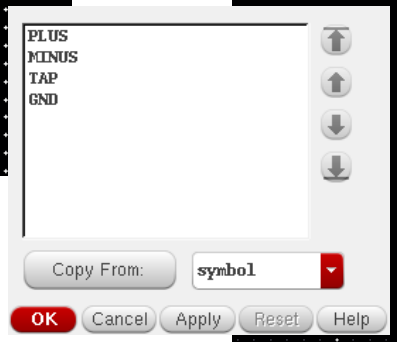
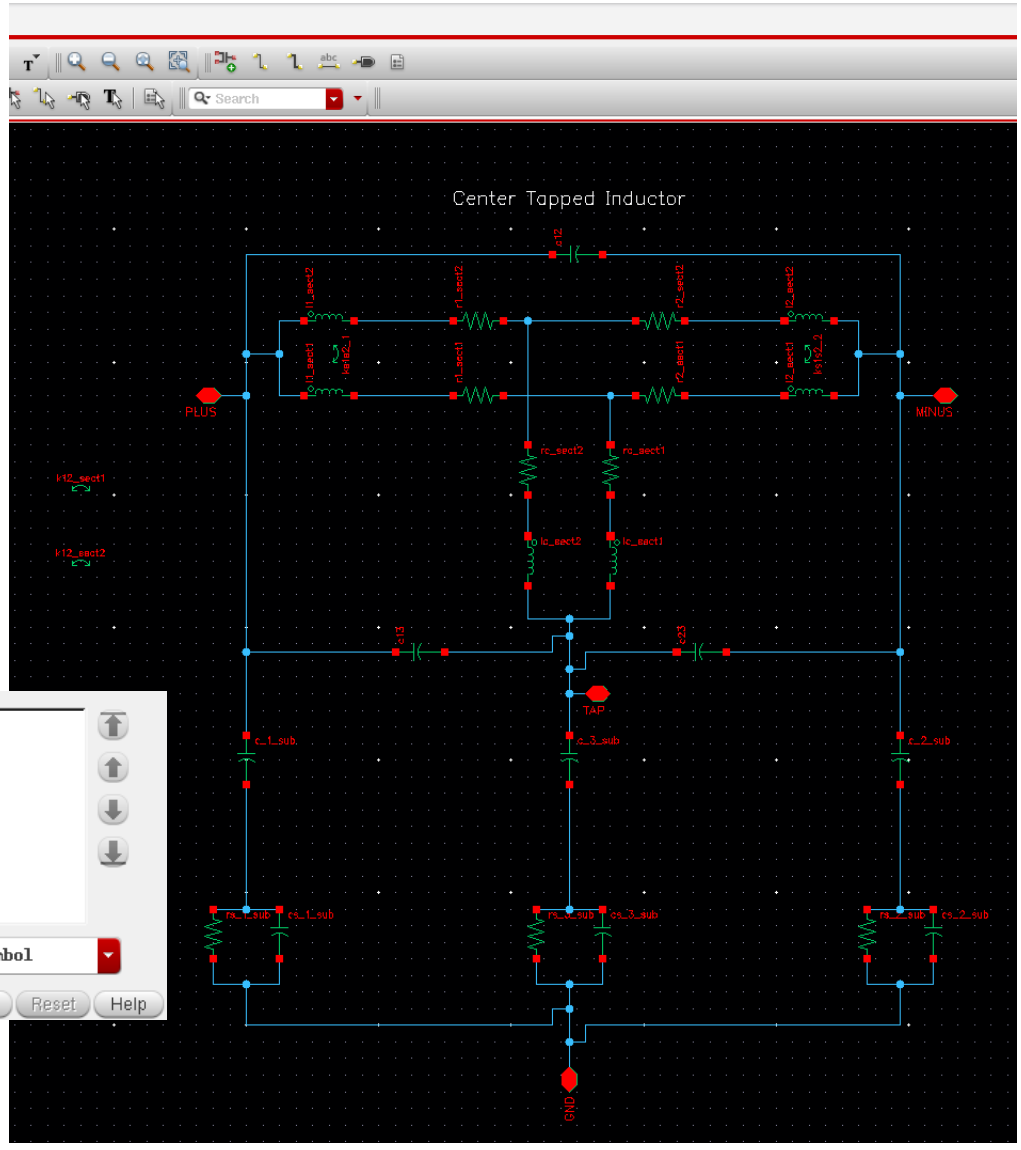
Center Tapped Inductor

