

# Lab 2

VE311 - Electronic Circuits Fall 2021

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## 1.1



Figure 1: problem 1 simulation

The DC sweep simulation circuit is here.  
And we do the experiment, then we get the experimental results.

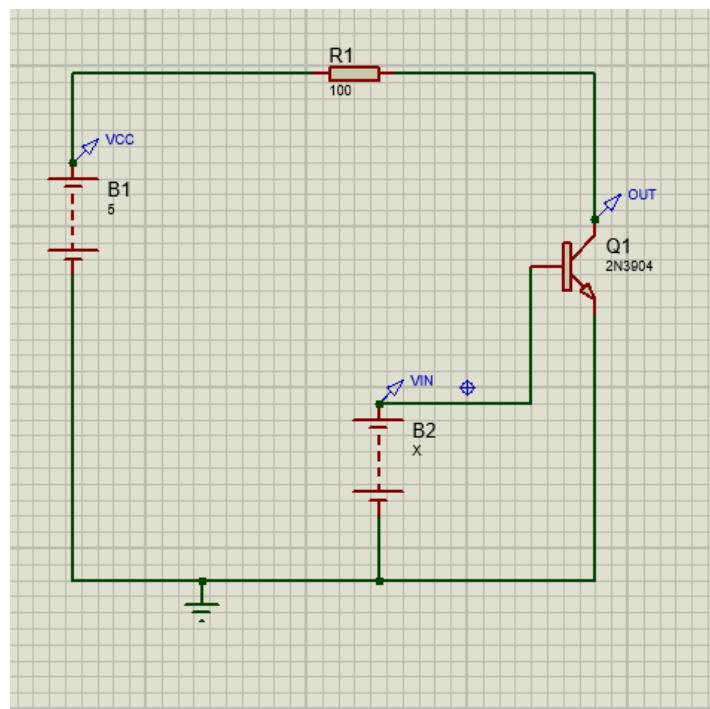


Figure 2: problem 1 simulation

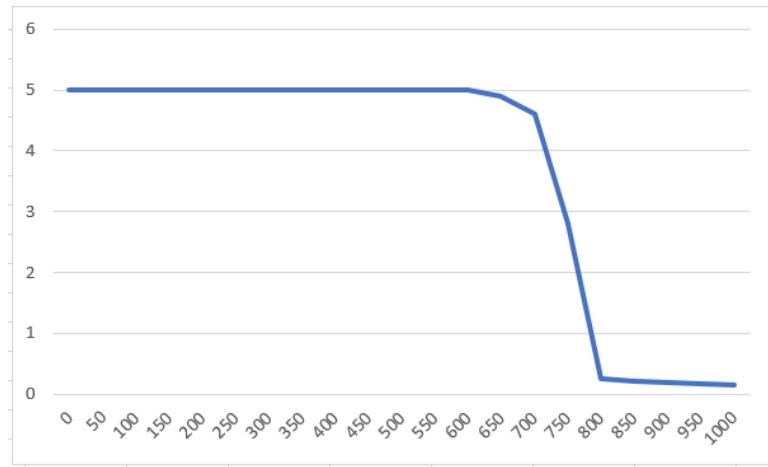


Figure 3: problem 1 experiment

From what we did above, we can get that  $V_{IN} = 0.75$  V.

