



Experiment 17 Part A





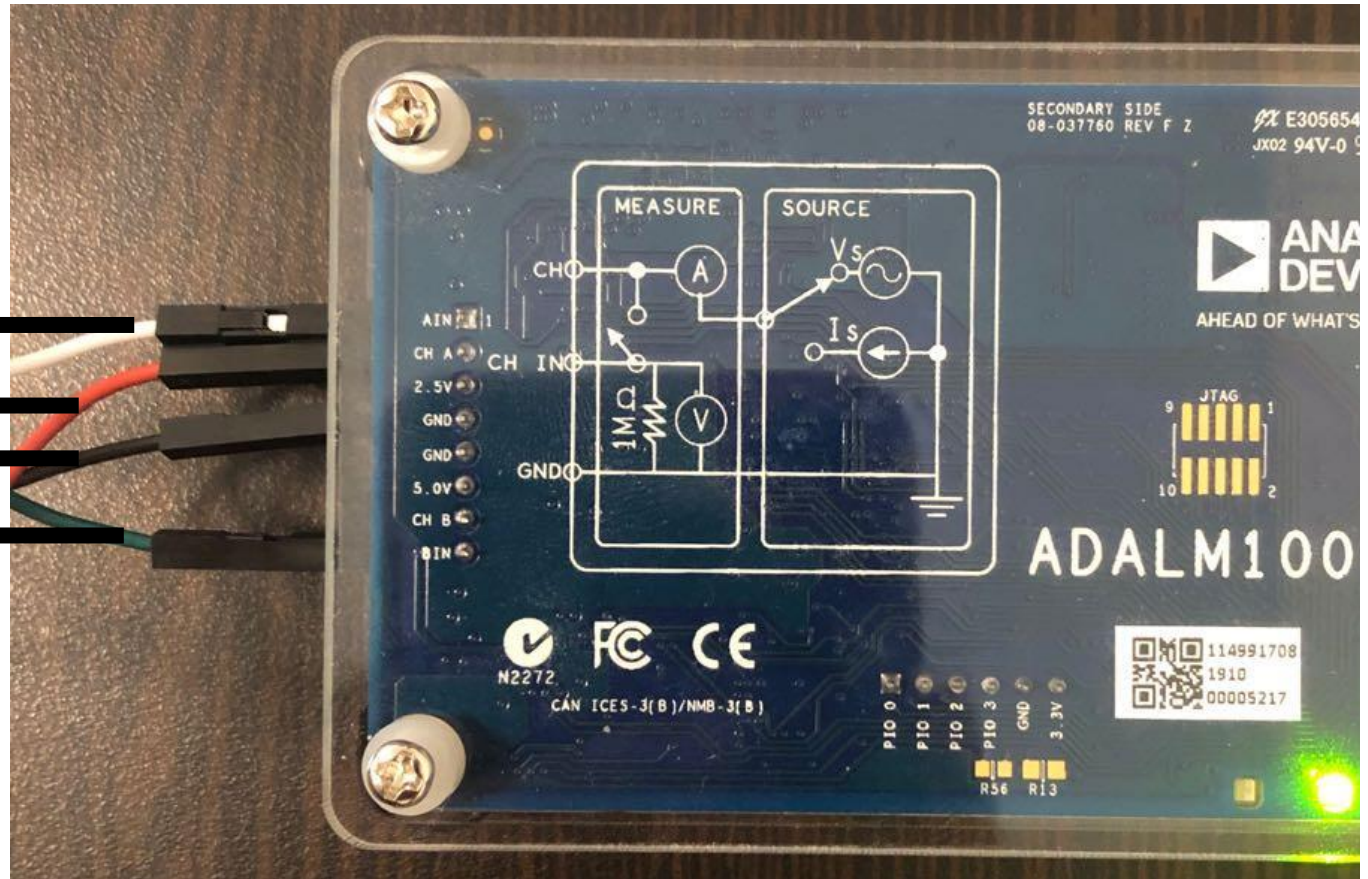
Experiment 1 Setup

Probe #1

Voltage Source

GND

Probe #2

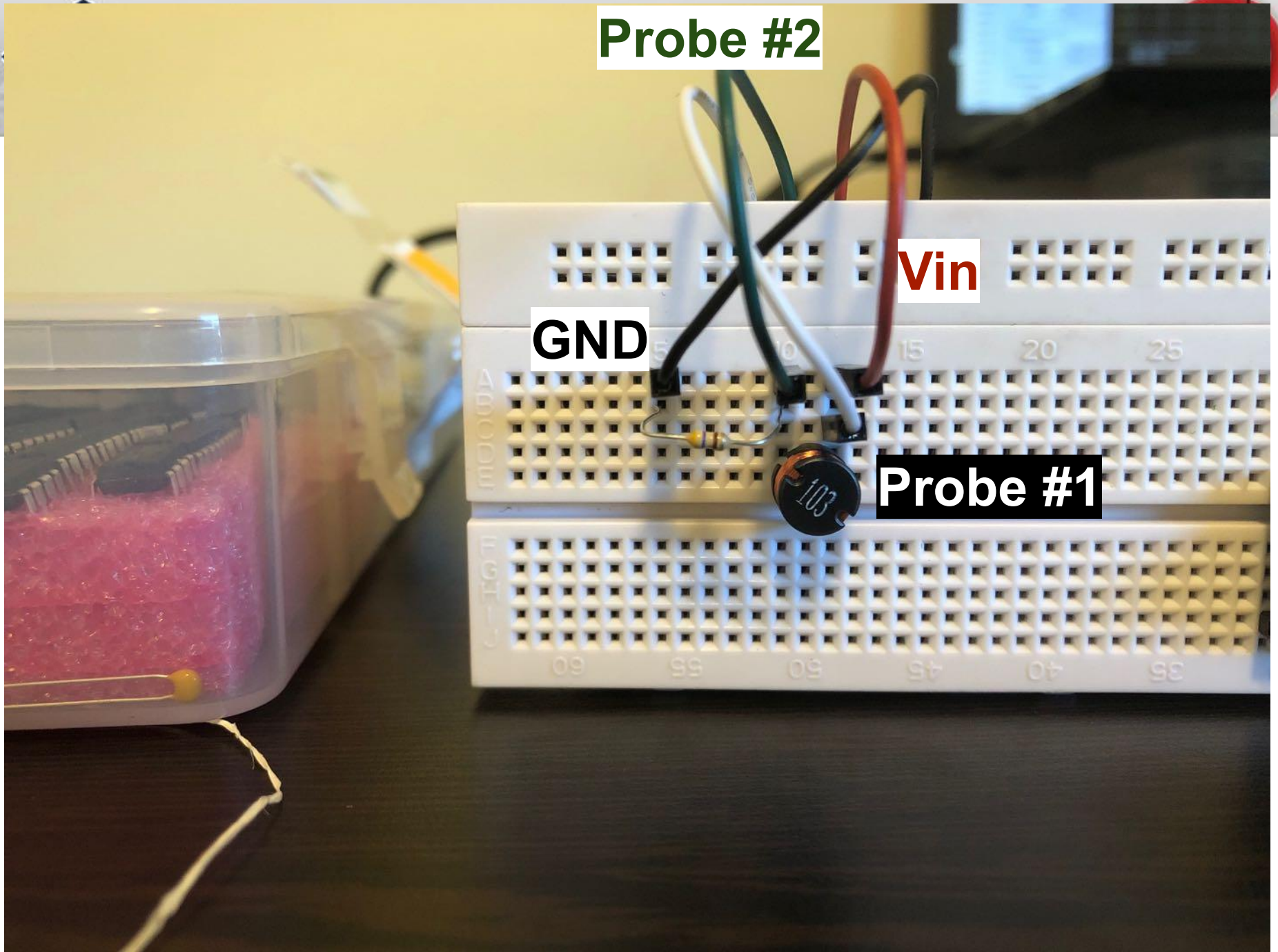


Probe #2

Vin

GND

Probe #1





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AWG Contr...

AWG CH A
Mode **Shape**
SVMI Split I/O Mode
Square
0.0 Min Ch A
2.0 Max Ch A
2500 Freq Ch A
Phase Delay
0 Deg
50 %
Length
☒ Both CH 1X
☐ CH A 2X
☐ CH B 2X

AWG CH B
Mode **Shape**
Hi-Z Split I/O Mode
DC
0.0 Min Ch B
0.0 Max Ch B
100.0 Freq Ch B
Phase Delay
0 Deg
50 %
Length
☐ B = Comp A
☒ Sync AWG
Minimize

Math Formula 1.3 (25 Aug 20...

