



# East West University

## Department of CSE

<b>Course code and Name:</b>  <b>CSE251(Sec:5)</b> <b>Electronic Circuits</b>	
<b>Project Name:</b> <b>Design a 5V DC Power Supply using Diode for a specified input.</b>	
<b>Semester and Year:</b>  <b>Fall 2019</b>	
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<b>Date of Submission:</b> <b>12<sup>th</sup> December,2019</b>	

## Problem Statement:

Design a 5V DC Power Supply using Diode for a specified input.

## Design Details:

### Circuit elements:

1. Diode D1N4148, 4 piece
2. Capacitor 1000  $\mu\text{F}$  , 1 piece
3. Voltage Regulator LM7508C, 1 piece

We have used 4 D1N4148 Diodes to build full wave rectifier. Then capacitor 1000 $\mu\text{F}$  was used for wave filtration. The regulator was used to make a smooth wave.

### Circuit Diagram:

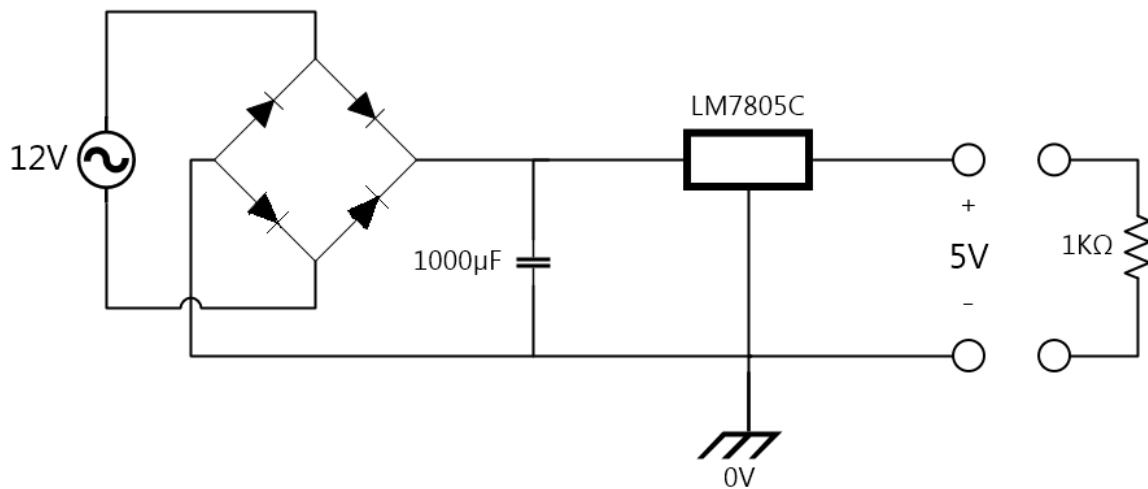


Figure 1: Circuit Diagram

## Results of Output:

### 1. Input from transformer

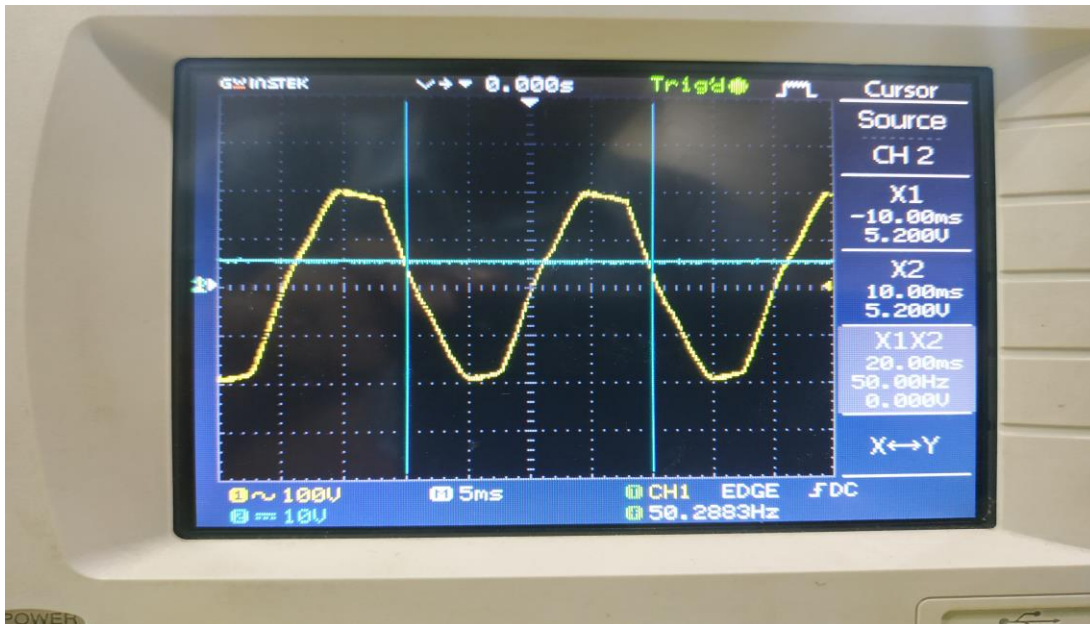


Figure 2: Input Wave

### 2. The output across the Diode rectifier

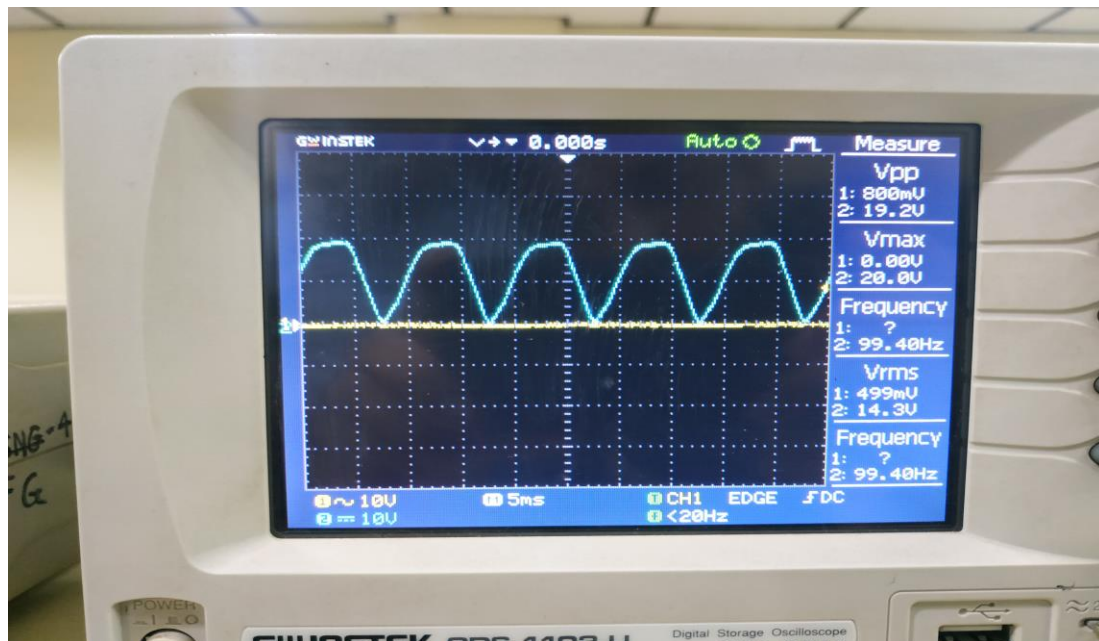


Figure 3: Output Wave (1)

