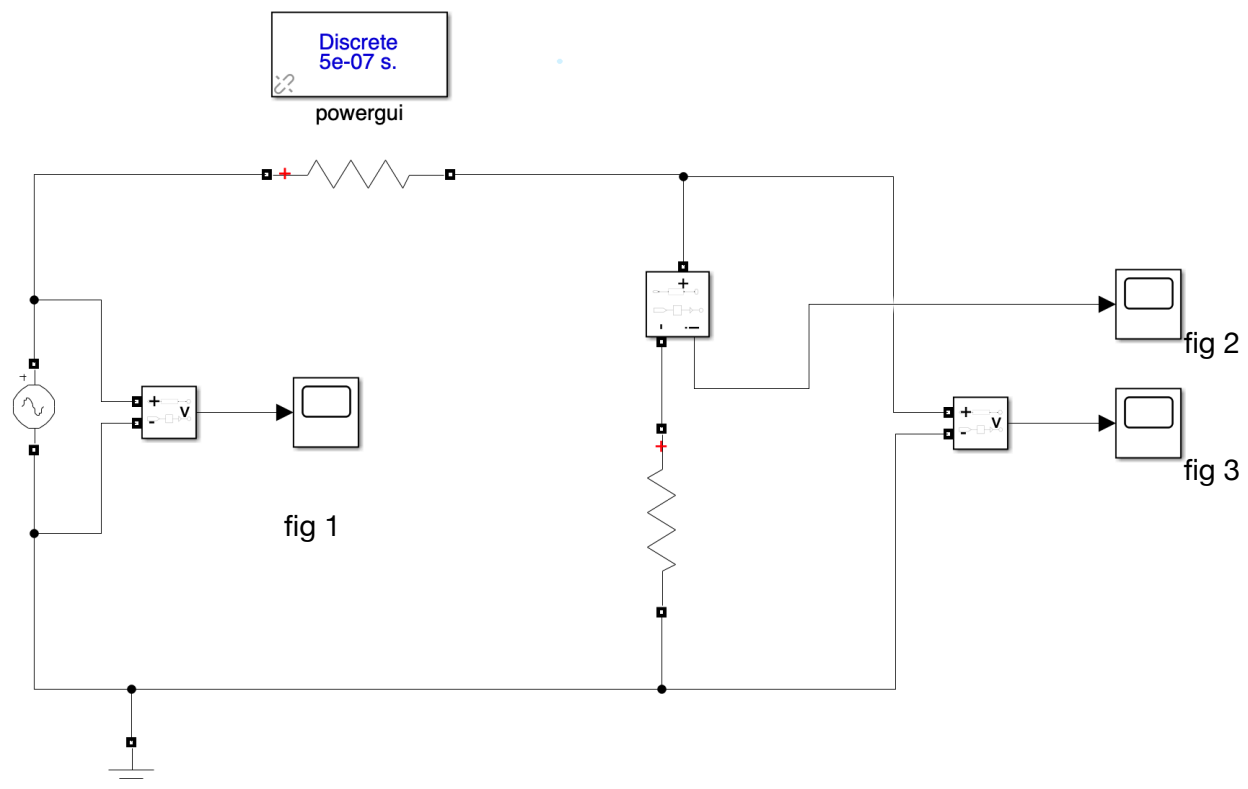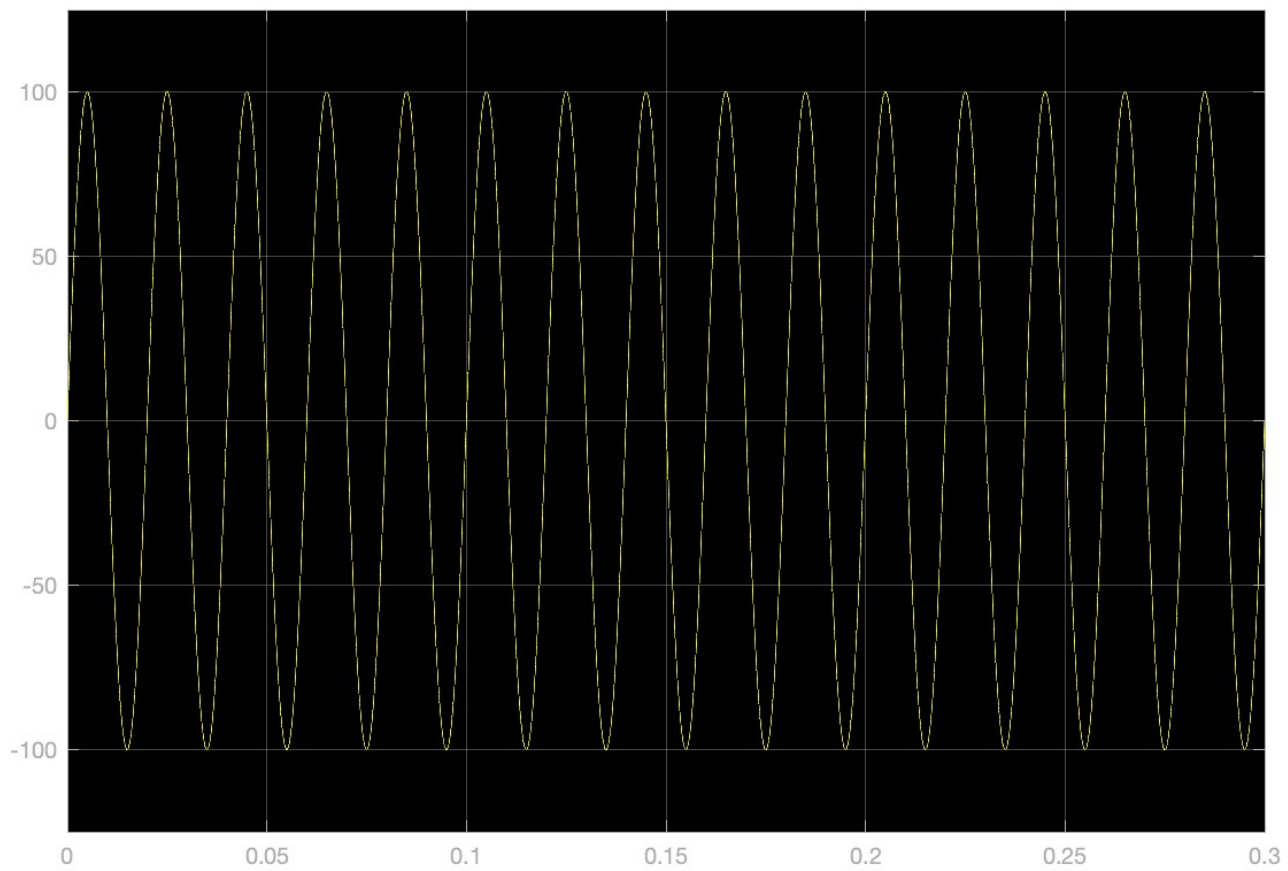Discrete
5e-07 s.

¿?

powergui

fig 1

a)

fig 1

fig 2

fig 3

b) 동시에 발생

fig 4

c)

Discrete
5e-07 s.