Built-in Exp
☐ none
☐ CAV+CBV
☐ CAV-CBV
☐ CBV-CAV
☐ CAI-CBI
☐ CBI-CAI
☐ CAV*CAI
☐ CBV*CBI
☐ CAV/CAI
☐ CBV/CBI
☐ CBV/CAV
☐ CBI/CAI
☒ Formula

Math Trace
Formula
Units **Check**
Axis **Apply**

X Math Trace
X Formula
X Units **Check**
X Axis **Apply**

Y Math Trace
Y Formula
Y Units **Check**
Y Axis **Apply**

Dismiss

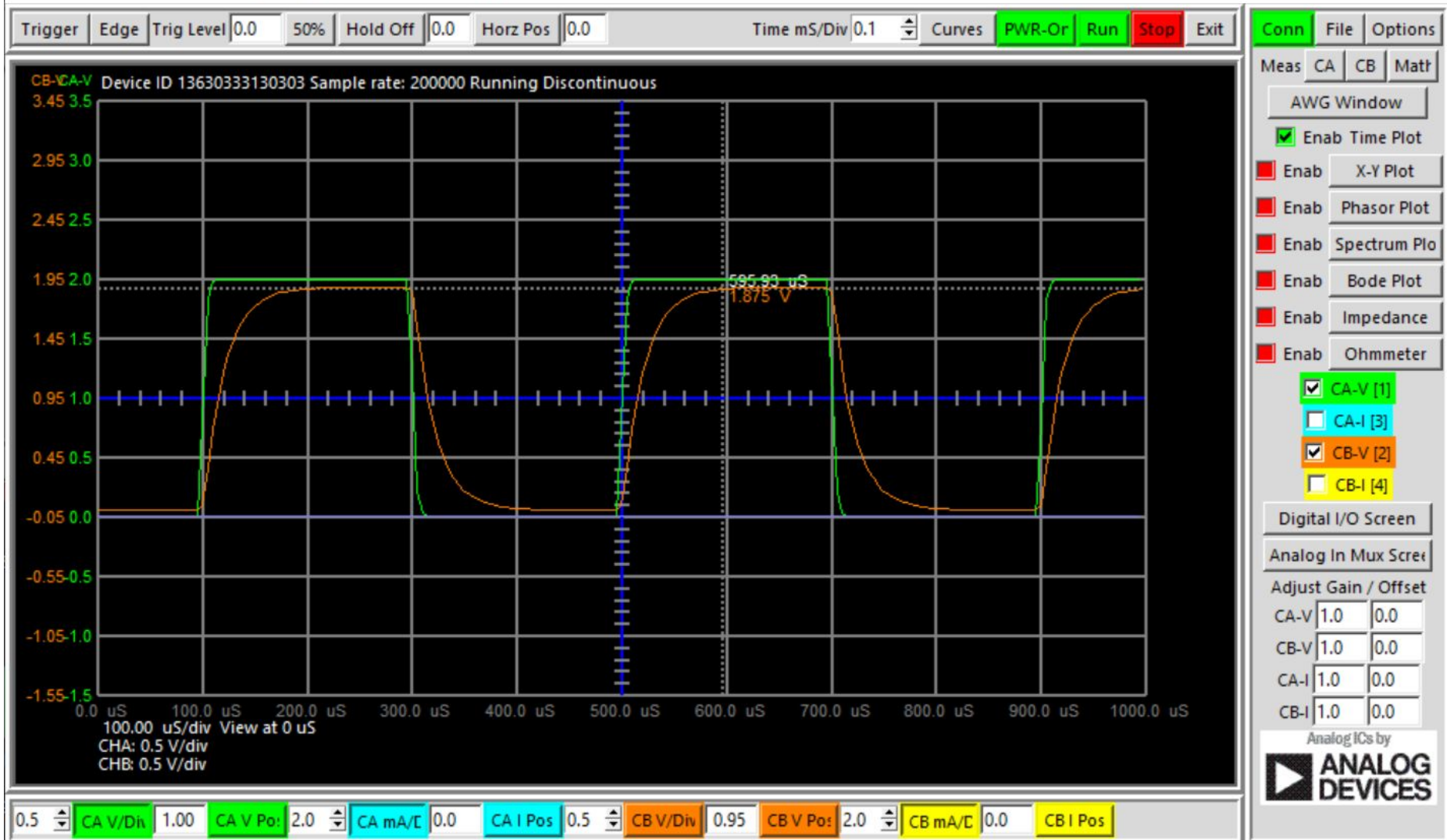


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ALICE DeskTop 1.3 (25 Aug 2020): ALM1000 Oscilloscope