3. The output across the Capacitor

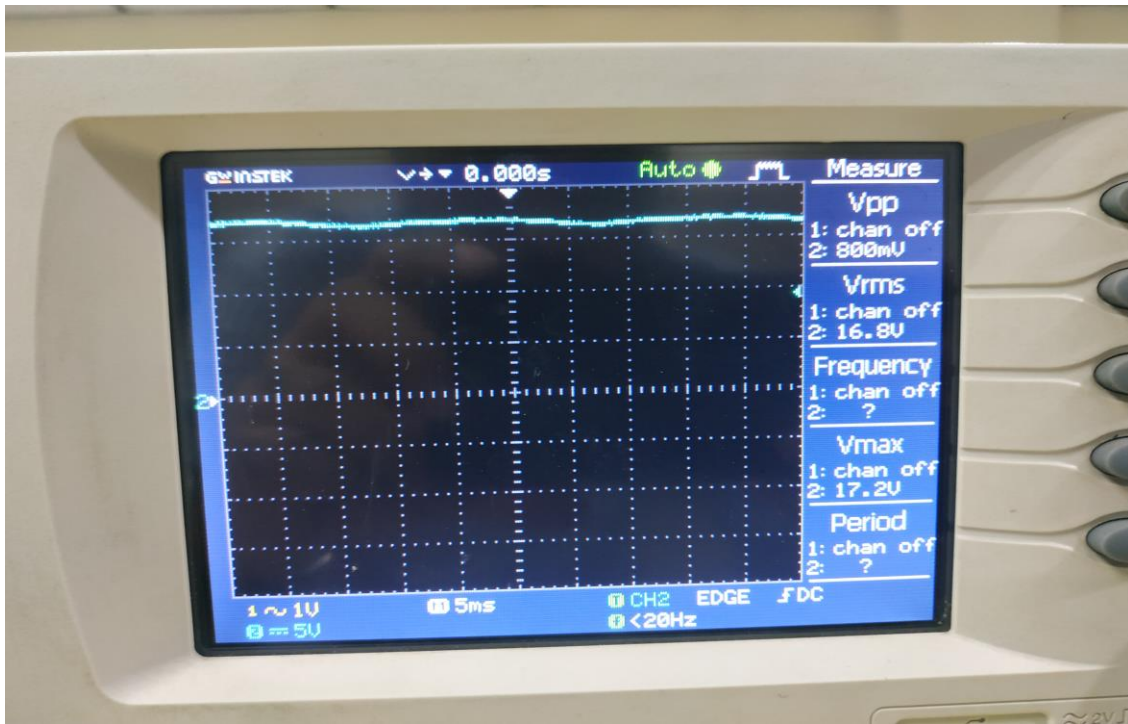


Figure 4: Output Wave (2)

