Project 8 – Coupled Line Bandpass Filter

ECE435

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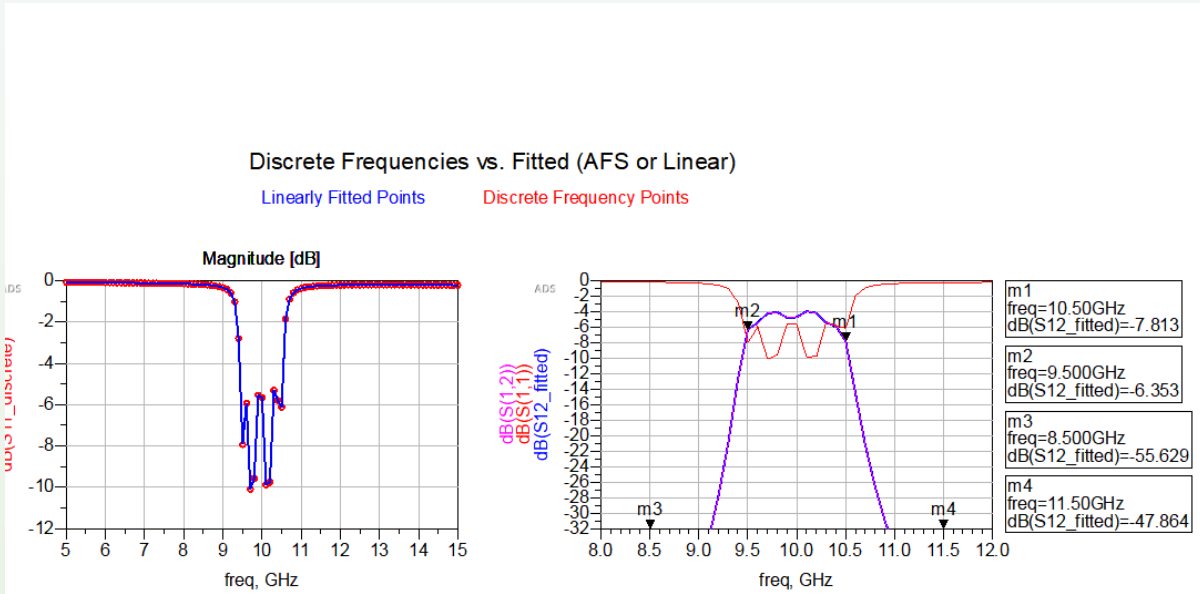
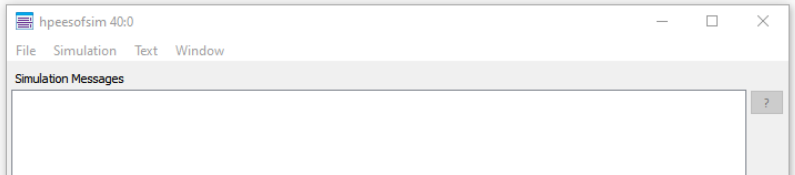
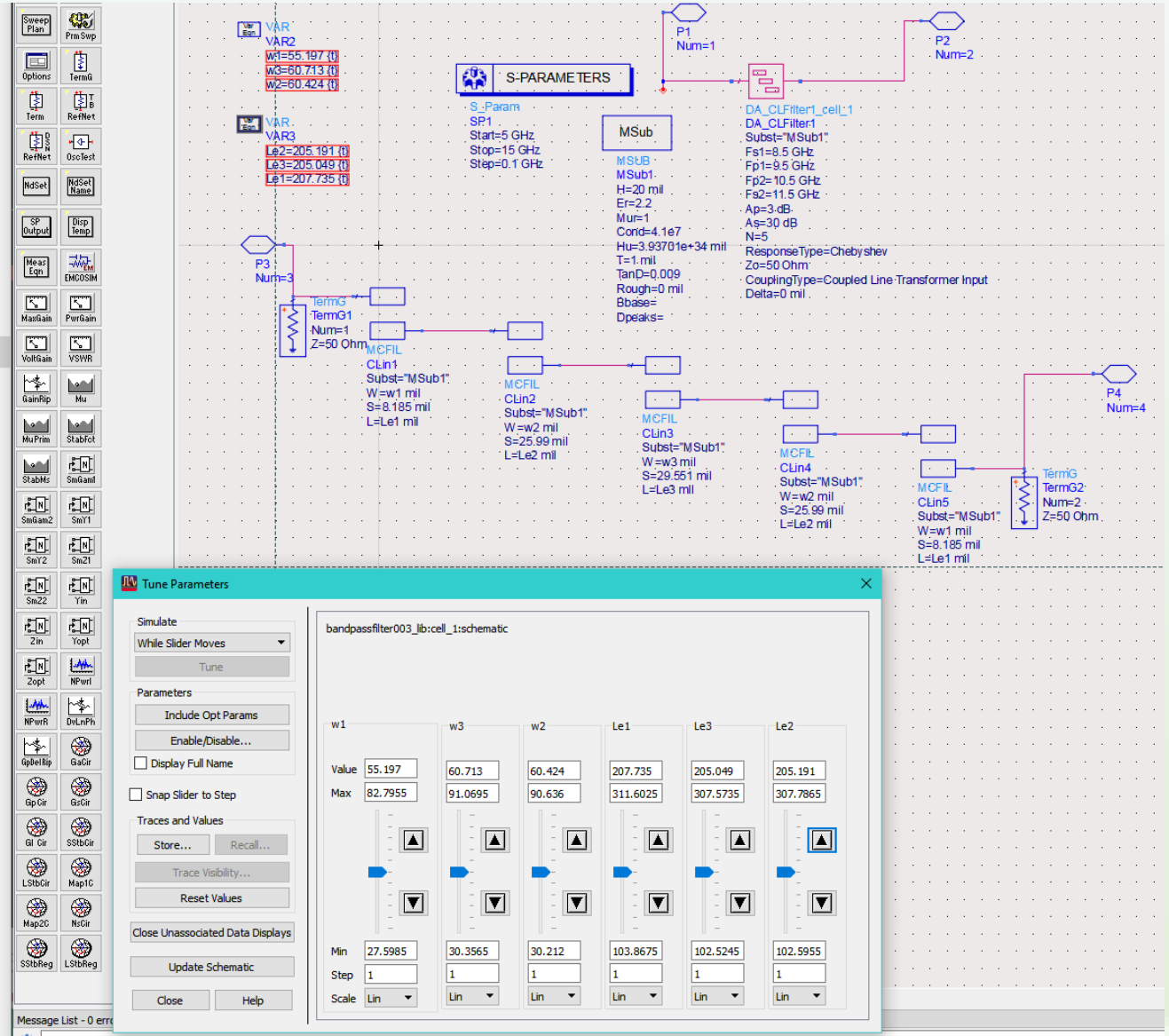
Project 8

