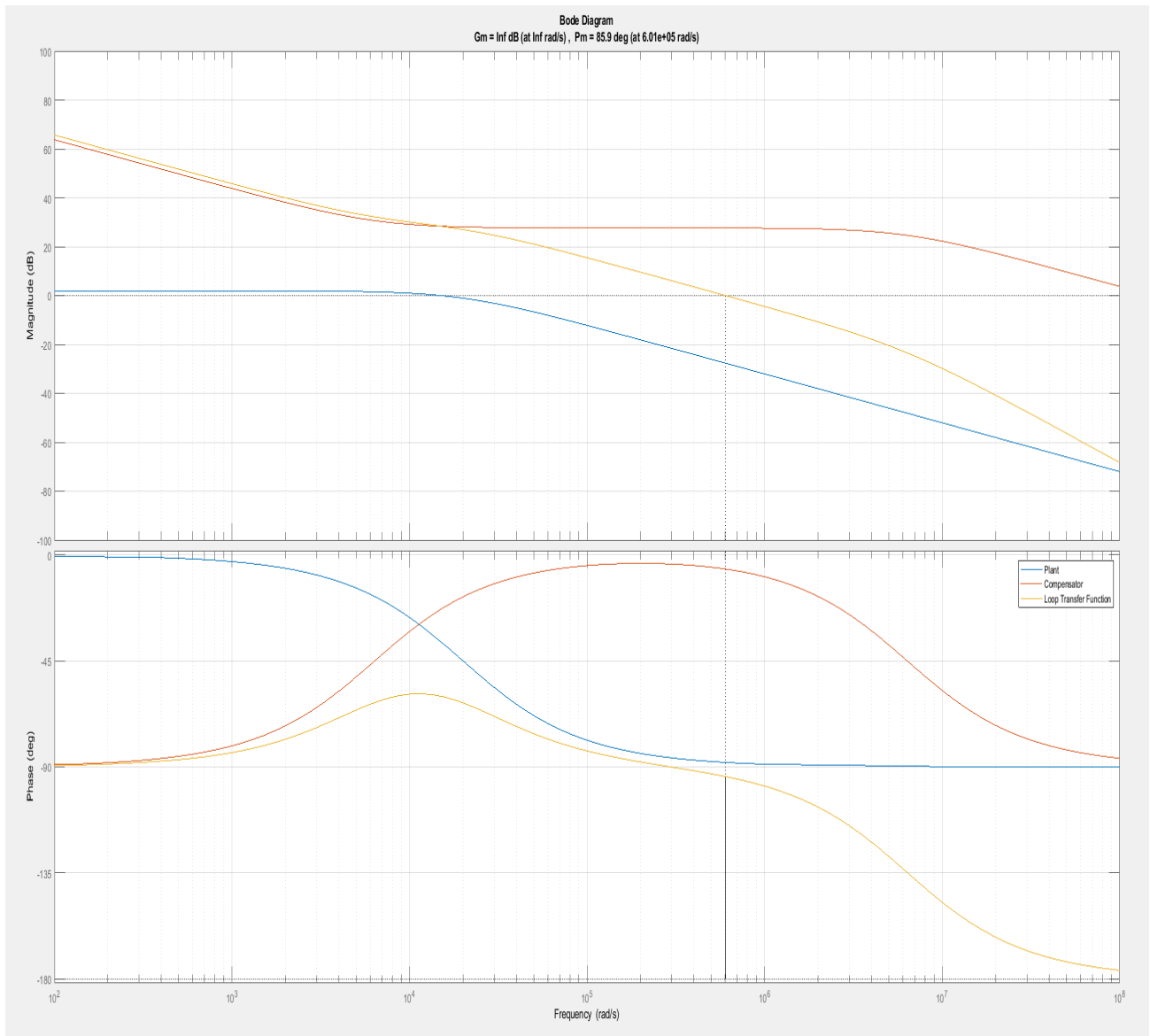


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