

Scilab Manual for  
Power Electronics Lab  
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Solutions provided by  
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## **Experiment: 1**

### **Uncontrolled 1-phase Half and Full wave rectifier with R load**

This code can be downloaded from the website [www.scilab.in](http://www.scilab.in) This code

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## **Experiment: 2**

### **Uncontrolled 3-phase Half wave and Full wave rectifier**

This code can be downloaded from the website [www.scilab.in](http://www.scilab.in)

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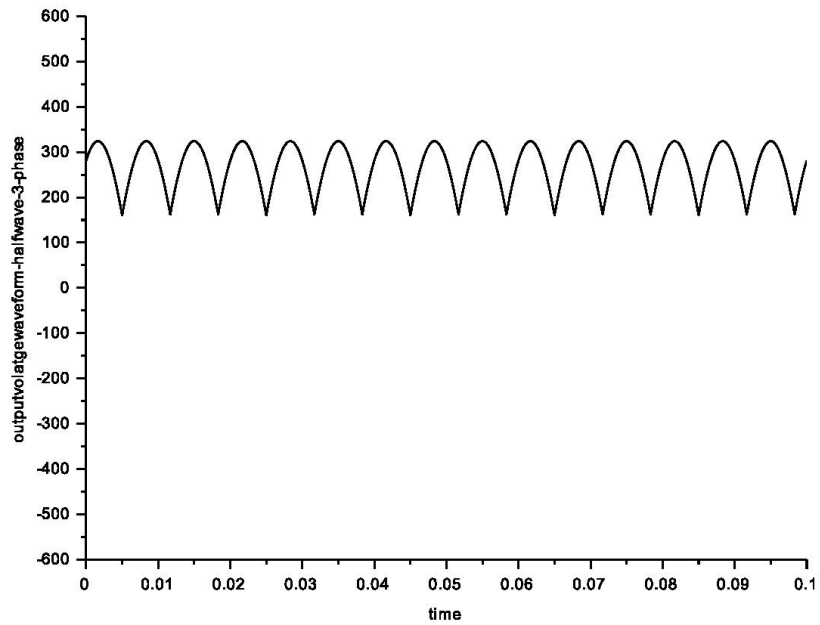


Figure 2.1: Circuit Diagram of 3phase Half Wave uncontrolled Rectifier with R load

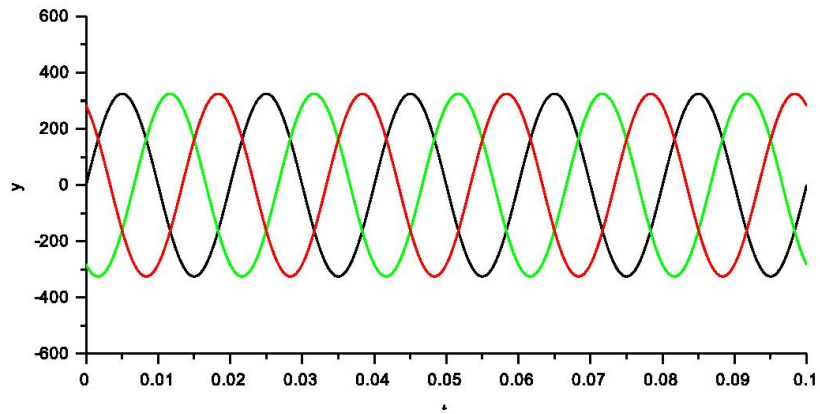


Figure 2.2: Circuit Diagram of 3phase Half Wave uncontrolled Rectifier with R load