powergui

THD

fig 5

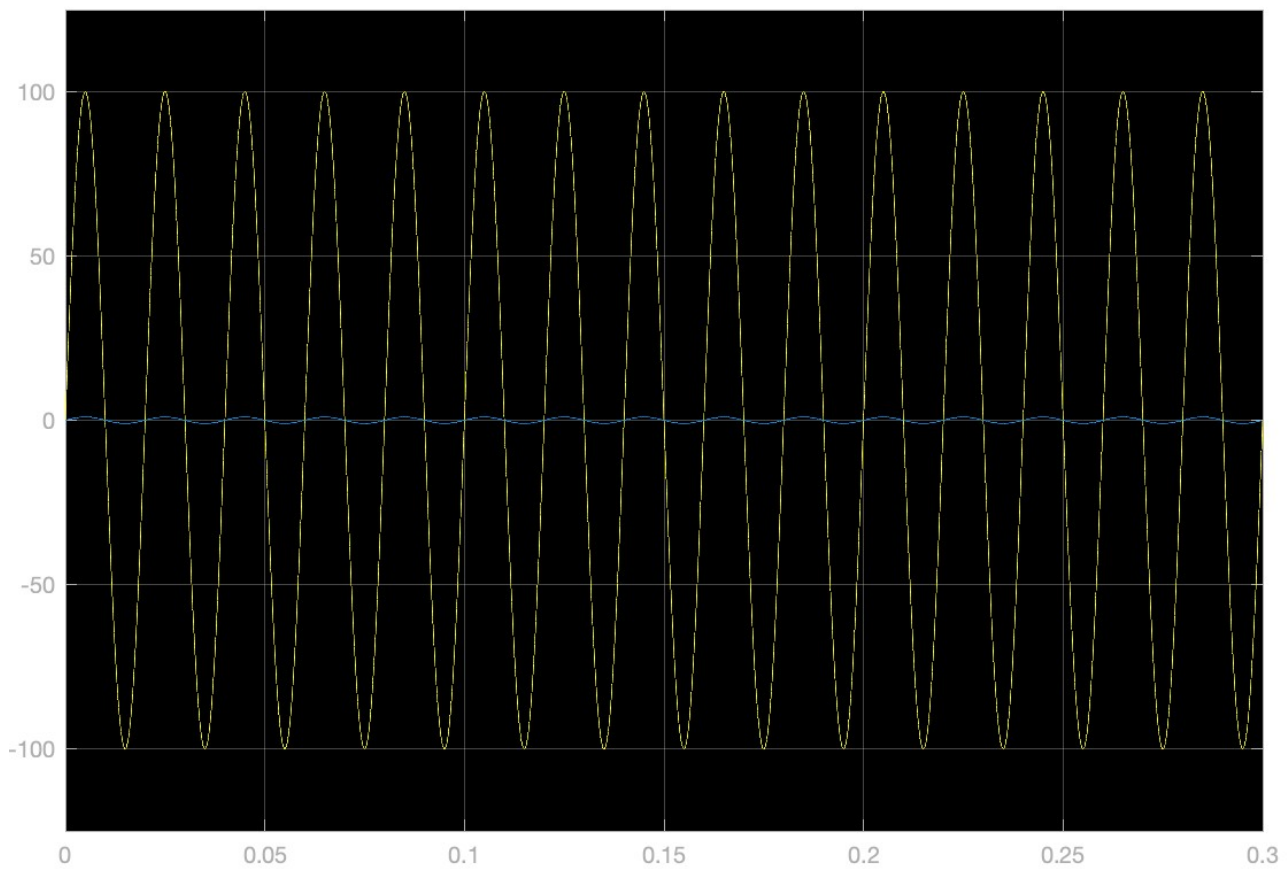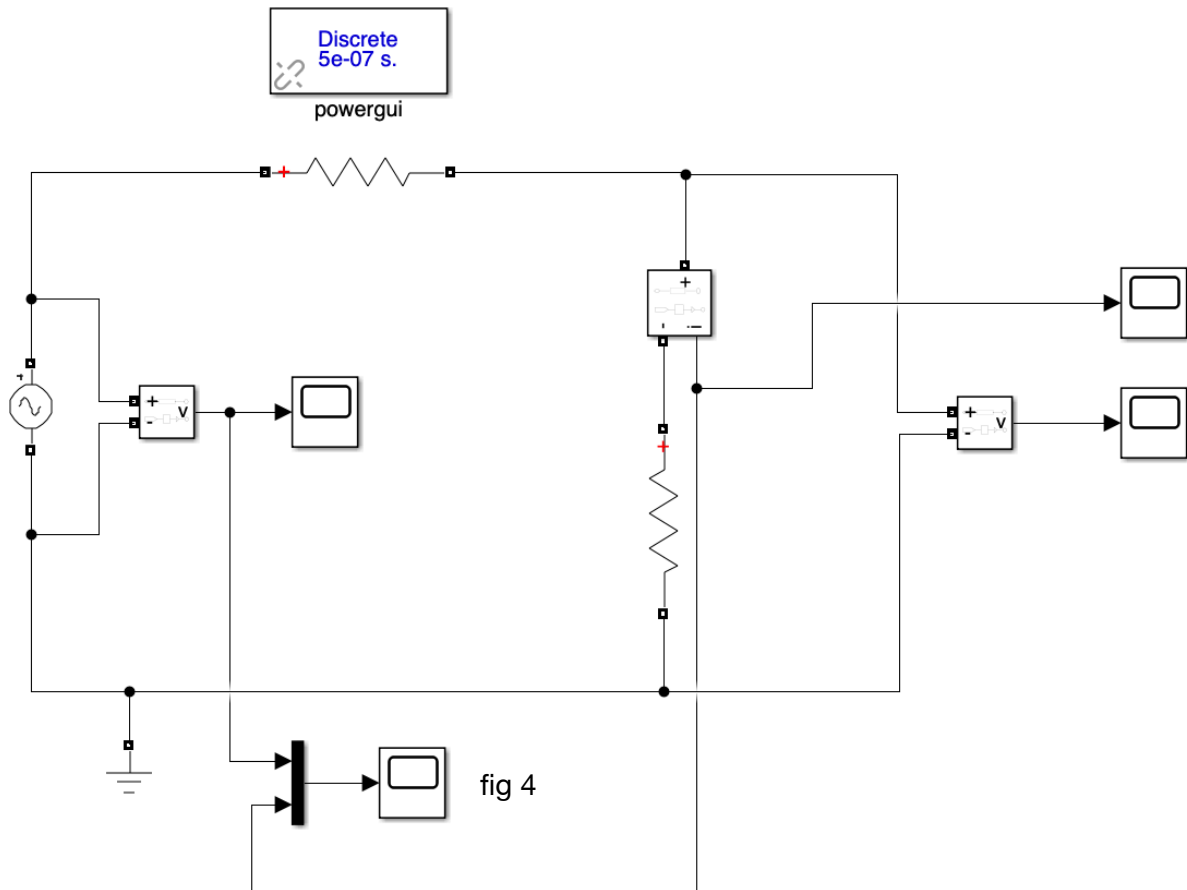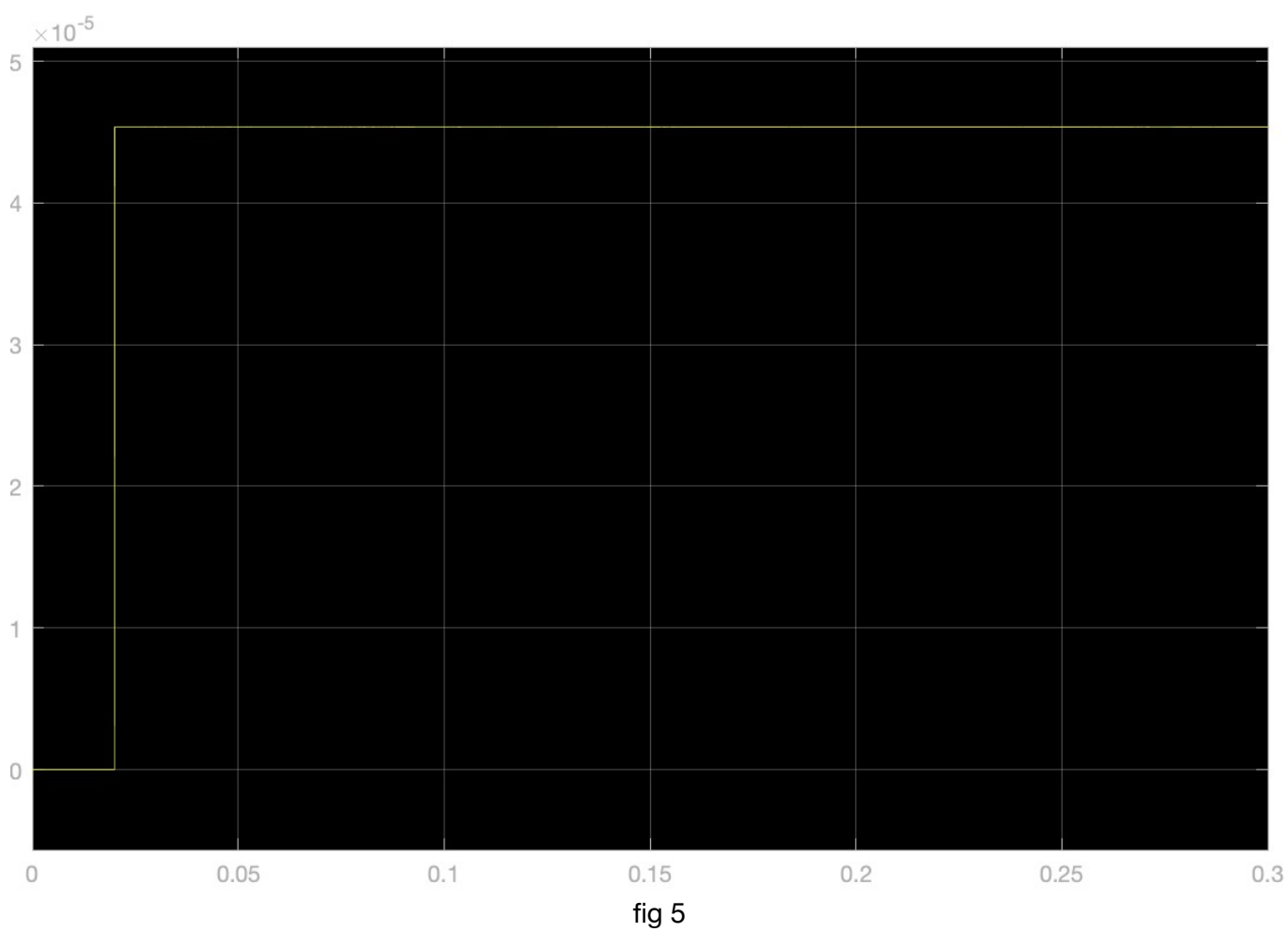
fig 5