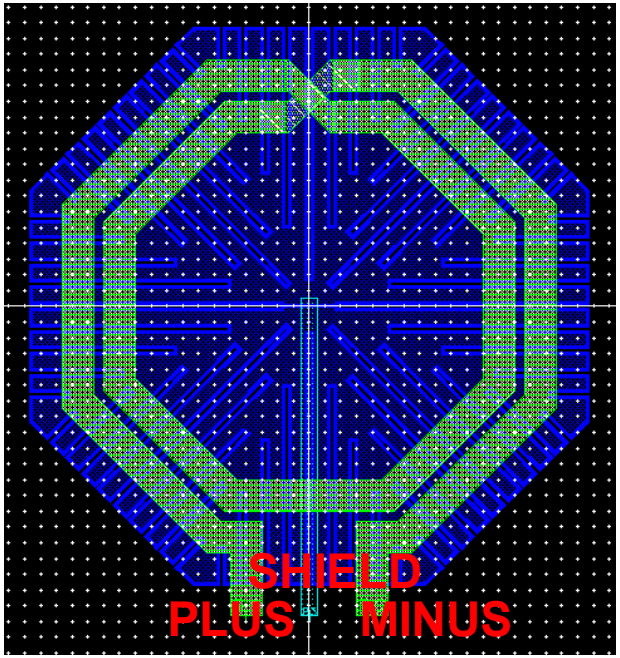


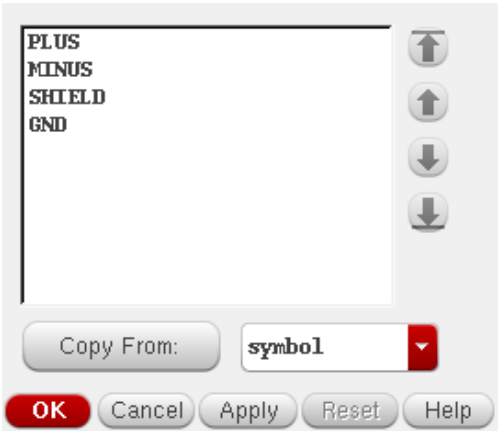


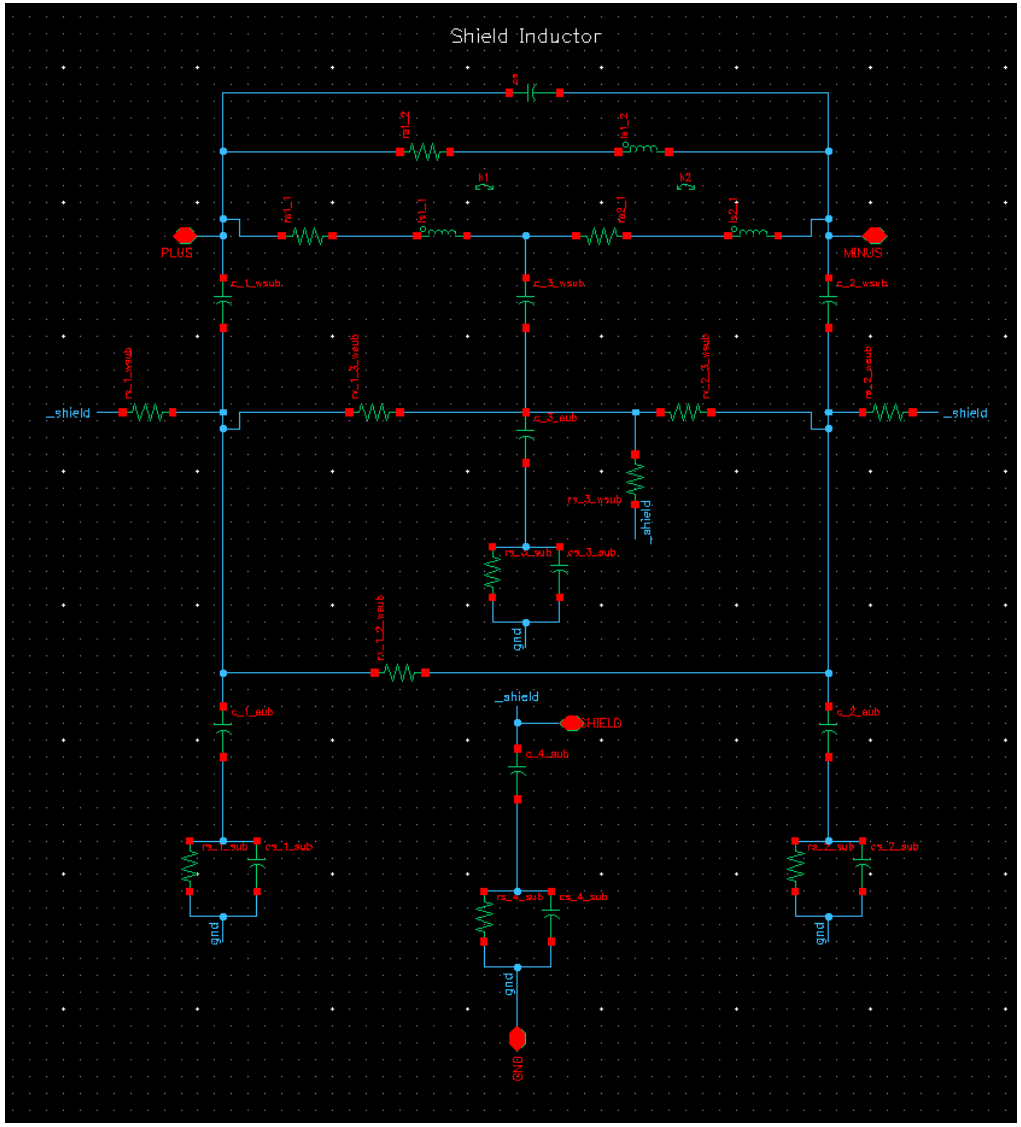


TAP is the last port
Same model for common-mode drive

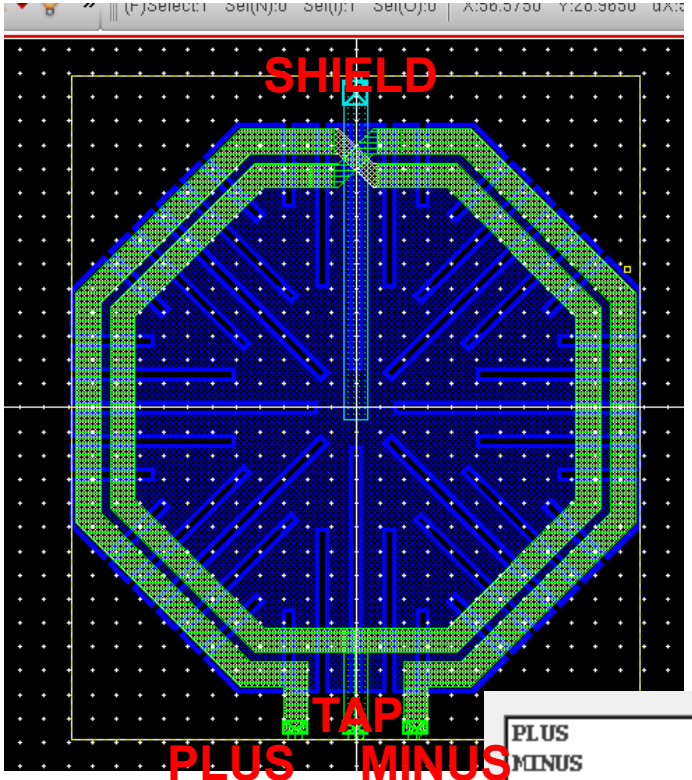
Shield Inductor

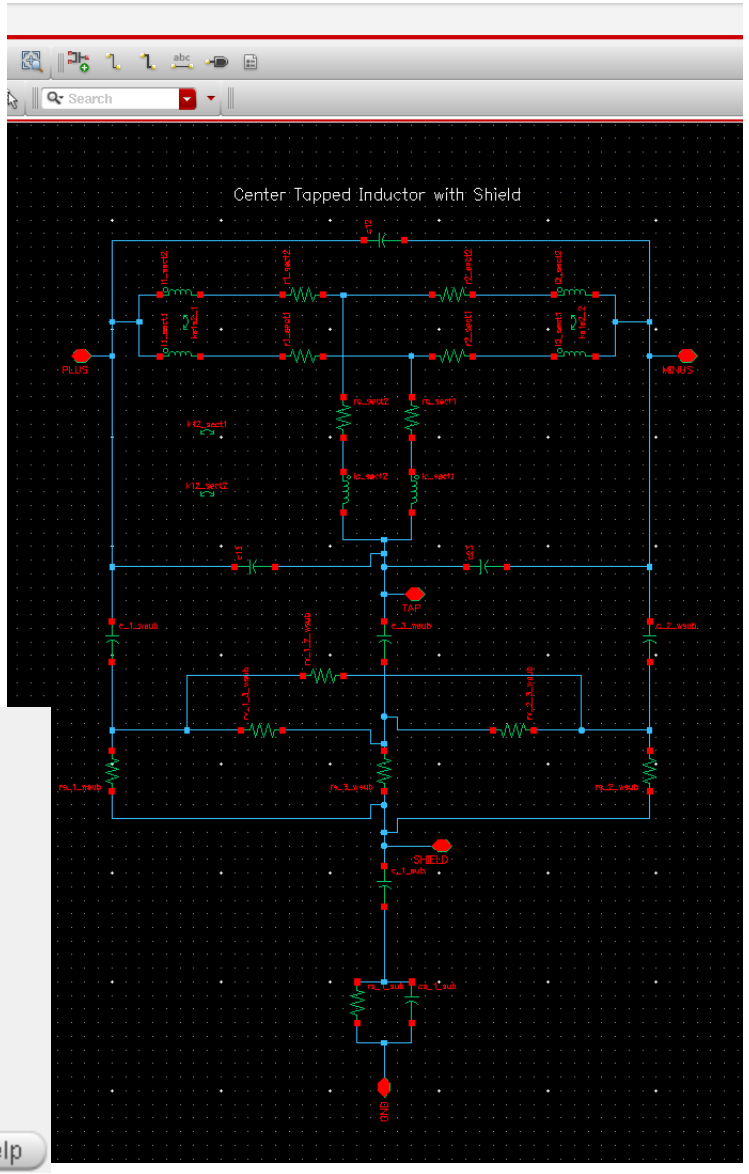






Center Tapped Shield Inductor





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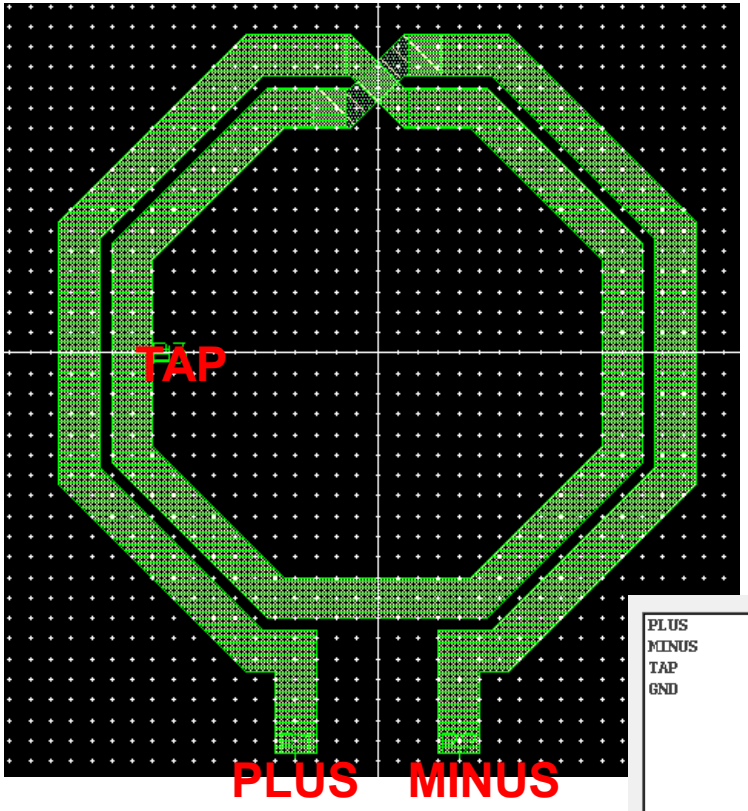
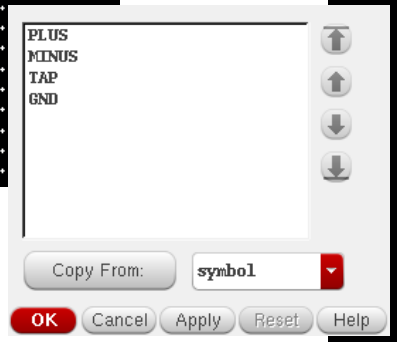
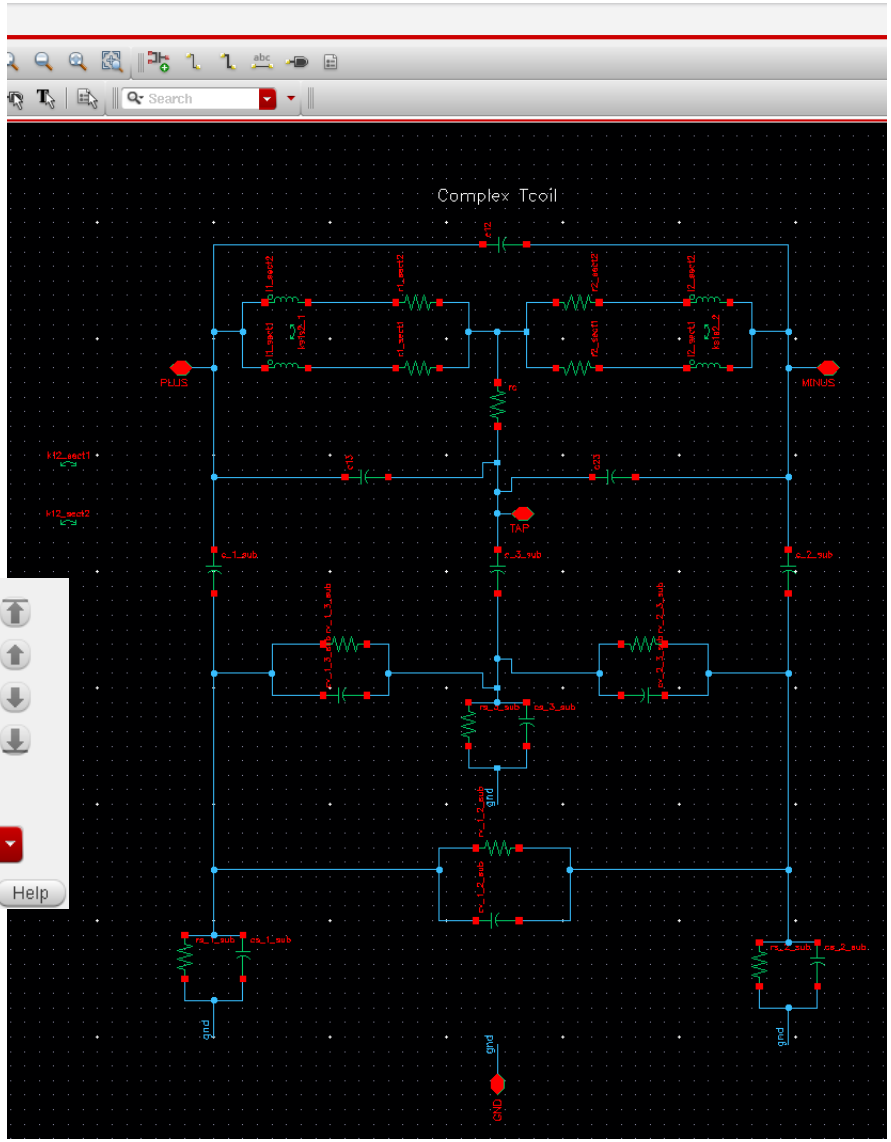
Tcoil/Stacked inductor

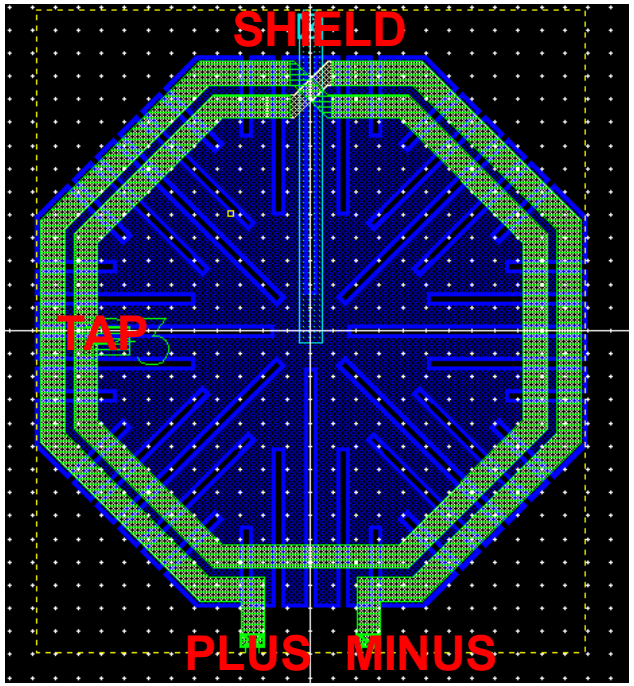


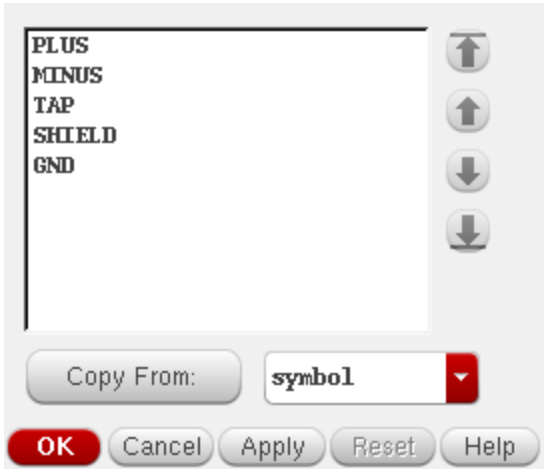


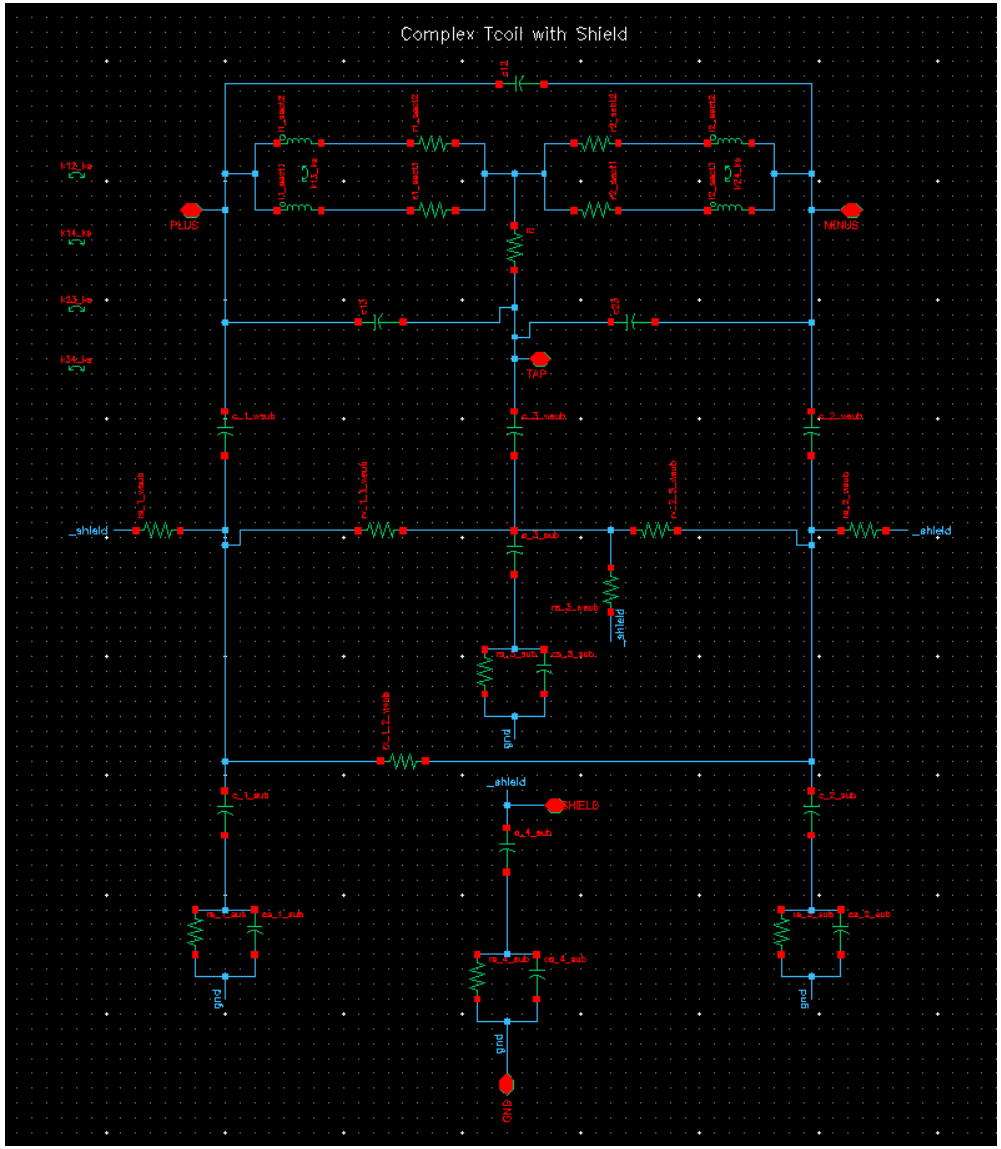


A tcoil is an asymmetrically tapped inductor usually driven single-ended. Tap is the last port.

