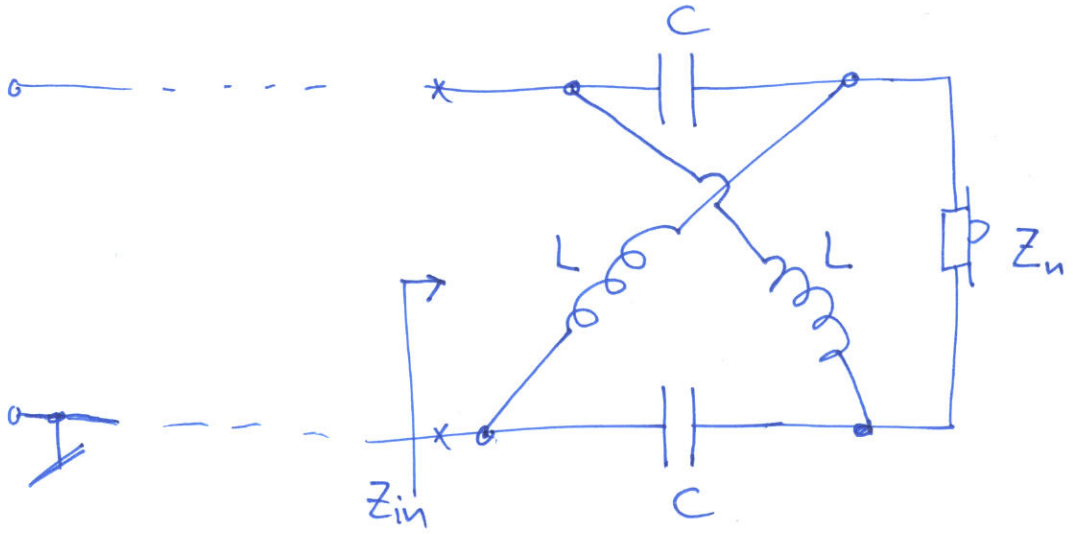
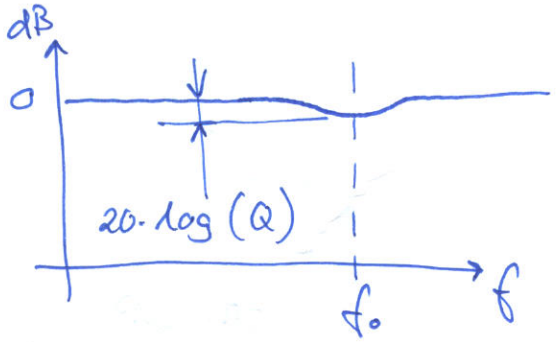
6/1-2017
US

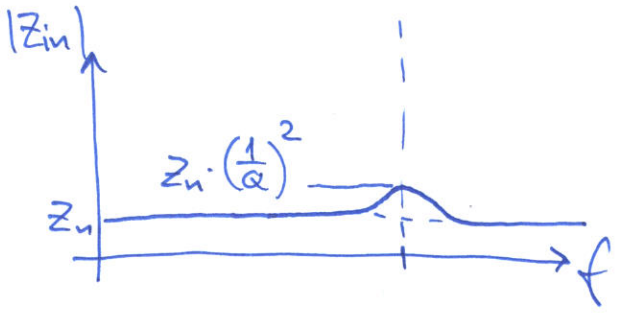
# All-pass filter
(delay network)

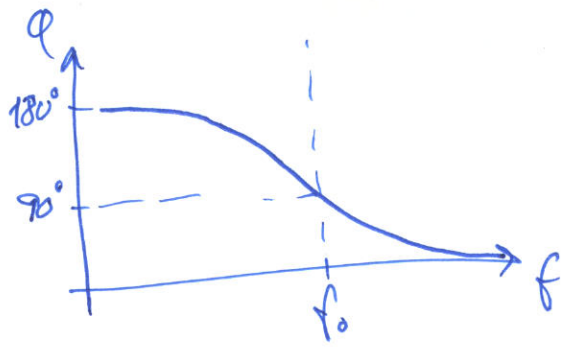



$$\omega_0^2 = \frac{1}{LC} \Rightarrow f_0 = \frac{1}{2\pi\sqrt{L \cdot C}}$$




$$Q = \omega_0 \cdot C \cdot Z_n = 2\pi f_0 \cdot C \cdot Z_n$$




Gruppeløbetid v. $f_0$ : $t_{gd} = \frac{Q}{\omega_0} = \frac{Q}{2\pi f_0} = Z_n \cdot C$

Ved at bytte om på L og C (fysisk) fås samme frekvensvespons, Q, $t_{gd}$ og $Z_{in}$, men fasen (φ) bliver nu :

SAMME formler gælder !