- Optimize bandpass filter using RT5880 substrate (20 mil thick substrate)
  - Center frequency 10GHz
  - 3dB passband bandwidth 1GHz
  - <-30dB stopband 1.5GHz from the 10GHz center
  - Return loss (S11 and S22): <-15dB with the passband
  - Generate layout
- Perform momentum microwave simulation and compare the results with that from equation based simulation (from schematic)

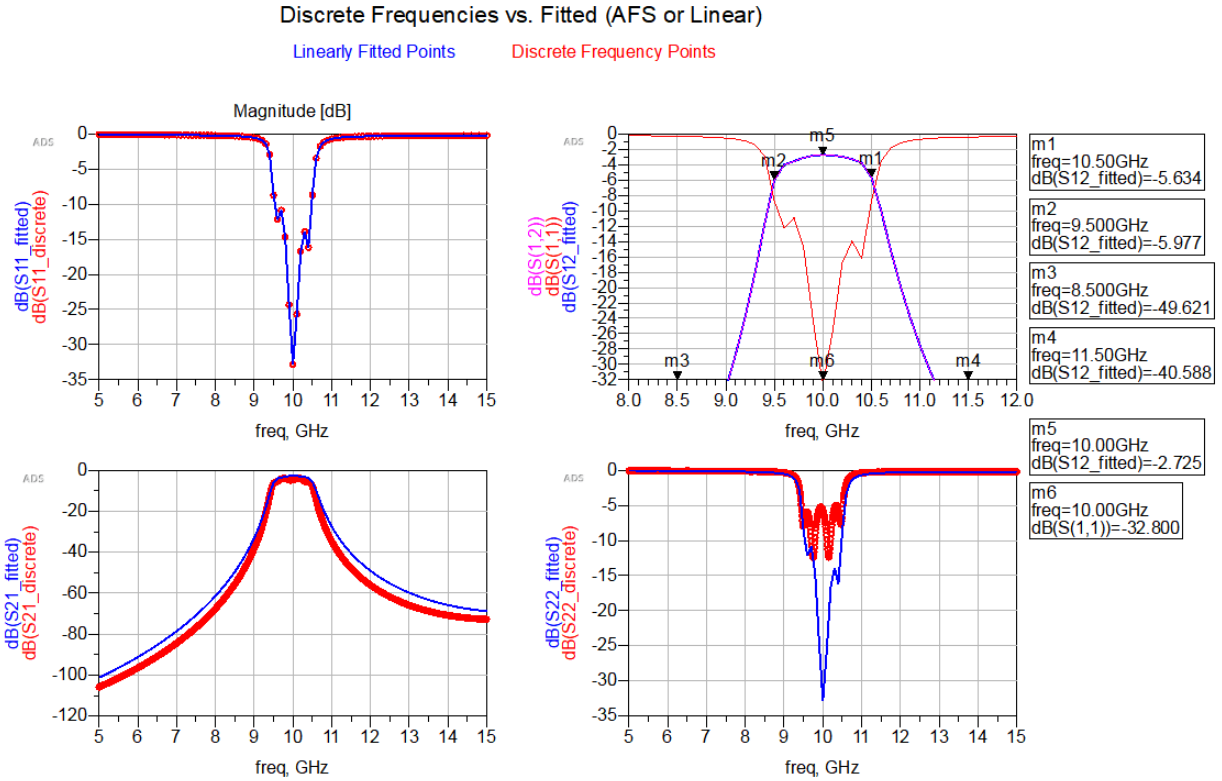
Equation-Based Simulation: Before Tuning