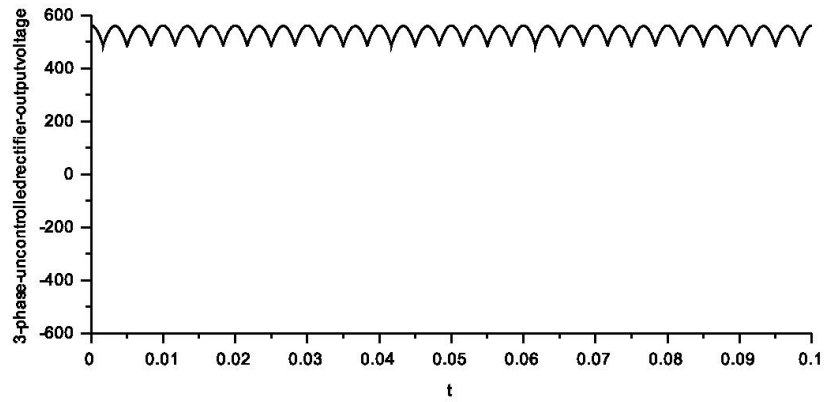


Figure 2.3: Circuit Diagram of 3phase Full Wave uncontrolled Rectifier with R load

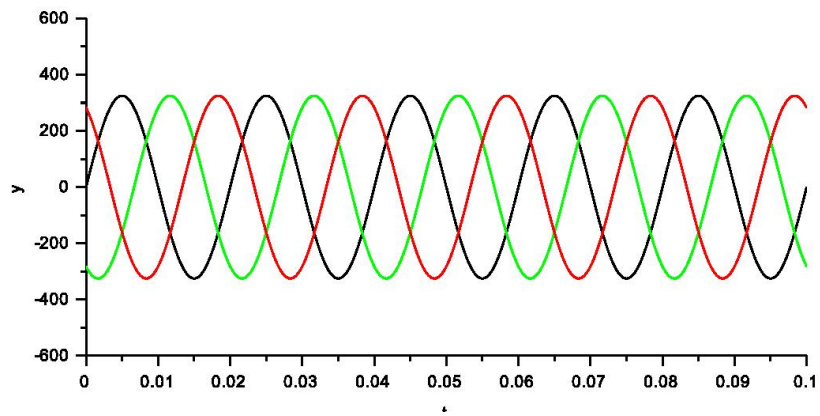


Figure 2.4: Circuit Diagram of 3phase Full Wave uncontrolled Rectifier with R load

## **Experiment: 3**

### **Controlled 1-phase Half and Full wave rectifier with R Load**

This code can be downloaded from the website [www.scilab.in](http://www.scilab.in) This code

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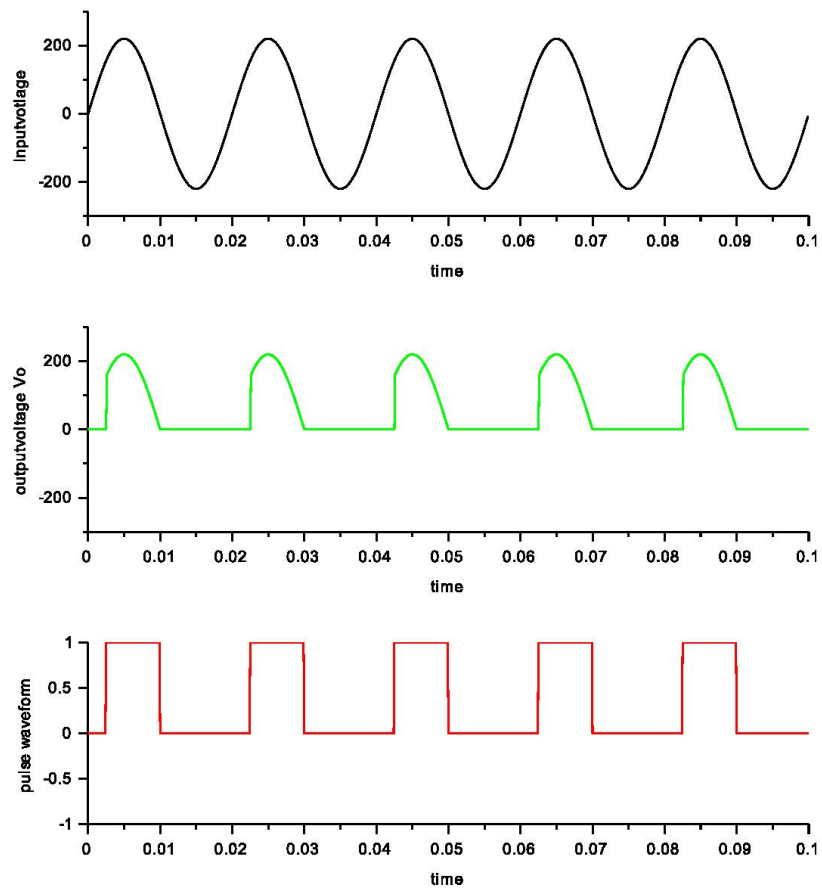


