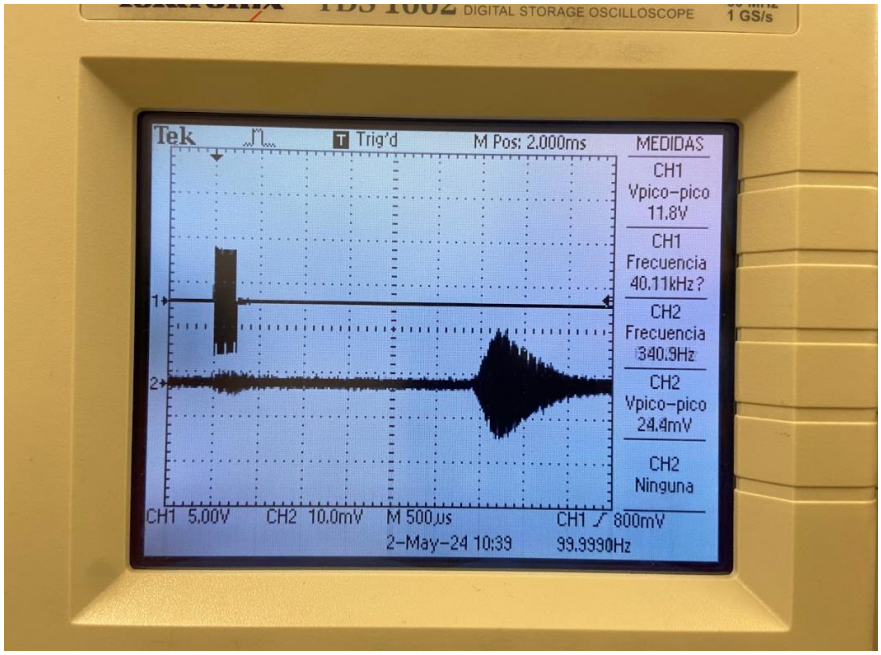
P6 Aitor Pitarch
Pere Sanchez

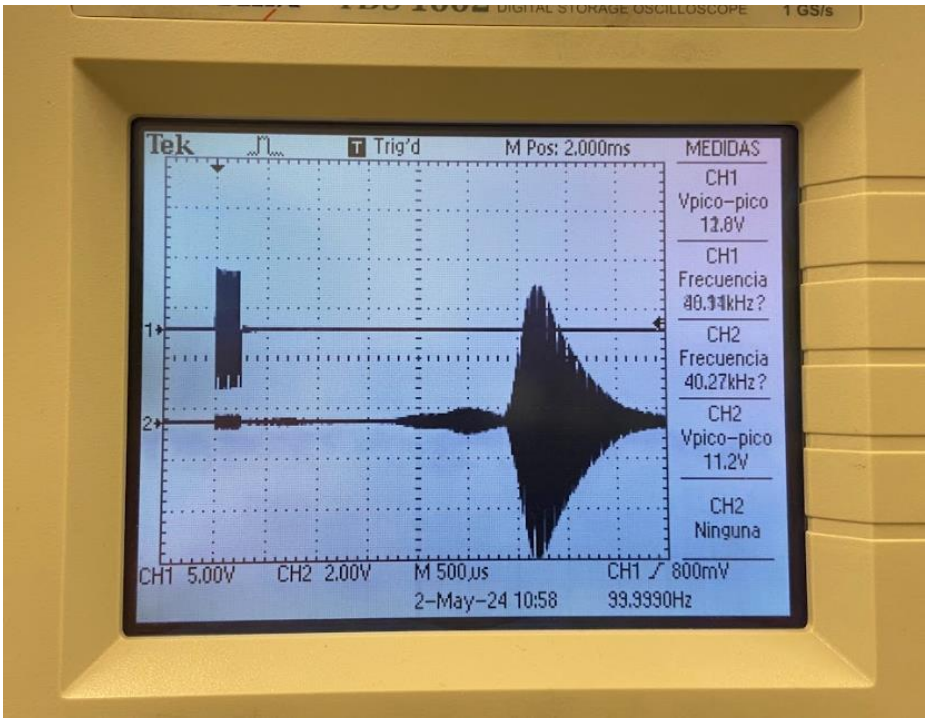
QL 1.1:



QL 1.2:

L'amplitud és de 24,4 mV i el TOF és d'uns 3ms. Coincideix amb l'estudi previ.