## 1.2

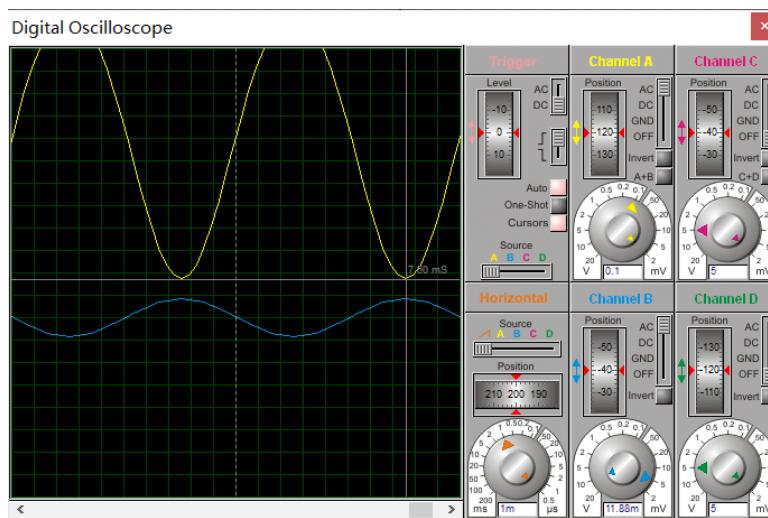


Figure 4: problem 2 simulation

The simulation circuit and results are here.

And we do the experiment, then we get the experimental results.

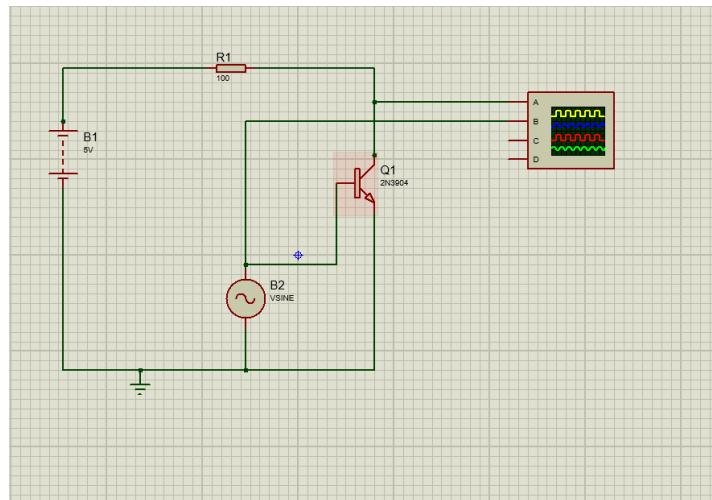


Figure 5: problem 2 simulation

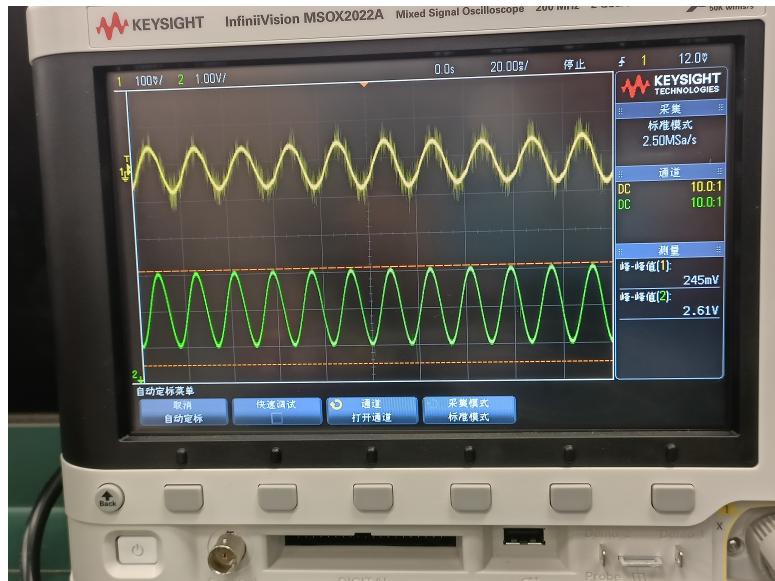


Figure 6: problem 2 experiment

Since the experimental result is almost the same as the simulation result. We can get that  $v_{out} = 0.35 \text{ V} = 0.01A_v$

### 1.3

The simulation circuit and results are here.

And we do the experiment, then we get the experimental results.

