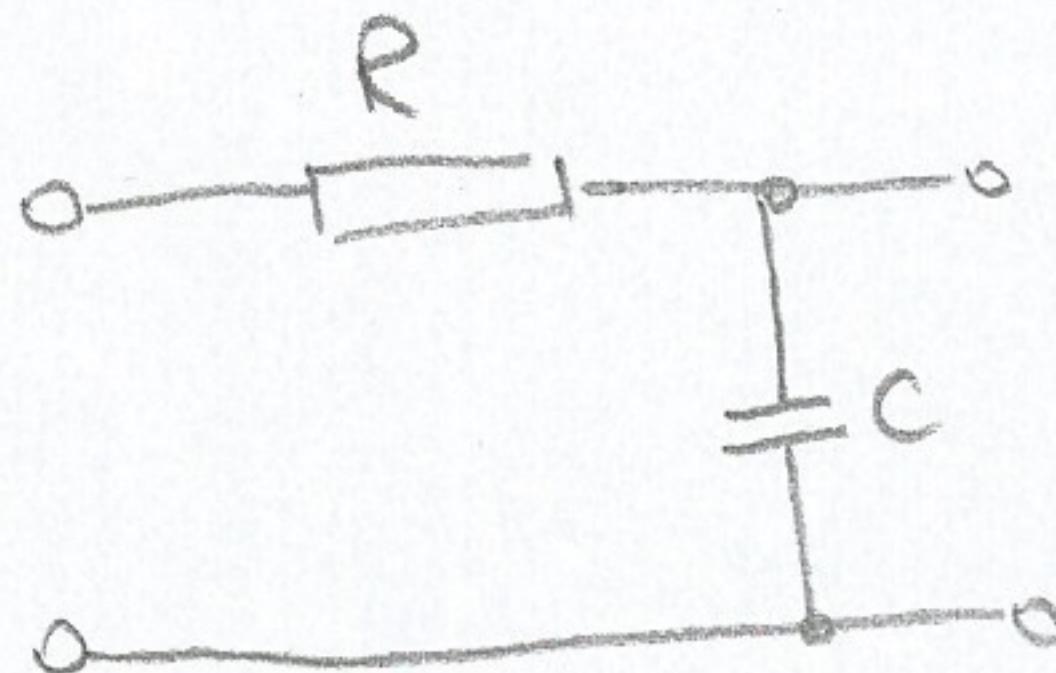


Tiefpass:

Bauteile:

$$4 \times 10\Omega R$$

$$1 \times 4,7\mu F$$



$$f_g = 800 \text{ Hz}$$

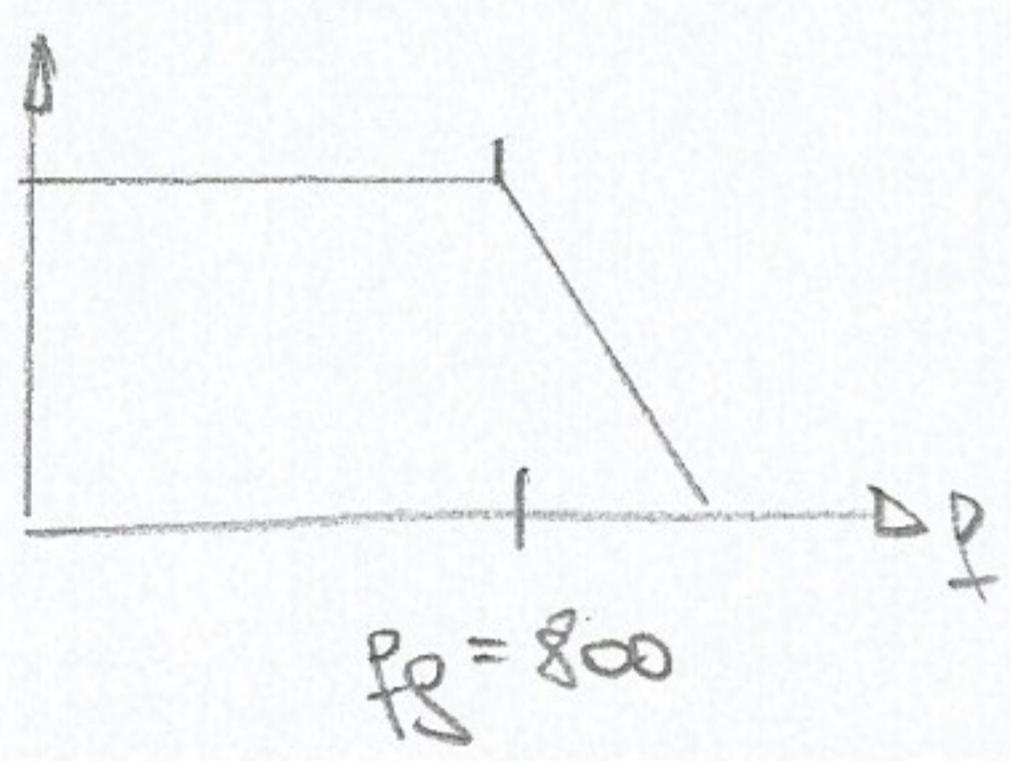
berechnung:

$$f_g = \frac{1}{2\pi RC}$$

$$R = \frac{1}{2\pi f_g C}$$

$$R = \frac{1}{2\pi 800 \cdot 4,7 \cdot 10^{-6}}$$

↙



logarithmisch abgeträgt

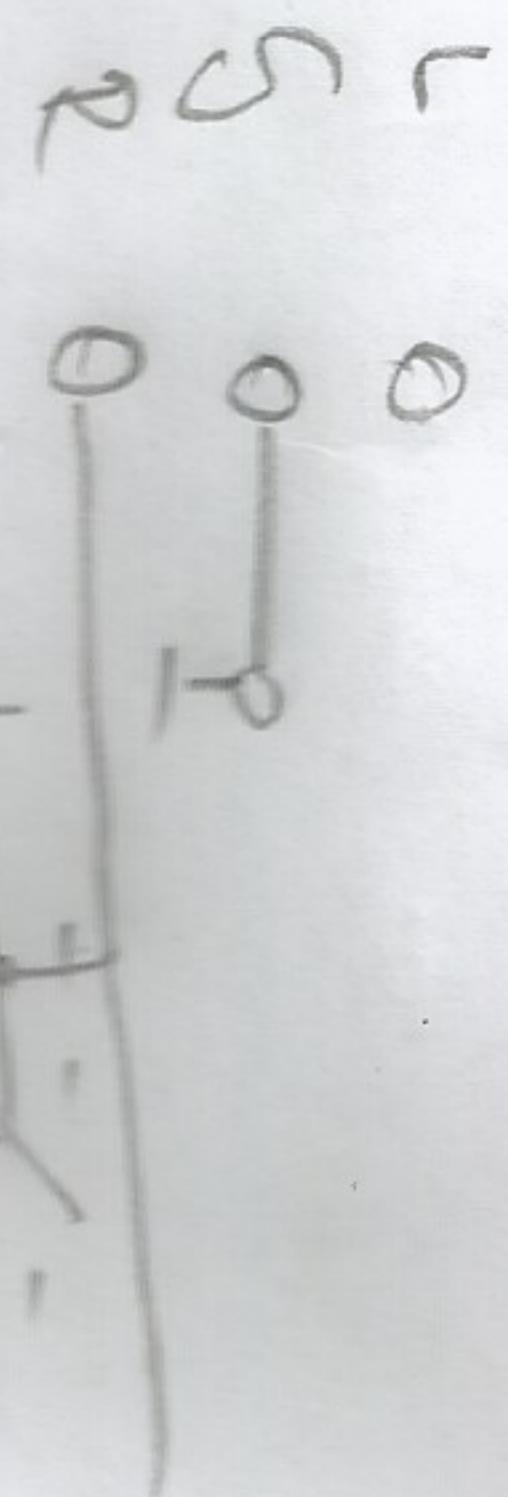
Using FFT

20 Hz - 20 kHz

→ Transistor switching

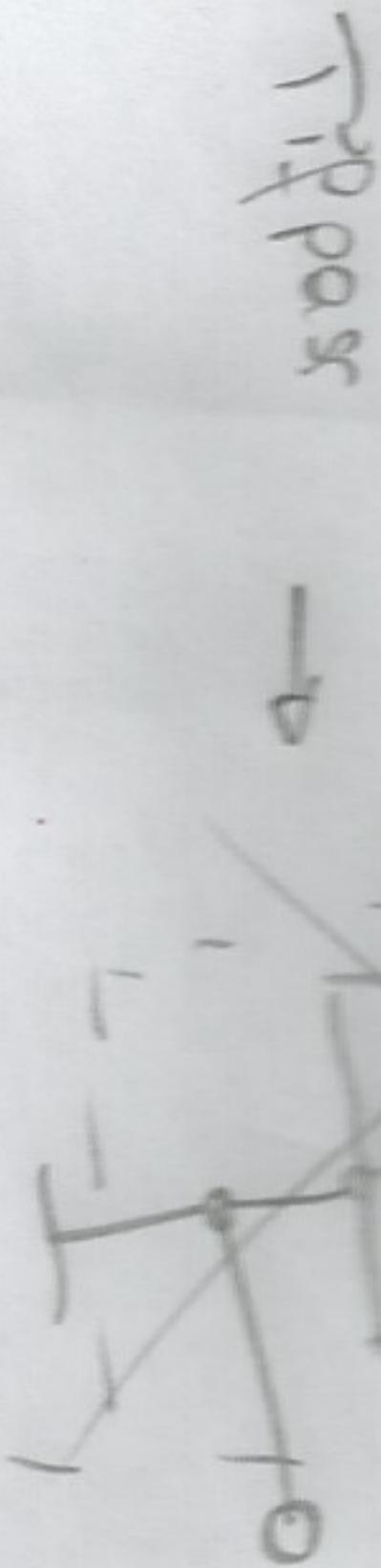
$$e^{en\beta t}$$

Harmonic distortion



euler =
rotating vector
for positive

$$-e^{en\beta t} \cdot g^{(1)} = -e^{-en\beta t} \cdot g^{(1)}$$



n number of samples