QL 1.3:



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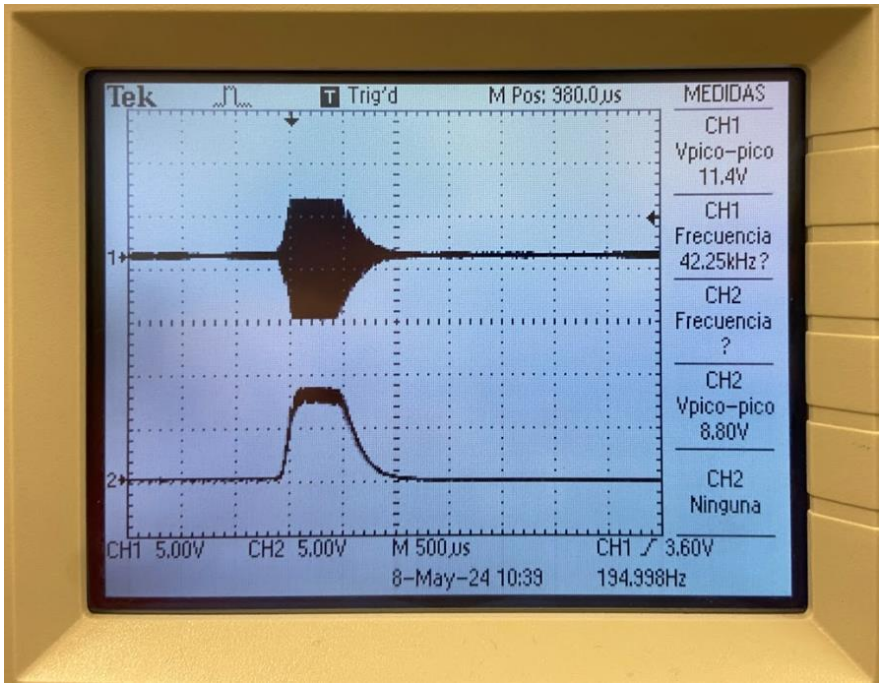
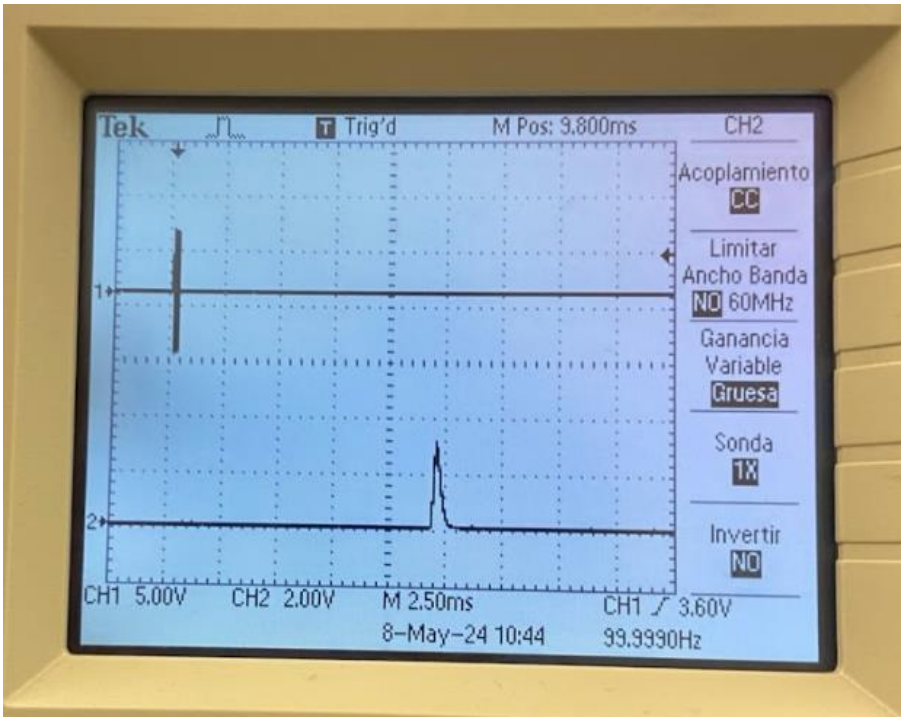
QL 1.4:



QL 1.5:



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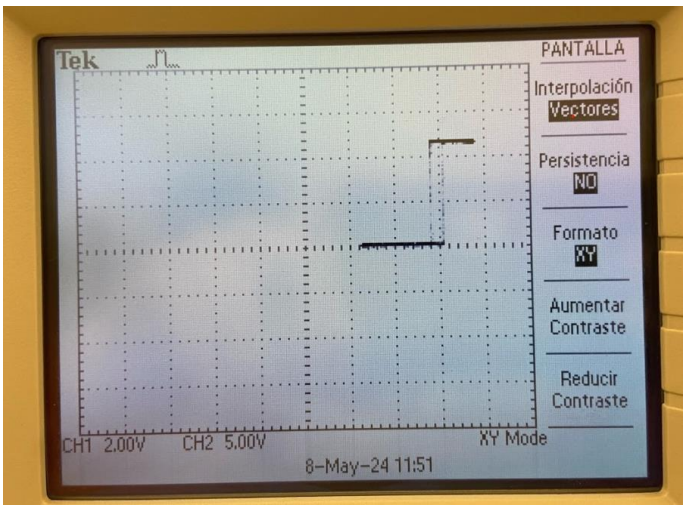
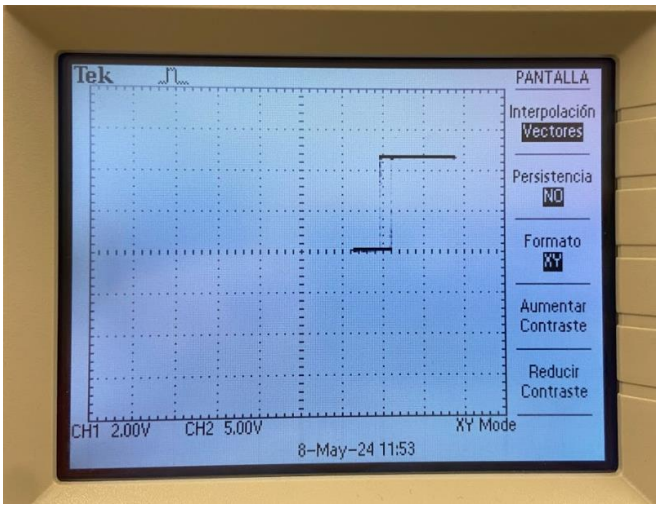
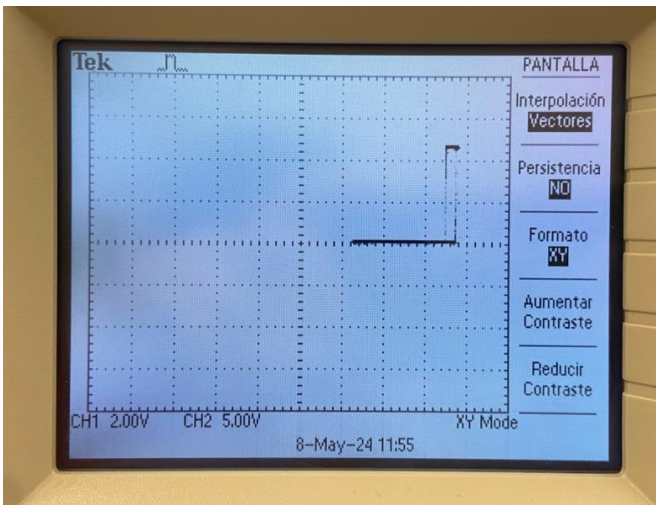
QL 1.6:



QL 1.7:





(potenciòmetre a l'esquerra i a la dreta respectivament)