Shield Tcoil







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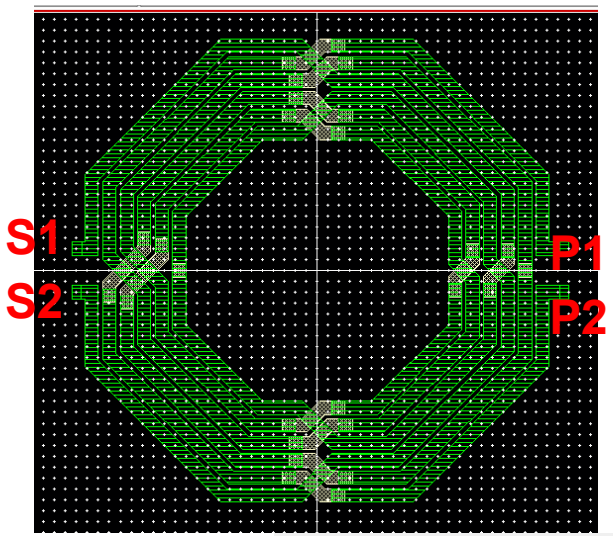
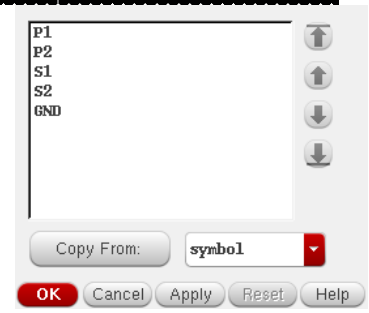
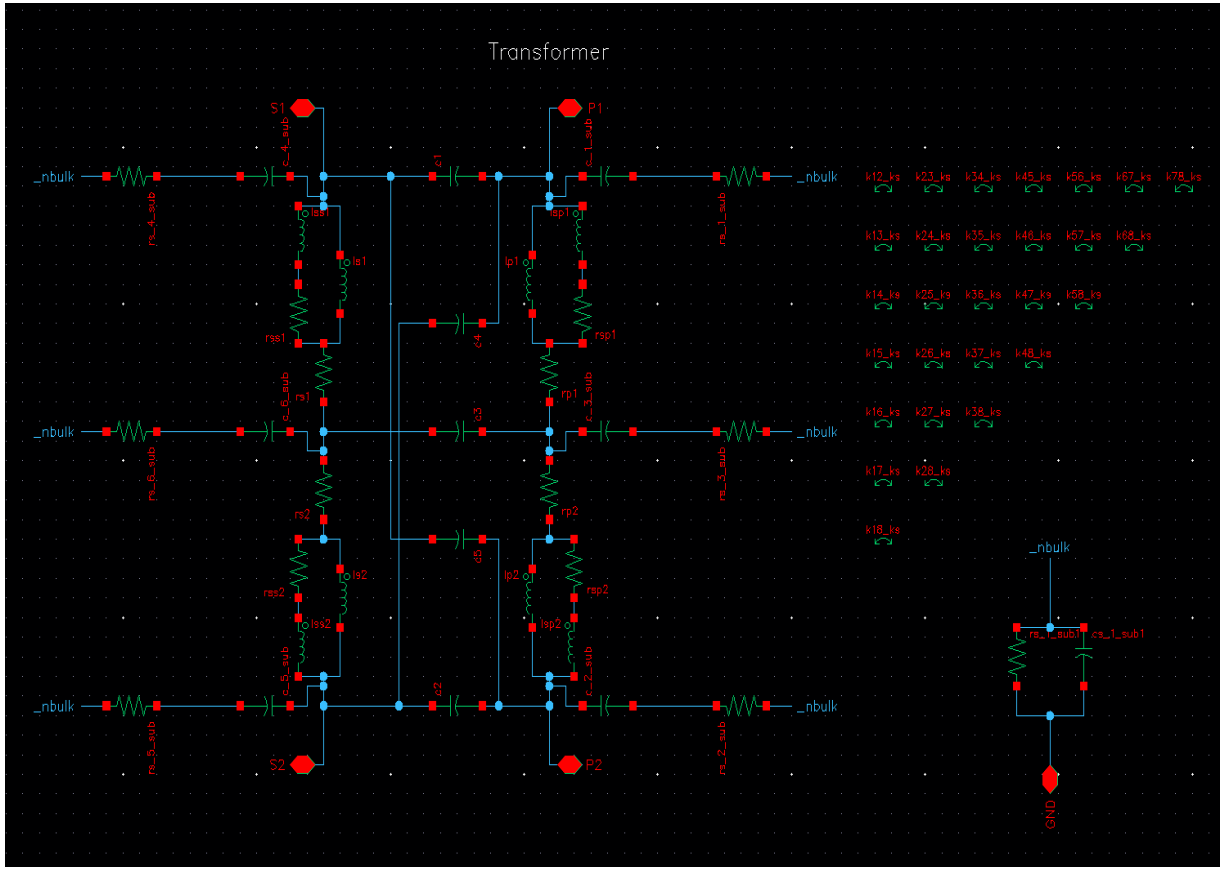
Transformer

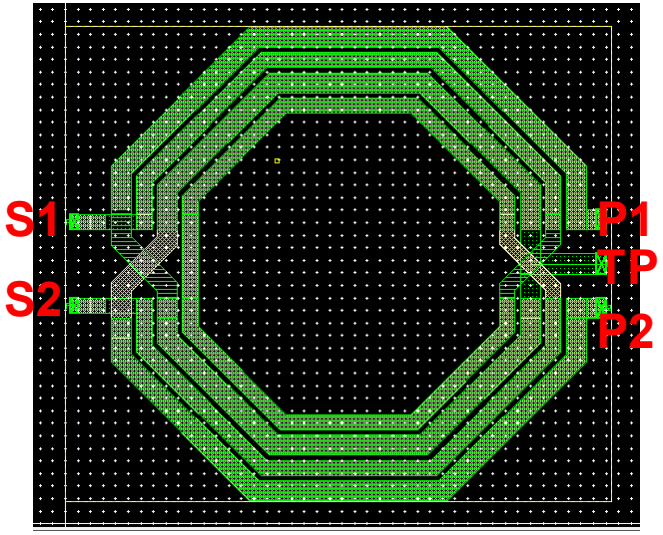


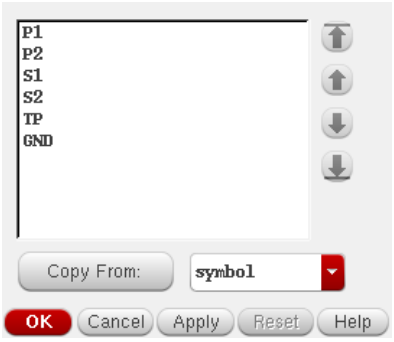


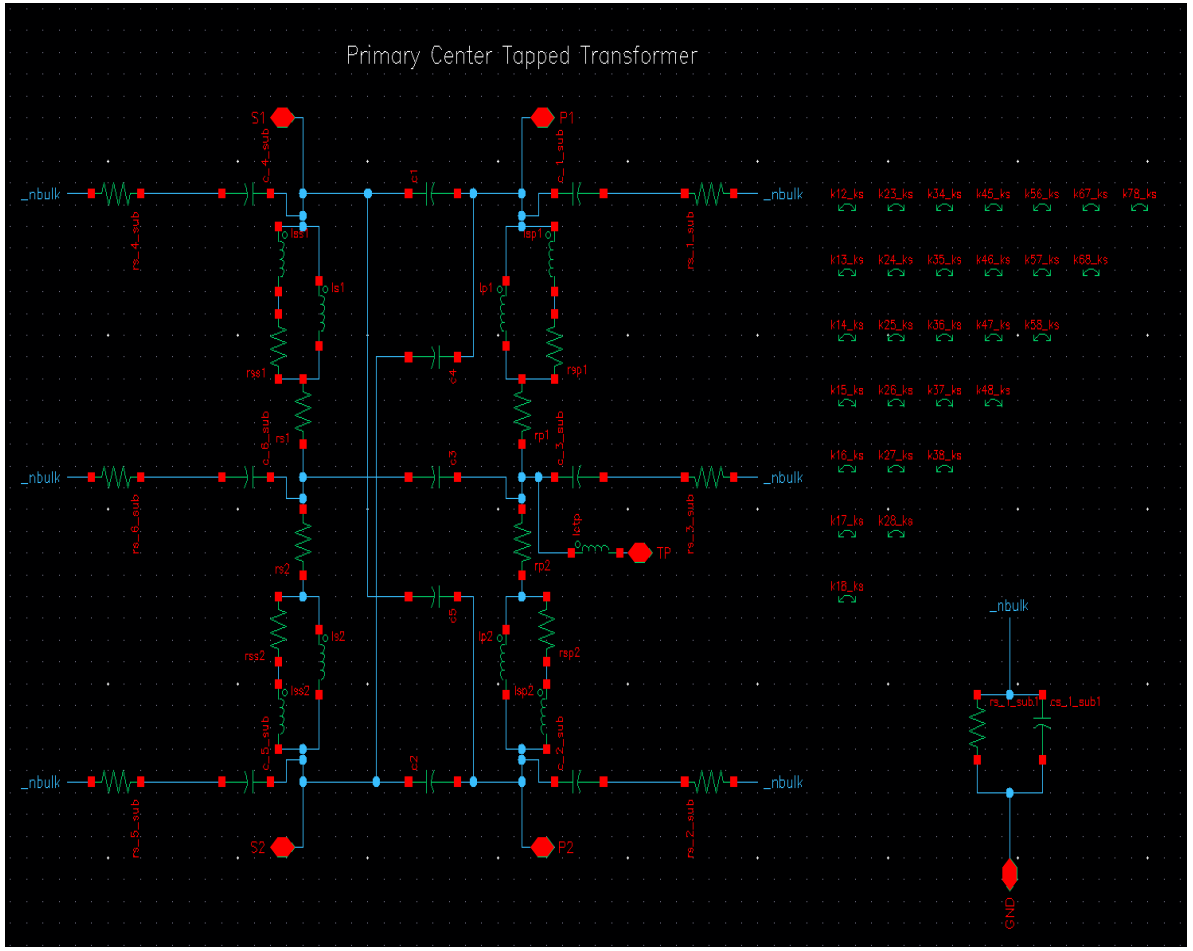


4 port transformer (no taps)

Transformer (primary center tapped)







