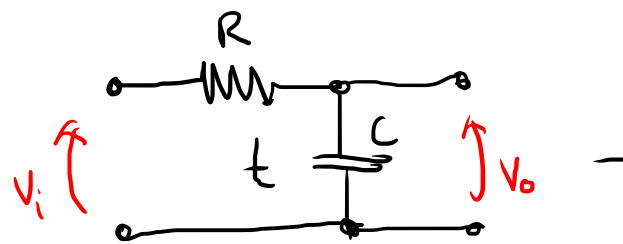
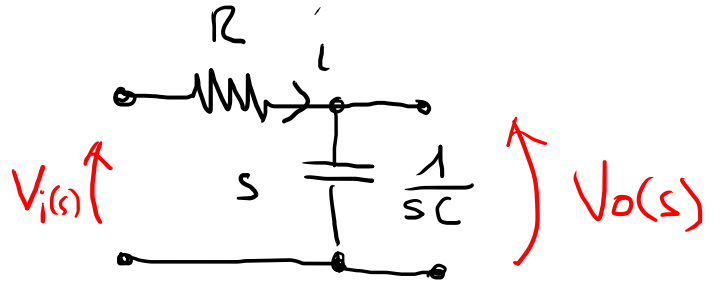


$\mathcal{L}$



P bono

$$V_o = I \cdot \frac{1}{sC} \qquad I = \frac{V_i}{R + \frac{1}{sC}}$$

$$V_o = \underbrace{\frac{V_i}{R + \frac{1}{sC}}}_{I} \cdot \frac{1}{sC} \rightsquigarrow \frac{V_o}{V_i} = T(s) = \frac{1}{sC\left(R + \frac{1}{sC}\right)} = \frac{1}{s + a}$$

T
Fdt

$$= \frac{1}{s \cdot RC + 1} = \frac{1}{RC} \cdot \frac{1}{\left(s + \frac{1}{RC}\right)}$$

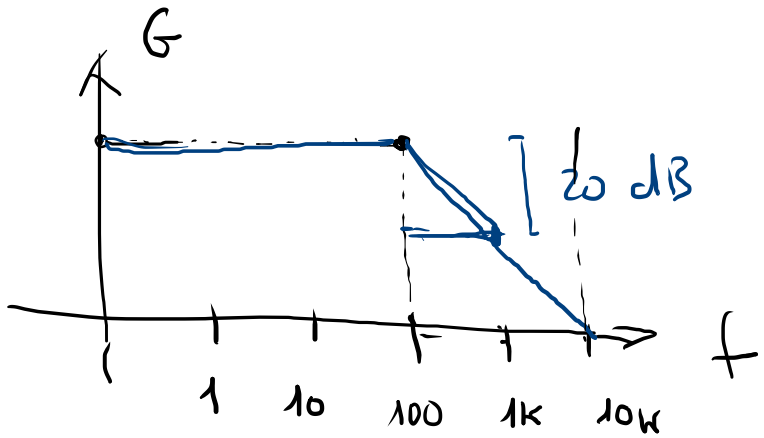
$\frac{N(s)}{D(s)}$

$\underbrace{\quad}_{\omega_0 = \frac{1}{RC} \rightsquigarrow \omega = 2\pi f}$

$$f_c = \frac{\omega_0}{2\pi} = \frac{1}{2\pi} \cdot \frac{1}{RC}$$

$$\frac{N(s)}{D(s)} = \frac{s^3 + 2s^2 + 1s - 10}{s^2 + 10s - 12} = \frac{(s+m)(s+n)(s+p)}{(s+a)(s+b)}$$ ← Zeri ← poli

$$F(s) = \frac{1}{RC} \cdot \frac{1}{s+a}$$



BODE

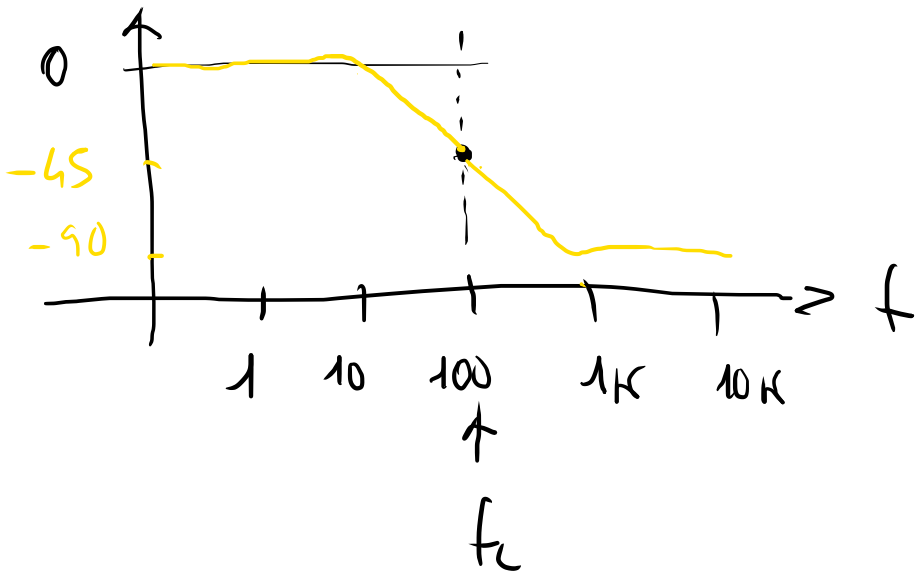
$$L_{dB} = 20 \log_{10} \frac{V_m}{V_{rif}}$$ ← ... 1 mV / 0,775 V

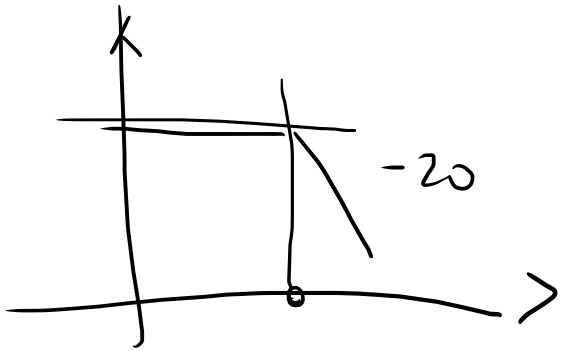
$$\log_{10} \frac{V_m}{V_R} = \frac{L}{20}$$

$10^{\log_{10}} \quad 10^{\frac{L}{20}}$ ↳ $\frac{V_m}{V_{rif}} = 10^{\frac{L}{20}}$

-40
-20

$V_m = V_{rif} \cdot 10^{\frac{L}{20}} = V_{rif}\, 10^{-1} = \frac{V_{rif}}{10}$





$$F(s) = \frac{1}{s+a}$$