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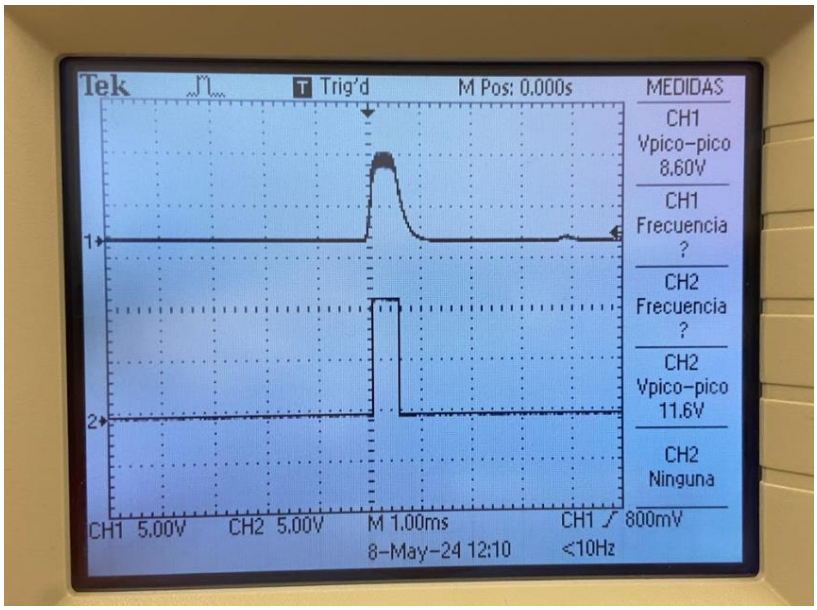
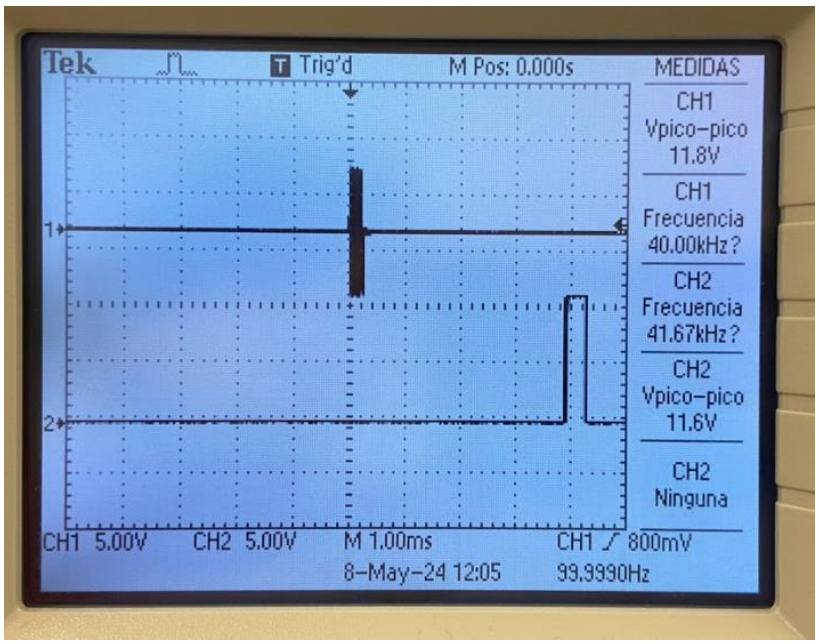
QL 1.8:



QL 1.9:



QL 1.10:

Observem un TOF = 3,6 ms aproximadament.

$$d = \frac{TOF \cdot v}{2}$$

Fent els càlculs ens dona una distància de 0,62 metres.

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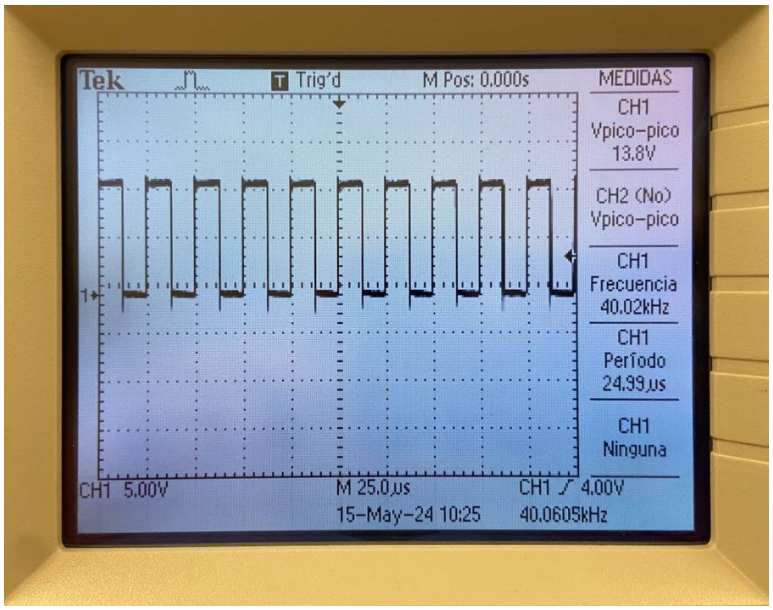
QL 2.1:

fmax: 54,66kHz
fmin: 22,57kHz

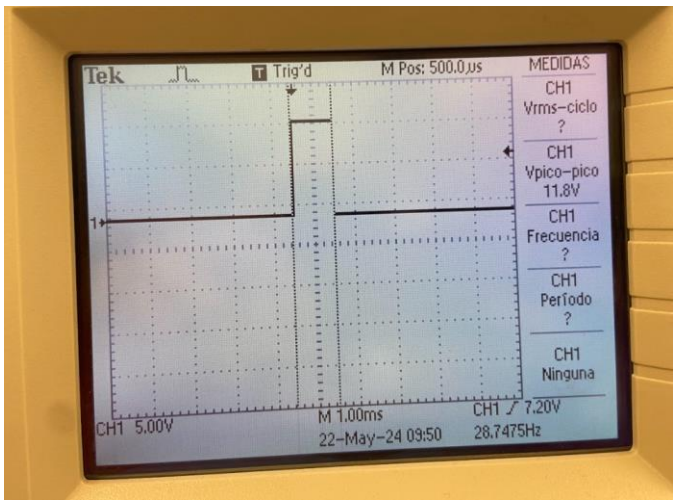
QL 2.2:



valor voltatge = 13,8V
valor temps = 24,99 µs

QL 2.3:
cicle de treball = 50%

QL 2.4:



valor voltatge = 11,8V
durada = 1,040 ms

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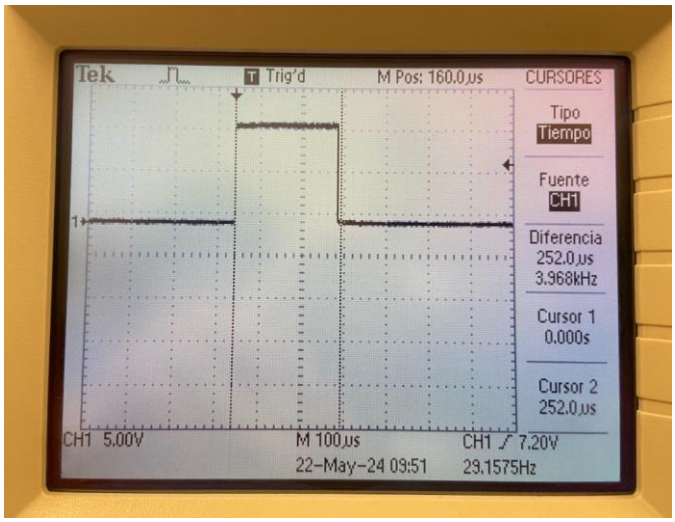
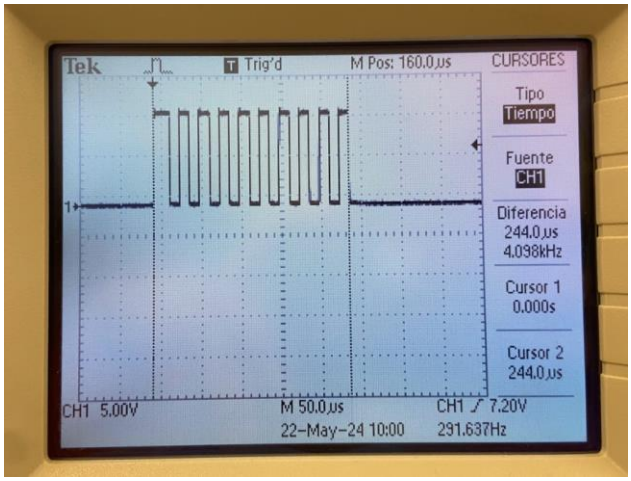
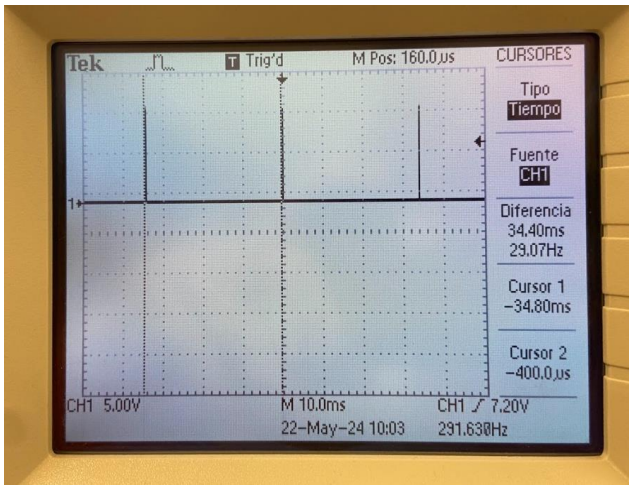
QL 2.5:



durada: 252 µs
freqüència: 29,16 Hz

QL 2.6:





Tenim salves cada 34,4 ms.
Freqüència de repetició de les salves = 29 Hz
Cada salva té 10 cicles, el primer dura 22 us i l'últim 16 us

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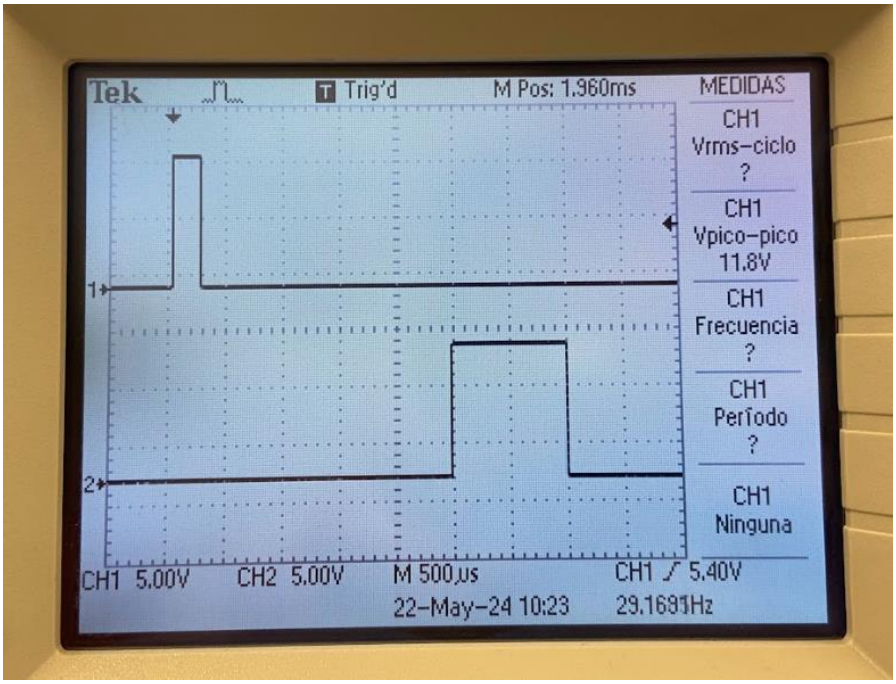
QL 2.7



amplitud = 11,8V
freqüència de la salva = 29,17Hz

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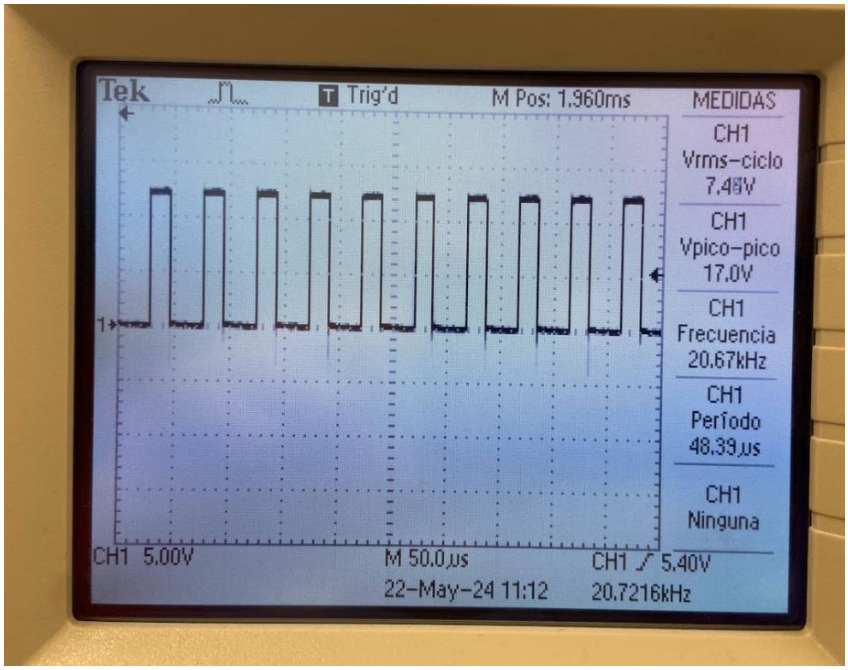
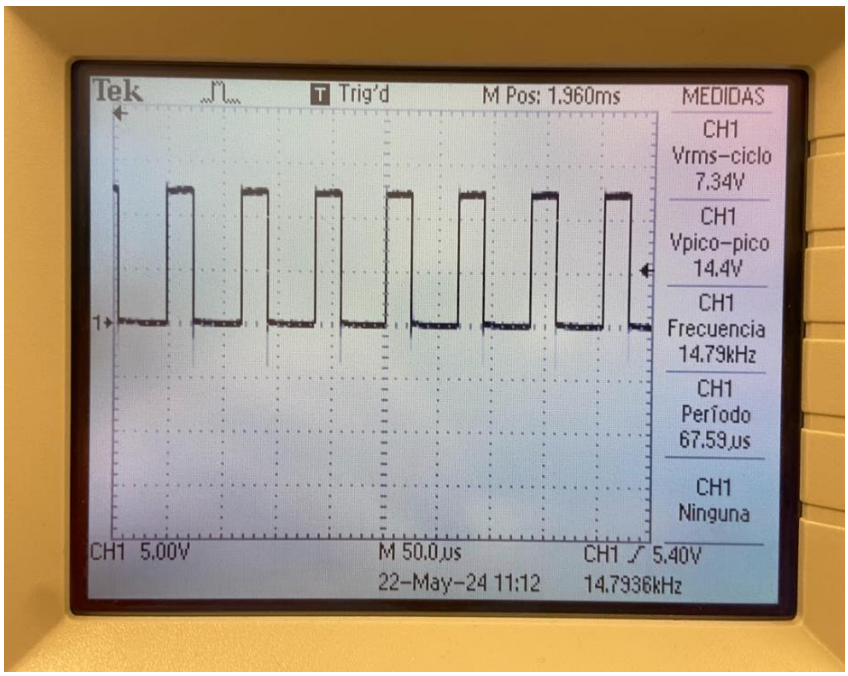
QL 3.1:



Freqüència màxima: 20,72 kHz



Freqüència mínima: 14,79 kHz

QL 3.2:
amplitud = 14,4V

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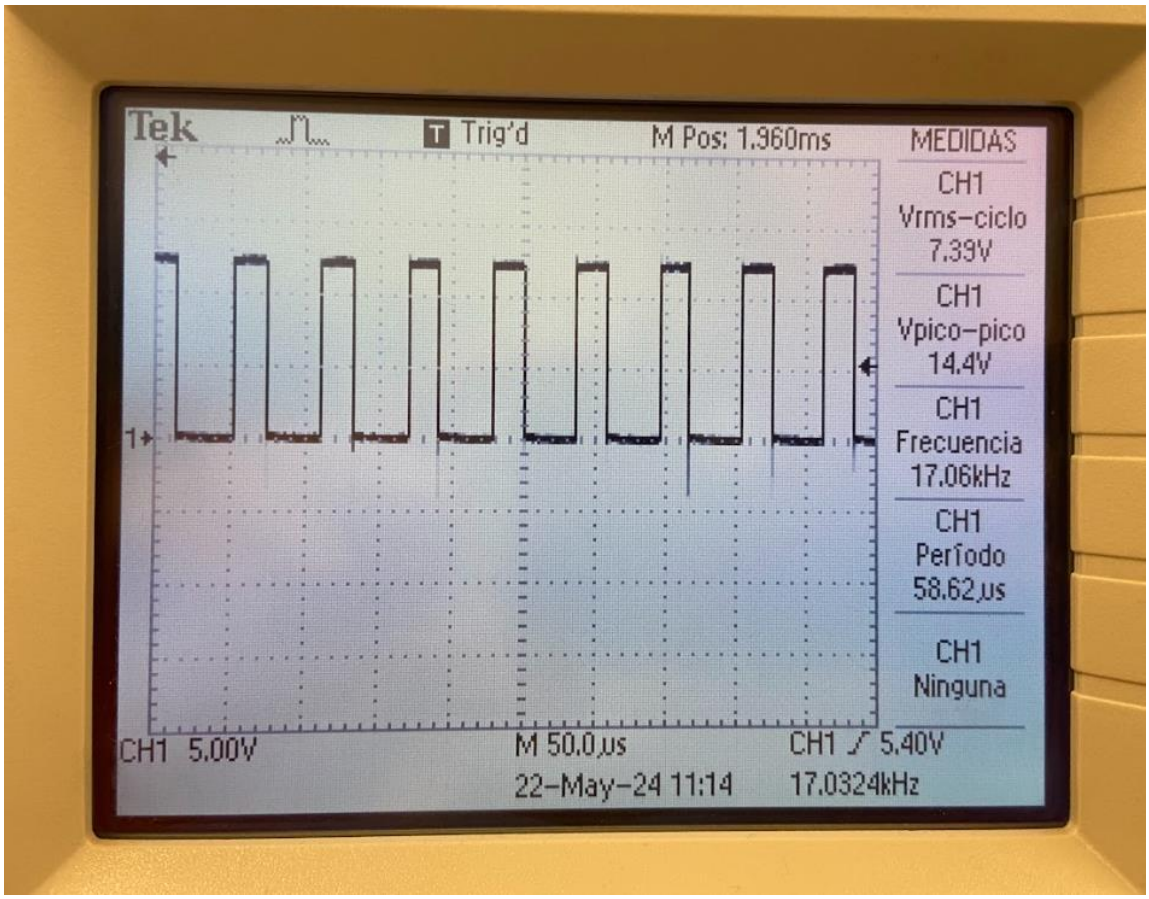