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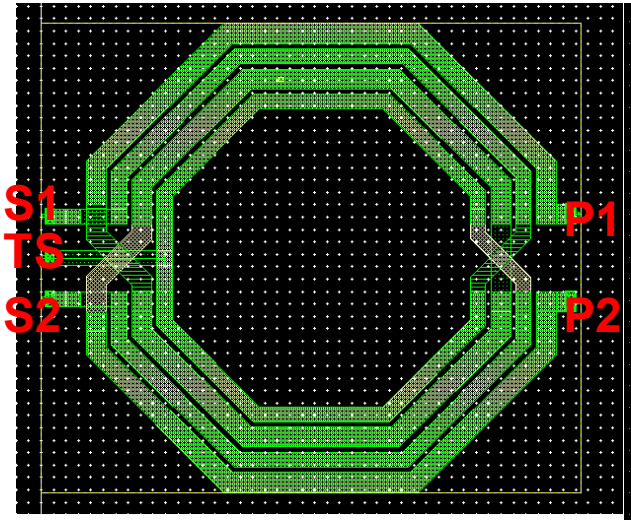
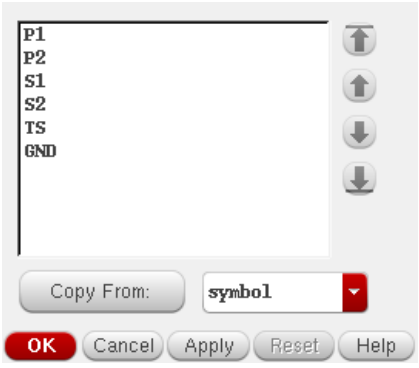
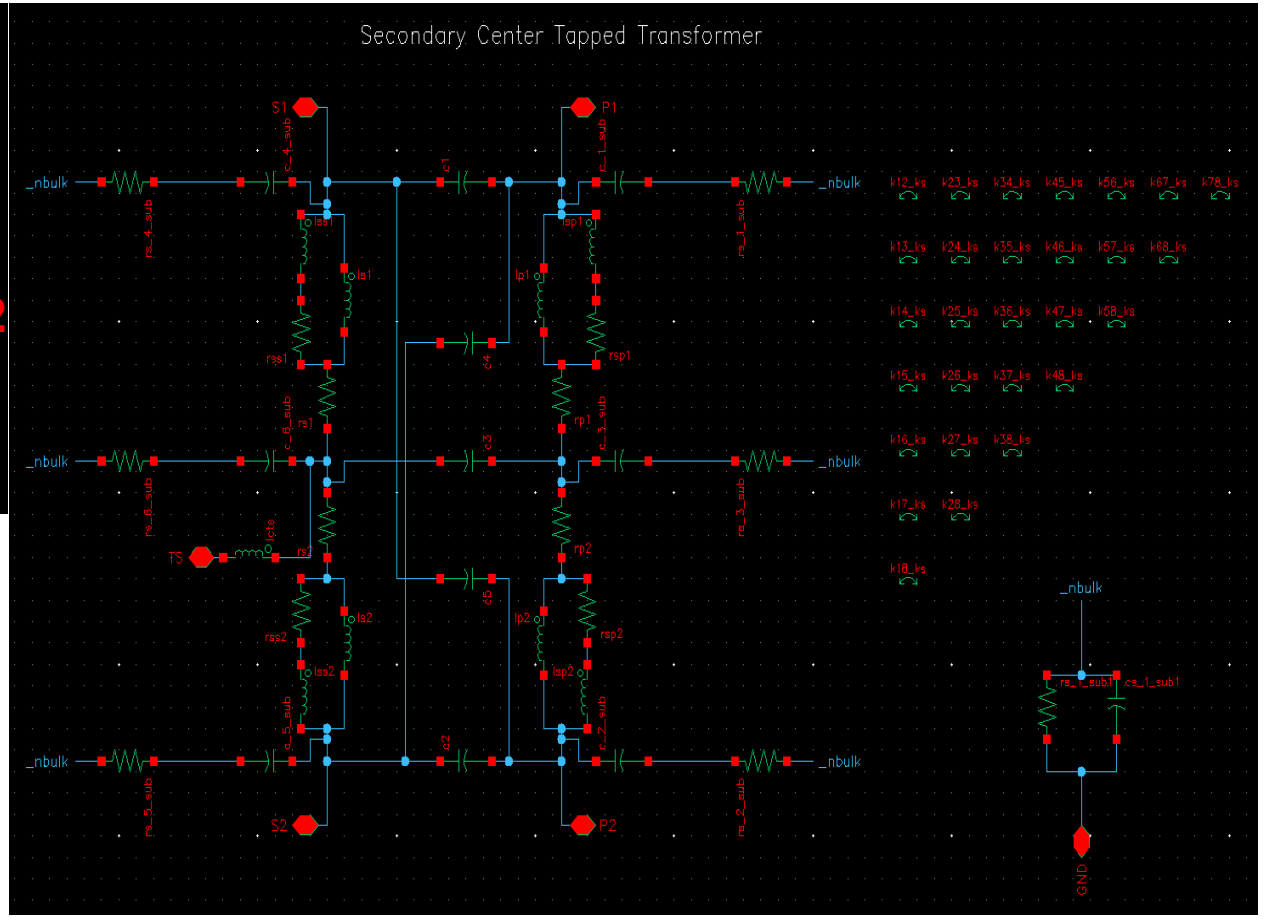
Transformer (secondary center tapped)







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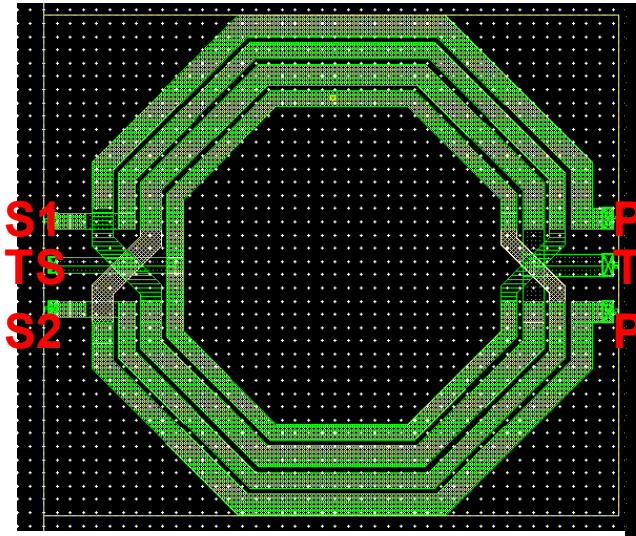
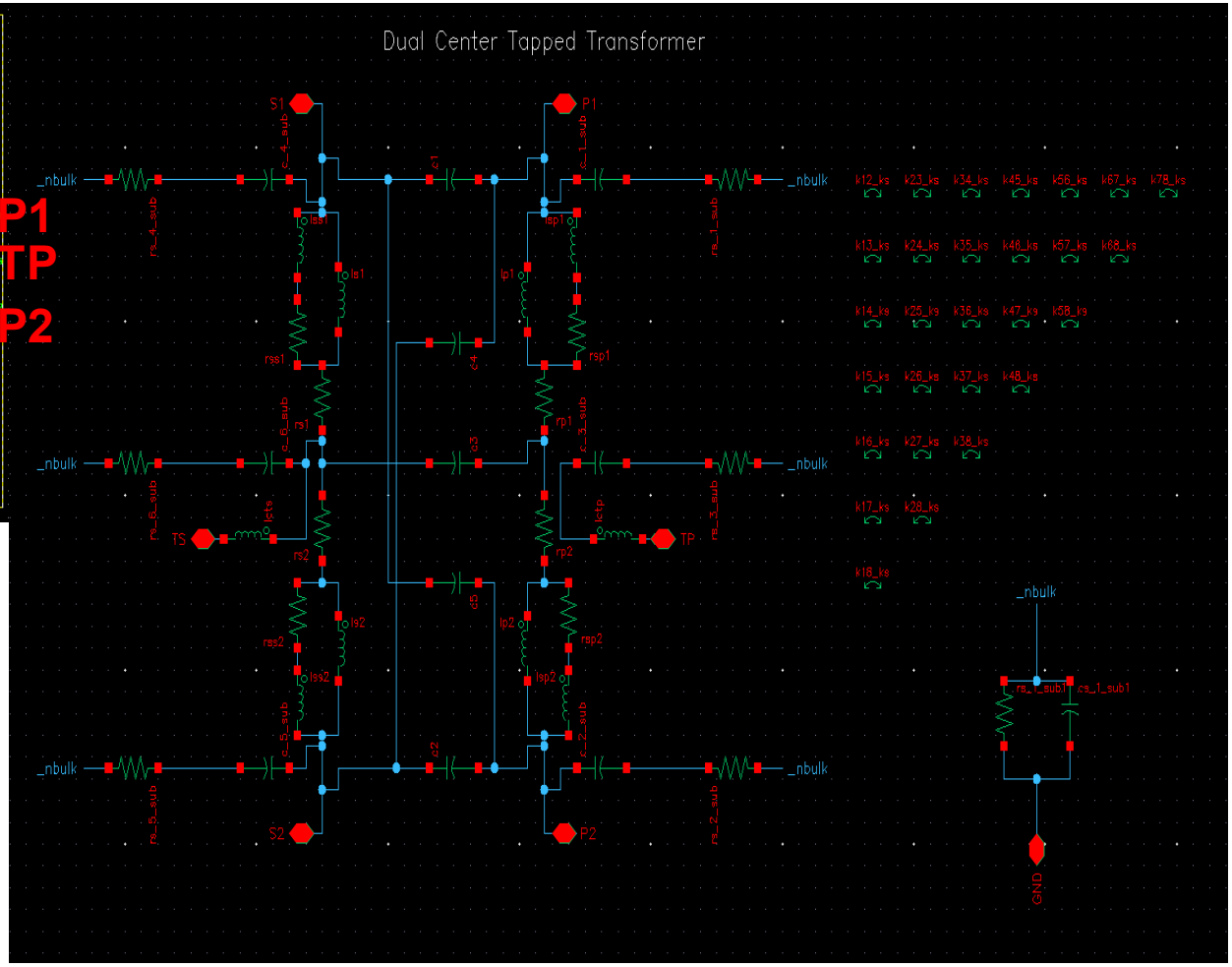
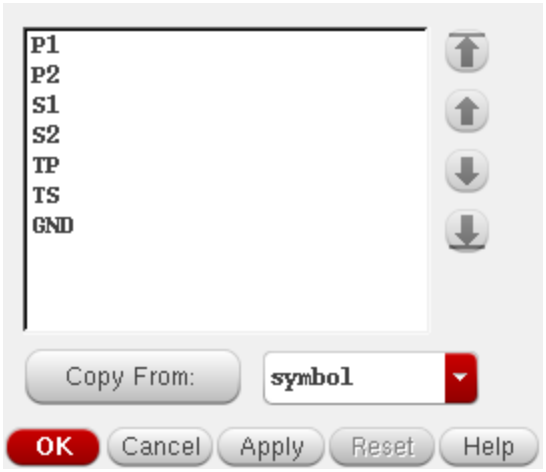
Transformer (double-tapped)







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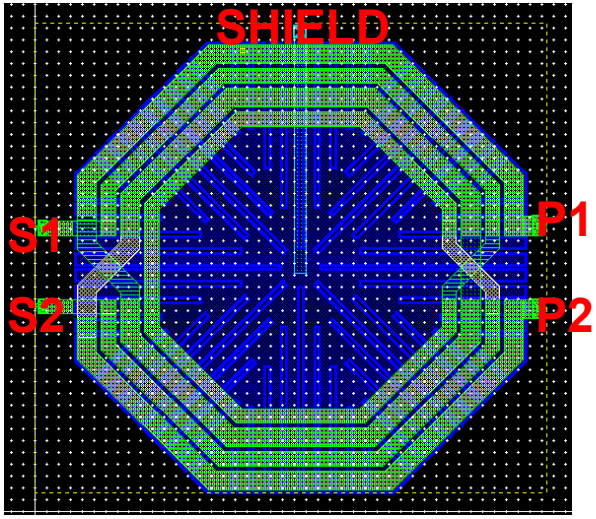
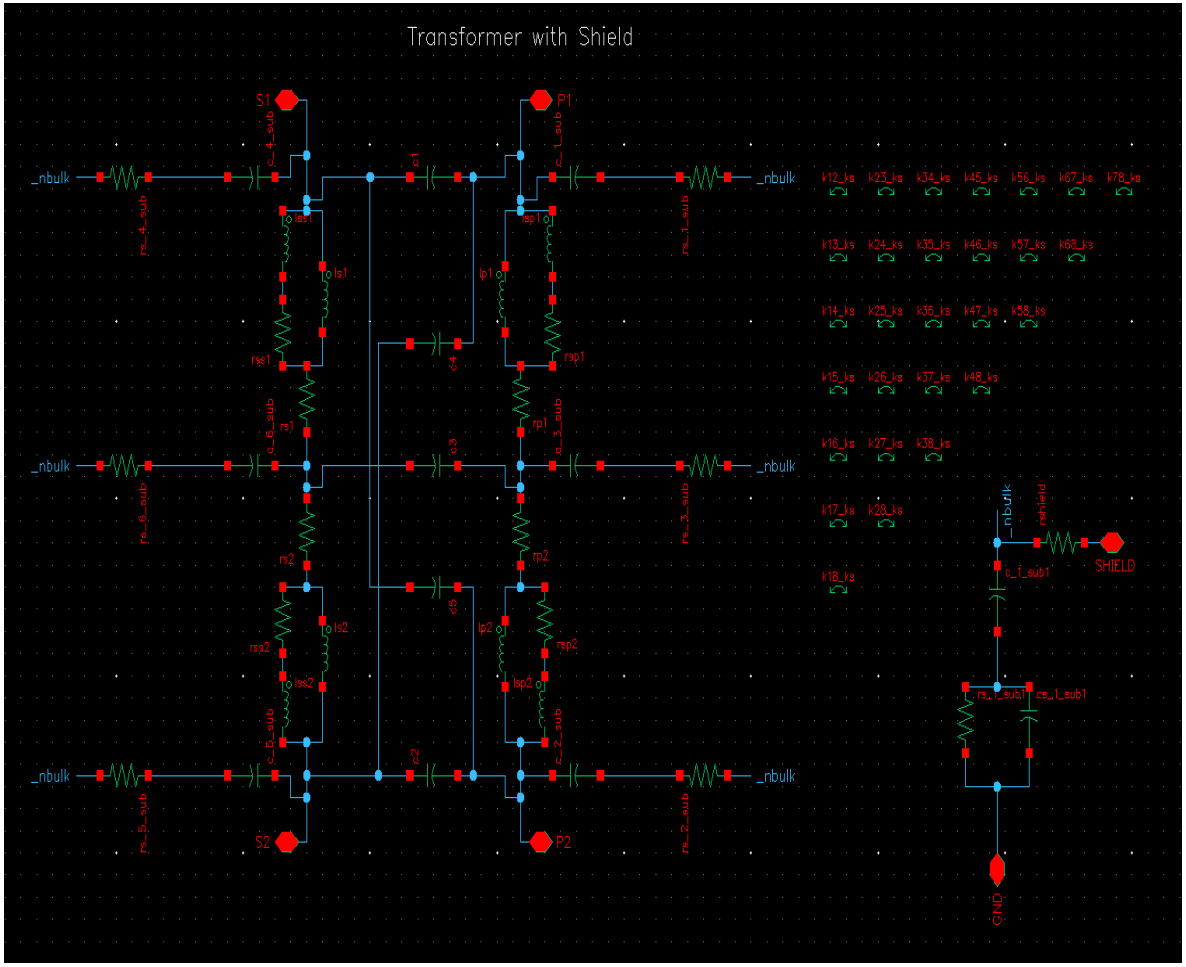
Shield Transformer