Figure 3.1: Circuit Diagram of 1phase Half Wave controlled Rectifier with R load

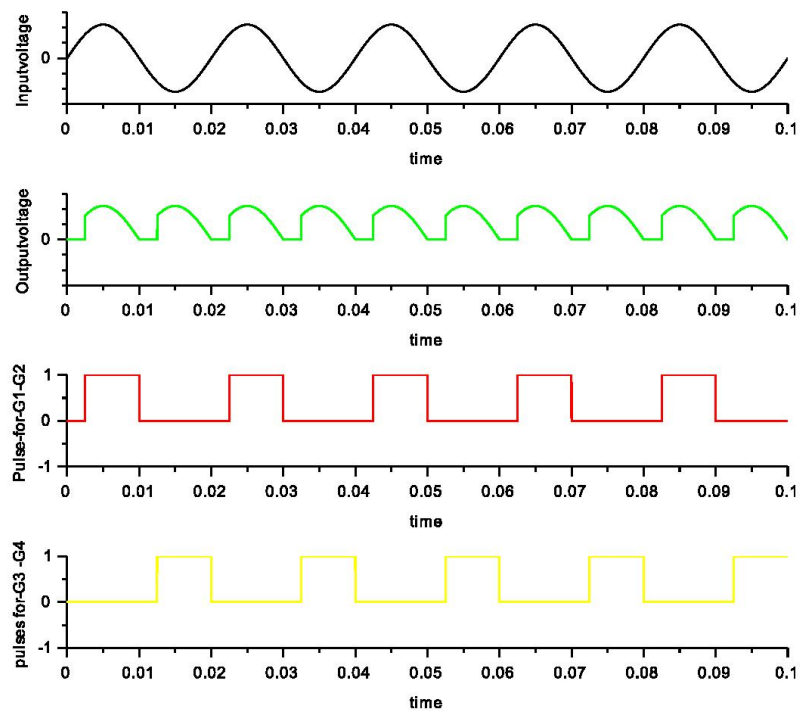


Figure 3.2: Circuit Diagram of 1phase Full Wave uncontrolled Rectifier with R load

## **Experiment: 4**

# **Controlled 3-phase Half and Full wave rectifier with R Load**

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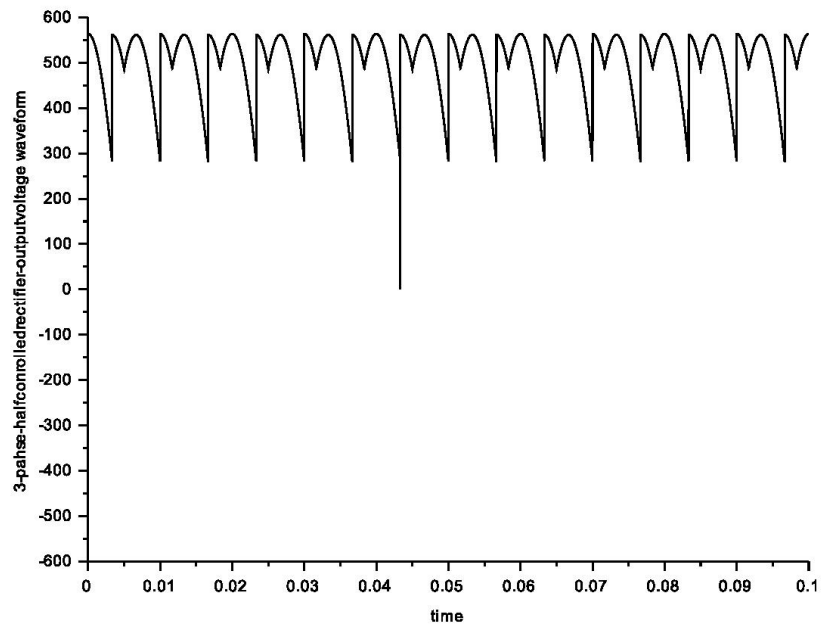


