School of Electronics Engineering

B.Tech Electronics and communication engineering

**ECE-402**

Microwave Engineering lab task

**Submitted to:**

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**Submitted by**:

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**Amplifier design**

**Aim:** Design an amplifier for maximum gain at 4 GHz, using single stub matching system. Calculate and plot RL and gain from 3 to 5 GHz.

Z0=50

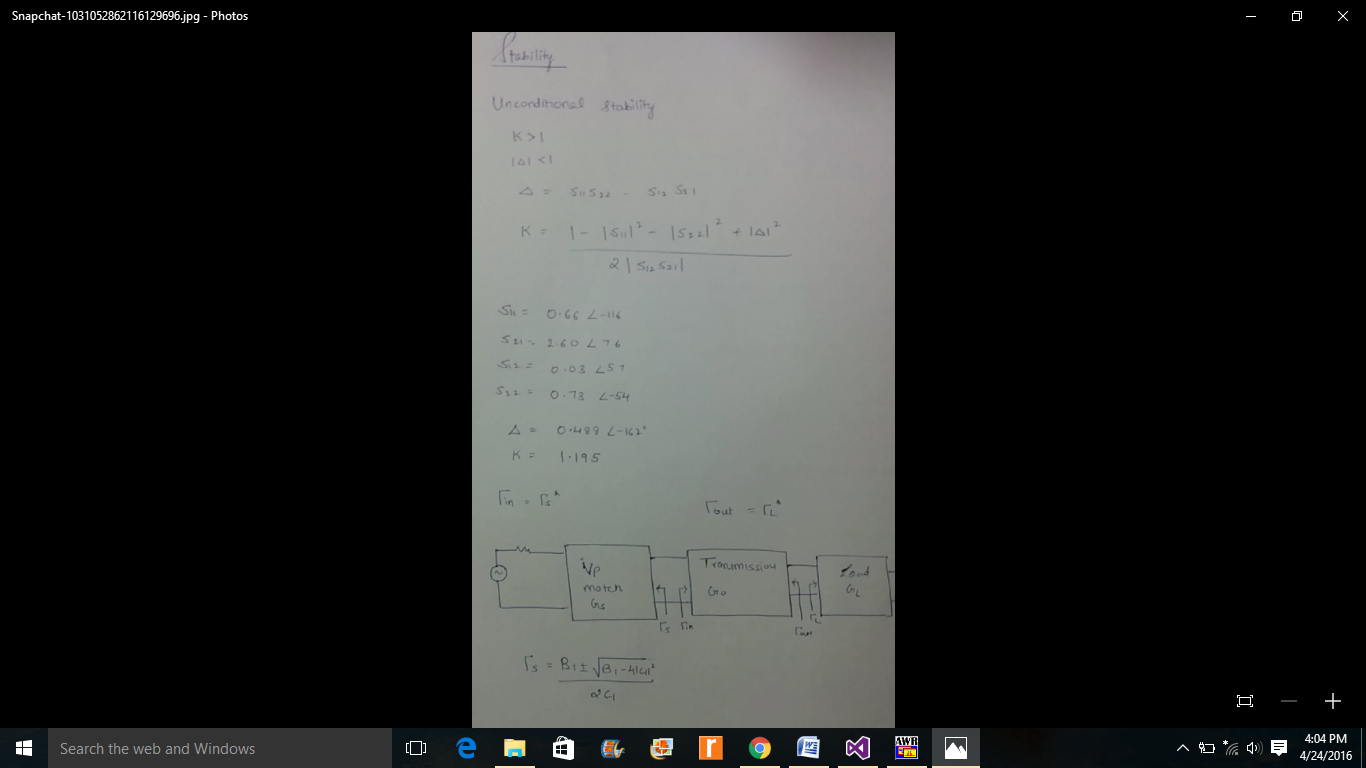
**Calculations:**

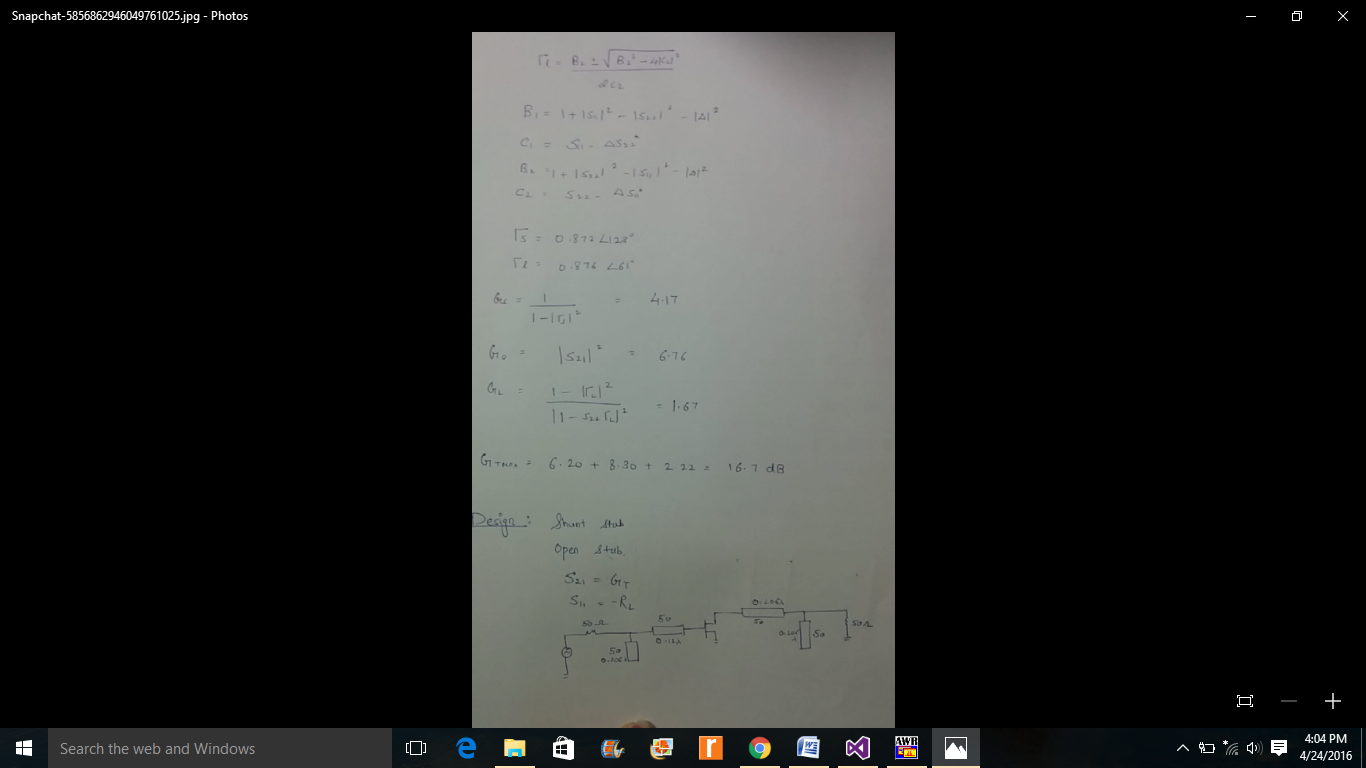
We have h=1.6mm, thickness=0.05mm, tand=0.001