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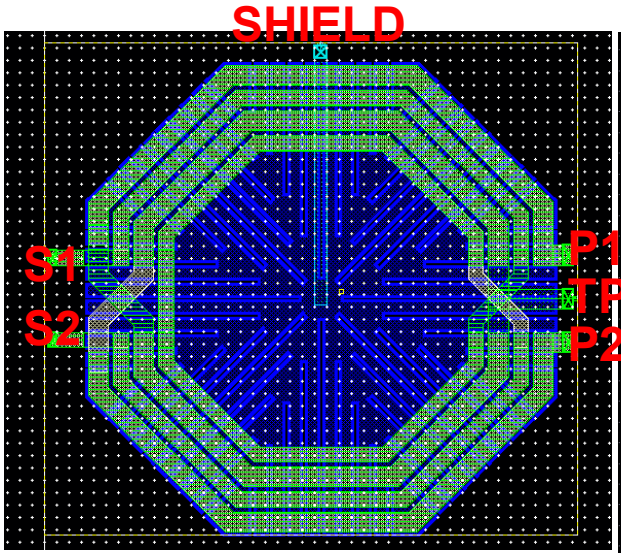
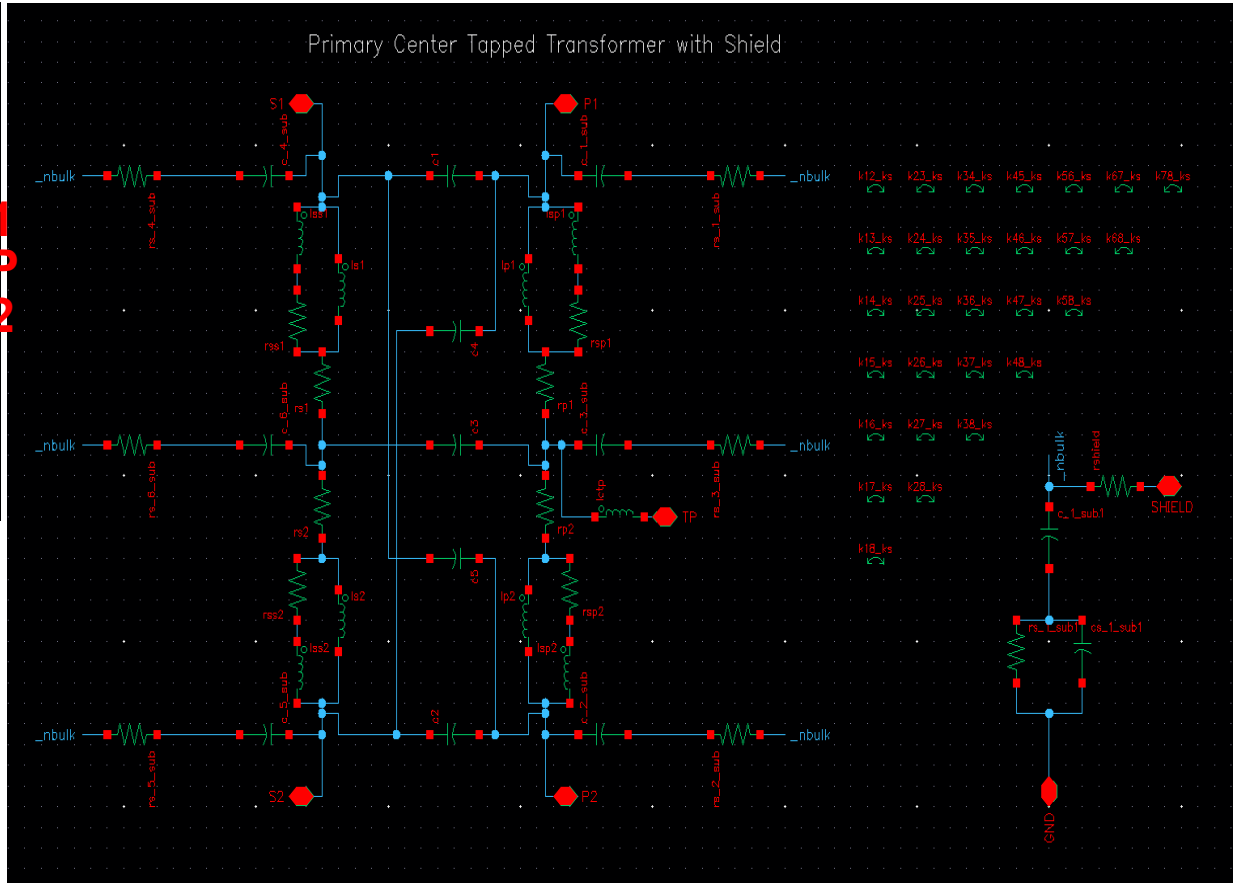
Shield Transformer (primary center tapped)





Shield Transformer (secondary center tapped)

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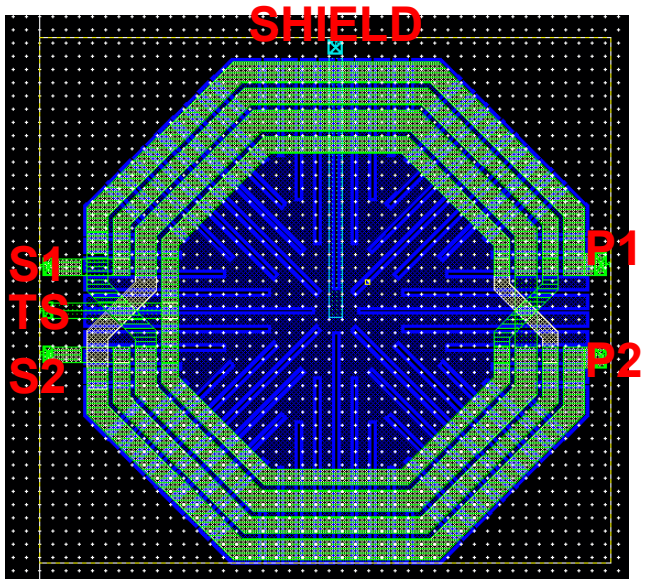
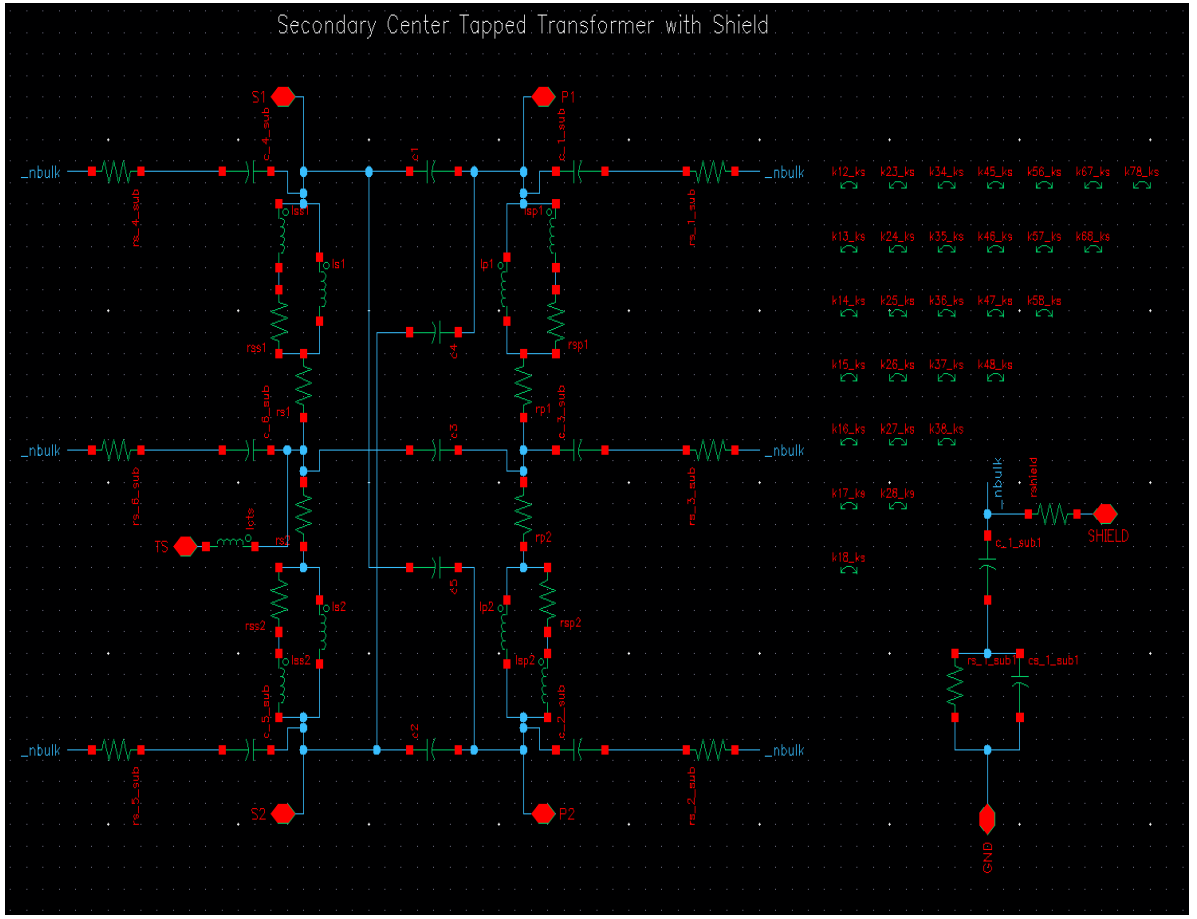
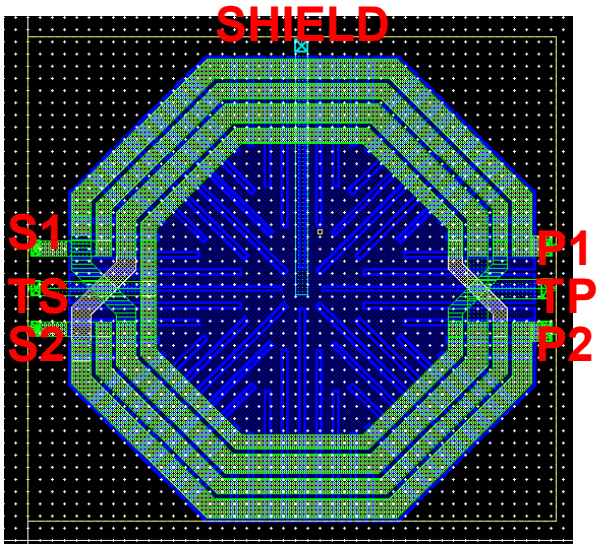
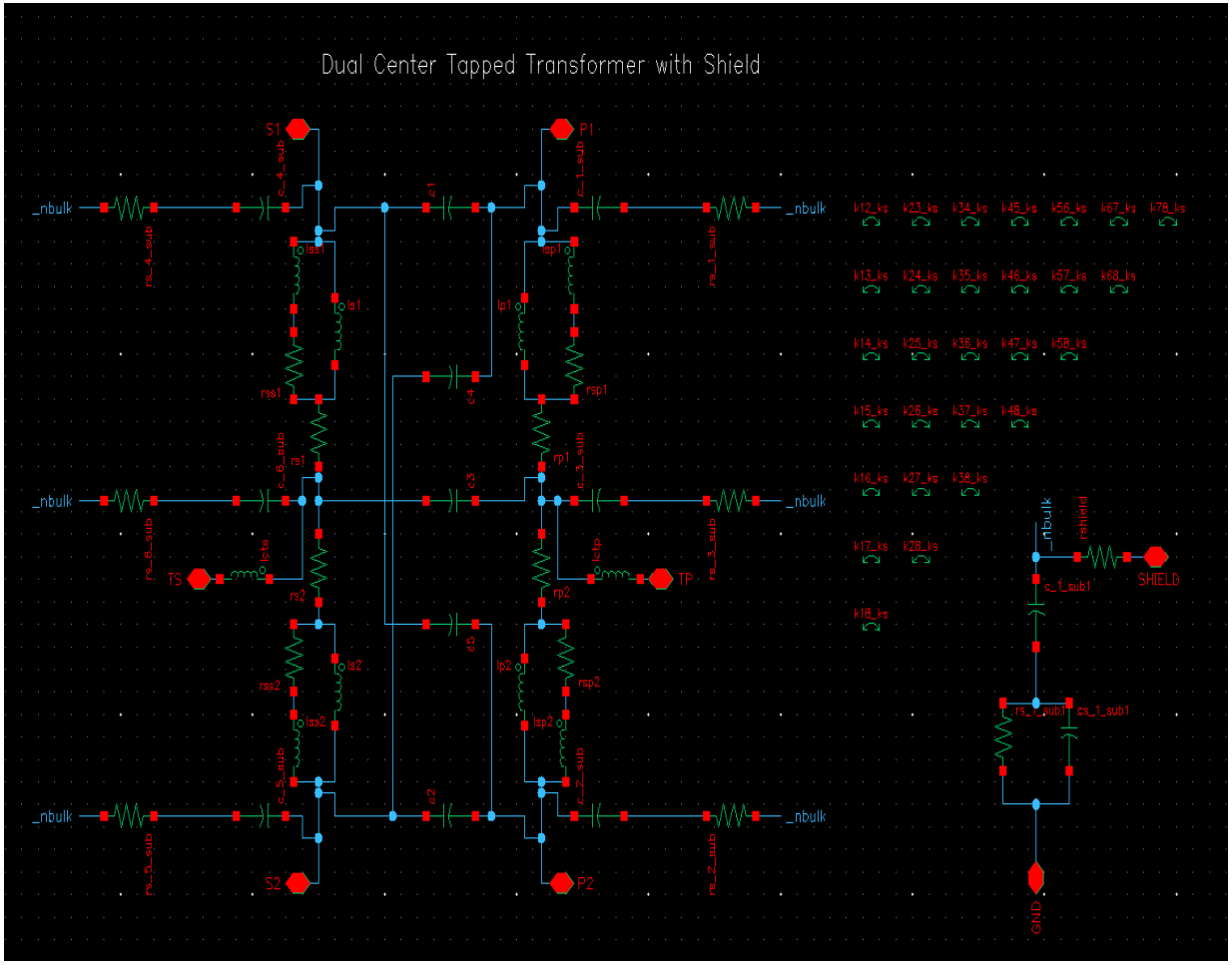


