Mapúa Institute of Technology at Laguna
Malayan Colleges Laguna

ECE101-1L – FUNDAMENTALS OF ELECTRONIC CIRCUITS (LAB)

Activity #8: JFET Amplifier

Objectives:

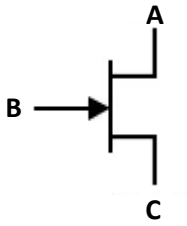
- Use Multisim to demonstrate the JFET Amplifier
- Measure the JFET amplifier voltage gain and its characteristics

Procedures:

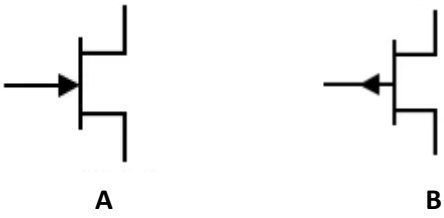
A. Multisim

DC Characteristics of JFET

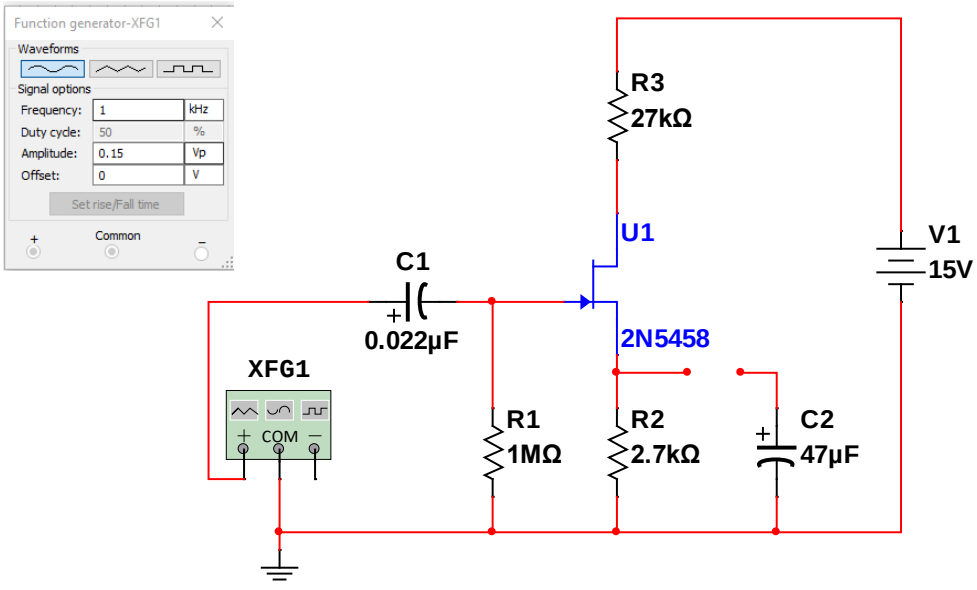
1. Identify the PIN Name of the JFET



2. Identify the Type of JFET shown below



3. Using Multisim create the schematic shown below, and change the function generator settings as shown below.



Prepared by: Jonathan R. Oracion

4. Using Oscilloscope measure and record the drain voltage
   (Note: reading should be about 0.24 Volts peak-to-peak)
   Screenshot the final oscilloscope output:

   _____
   _____

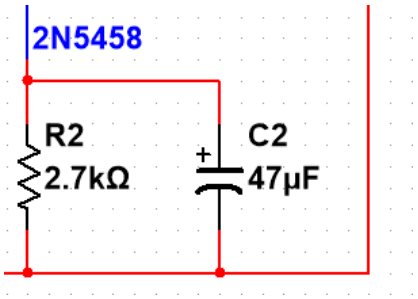
5. Comparing input and output signals, does your circuit with unbypassed source resistor provide voltage gain?

   _____
   _____

6. Calculate and record the ac circuit voltage gain (Av = Vo/Vi).

   _____
   _____

7. Connect the bypassed capacitor and run the simulation



8. Using Oscilloscope measure and record the new drain voltage
   Screenshot the final oscilloscope output:

   _____
   _____

9. Calculate and record the ac circuit voltage gain (Av = Vo/Vi).

   _____
   _____

10. Does the Gain increase or decrease when bypassed capacitor is connected?

    _____
    _____

Discussions:

_____
_____
_____