Measurements

March 16, 2022

1 PARAMETERS

```
HBox(children=(Label(value='Sample name :'), Text(value='test',␣
↪placeholder='Custom Name')))
```

```
HBox(children=(Label(value='Measure duration [s] :'), parameter(value=3.0,␣
↪continuous_update=True, step=0.1)))
```

```
HBox(children=(Label(value='Load resistance [Ohms] :'), parameter(value=300000.
↪0, continuous_update=True, step…
```

```
HBox(children=(Label(value='Nombre of periods [1] :'), parameter(value=5.0,␣
↪continuous_update=True, step=1.0))…
```

```
HBox(children=(Label(value='Circuit resistance [Ohms] :'), parameter(value=1.0,␣
↪continuous_update=True, step=1…
```

```
HBox(children=(Label(value='Maximum frequency for analysis: [Hz] :'),␣
↪parameter(value=100.0, continuous_update…
```

```
Button(description='Save parameters', style=ButtonStyle())
```

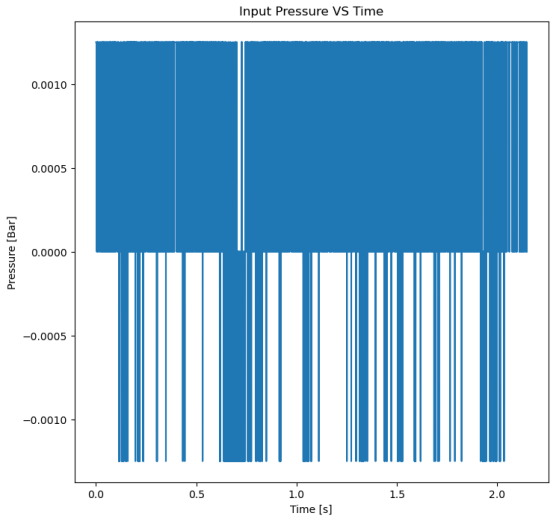
```
Output()
```

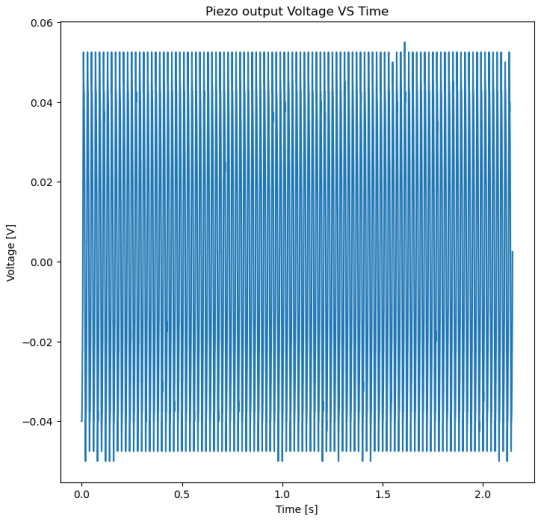
```
Sample name: test
```

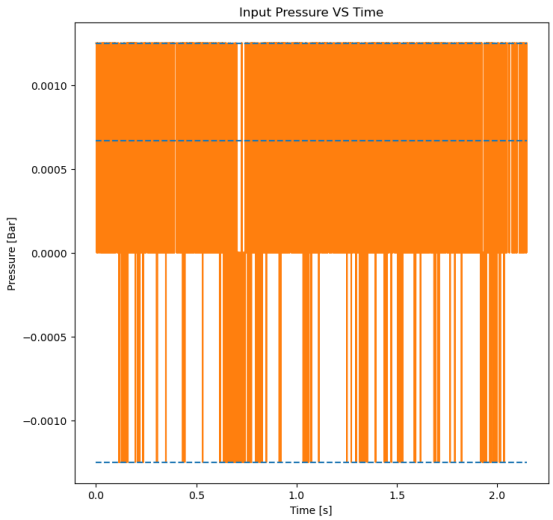
	Parameter	Value	Unit
0	Sample name	test	
1	Measure duration	3.0	[s]
2	Rload	300000.0	[Ohms]
3	Nb Periods	5.0	[1]
4	R Circuit	1.0	[Ohms]
5	Max Frequency	100.0	[Hz]

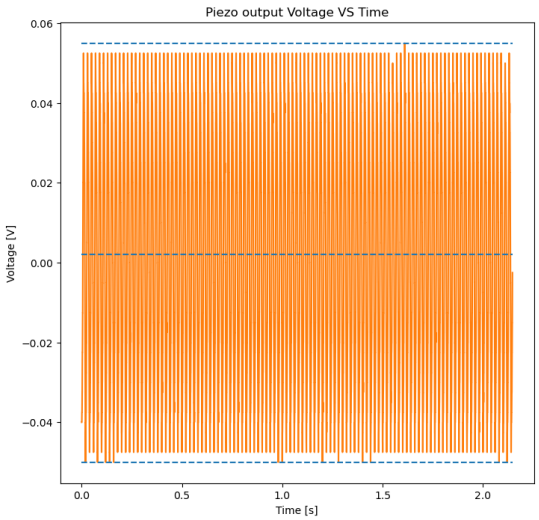
2 PRESSURE AND VOLTAGE MEASUREMENTS

```
The input frequency is:  2.33 Hz
```