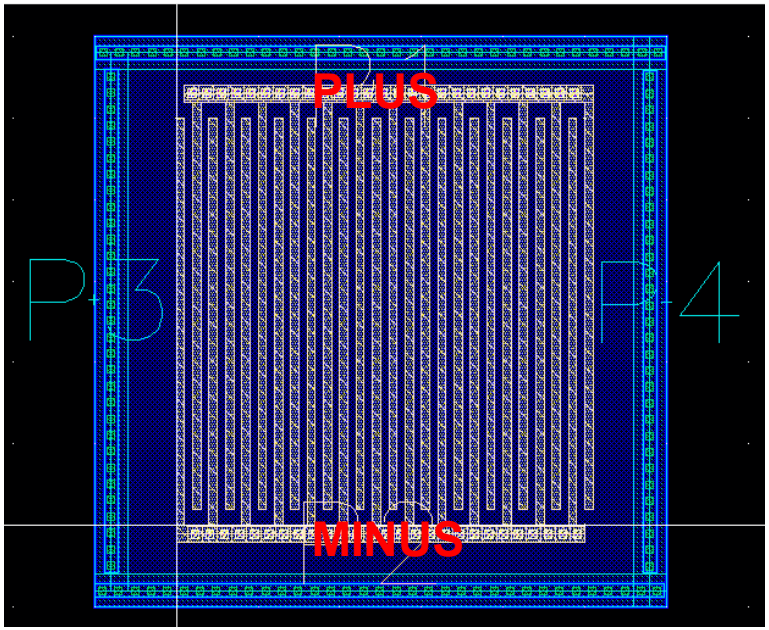


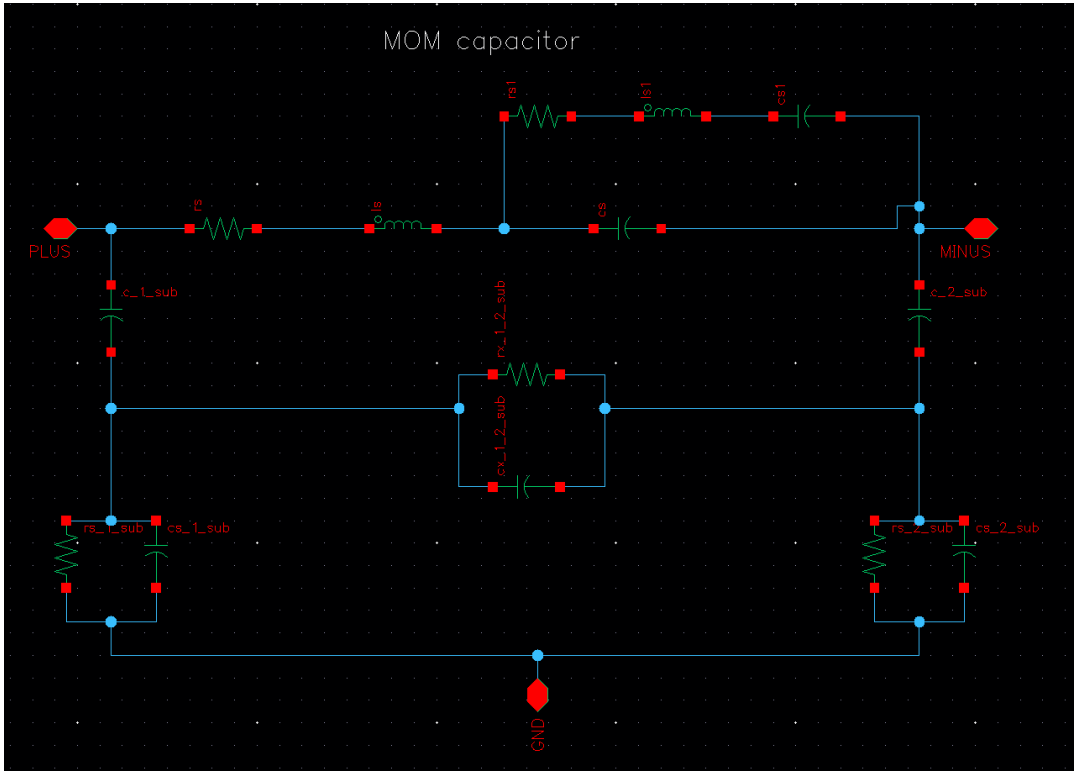
Shield Transformer (double-tapped)