Figure 4.1: Circuit Diagram of 3phase Half controlled Rectifier with R load

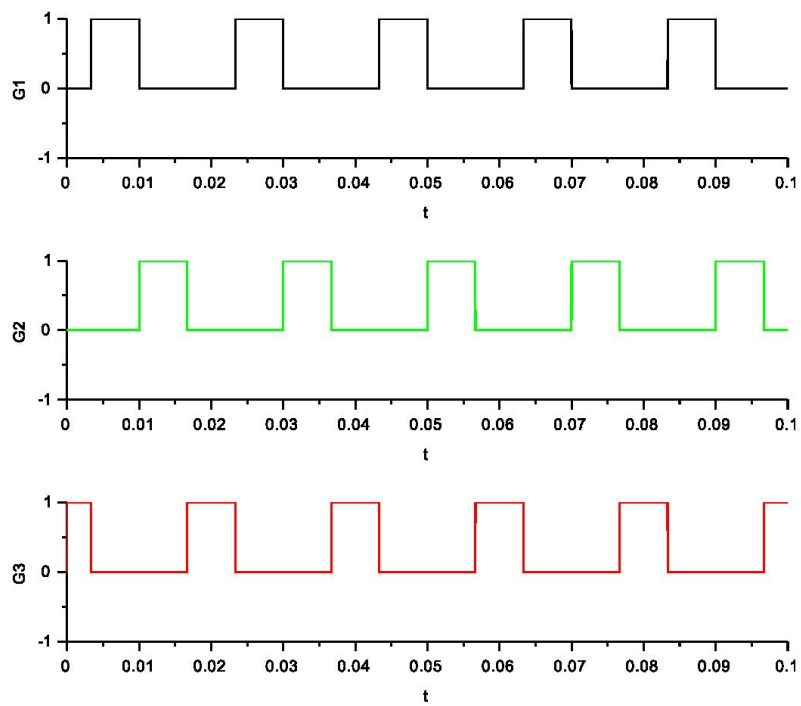


Figure 4.2: Circuit Diagram of 3phase Half controlled Rectifier with R load

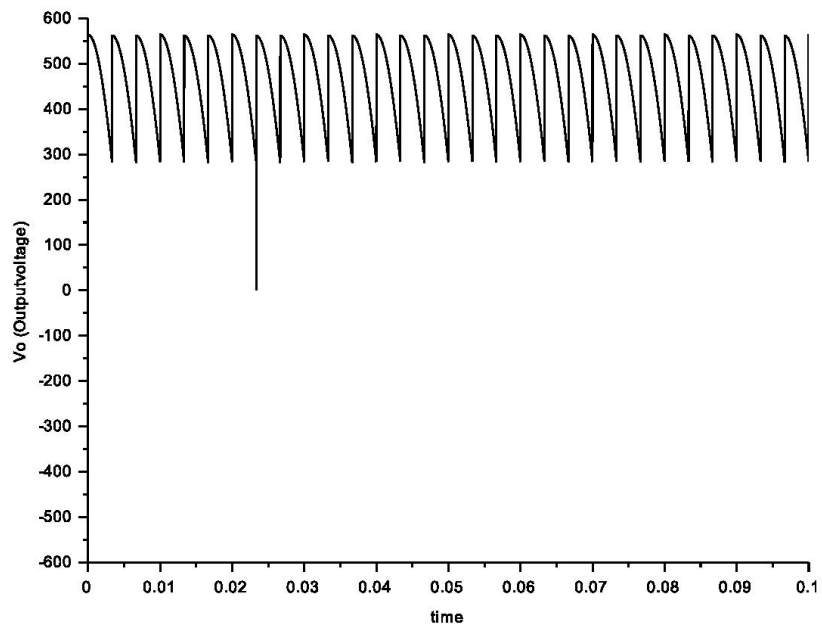


Figure 4.3: Circuit Diagram of 3phase Full Wave controlled Rectifier with R load



