

$$X_C = X_L$$

$$X_C = \frac{1}{\omega \cdot C}$$

$$\omega = 2\pi \cdot f$$

$$X_L = \omega \cdot L$$

$$f = \frac{1}{2\pi \cdot \sqrt{L \cdot C}}$$

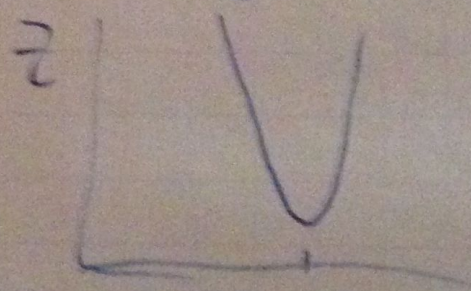
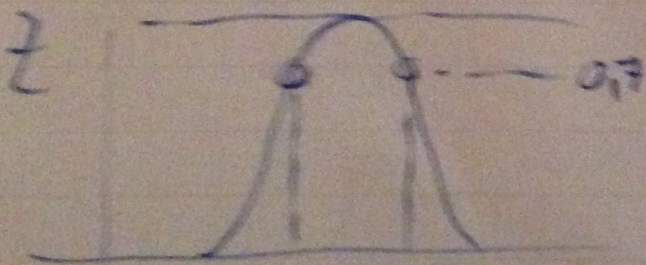
$$L = \frac{1}{\omega^2 \cdot C}$$

$$C = \frac{1}{\omega^2 \cdot L}$$

$$\omega^2 = 2\pi^2 \cdot f^2$$

$$(2 \cdot 3)^2$$

$$2^2 \cdot 3^2$$

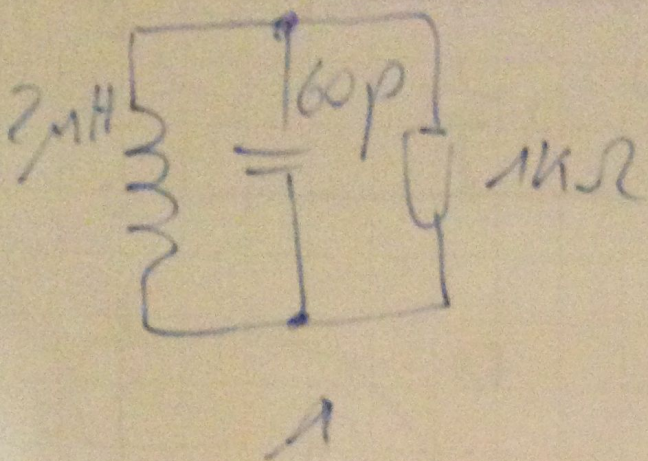


$$Q = \frac{f}{b}$$

$$Q = \frac{X_L}{R_v}$$

$$Z_p = Q \cdot X_L$$

$$Z_s = R_v$$



$$6,28 \cdot \sqrt{2 \cdot 10^{-6} \cdot 60 \cdot 10^{-12}}$$

$$\frac{1}{6,28 \cdot 10,35} \cdot 10^9 =$$

$$f = \frac{1}{2\pi \cdot \sqrt{L \cdot C}}$$

$$6,28 \cdot \sqrt{120} \cdot 10^{-9}$$

$$\frac{1000}{68,8} \cdot 10^8$$

$$\underline{\underline{14,53 \text{ MHz}}}$$

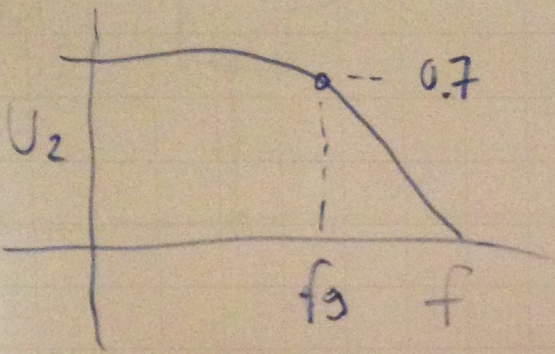
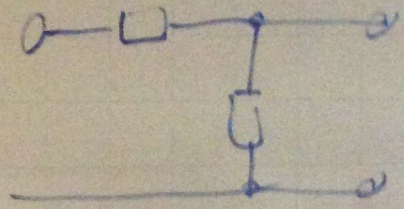
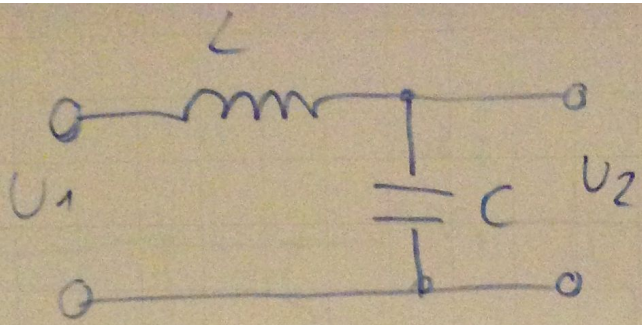
$$X_L = 2\pi \cdot f \cdot L = 6,28 \cdot 14,53 \cdot 10^6 \cdot 2 \cdot 10^{-6} = 182,5 \Omega$$