d) cos (arctan (q/p)) = cos (arctan (0)) = cos 0 = 1
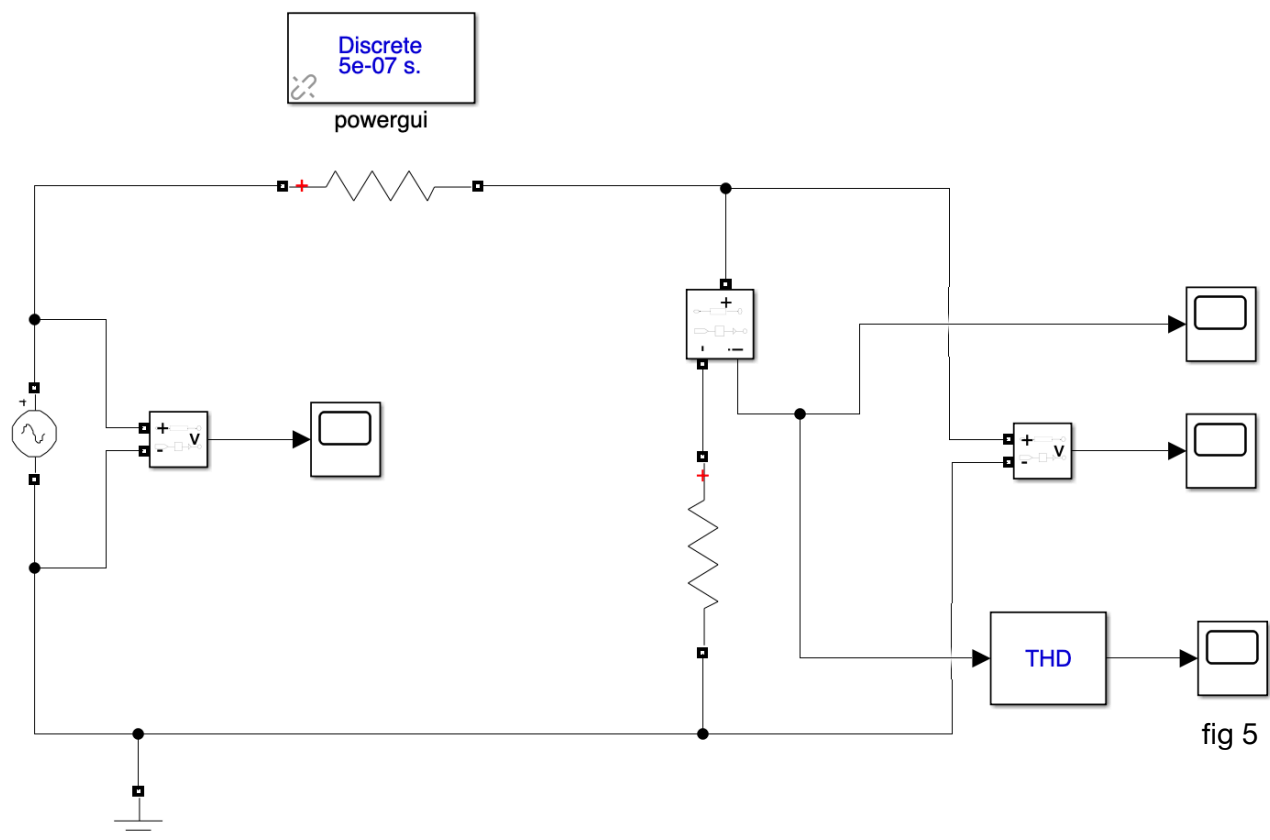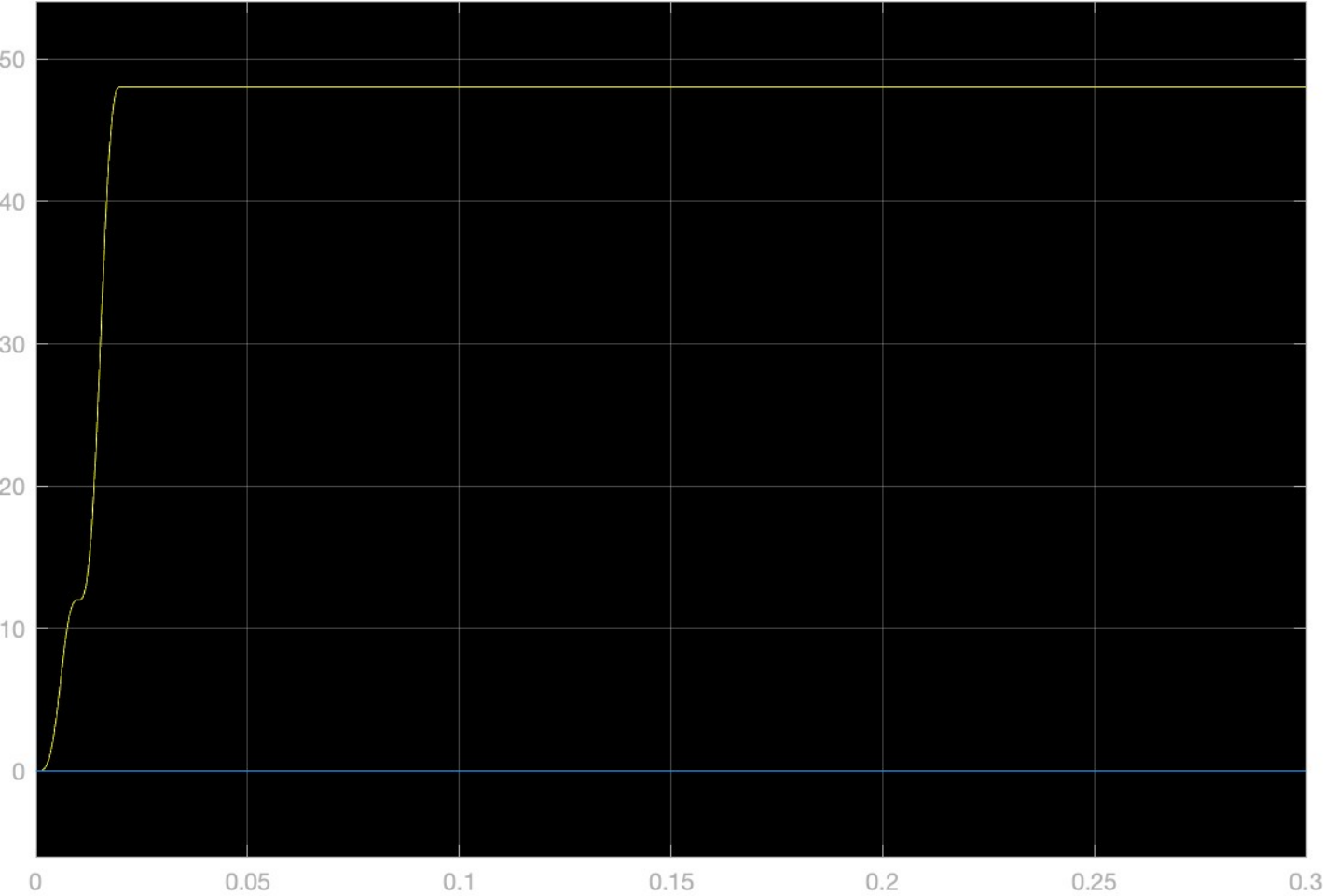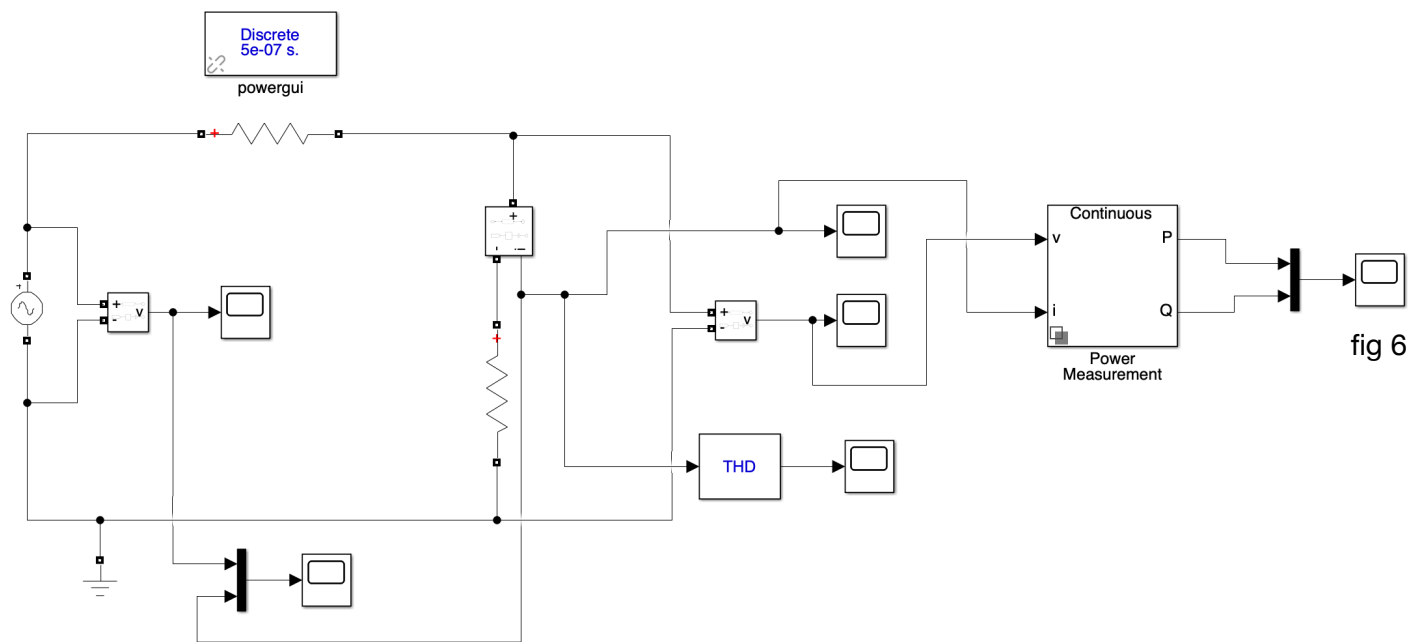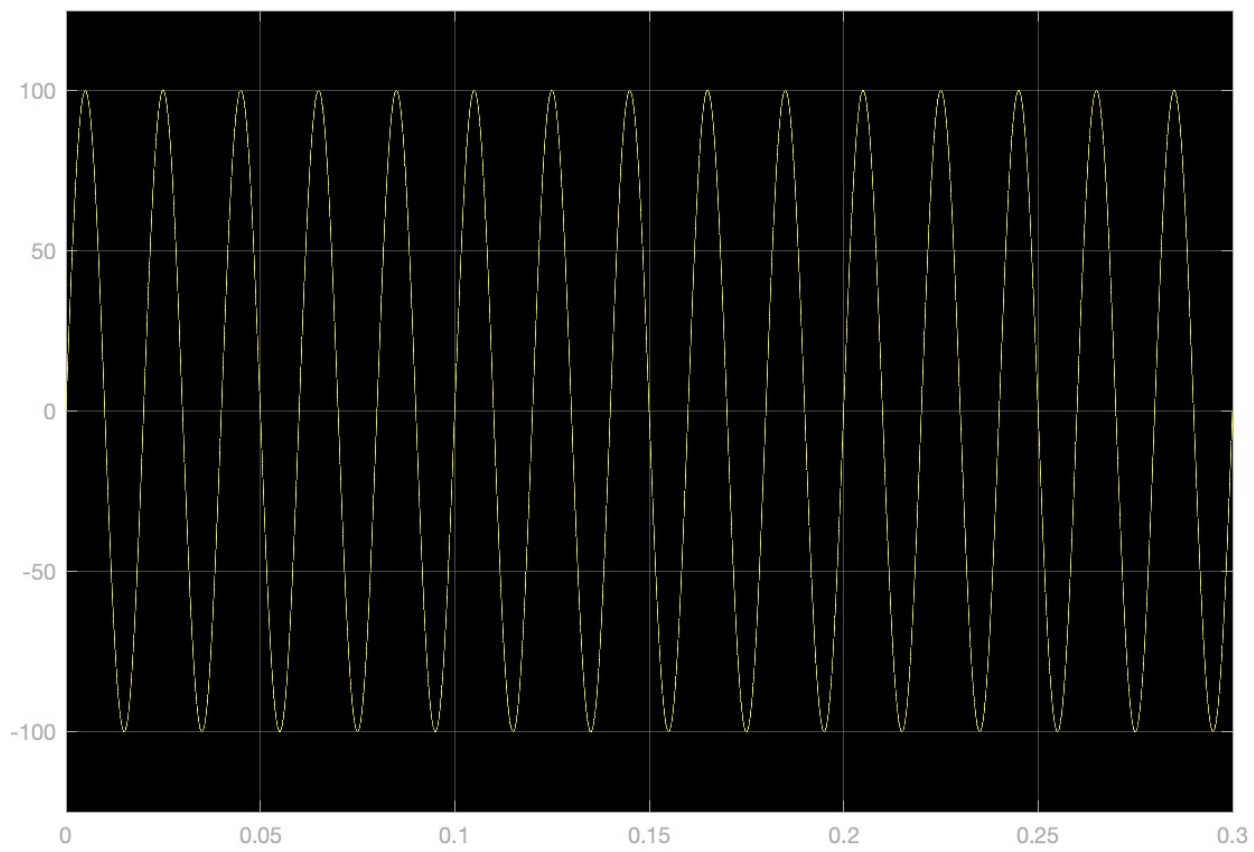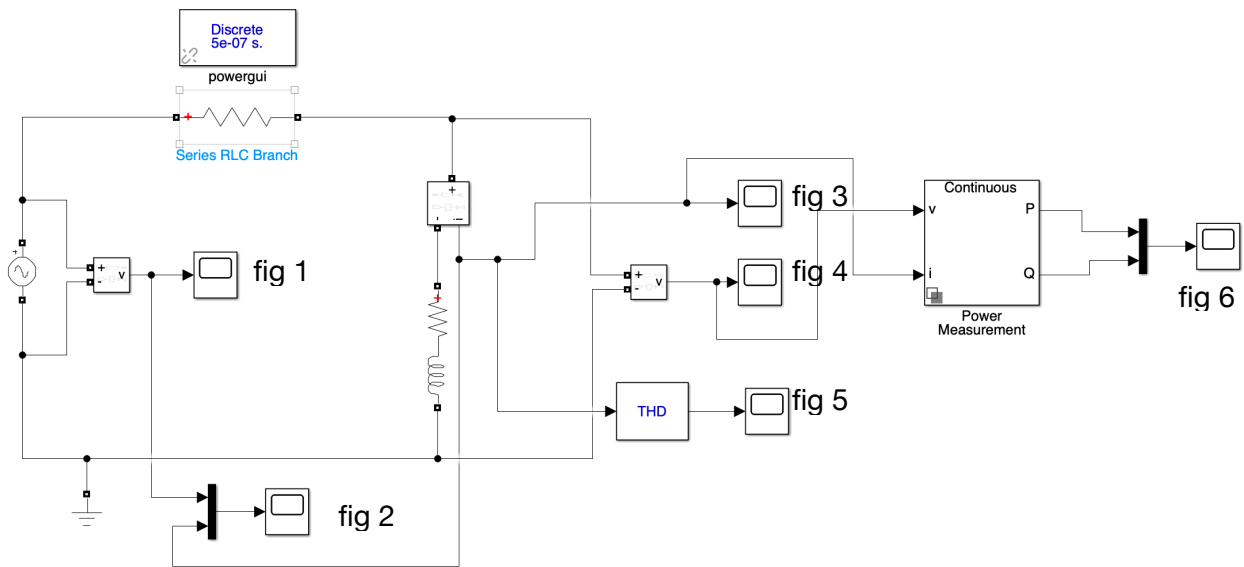
fig 6

