Mag @ w_c is $\approx -3\,db = .707$

as for range 1.8 KHz to 2 KHz attenuation must be no more than $-0.3\,dB$. Thus, cut-off frequencies must be selected to fit this range.

Choose cut-off of 1.2 KHz & 2.6 KHz.

$w_{c1} = 1.2\text{ KHz}$; $w_{c2} = 2.6\text{ KHz}$

$w_0 = 1.9 \cdot 2\pi \cdot 10^3 \frac{rad}{s}$

$$w_0 = \sqrt{\frac{1}{LC}} \Rightarrow LC = \frac{1}{w_0^2} = 7.017\ nHF$$

$$LC = 277 \cdot 10^{-9} \Rightarrow L = \frac{7.017 \cdot 10^{-9}}{C}$$ Plot and select good values for both

select $C = 3.5\ \mu F \Rightarrow L = 2.01\ mH$

$$w_c = \pm \frac{R}{2L} + \sqrt{\left(\frac{R}{2L}\right)^2 + \left(\frac{1}{LC}\right)}$$

$\Rightarrow R \approx 22.74\ \Omega$ for w_{c1}

$R \approx 15.34\ \Omega$ for w_{c2}

Best R found was 9.4

Thus R will likely be somewhere in that range.

$$2.77 \cdot 10^{-7} = 277 \cdot 10^{-9}$$

$\downarrow R \Rightarrow$ implies tighter corner frequencies

After first iteration,