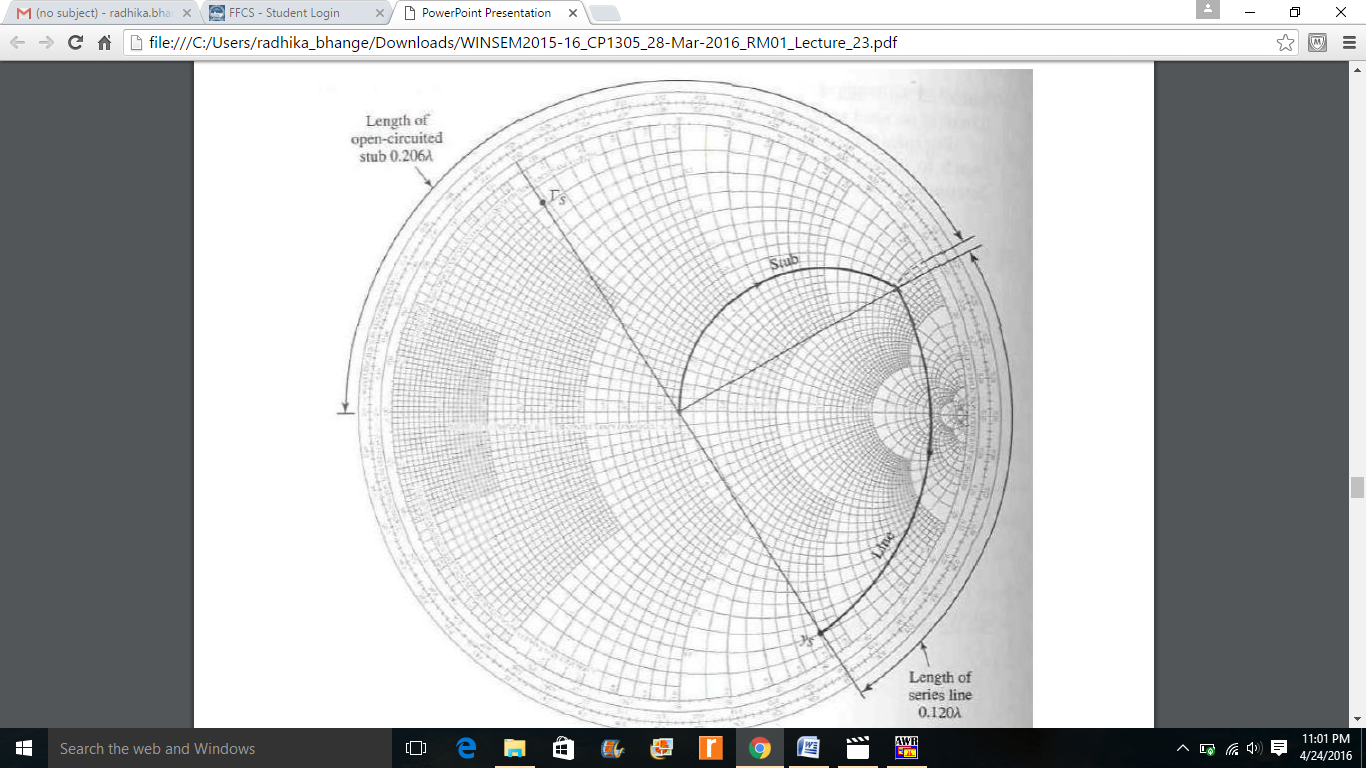
For 0.12 λ: W= 3.04378, L= 4.87244

For 0.206 λ: w=3.04378, L=8.36436

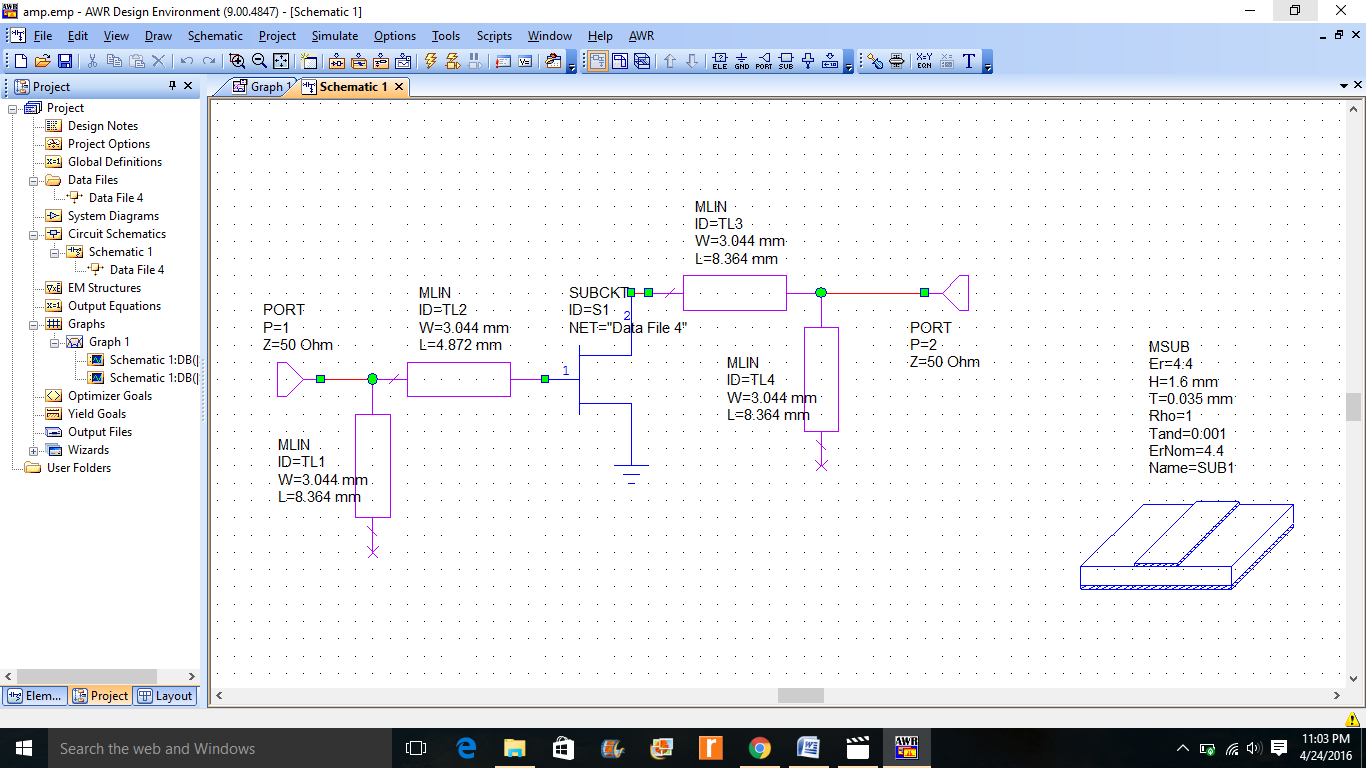