Semiperiode superior = 20us
Semiperiode inferior = 38us

QL 3.3:

Cicle de treball = (20us / (20us + 38us)) * 100 = 34,48 %

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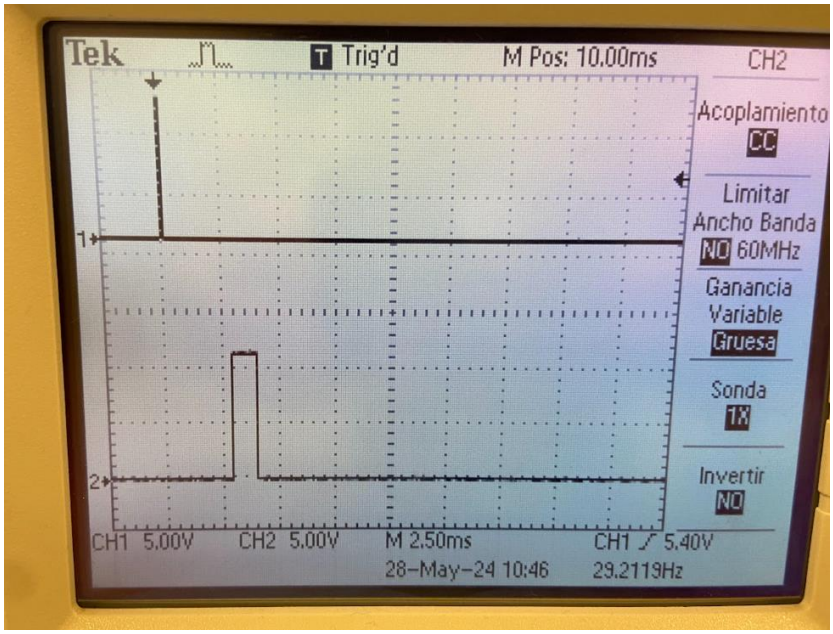
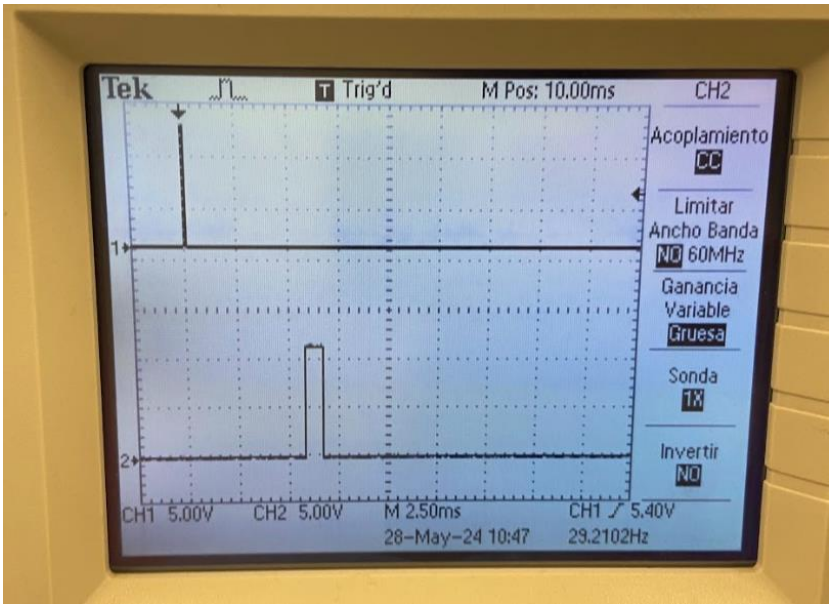
QL 3.4:

A 0,5m:



A1m:



QL 3.5:

L'abast del mesurador es de 266 cm