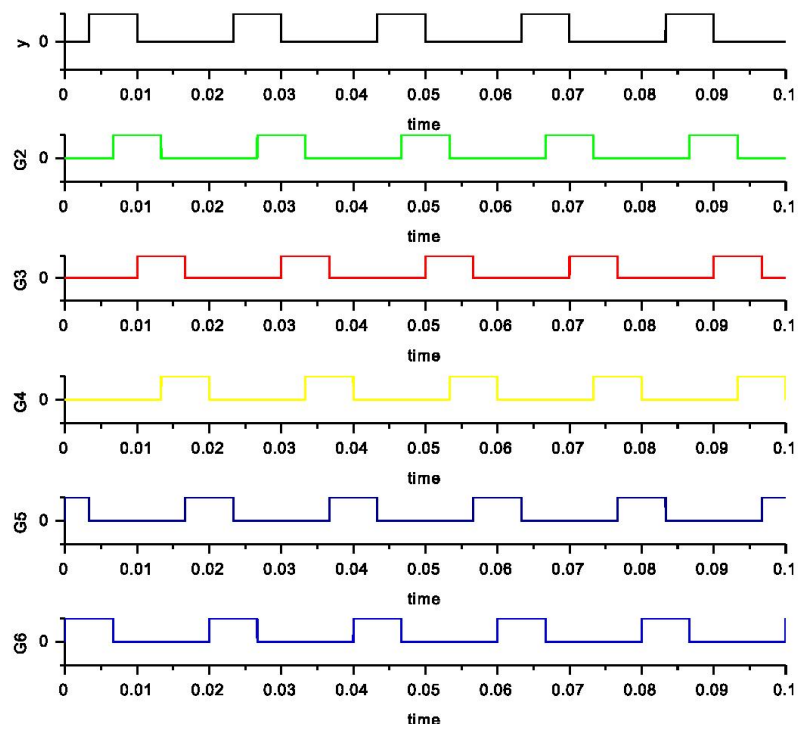


Figure 4.4: Circuit Diagram of 3phase Full Wave controlled Rectifier with R load

## **Experiment: 5**

### **Step Down and Step up chopper with R load**

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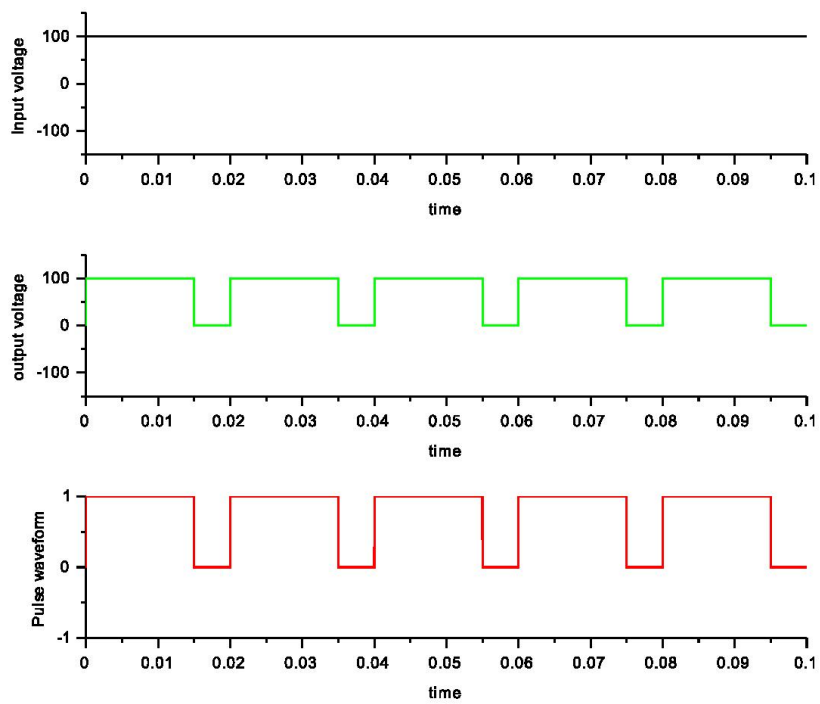