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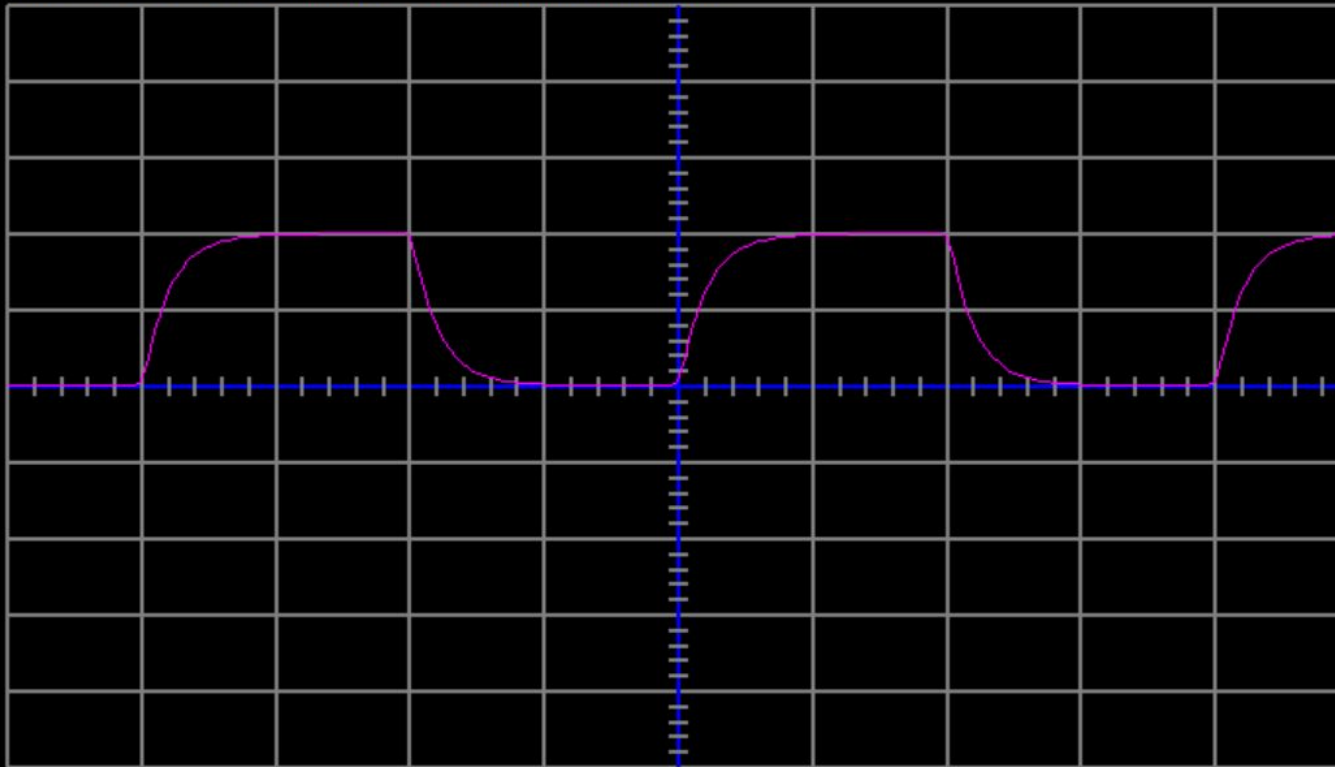
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ALICE DeskTop 1.3 (25 Aug 2020): ALM1000 Oscilloscope

Trigger Edge Trig Level 0.0 50% Hold Off 0.0 Horz Pos 0.0 Time mS/Div 0.1 Curves PWR-Or Run Stop Exit