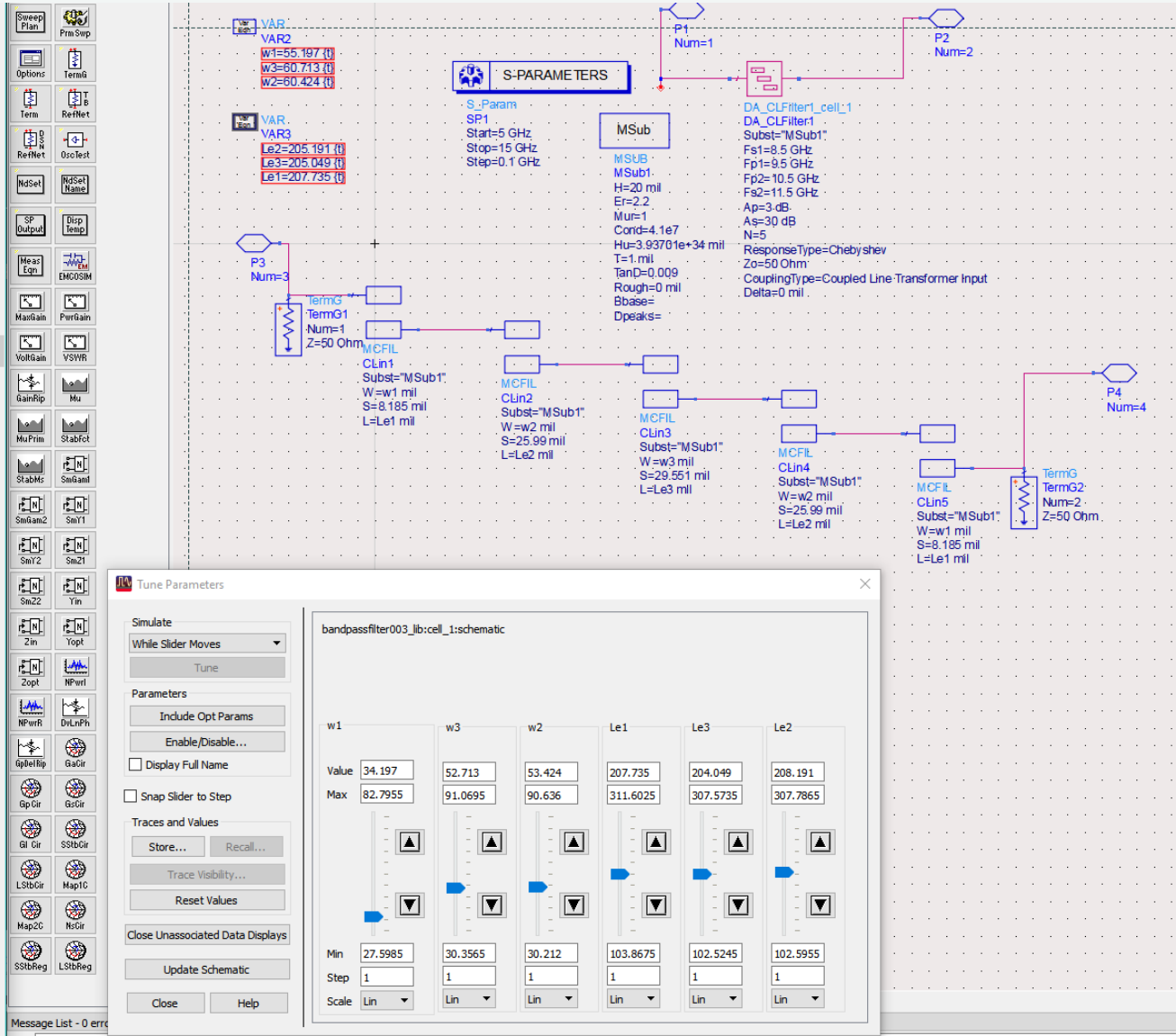




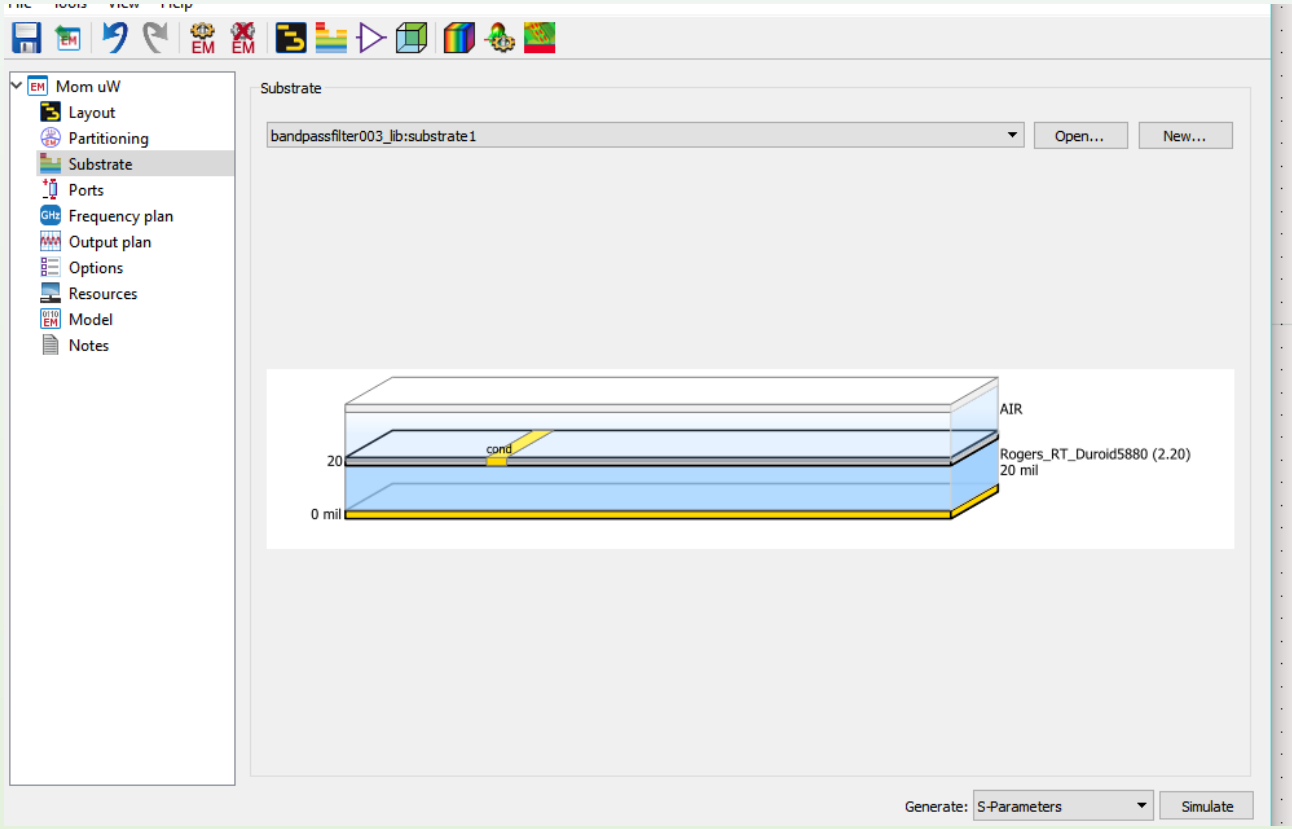


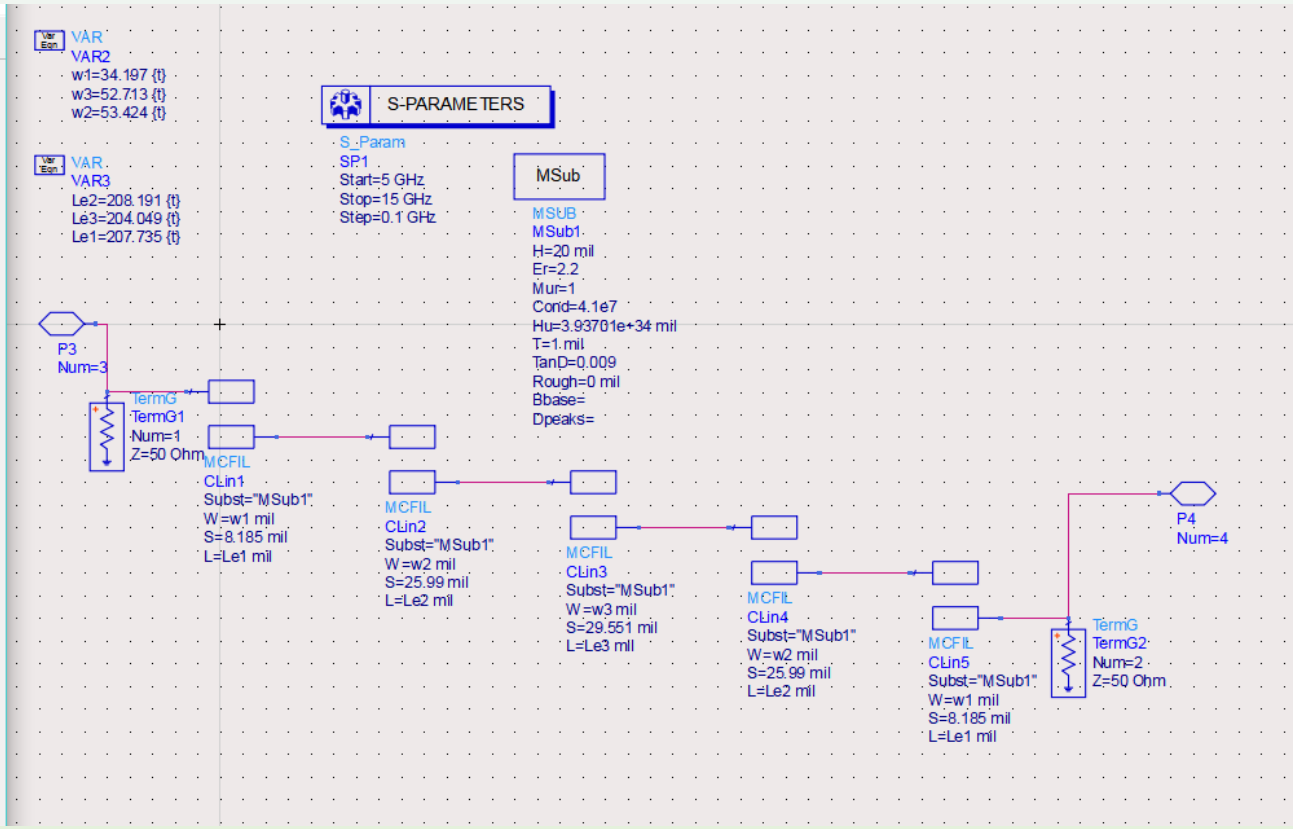
Equation-Based: After Tuning





Delete DesignGuide Component and Create Layout





EM-Based Solution with Layout