

Experiment Summary

Filter 1

Filter Type: BP

$$Z(s)\text{: } \left(\infty, \infty, \infty, \infty, R_4, \frac{LLs}{CLLLs^2+1}\right)$$

$$H(s)\text{: } \frac{LLs(R_4gm-1)}{CLLL R_4s^2+LLs+R_4}$$

$$\mathbf{Q}\text{: } CLR_4\sqrt{\frac{1}{CLLL}}$$

$$\omega_0\text{: } \sqrt{\frac{1}{CLLL}}$$

$$\mathbf{Bandwidth}\text{: } \frac{1}{CLR_4}$$

Filter 2

Filter Type: BP

$$Z(s)\text{: } \left(\infty, \infty, \infty, \infty, R_4, \frac{1}{CLs+\frac{1}{RL}+\frac{1}{LLs}}\right)$$

$$H(s)\text{: } \frac{LLRLs(R_4gm-1)}{CLLL R_4RLs^2+LLR_4s+LLRLs+R_4RL}$$

$$\mathbf{Q}\text{: } \frac{CLR_4RL\sqrt{\frac{1}{CLLL}}}{R_4+RL}$$

$$\omega_0\text{: } \sqrt{\frac{1}{CLLL}}$$

$$\mathbf{Bandwidth}\text{: } \frac{R_4+RL}{CLR_4RL}$$