Device ID 13630333130303 Sample rate: 200000 Running Discontinuous



0.0 uS 100.0 uS 200.0 uS 300.0 uS 400.0 uS 500.0 uS 600.0 uS 700.0 uS 800.0 uS 900.0 uS 1000.0 uS
100.00 uS/div View at 0 uS

0.5 CA V/Div 1.00 CA V Pos 2.0 CA mA/Div 0.0 CA I Pos 0.5 CB V/Div 0.95 CB V Pos 2.0 CB mA/Div 0.0 CB I Pos

Conn File Options

Meas CA CB Matr

AWG Window

☒ Enab Time Plot

☐ Enab X-Y Plot

☐ Enab Phasor Plot

☐ Enab Spectrum Plo

☐ Enab Bode Plot

☐ Enab Impedance

☐ Enab Ohmmeter

☐ CA-V [1]

☐ CA-I [3]

☐ CB-V [2]

☐ CB-I [4]

Digital I/O Screen

Analog In Mux Screen

Adjust Gain / Offset

CA-V 1.0 0.0

CB-V 1.0 0.0

CA-I 1.0 0.0

CB-I 1.0 0.0

Analog ICs by



File Edit View Search Documentation YAN XIAO

New Open Save Find Files Compare Print Go To Find EDIT Breakpoints Run Run and Advance Run Section Advance Run and Time

FILE NAVIGATE BREAKPOINTS RUN

D:\Document\Github\M1K\Experiment_17_RLC_Second_Order\data\part-a

Current Folder

Name	Git
config.cfg	
current_of_resistor.m	
Vin_Vr.csv	

Vin_Vr.csv (Microsoft Excel Comma ...)

Workspace

Name	Value
Array	4000x3 table
CHA_V	4000x1 double
CHB_V	4000x1 double
R	470
time	4000x1 double

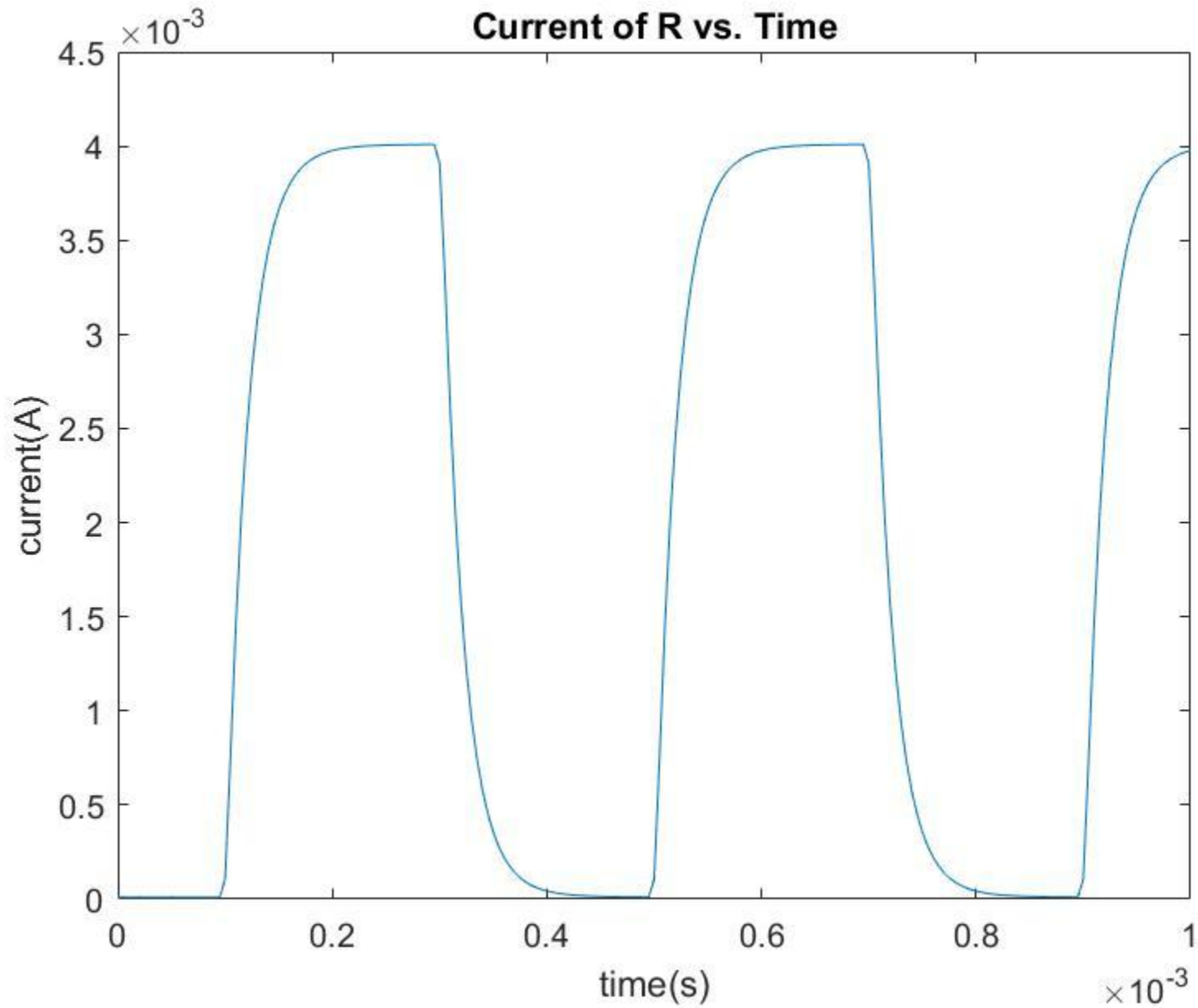
Editor - D:\Document\Github\M1K\Experiment_17_RLC_Second_Order\data\...

```
1 - Array=readtable('vin_vr.csv');
2 - time = Array(:, 1);
3 - CHA_V = Array(:, 2);
4 - CHB_V = Array(:, 3);
5 - R = 470;
6 - figure()
7 - plot(time, CHB_V/470)
8 - title("Current of R vs. Time");
9 - xlabel('time(s)');
10 - ylabel('current(A)');
11 - xlim([0 0.001]);
```

