

NEUB CSE 214 LAB 4

North East University Bangladesh

Department of CSE

Course no: CSE 214

Experiment no: 04

Experiment Name: Clipping and Clamping Circuits.

CAUTIONS:

1. Don't switch on the supply of the circuit until you have verified the circuit carefully
2. Take readings of apparatus carefully
3. Take care of any bare circuit elements in energized condition
4. Never try to touch bare live wires

Objective

The objective of this experiment is to study diode application in clipping and clamping circuit.

Theory

Theory needed for this lab should be read from lecture 3 of theory course.

Apparatus Needed

- Trainer Board (Bread board)
- Diodes
- Resistor
- Capacitor
- DC Voltmeter
- DC Ammeter
- DC power supply
- Function Generator
- Oscilloscope
- Connecting wires

Procedure

1. Connect the circuit shown in Figure 1.
2. Ensure that the variable DC is at minimum and the source is at $10V_{p-p}$ with a frequency of 1 KHz.
3. Observe and sketch the input and output waveforms.
4. Increase the variable DC voltage to 4V and notice to what voltage are the positive peaks chopped off, sketch the waveforms.
5. Reverse the diode and repeat step 2-4.
6. Connect the circuit shown in Figure 2.
7. Ensure the variable DC is at minimum.
8. Set the sine wave generator frequency of 1 KHz and its output amplitude to $10V_{p-p}$.
9. Observe and sketch the input waveform with the variable DC at minimum. Sketch the output waveform.
10. Reverse the diode and repeat step 7-9.

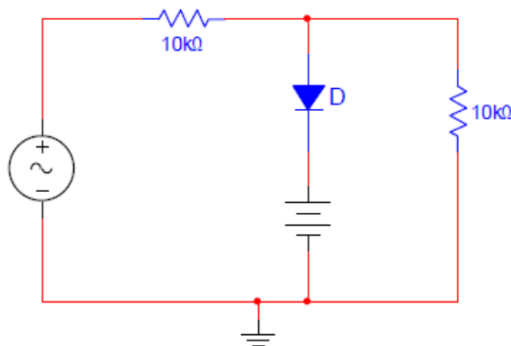


Fig. 1

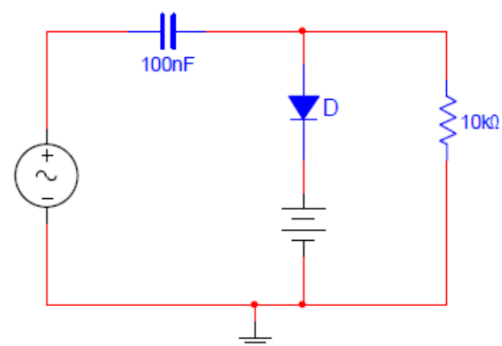


Fig. 4

Report

1. Submit all the necessary waveforms in tracing paper with the report
2. Comment on the learnings from this LAB