fig 6

fig 1
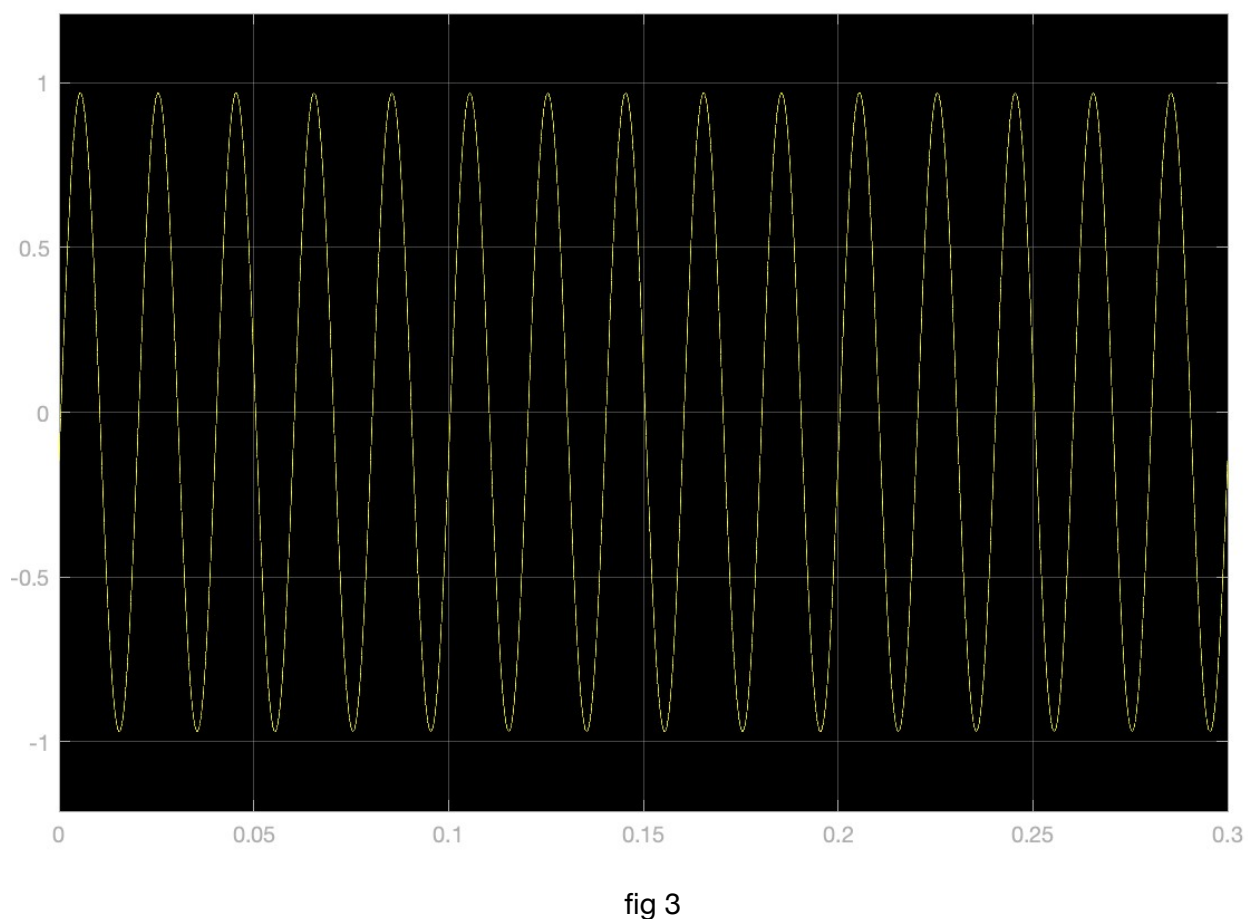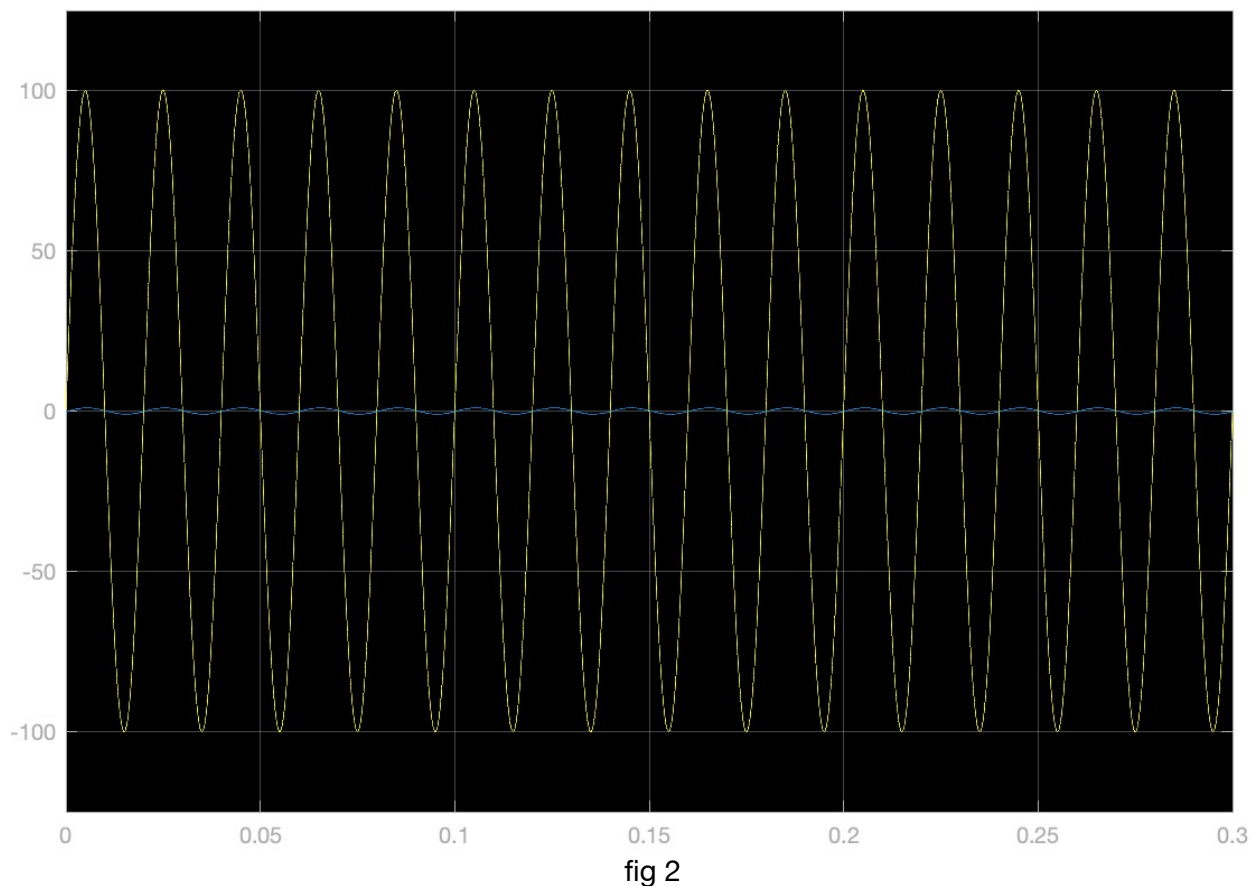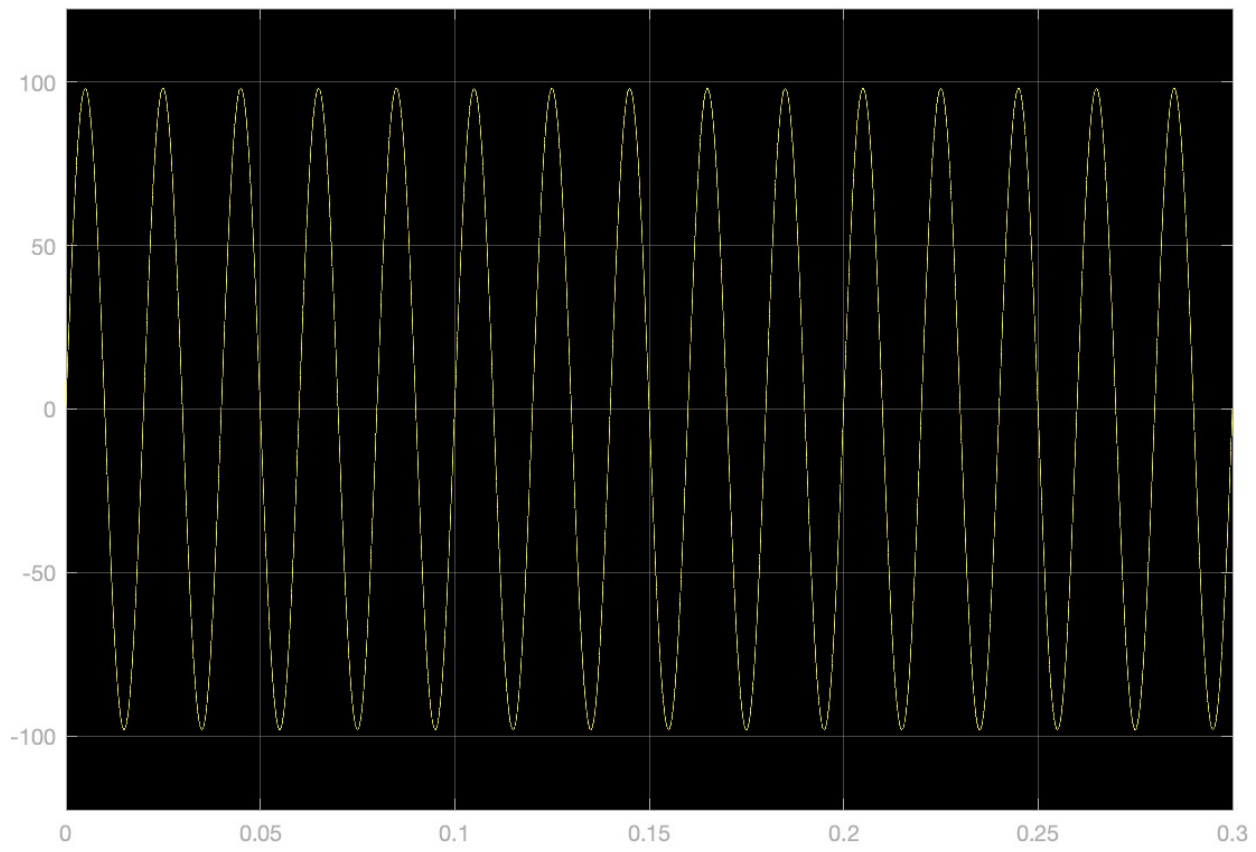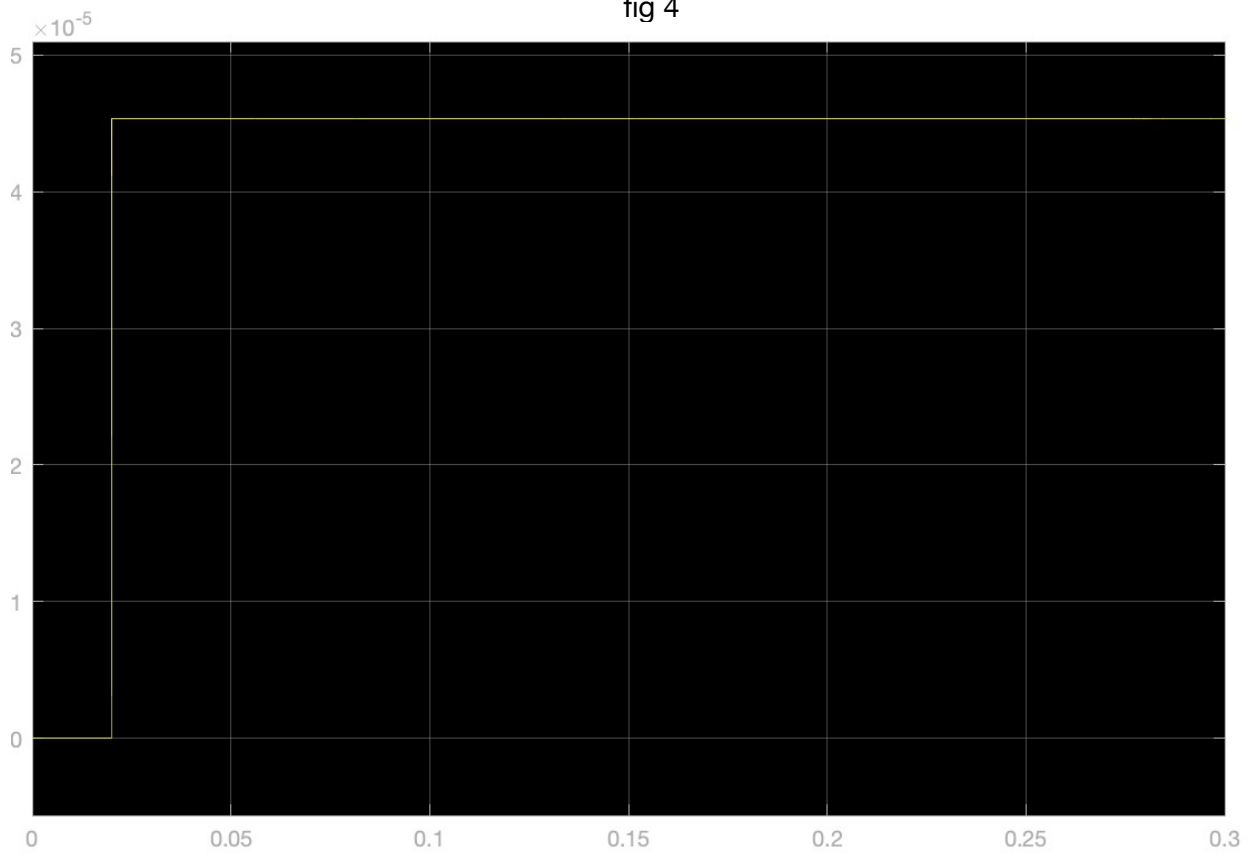
fig 2