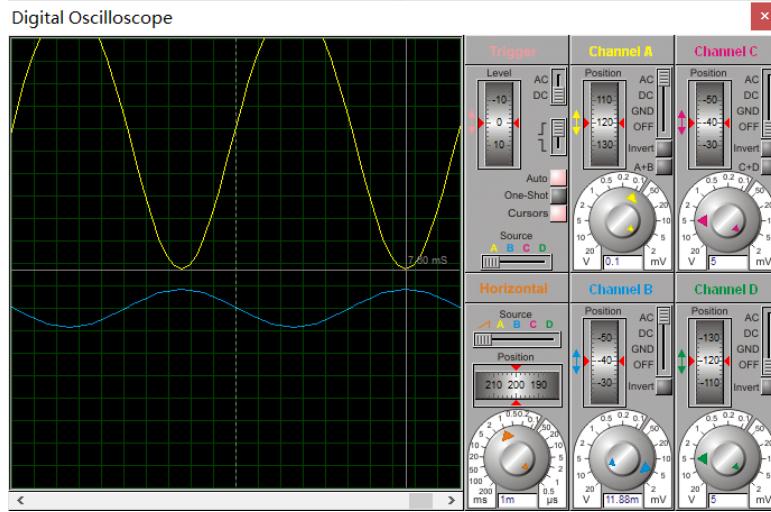


Figure 7: problem 3 simulation

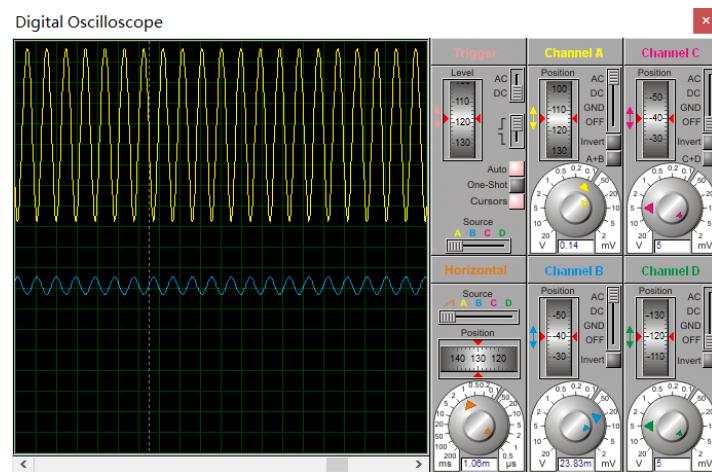


Figure 8: problem 3 simulation

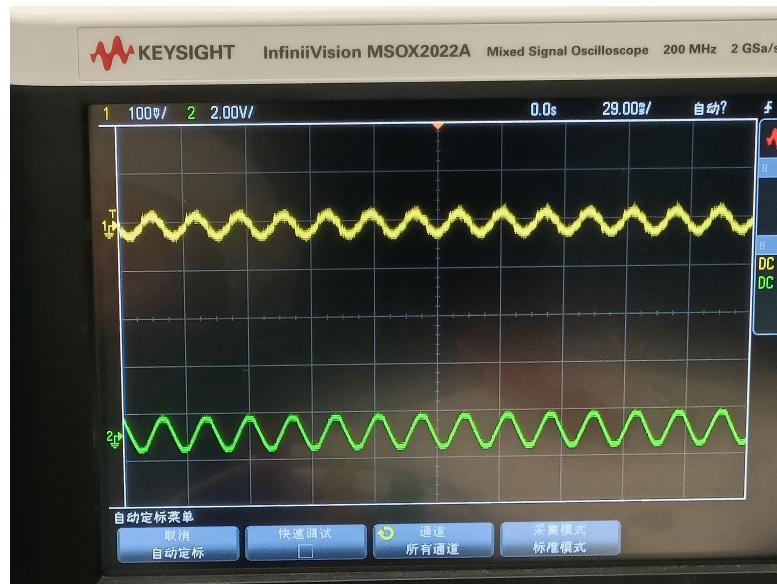


Figure 9: problem 3 experiment

At this time, we cannot see the ideal result. Since the frequency is too high to observe visible amplitude and there is only large sinusoidal wave here.