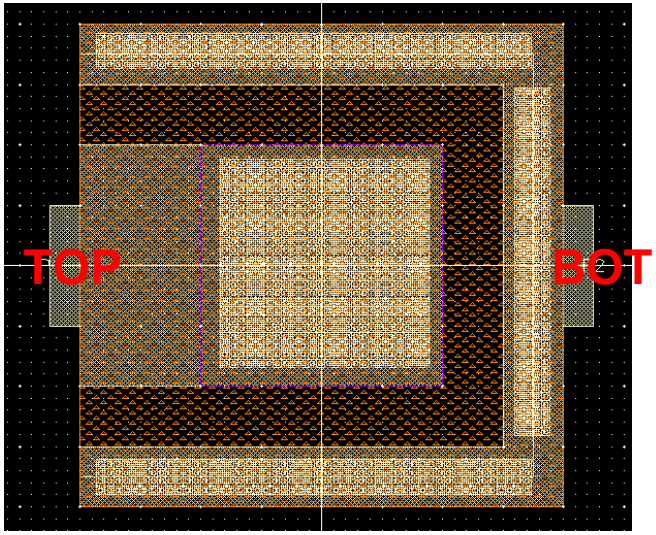


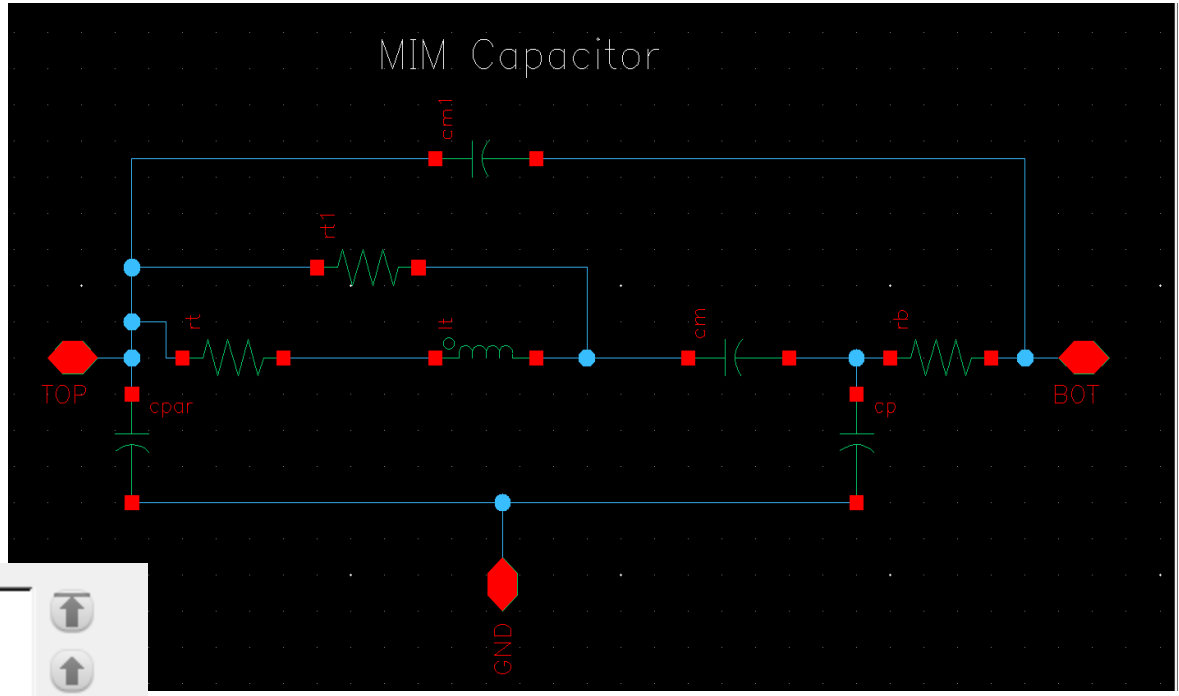
MOM capacitor



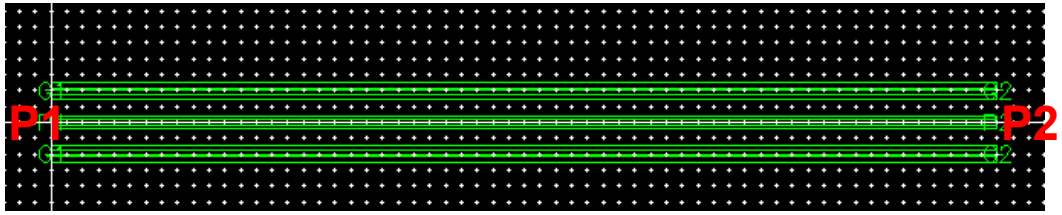


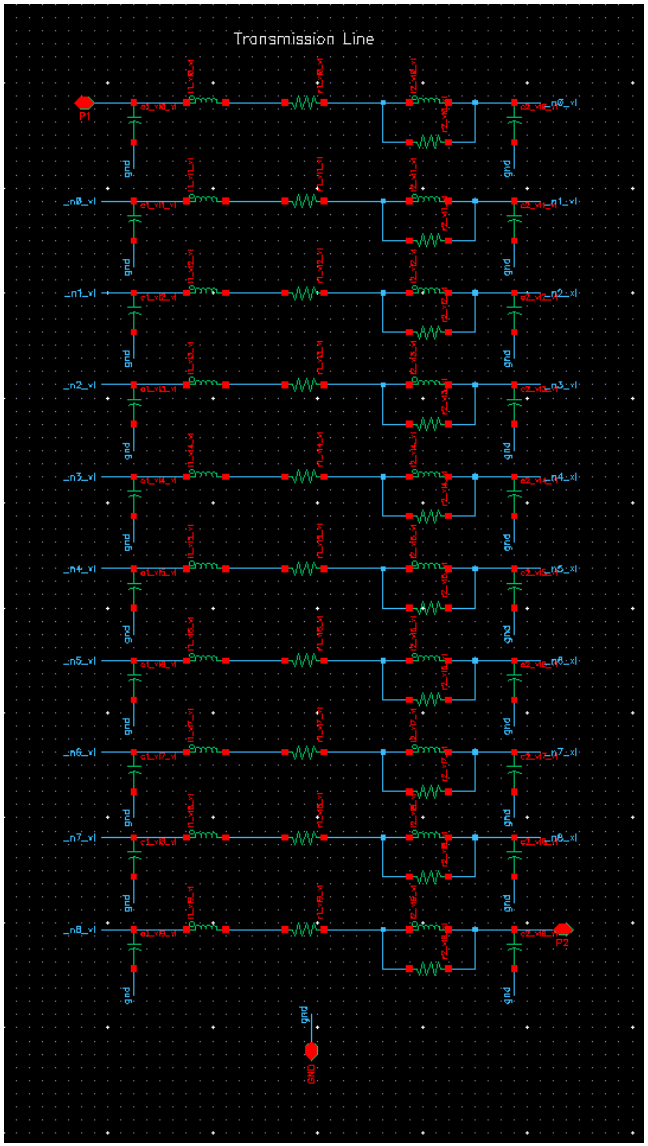
MIM capacitor





Transmission Line





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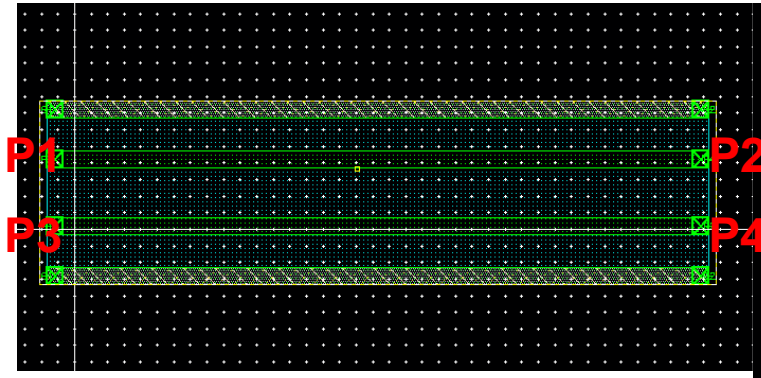
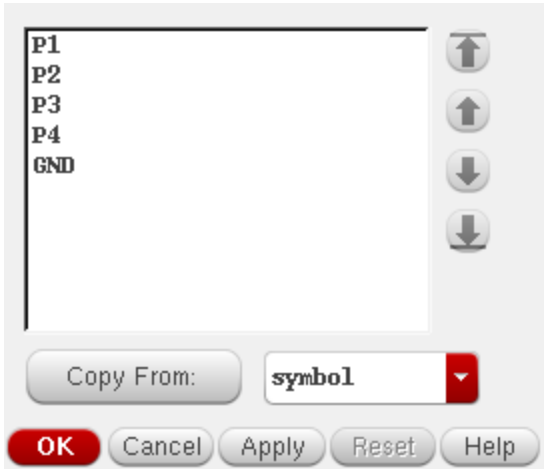
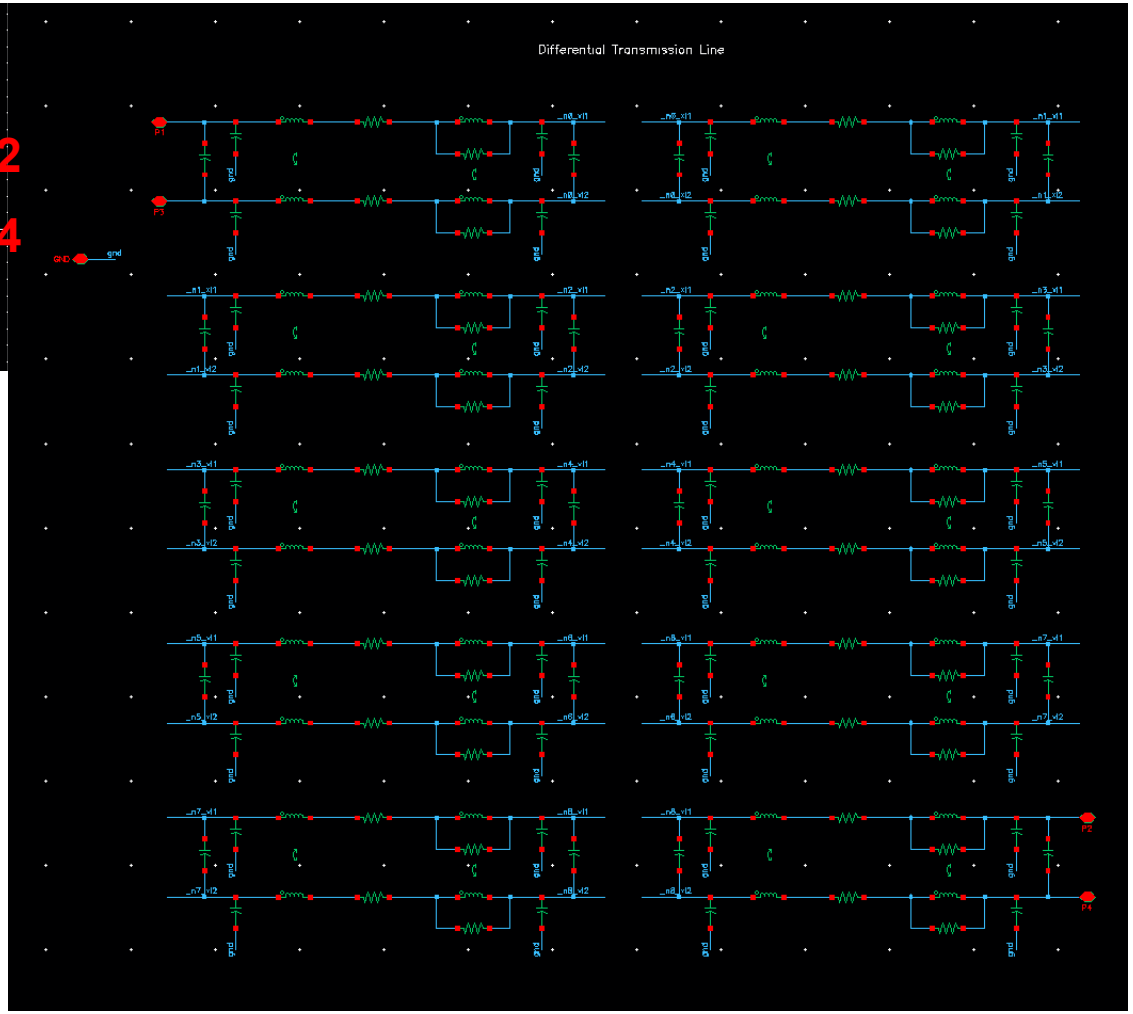
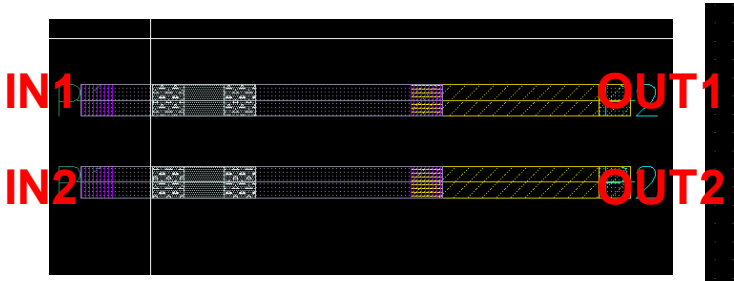
Diff Transmission Line