fig 3

fig 4

fig 5

Offset=0

fig 6

b) 동시에 발생
d) cos (arctan (8/48)) = cos (0.165) = 0.98

theta = 0.165 rad

fig 1

fig 2

fig 3

fig 4

fig 5

fig 6

b) 동시에 발생
d) cos (arctan (-40/1)) = cos (-1.54) = 0.024

theta = -1.54 rad
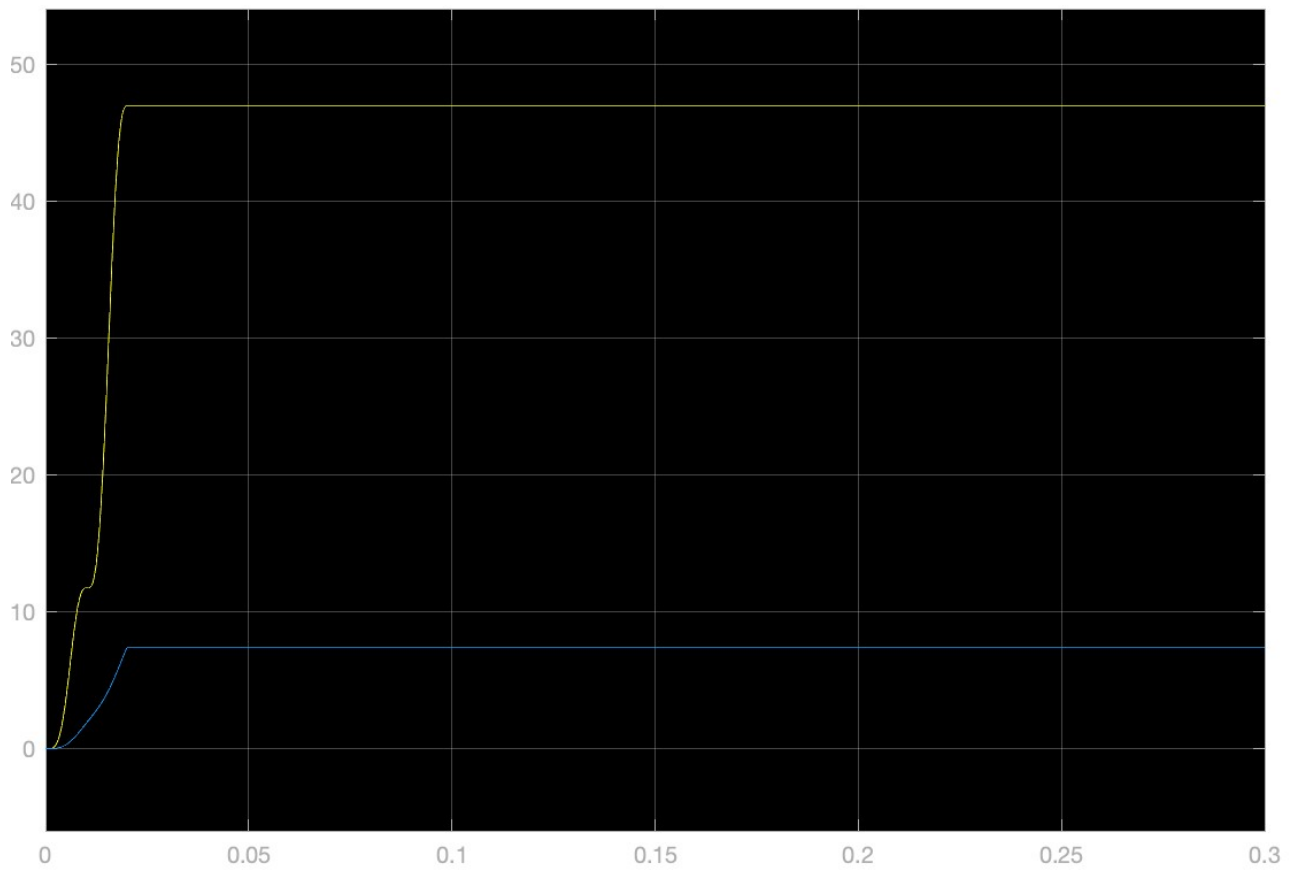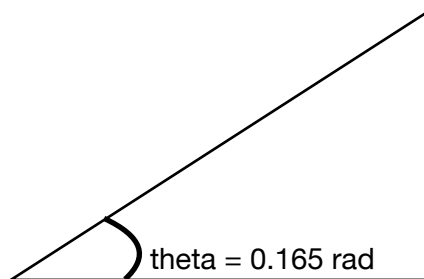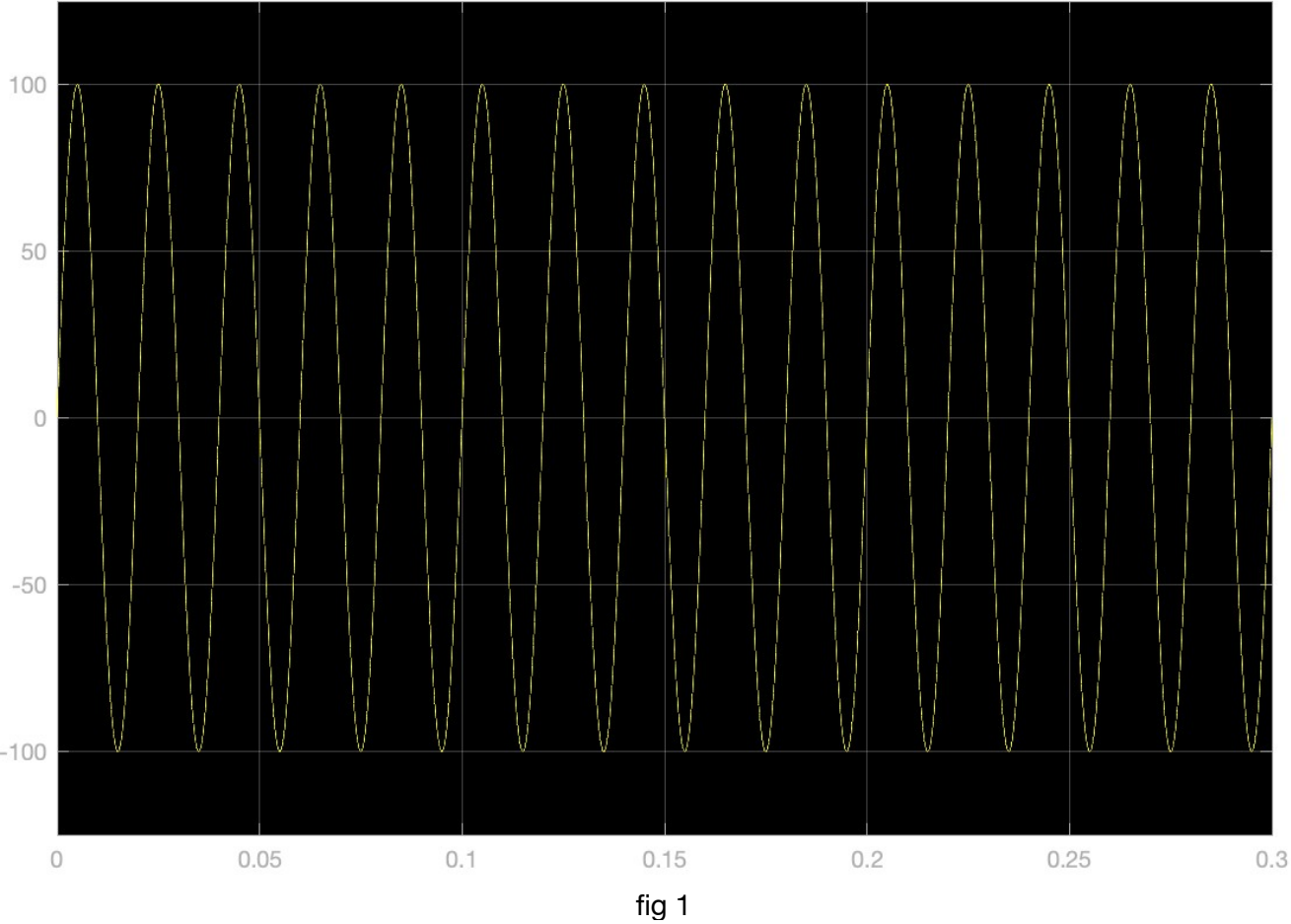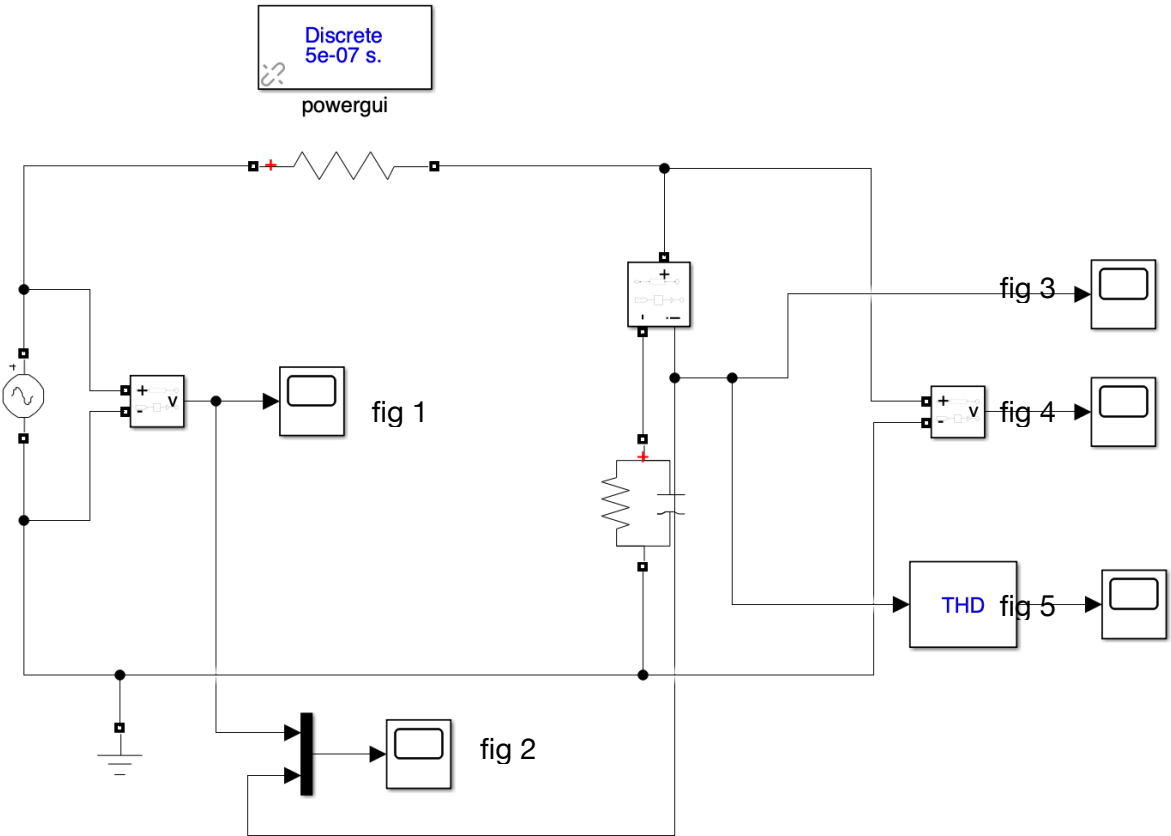