

## ECE 443 APPLIED ELECTRONICS - LAB 8 RECEIVER DESIGN I (PRE AMPLIFIER)

G. Sener

Cankaya University, Electronics and Communication Engineering Department,  
06810, Yenimahalle, Ankara, Turkey.  
email: sener@cankaya.edu.tr

**Abstract**—This lab experiment aims to teach students how to implement the first amplifier stage in receiver circuit.

### 1. METHODS

Parts:  $R = 100k\Omega$ ,  $C=1\mu F$ ,  $L=10mH$ ,  $C_m=50-350pF$ ,  $L_m=10mH$ ,  $J=BF246B$  Jfet transistor

1. Implement the following circuit (Fig.1).
2. Observe the amplitude of the output waveform and draw it in your

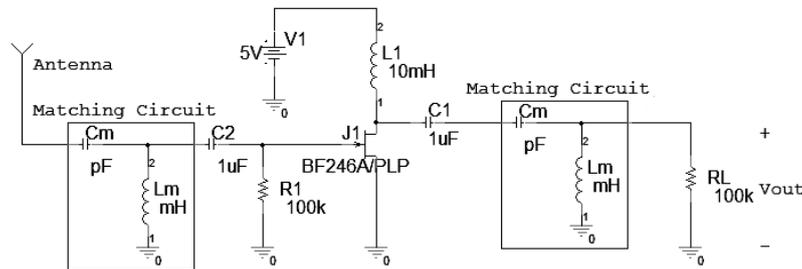


Figure 1. a)Circuit Diagram

lab notebook.

3. Calculate the amplifier voltage gain.
4. Calculate the power gain.

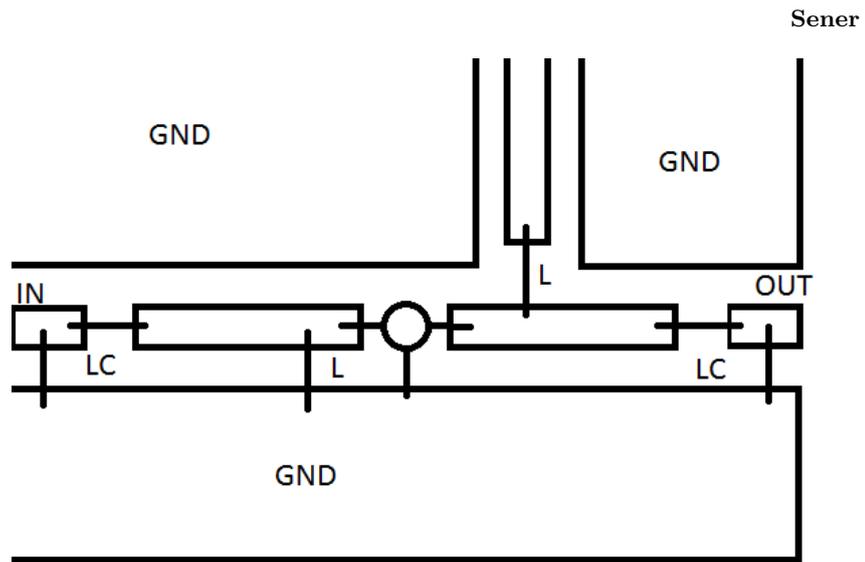


Figure 2. a)PCB Circuit Diagram