Command Window

Jx >>

script Ln 6 Col 9





Experiment 17 Part B





Experiment 1 Setup

Probe #1

Voltage Source

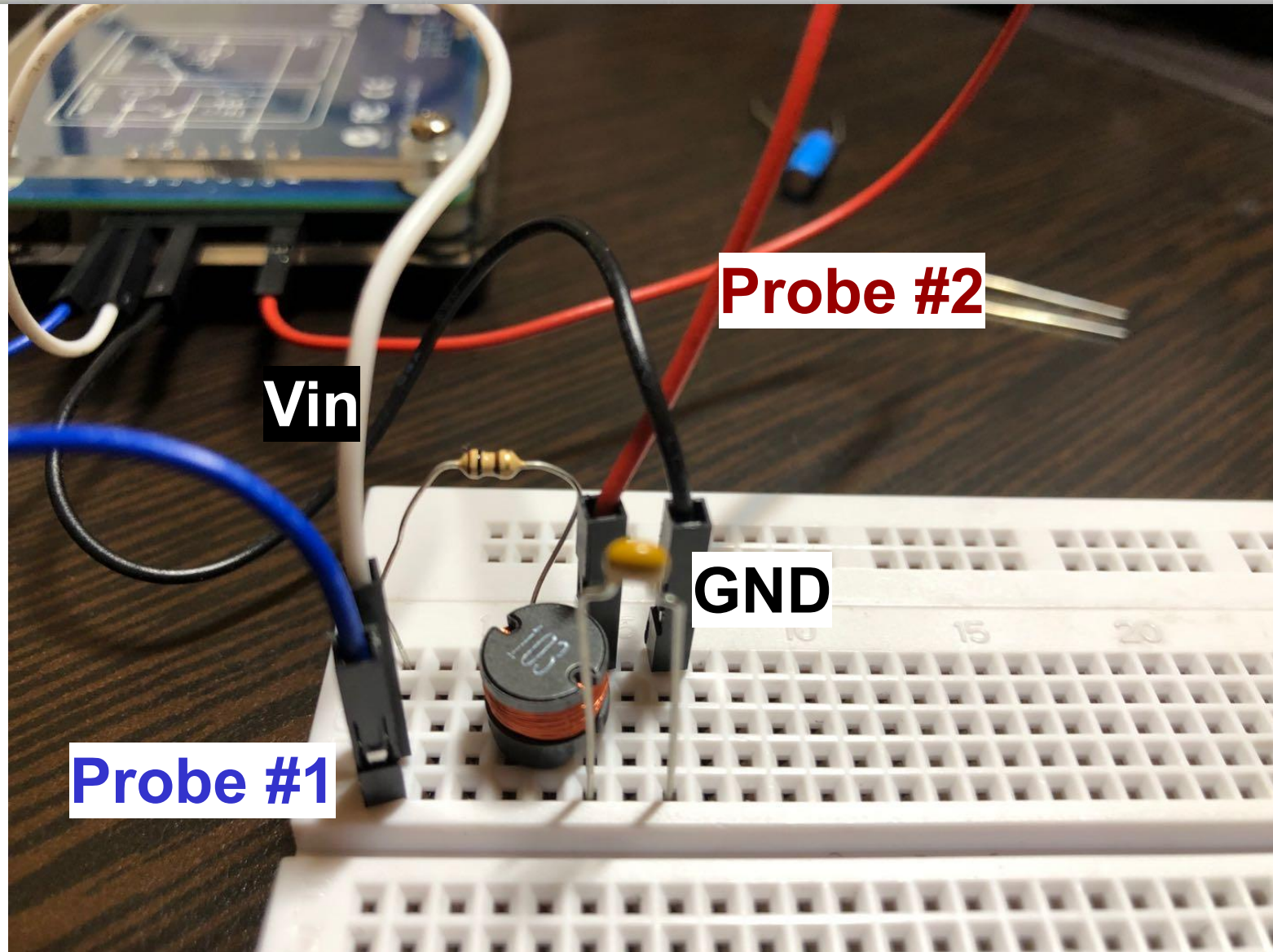
GND

Probe #2





Probe #2





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AWG Contr...

AWG CH A

Mode Shape

SVMI Split I/O Mode

Square

0.0 Min Ch A

2.0 Max Ch A

400 Freq Ch A

Phase Delay

0 Deg

50 %

Length

☒ Both CH 1X

☐ CH A 2X

☐ CH B 2X

AWG CH B

Mode Shape

Hi-Z Split I/O Mode

DC

0.0 Min Ch B

0.0 Max Ch B

100.0 Freq Ch B

Phase Delay

0 Deg

50 %

Length

☐ B = Comp A

☒ Sync AWG

Minimize

Math Formula 1.3 (25 Aug 20...