4. The final output across the Regulator

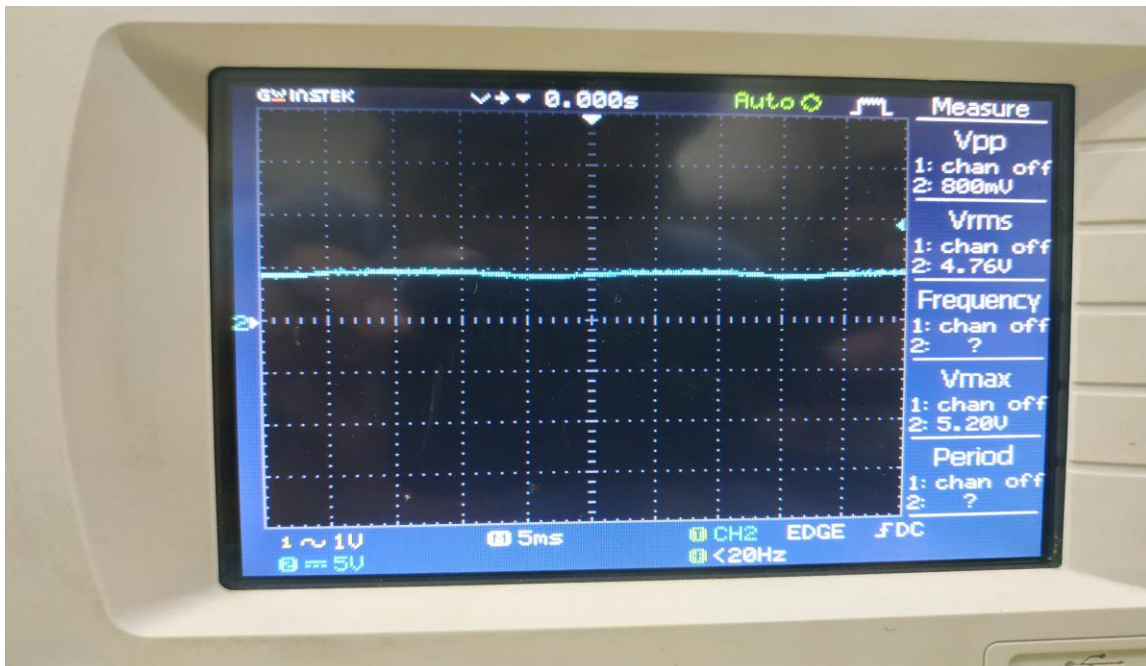


Figure 5: Output Wave (3)

## Simulation Result:

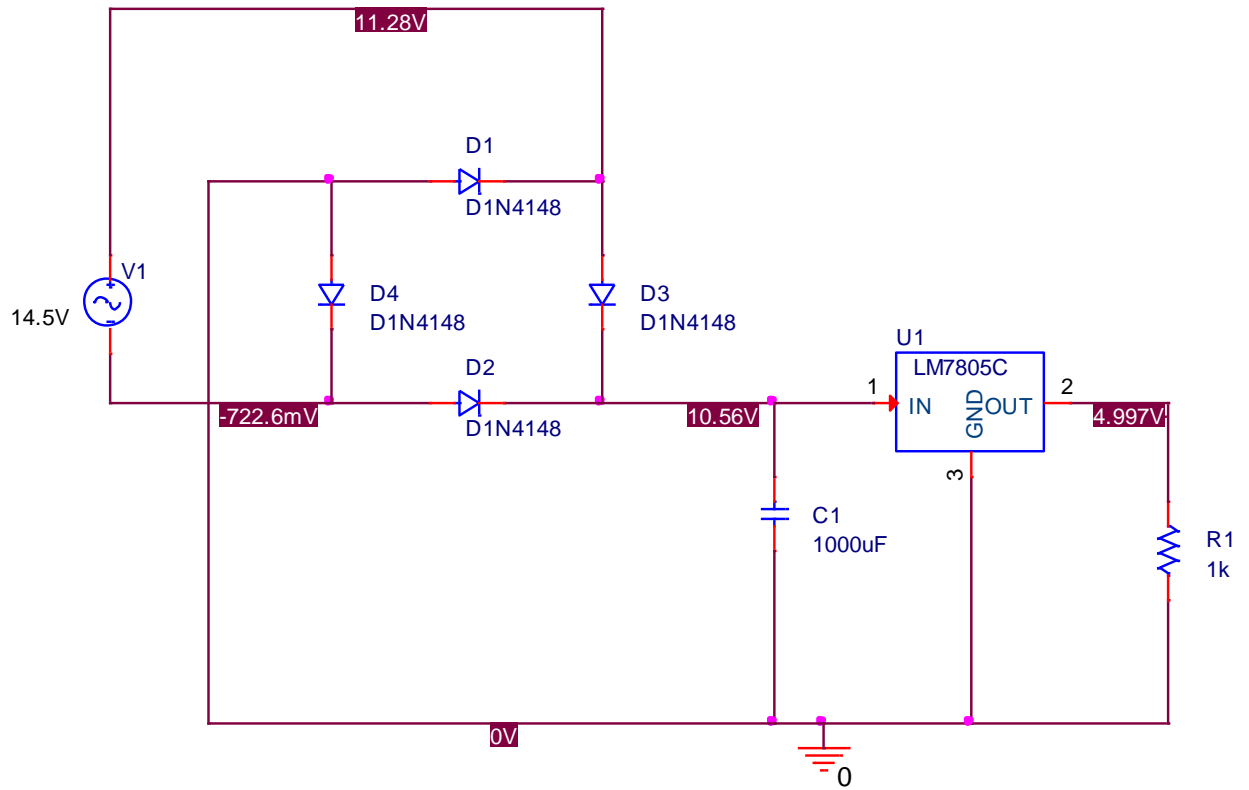


Figure 6: Simulation Result