**Design:**

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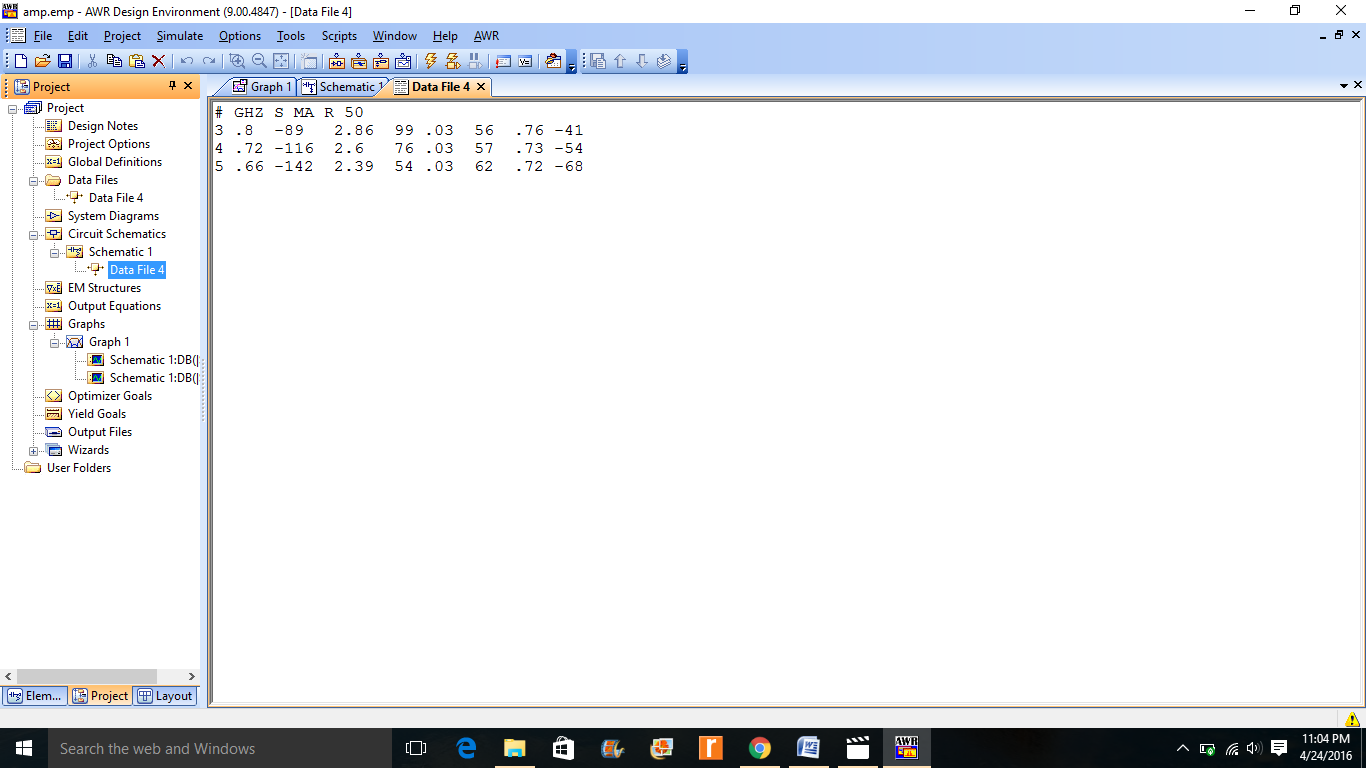
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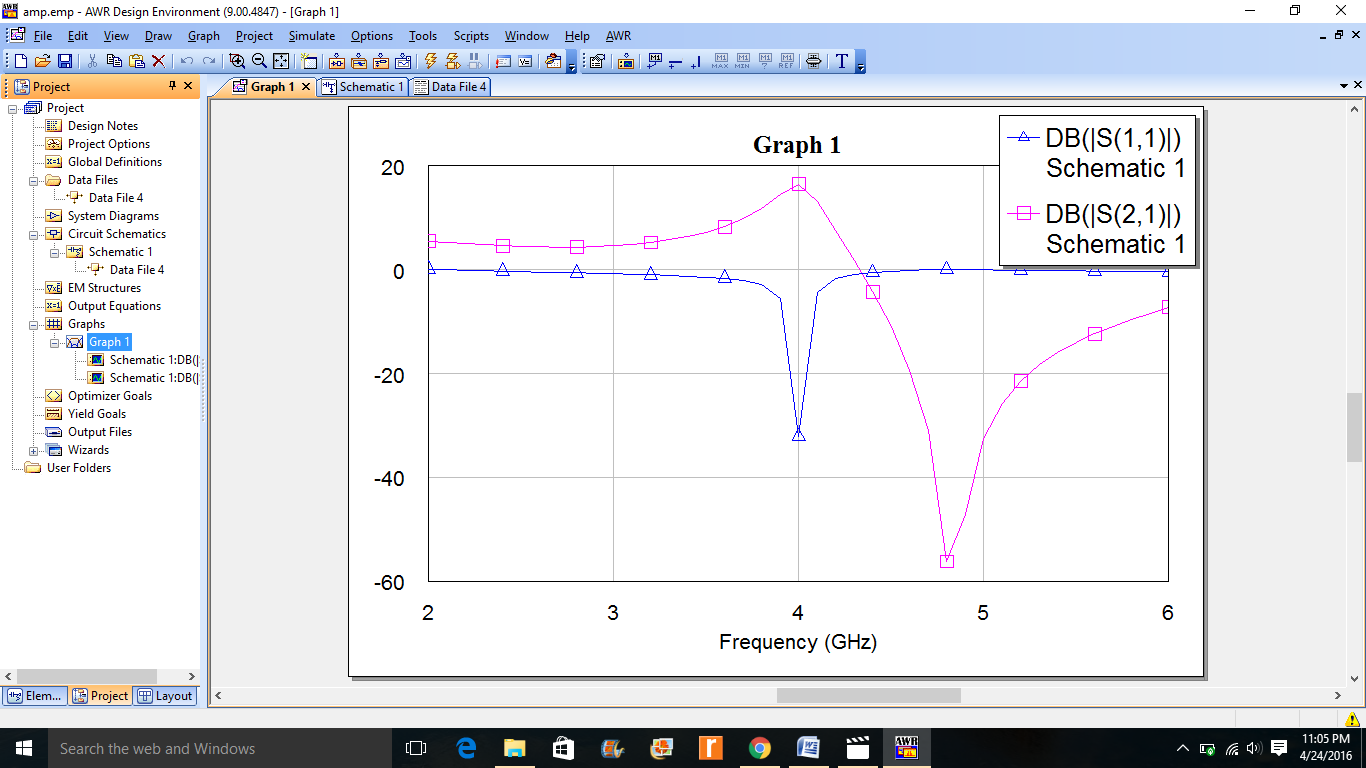
**Circuit diagram:**



**Data file:**



**Graph:**



**Result:**

The graph was plotted for return loss and Gt, and the desired gain of 16.7 was attained at 4 Ghz successfully.