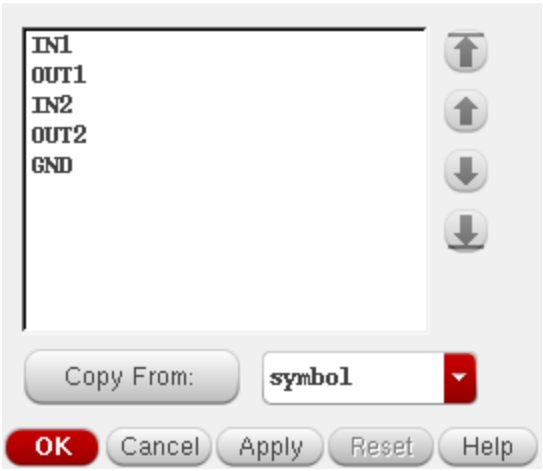


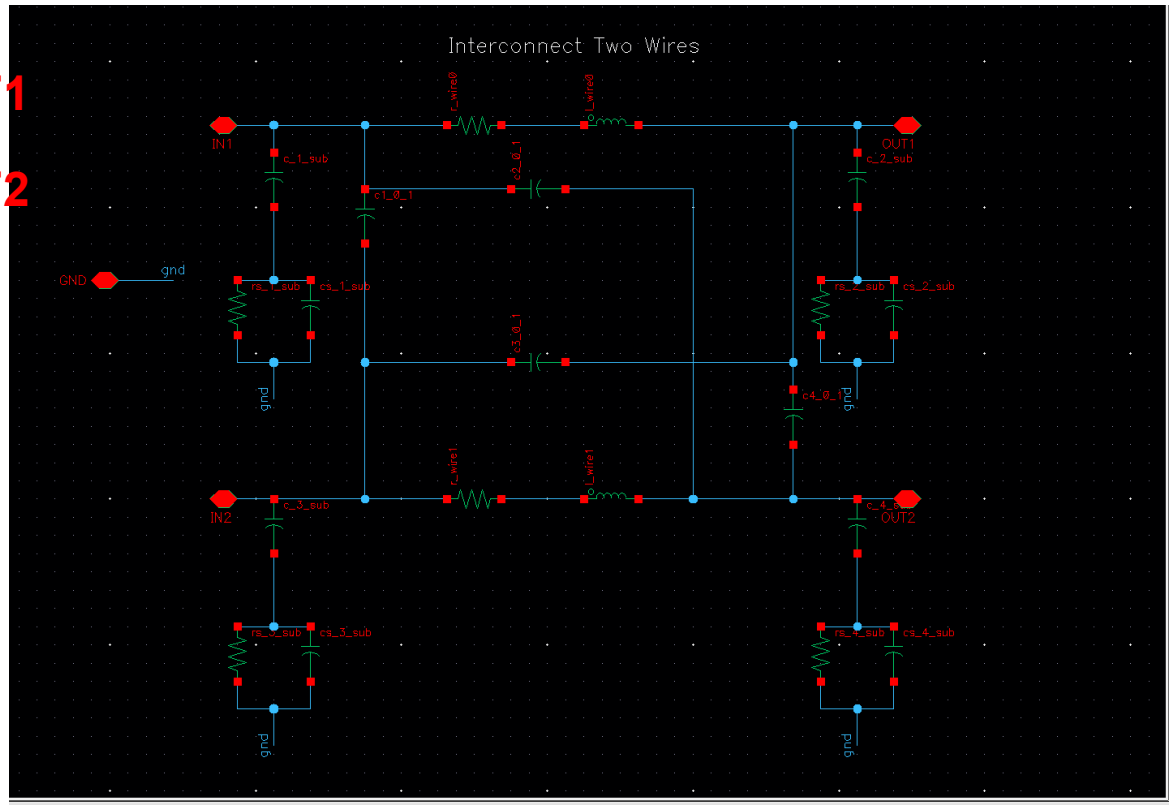




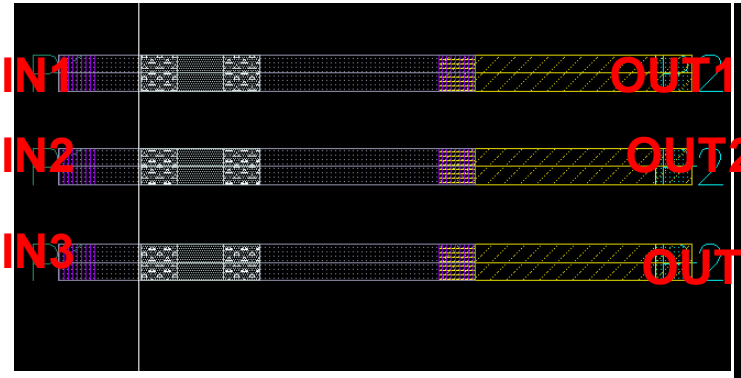
Interconnect 2

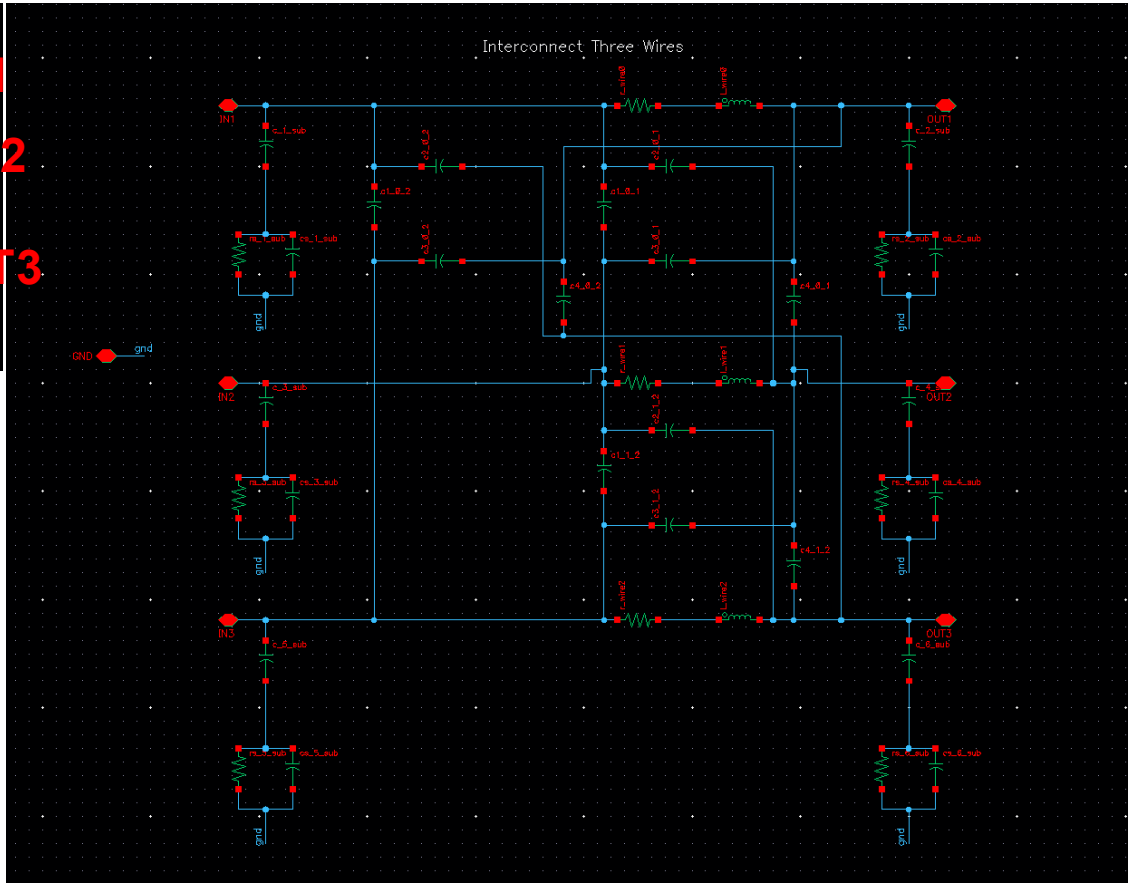






Interconnect 3





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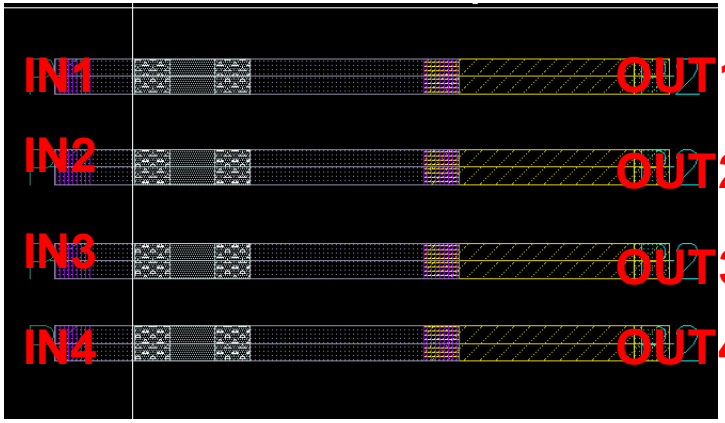
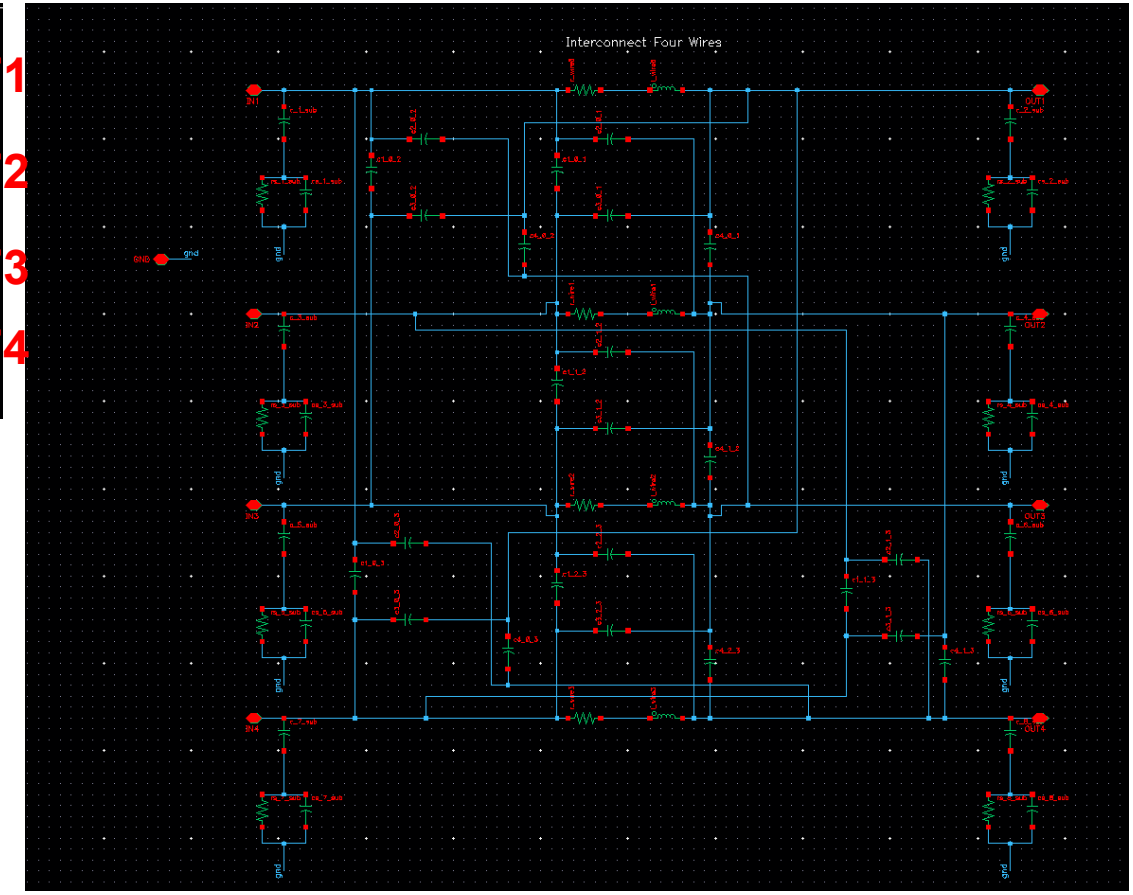
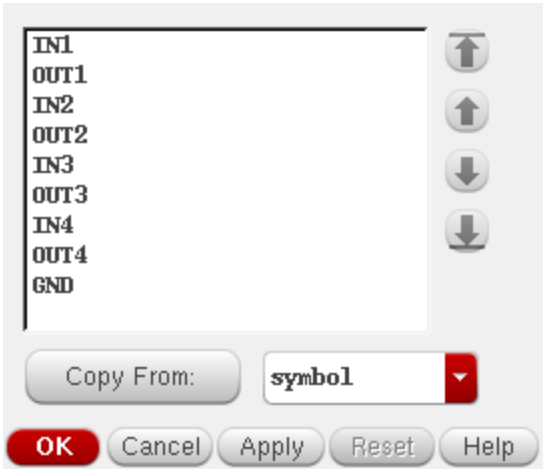
Interconnect 4







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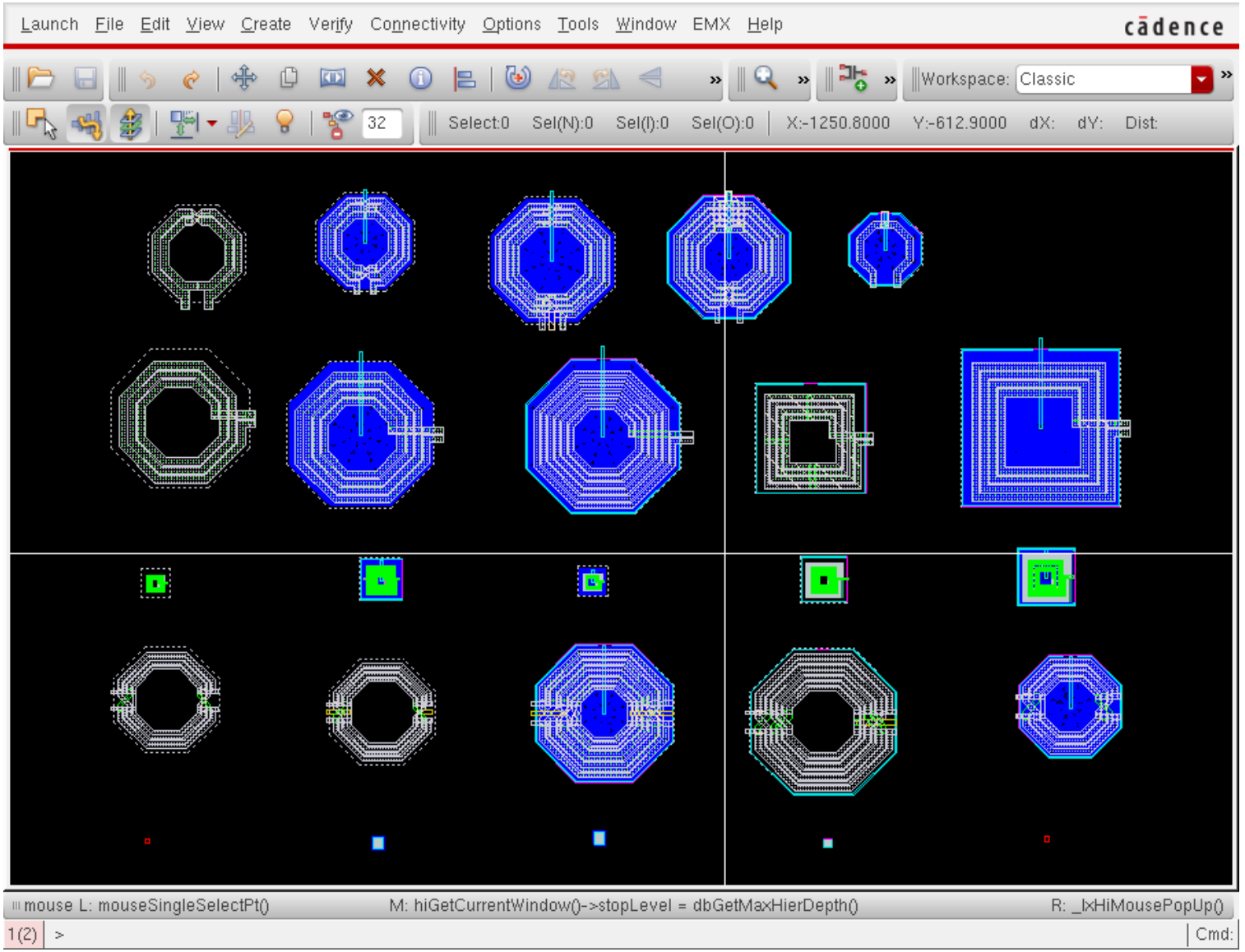
INTEGRAND PCELLS

SYM_IND

SPIRAL_IND

STACKED

TRANSFORMER

MOM CAP