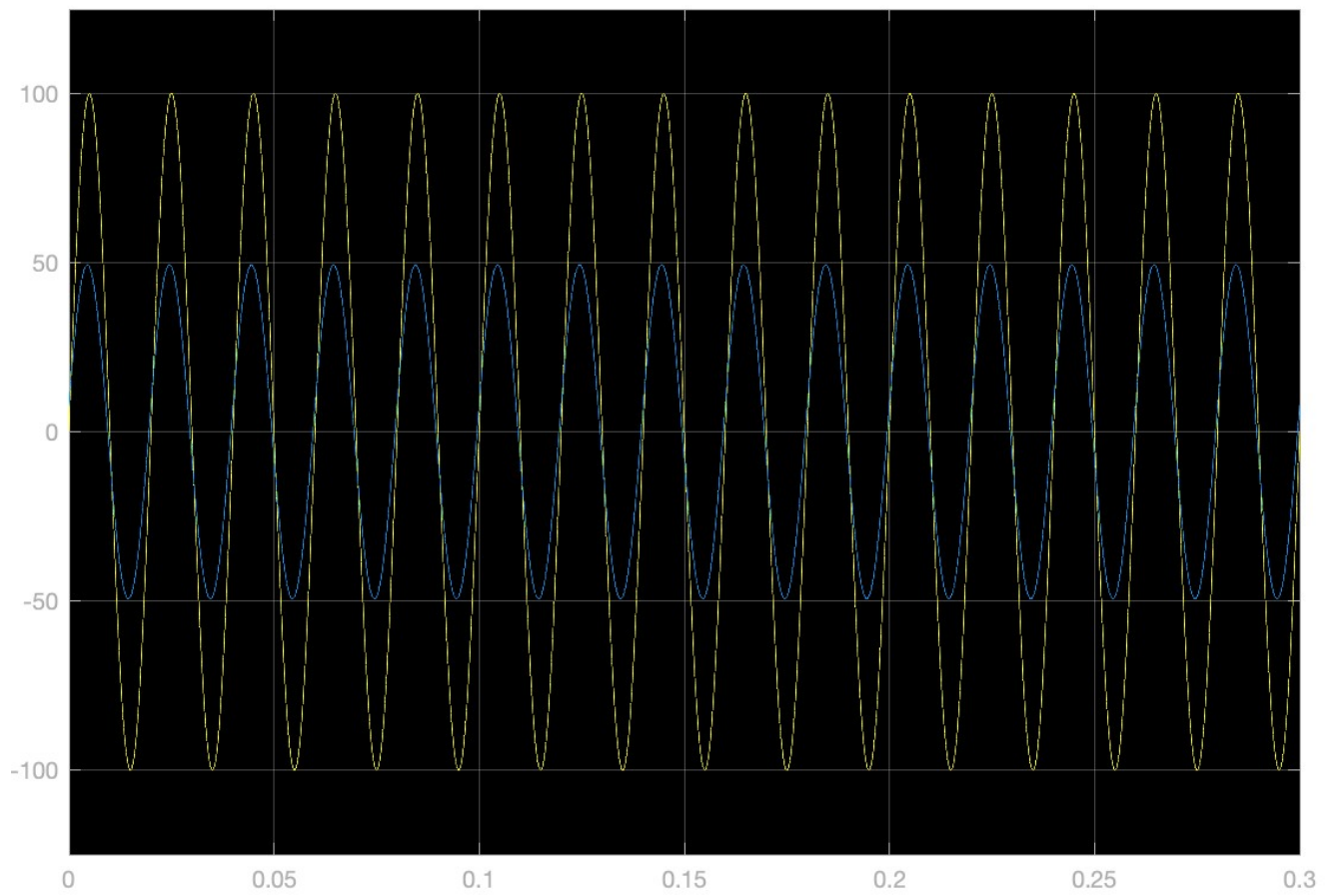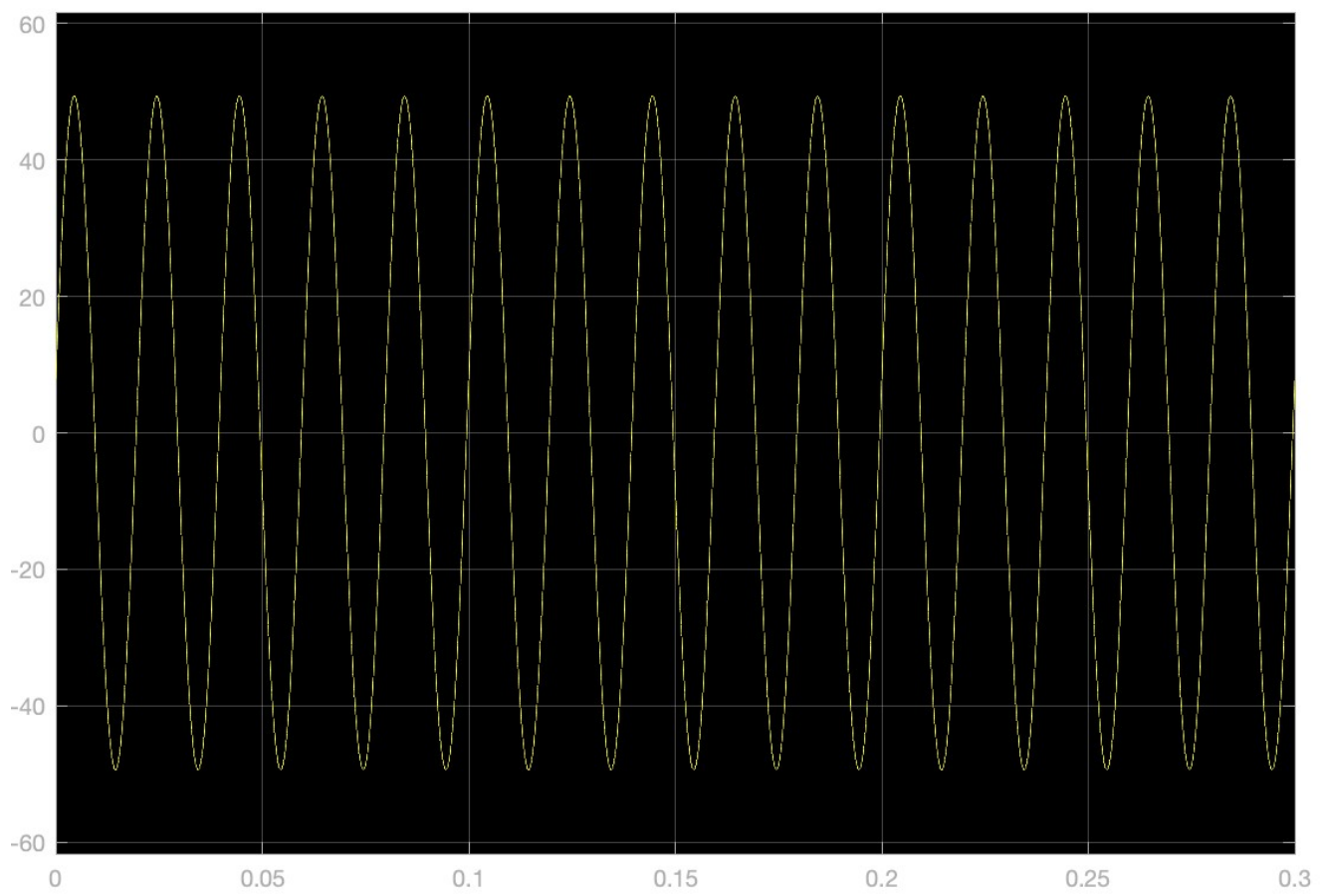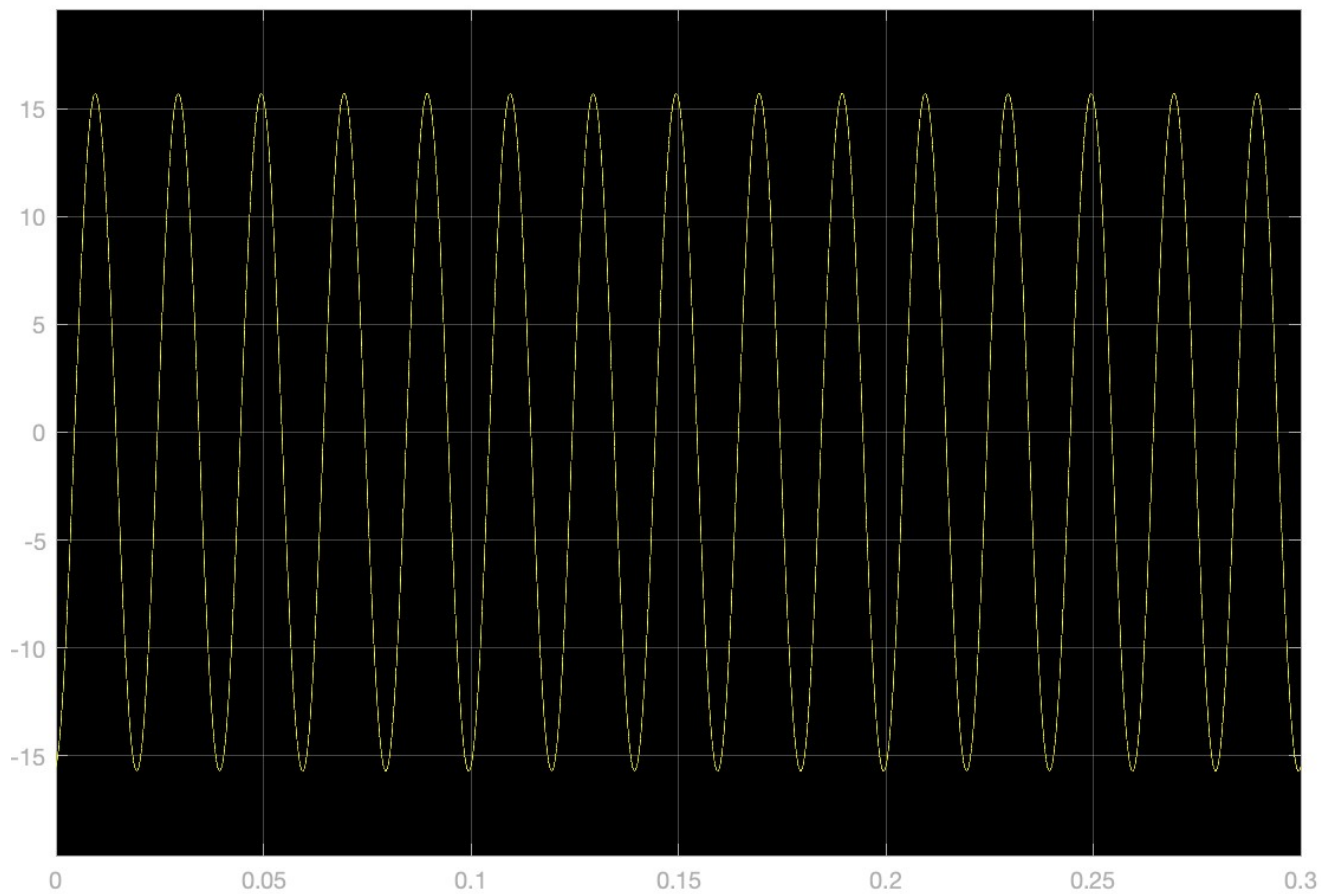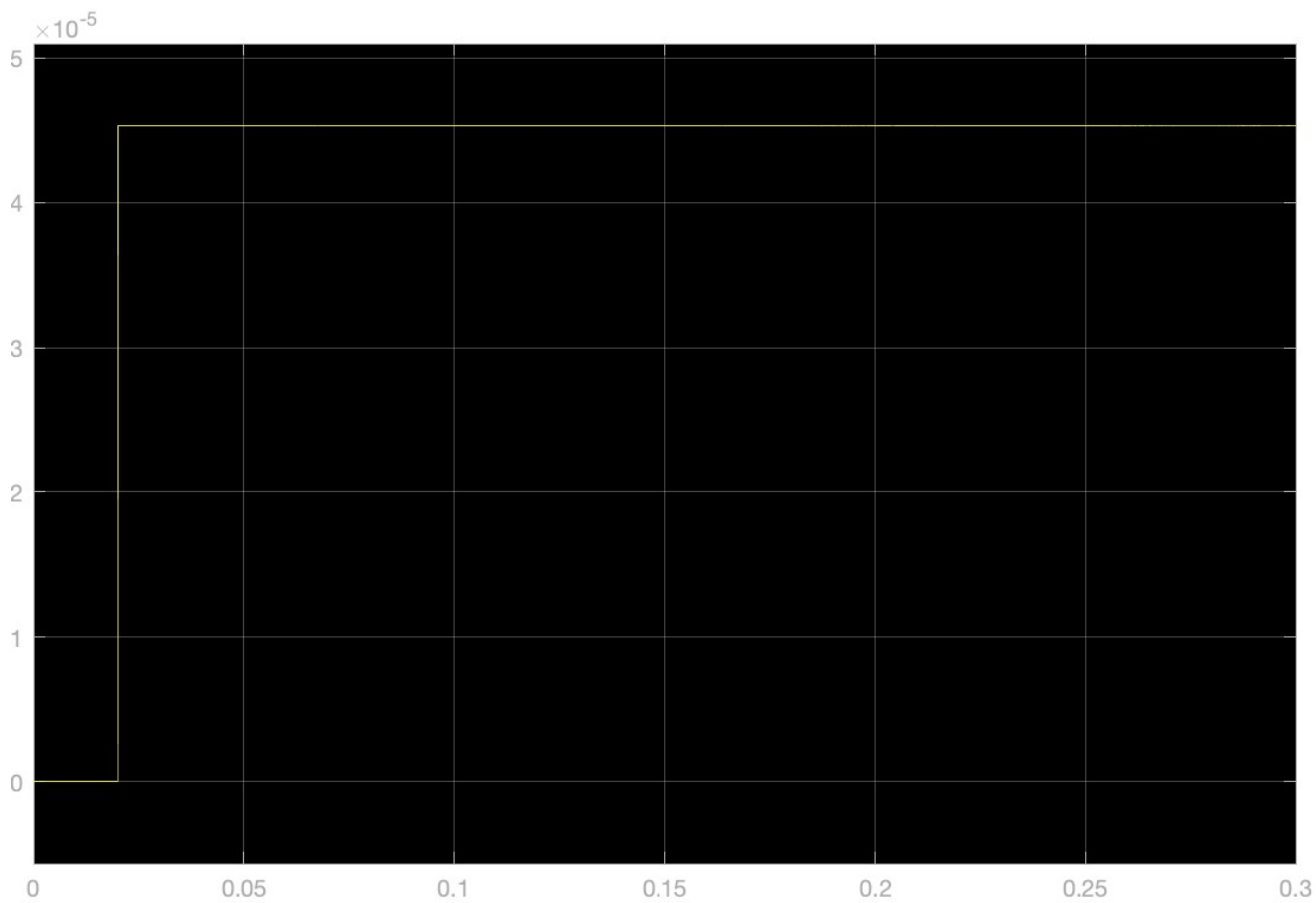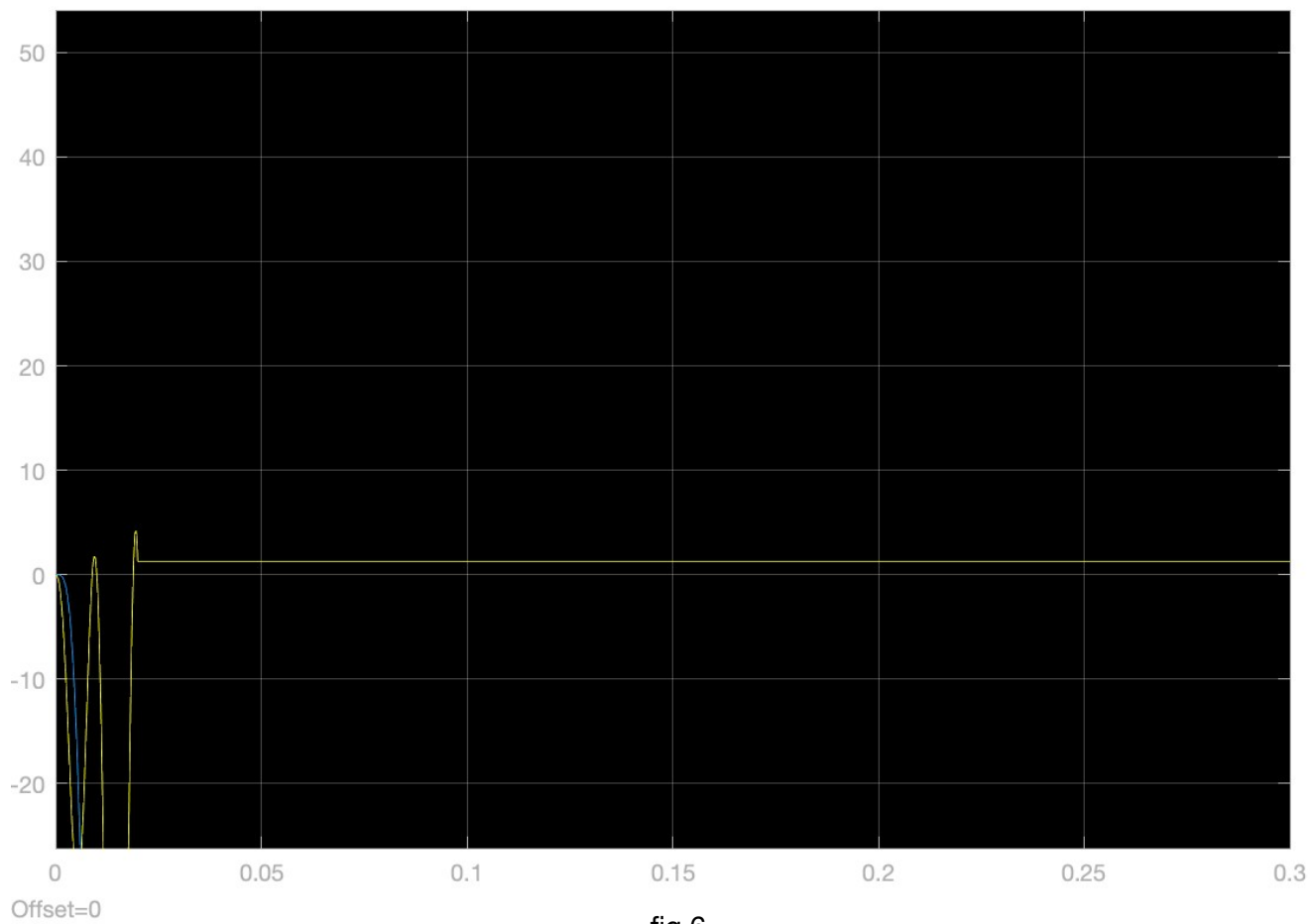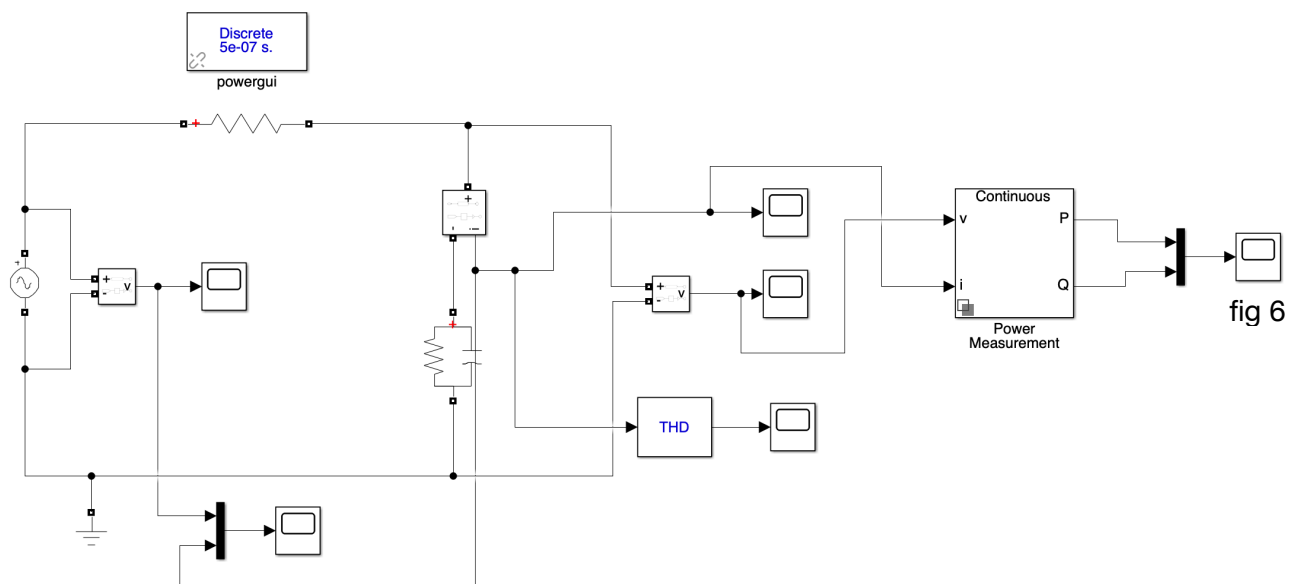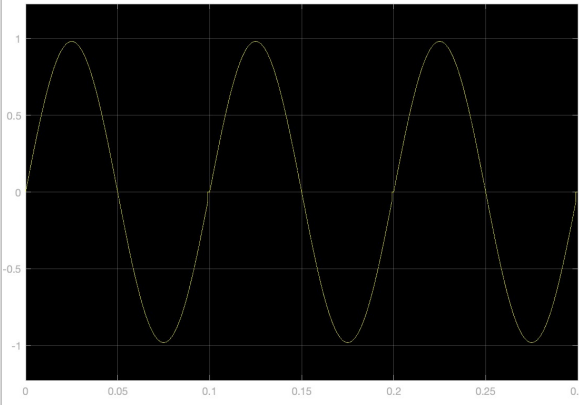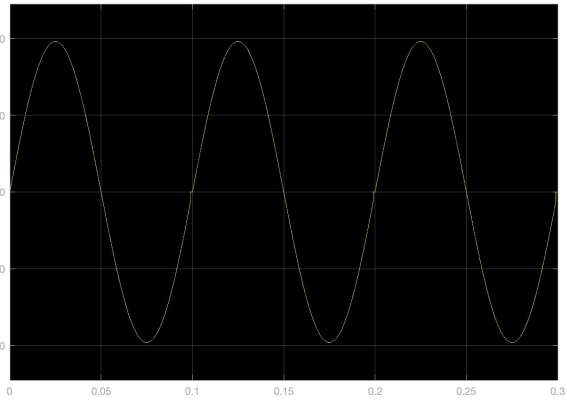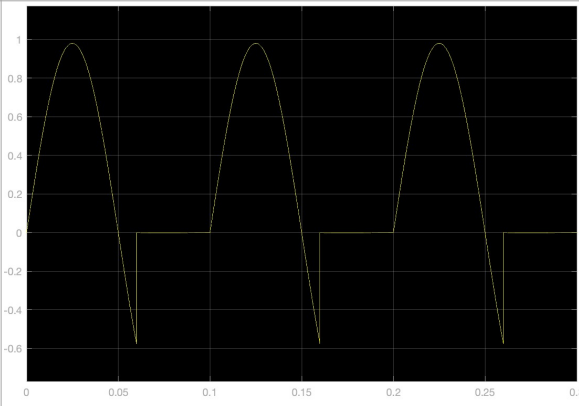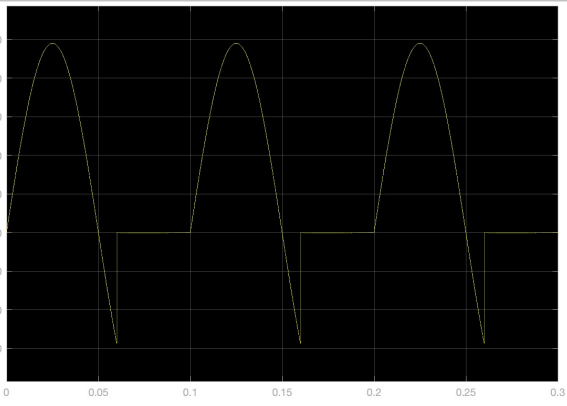