$$Q = \frac{1 \text{ k}\Omega}{182,5} = \underline{\underline{5,5}}$$

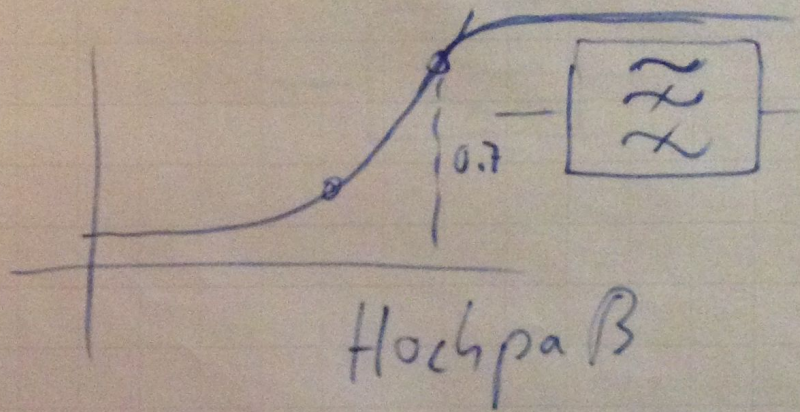
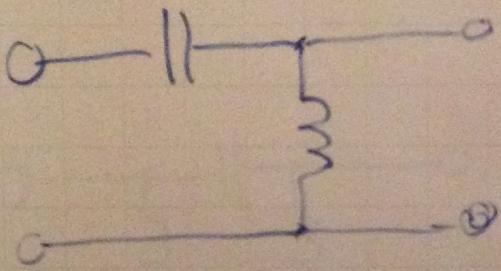
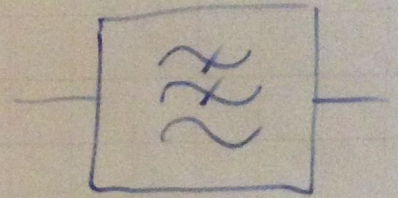
$$b = \frac{f_{\text{res}}}{Q} = \frac{14,53}{5,5} = 2,64 \text{ MHz}$$

$$R_{\text{up}} = Q \cdot X_L$$

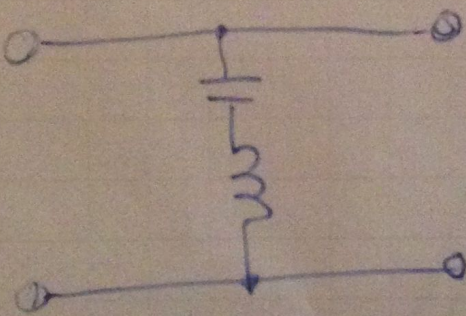
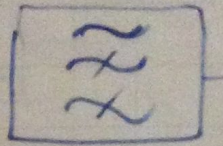
$$Q = \frac{f_{\text{res}}}{b}$$



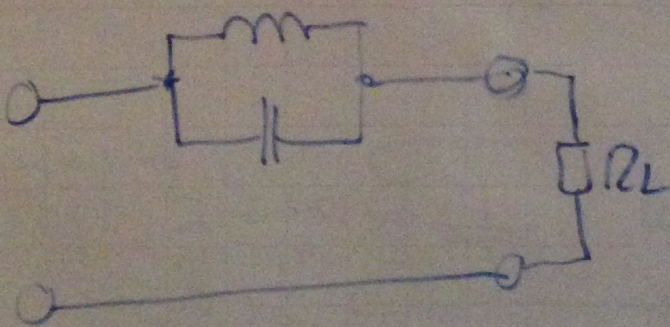
Tiefpaß



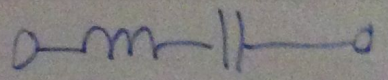
Hochpaß



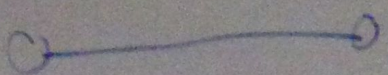
Saugkreis

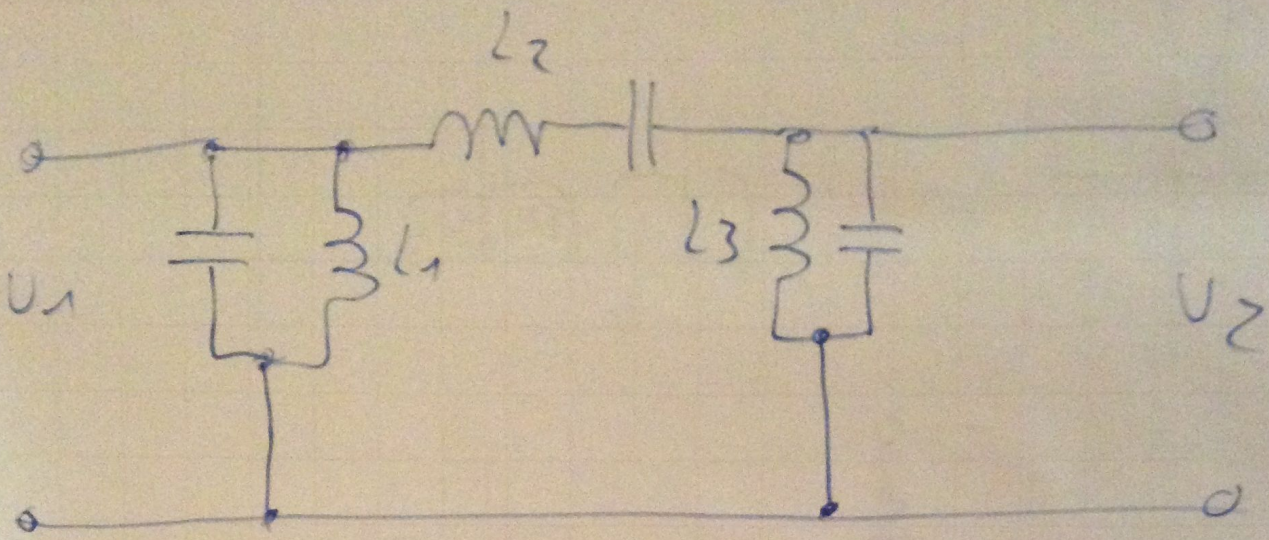


Sperrkreis



Leitkreis





Bandpass