$$\rightarrow \frac{1}{D} \sum_{n=1}^N g^{(1)} e^{-en\beta t}$$

→ can be of max

$$+\frac{1}{D} \sum_{n=1}^N g^{(1)} e^{-en\beta t} dt$$

A

time interval

$$T = \frac{\int g^{(1)} e^{-2\pi i \beta t} dt}{n}$$

lock

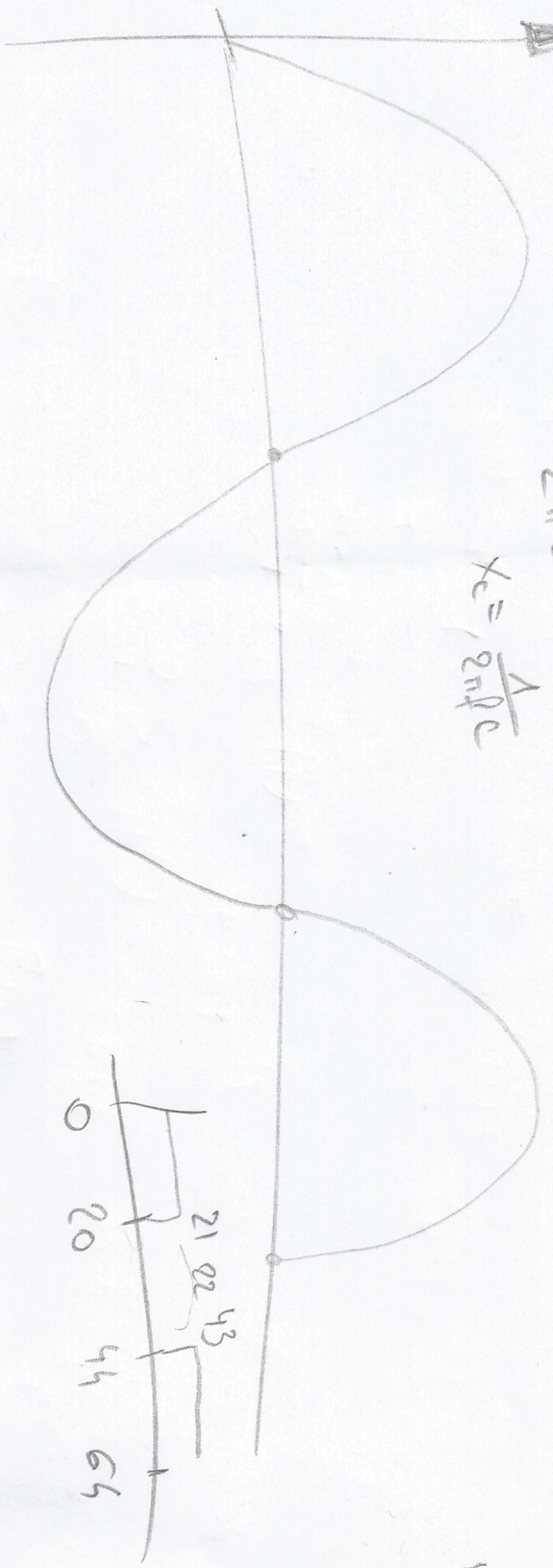
$$v_{\text{Host}} = \frac{f}{T}$$

$$m_{\text{eff}}^2 = \frac{1}{800} - \frac{1}{800}$$

25 Ohm

$$R = \frac{V}{I} = \frac{1000 \cdot 0.1}{3 \times 100 \cdot 2 \cdot 11} = 25 \Omega$$