Figure 5.1: Circuit Diagram of StepDownchopper with R load

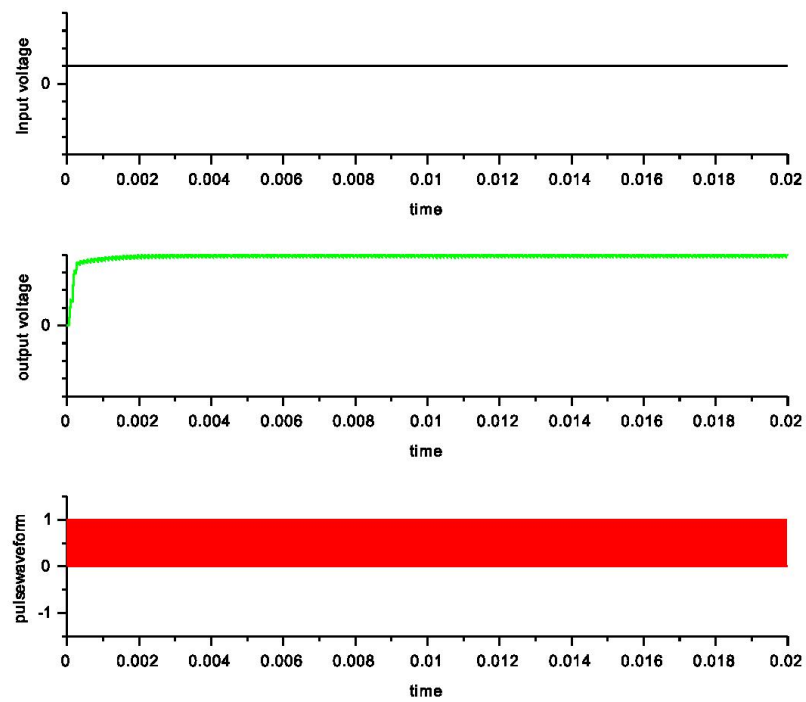


Figure 5.2: Circuit Diagram of Step Up chopper with R load

## Experiment: 6

### 1-phase AC- voltage controller with R load

This code can be downloaded from the website [www.scilab.in](http://www.scilab.in)

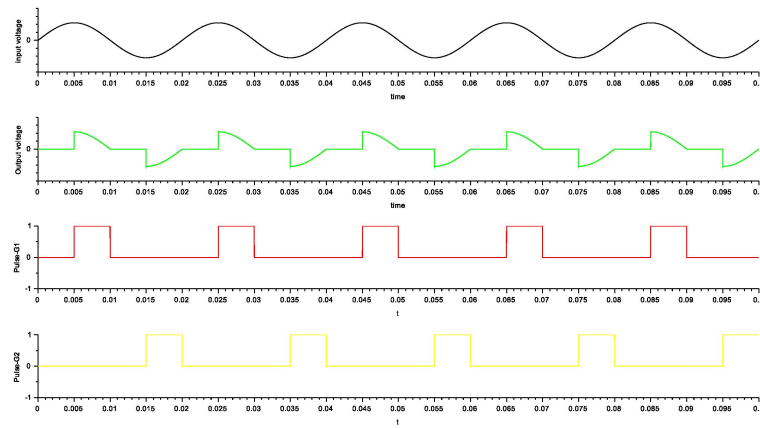


Figure 6.1: Circuit Diagram of 1phase AC Vokltage controller with R load

## Experiment: 7

### 1-phase Inverter (Half Bridge and H bridge ) with R load

This code can be downloaded from the website [www.scilab.in](http://www.scilab.in) This code