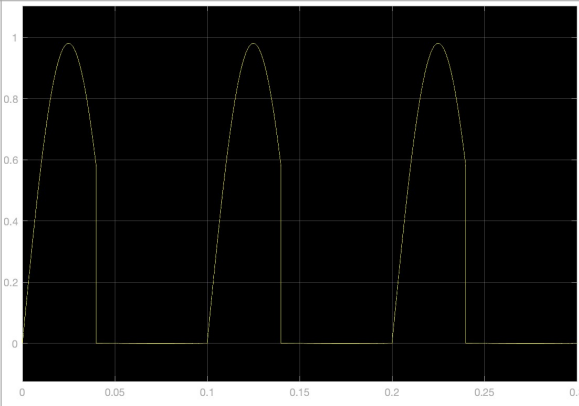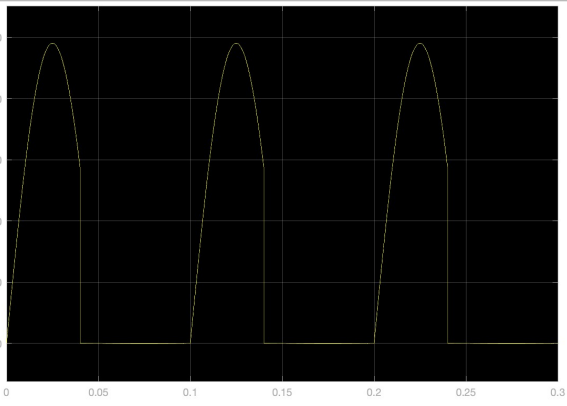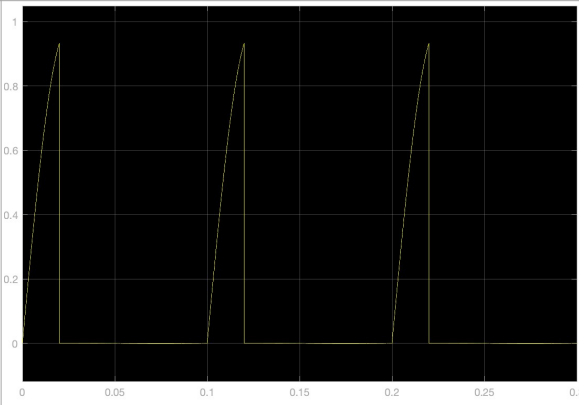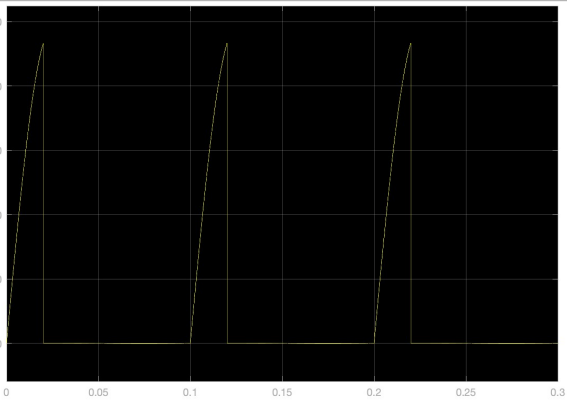
[4]
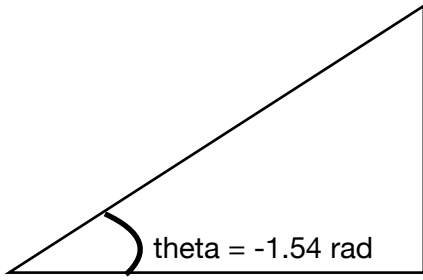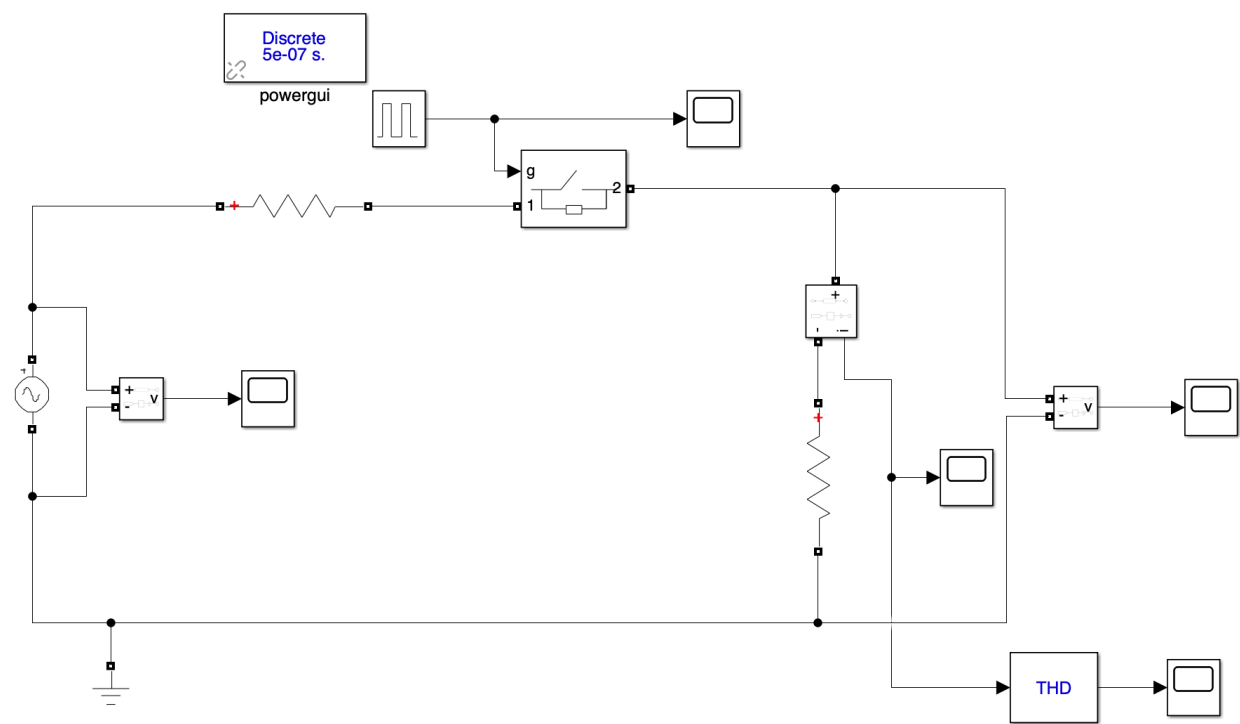
experiment number	Pulse Width (% of period)	THD value at t = 0.2 sec
1	99	0.0050
2	60	0.5375
3	40	0.5916
4	20	1.380
5	5	3.391