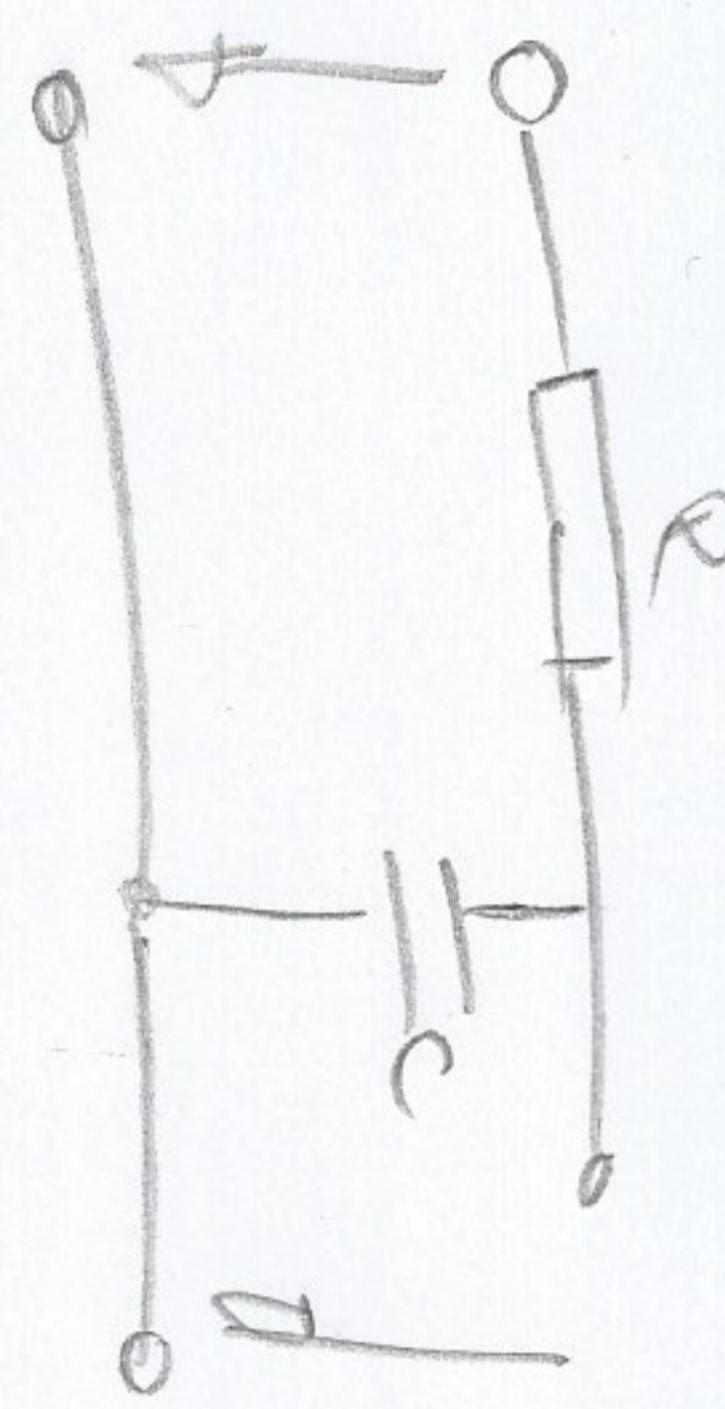
$$X_C = \frac{1}{2\pi f C} = \frac{1}{2\pi \cdot 900 \cdot 41.7 \cdot 10^{-12}}$$