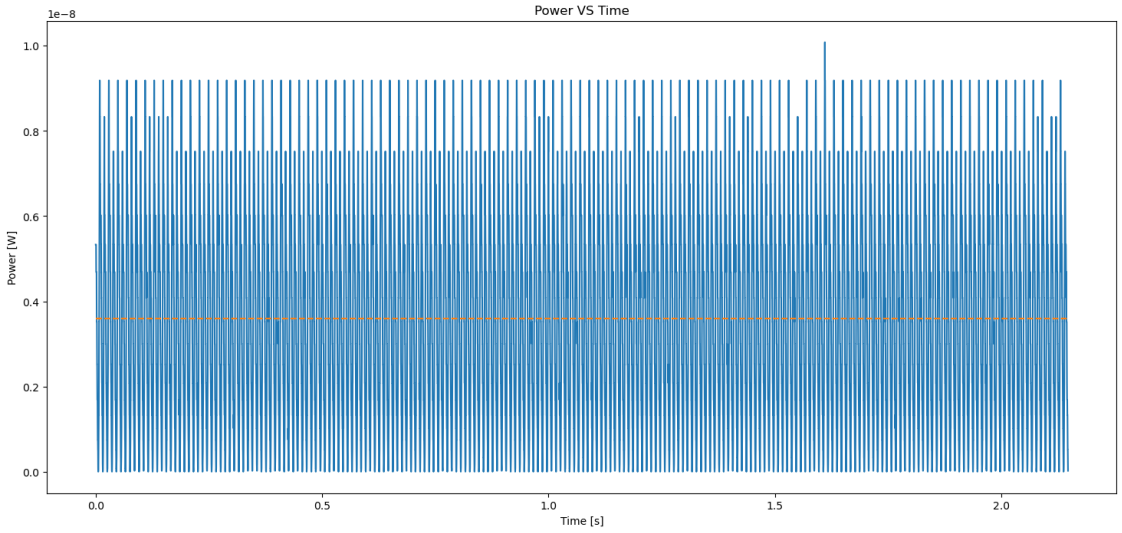






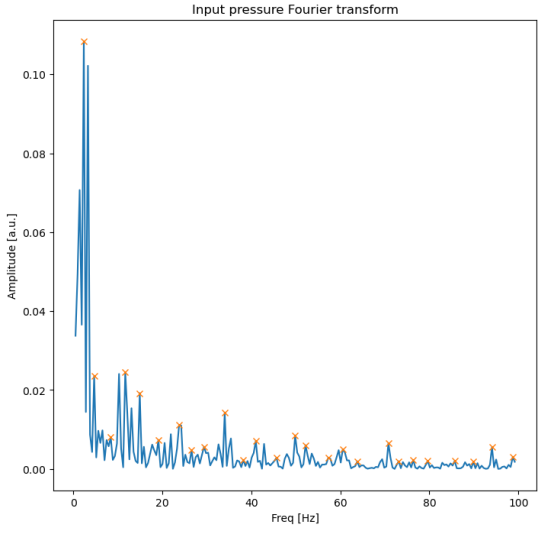
	Variable	Min	Max	Peak to peak	Mean	Mean of absolute value
0	Pressure [Bar]	-1.25e-03	1.25e-03	2.50e-03	6.68e-04	7.41e-04
1	Voltage [V]	-5.00e-02	5.50e-02	1.05e-01	2.02e-03	2.98e-02

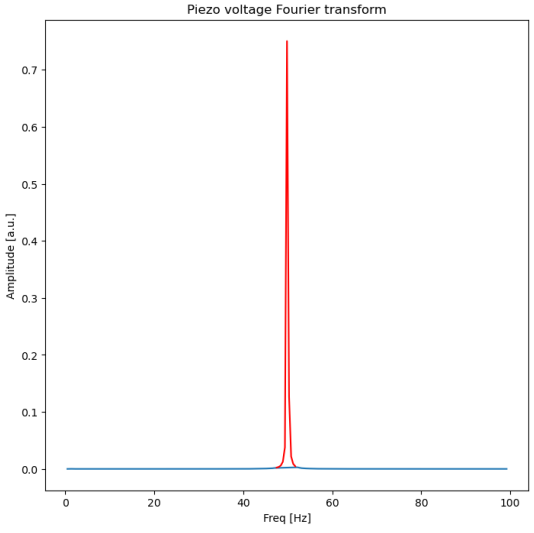
3 POWER



`Mean power: 3.59e-09 [W]`

4 FREQUENCY ANALYSIS





4.1 Voltage frequency peaks

Empty DataFrame Columns: Index([’Freq [Hz]’, ’Amplitude percentage’], dtype=’object’) Index: RangeIndex(st

4.2 Pressure frequency peaks

	Freq [Hz]	Amplitude percentage
0	2.33	10.84
1	4.66	2.35
2	8.38	0.80
3	11.64	2.45
4	14.90	1.92
5	19.09	0.74
6	23.75	1.11
7	26.54	0.48
8	29.34	0.56
9	34.00	1.43
10	38.19	0.23
11	40.98	0.71
12	45.64	0.28
13	49.83	0.85
14	52.16	0.60
15	57.28	0.29
16	60.54	0.50
17	63.80	0.19
18	70.78	0.65
19	73.11	0.20
20	76.37	0.22
21	79.63	0.20
22	85.69	0.20
23	89.88	0.18
24	94.07	0.55
25	98.73	0.30