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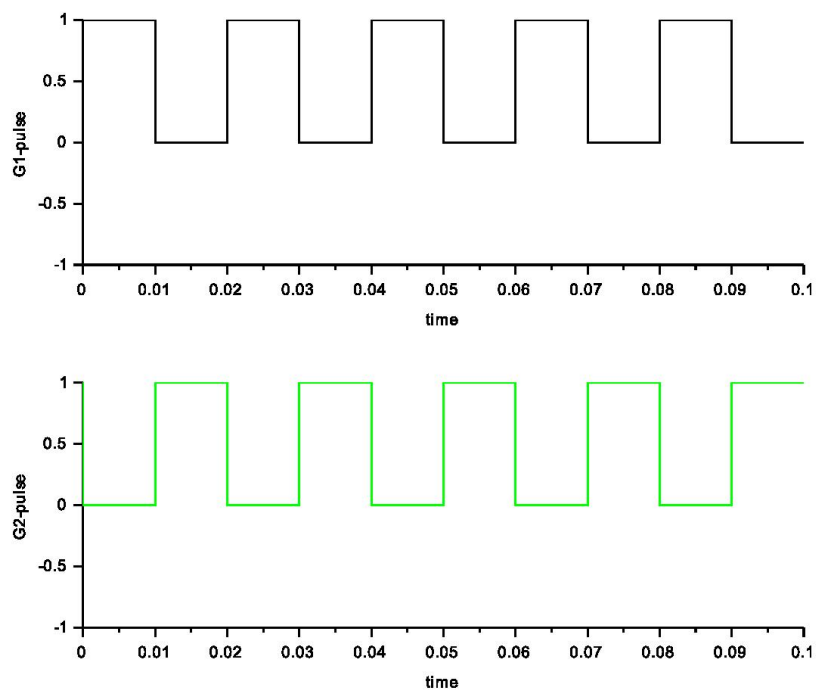