$$Z_L = \frac{V}{I} = \frac{1000}{25} = 40 \Omega$$

$$Z_R = \frac{V}{I} = \frac{1000}{25} = 40 \Omega$$

$$1000 = 25 \cdot 40$$



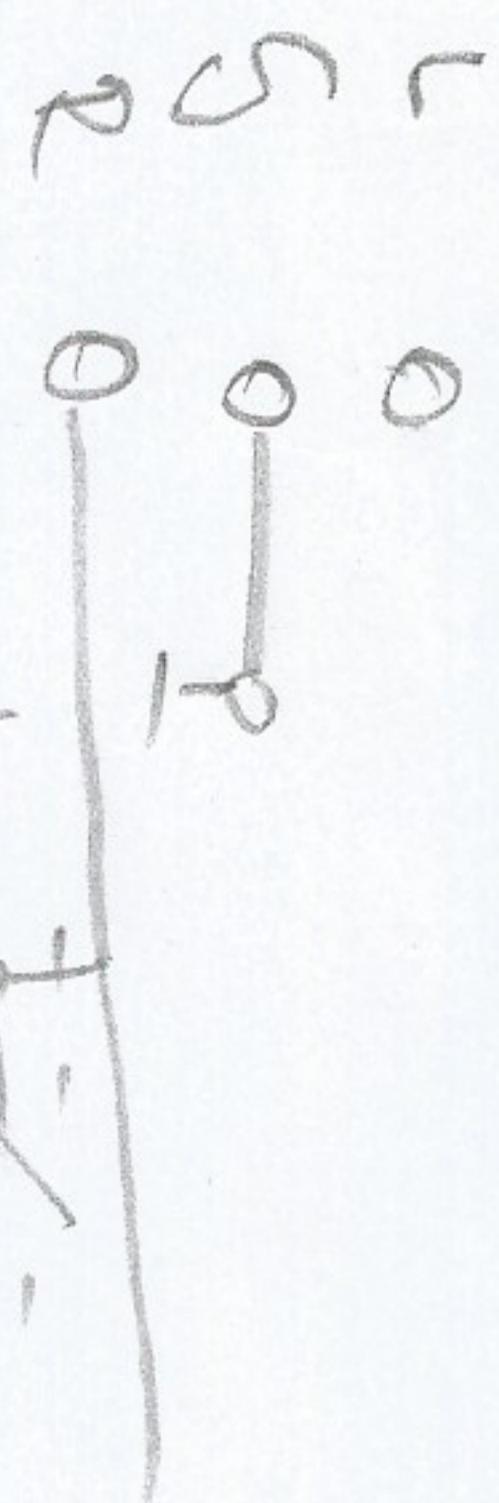
Wachst
auf 10

20Hz - 20kHz

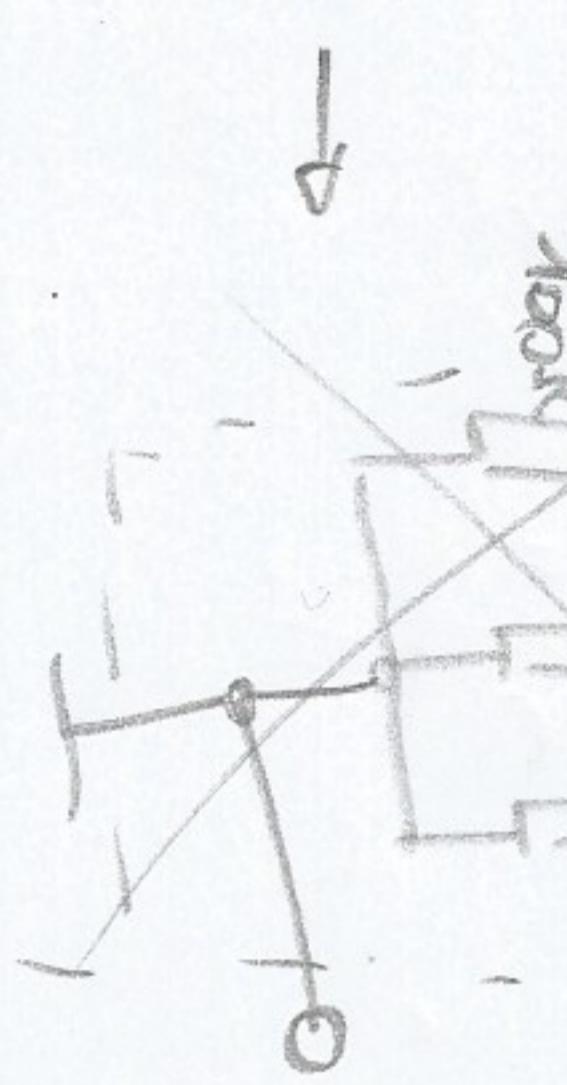
→ transistor schaltung

$$e^{2\pi i f t}$$

// counter clockwise



tripass



euler =
rotating vector
for Fourier

$$= -e^{-2\pi i f t} \cdot g(t)$$

$$\rightarrow \frac{1}{N} \sum_{n=1}^N g(t_n) e^{-2\pi i f t}$$

n number of samples

$$+ 2 \int_{t_1}^{t_2} g(t) e^{-2\pi i f t} dt$$

→ centre of mass

$$+\frac{1}{2} \int_{t_1}^{t_2} g(t) e^{-2\pi i f t} dt$$

A

time interval

$$\frac{1}{T} = \frac{\int g(t) e^{-2\pi i f t} dt}{dt}$$

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$$V_{\text{Haut}} = \frac{1}{T}$$