

EE 481/581 Microwave Engineering (Fall 2024)

Homework 10

Friday, November 8, 2024

- 1) 7.3 Also, find the isolation of the coupler (dB).
- 2) 7.20 CAD part is not required.
- 3) 7.22 Also, draw labeled sketch of design.
- 4) Design a microstrip quad hybrid for a $75\ \Omega$ system with a design frequency of 3 GHz on Rogers RO4003C, 1 oz. copper, 0.032" board thickness. Also, draw labeled sketch of design. Hint: In 'Material Properties' box (in middle), use 'DK values for a specific frequency' option in Rogers MWI software. Use Snipping Tool to include relevant screenshots from MWI.]
- 5) Design a microstrip ring hybrid for a $40\ \Omega$ system with a design frequency of 3 GHz on Rogers RO4003C, 1 oz. copper, 0.032" board thickness. Also, draw labeled sketch of design. Hint: In 'Material Properties' box (in middle), use 'DK values for a specific frequency' option in Rogers MWI software. Use Snipping Tool to include relevant screenshots from MWI.
- 6) **EE 481** only: 7.19 CAD part is not required.
- 7) **EE 581** Only: 7.24

Due Friday, November 15, 2024.