

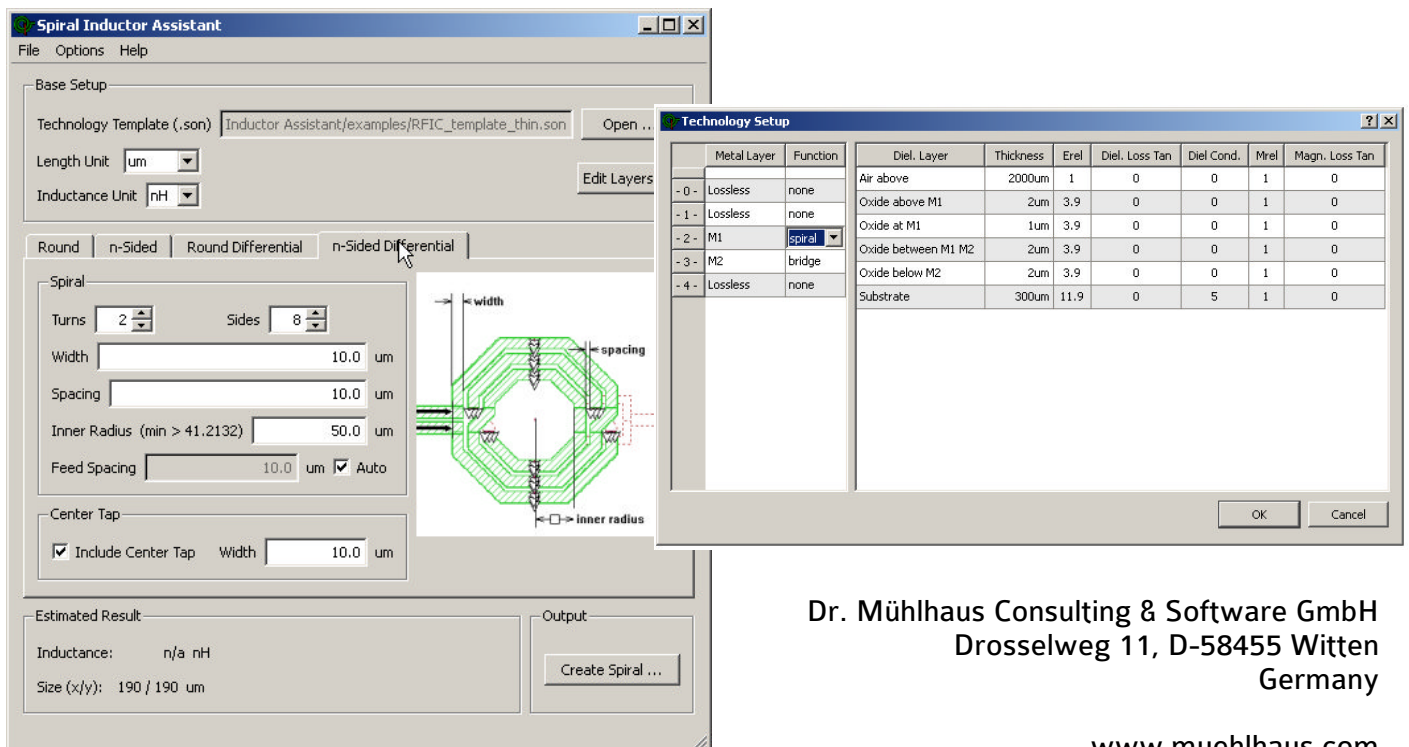
Spiral Inductor Assistant for Sonnet

Benefits

- Fast and accurate on-the-fly design and analysis of single ended and differential inductor layouts
- Complements the accurate and efficient Sonnet Professional RFIC workflow

Key Features

- Generate layouts for various single ended and differential inductors
- Single or multiple parallel layer(s) for spiral and underpass/overpass
- Estimated inductance read-out for single ended spirals while geometry parameters are changed
- Import technology information from existing Sonnet simulation models
- Write a full, complete Sonnet simulation model for accurate EM verification of the inductor, ready for immediate analysis
- Full wave EM analysis in Sonnet Professional provides accurate, calibrated S-parameters (Sonnet license required)
- Plot L, Q, series resistance, substrate resistance and capacitance from the Sonnet results (Sonnet license required)
- Extract a broad band SPICE model for Spectre and other time domain simulators for the inductor (Sonnet license required)
- Available for Windows and Linux platforms



| Metal Layer | Function | Diel. Layer | Thickness | Erel | Diel. Loss Tan | Diel Cond. | Mrel | Magn. Loss Tan |
|-------------|----------|-------------|-----------|------|----------------|------------|------|----------------|
| - 0 - | Lossless | none | 2000um | 1 | 0 | 0 | 1 | 0 |
| - 1 - | Lossless | none | 2um | 3.9 | 0 | 0 | 1 | 0 |
| - 2 - | M1 | spiral | 1um | 3.9 | 0 | 0 | 1 | 0 |
| - 3 - | M2 | bridge | 2um | 3.9 | 0 | 0 | 1 | 0 |
| - 4 - | Lossless | none | 2um | 3.9 | 0 | 0 | 1 | 0 |
| | | Substrate | 300um | 11.9 | 0 | 5 | 1 | 0 |

Dr. Mühlhaus Consulting & Software GmbH
Drosselweg 11, D-58455 Witten
Germany