Built-in Exp

☐ none

☐ CAV+CBV

☐ CAV-CBV

☐ CBV-CAV

☐ CAI-CBI

☐ CBI-CAI

☐ CAV*CAI

☐ CBV*CBI

☐ CAV/CAI

☐ CBV/CBI

☐ CBV/CAV

☐ CBI/CAI

☒ Formula

Math Trace

Formula

Units

Axis

X Math Trace

X Formula

X Units

X Axis

Y Math Trace

Y Formula

Y Units

Y Axis



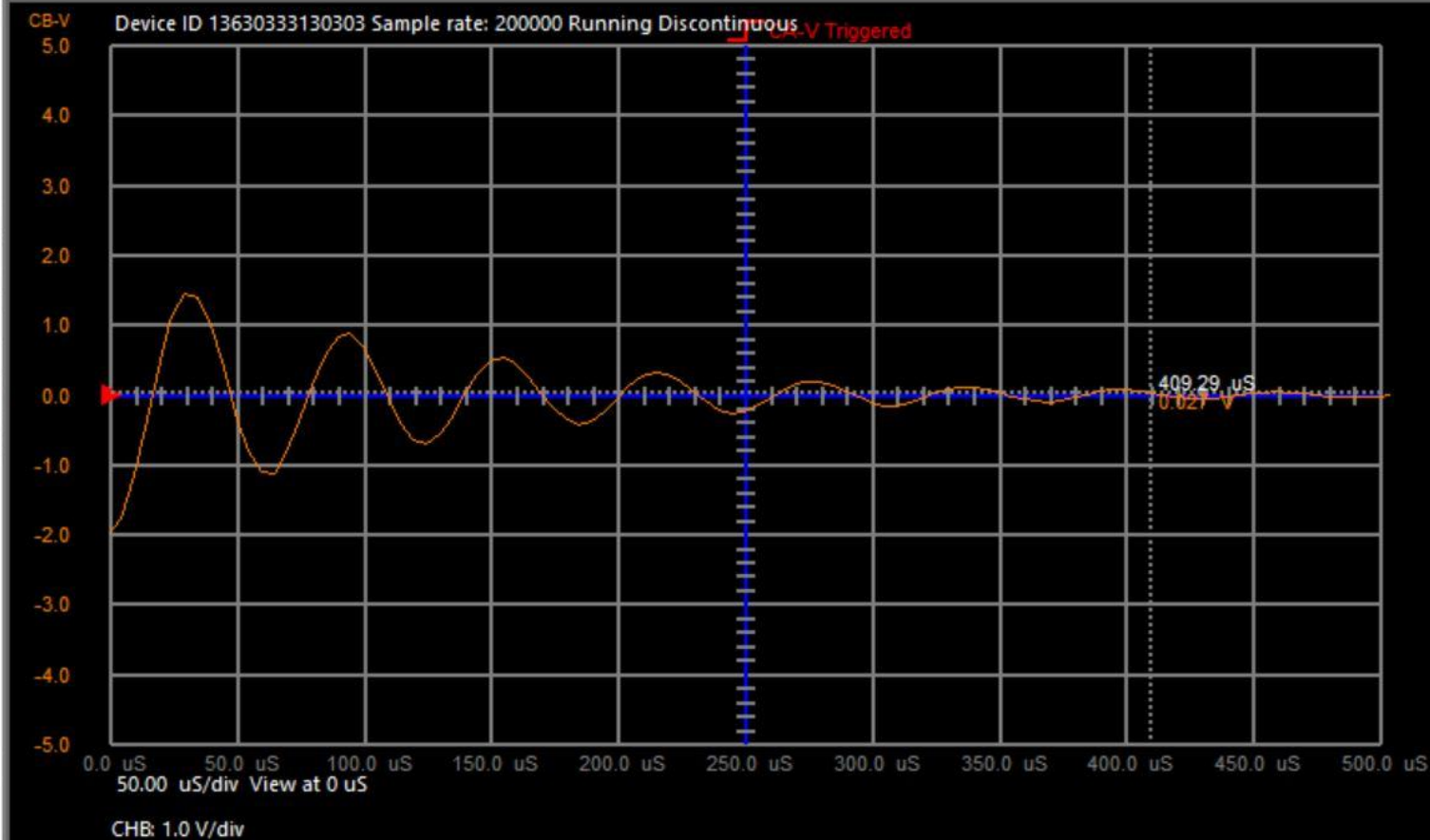
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ALICE DeskTop 1.3 (25 Aug 2020): ALM1000 Oscilloscope

Trigger Edge Trig Level 1.001 50% Hold Off 0.0 Horz Pos 0 Time mS/Div 0.05 Curves PWR-Or Run Stop Exit



Conn File Options

Meas CA CB Matr

AWG Window

☒ Enab Time Plot

☐ Enab X-Y Plot

☐ Enab Phasor Plot

☐ Enab Spectrum Plo

☐ Enab Bode Plot

☐ Enab Impedance

☐ Enab Ohmmeter

☐ CA-V [1]

☐ CA-I [3]

☒ CB-V [2]

☐ CB-I [4]

Digital I/O Screen

Analog In Mux Screen

Command Interface

Adjust Gain / Offset

CA-V 1.0 0.0

CB-V 1.0 2.0

CA-I 1.0 0.0

CB-I 1.0 0.0



```
D:\Document\Github\M1K-org\...  
E... P... V...  
1 - Array=readtable('vin_vc.csv');  
2 - time = Array(:, 1);  
3 - CHA_V = Array(:, 2);  
4 - CHB_V = Array(:, 4);  
5  
6 - figure()  
7 - plot(time, CHB_V)  
8 - title("Voltage of C vs. Time");  
9 - xlabel('time(s)');  
10 - ylabel('voltage(V)');  
11  
script Ln 11 Col 1
```




Figure 2

File Edit View Insert Tools Desktop Window Help