experiment number	output current waveform	output voltage waveform
1		
2		
3		
4		

| 5 | | |
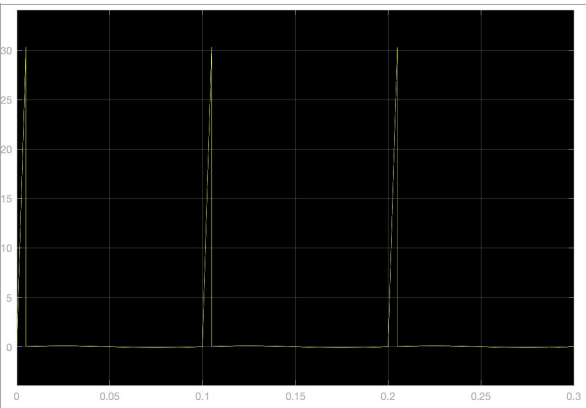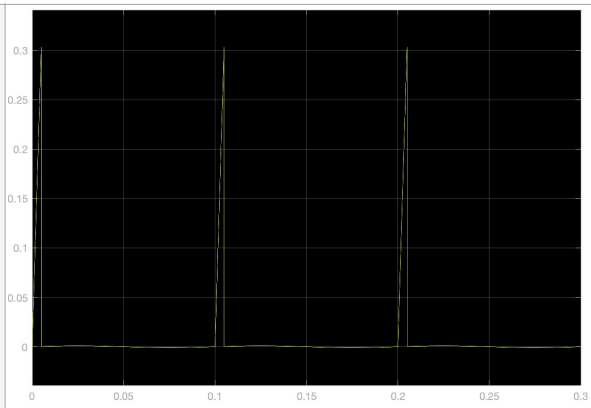
[5] Pulse with 70% (fig 1) / Pulse with 40% (fig 2)

fig 1

Structure with time: current [update]

Signal: unnamed (input 1)

Dimension: 1

Start time (s): 0

Number of cycles: 1

Zoom on: Signal

Fundamental frequency (Hz): 10

Max frequency (Hz): 1000

Max THD frequency: Nyquist frequency

Display style: Bar (relative to fundamental)

Base value: 1.0

Frequency axis: Hertz

[Compute FFT]

Selected signal with FFT window (in red)

Fundamental (10Hz) = 0.07635 , THD= 1063.40%

[Export]

fig 2

Structure with time: current [update]

Signal: unnamed (input 1)

Dimension: 1

Start time (s): 0

Number of cycles: 1

Zoom on: Signal

Fundamental frequency (Hz): 10

Max frequency (Hz): 1000

Max THD frequency: Nyquist frequency

Display style: Bar (relative to fundamental)

Base value: 1.0

Frequency axis: Hertz

[Compute FFT]

Selected signal with FFT window (in red)

Fundamental (10Hz) = 0.1235 , THD= 491.85%

[Export]