Figure 7.1: Circuit Diagram of Half bridge Inverter with R load



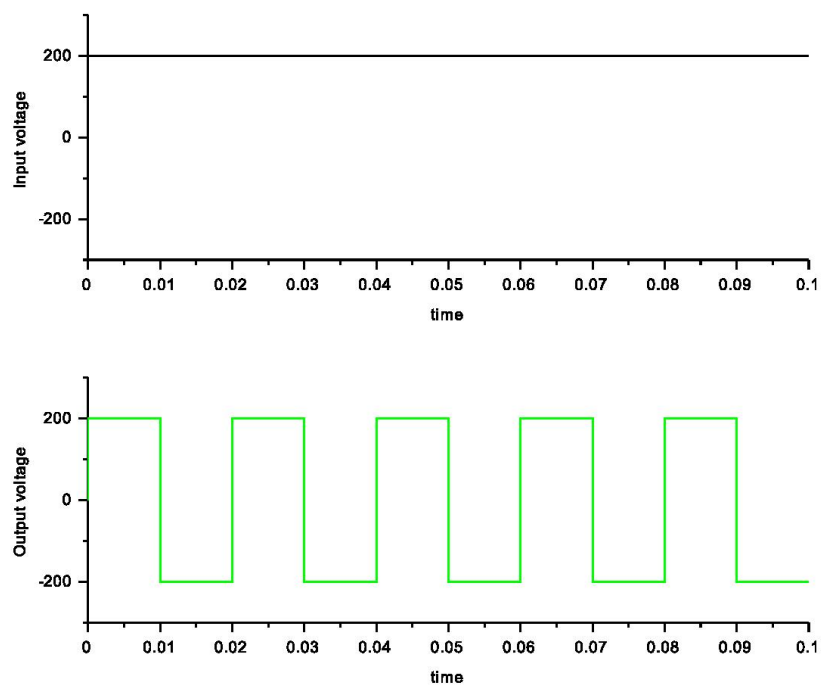


Figure 7.2: Circuit Diagram of Half bridge Inverter with R load

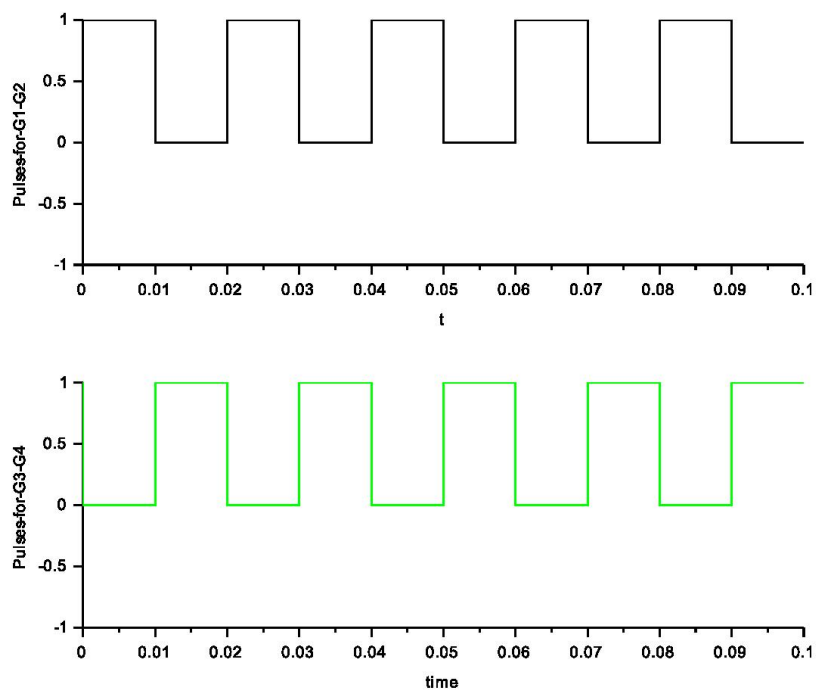


Figure 7.3: Circuit Diagram of Full bridge Inverter with R load

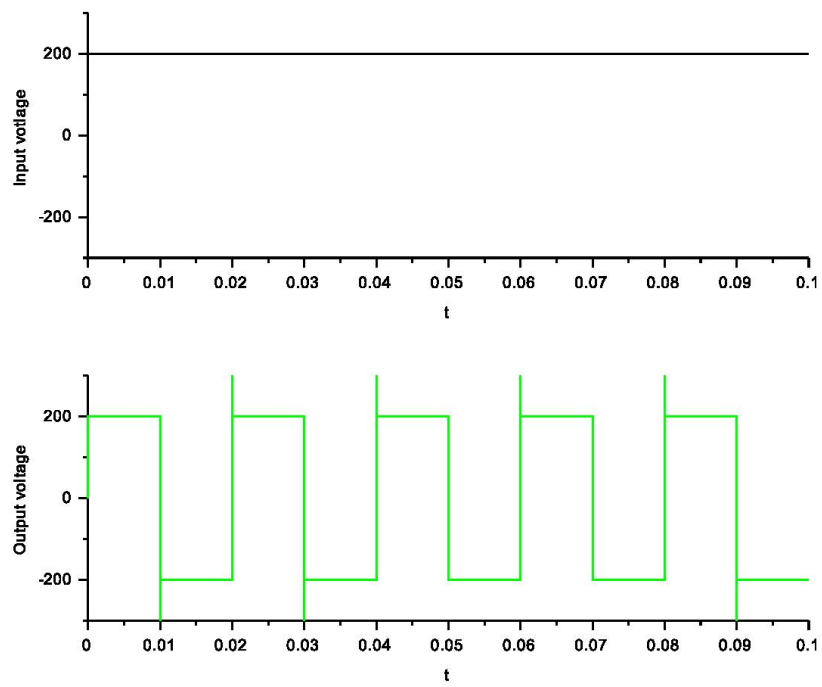


Figure 7.4: Circuit Diagram of Full bridge Inverter with R load