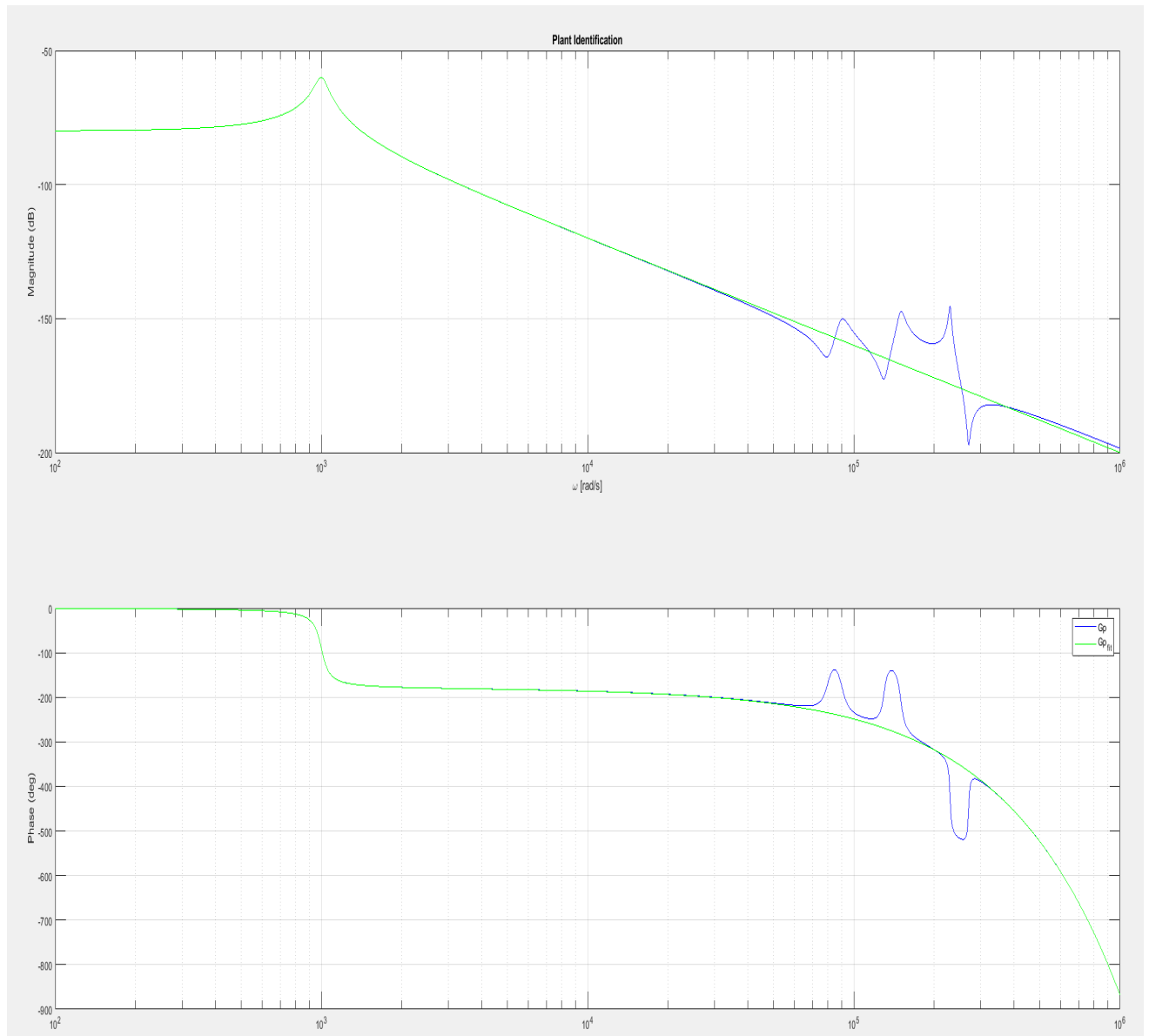
Everett Sheu, 704796167  
Gajan Nagaraj, 904937784

e)

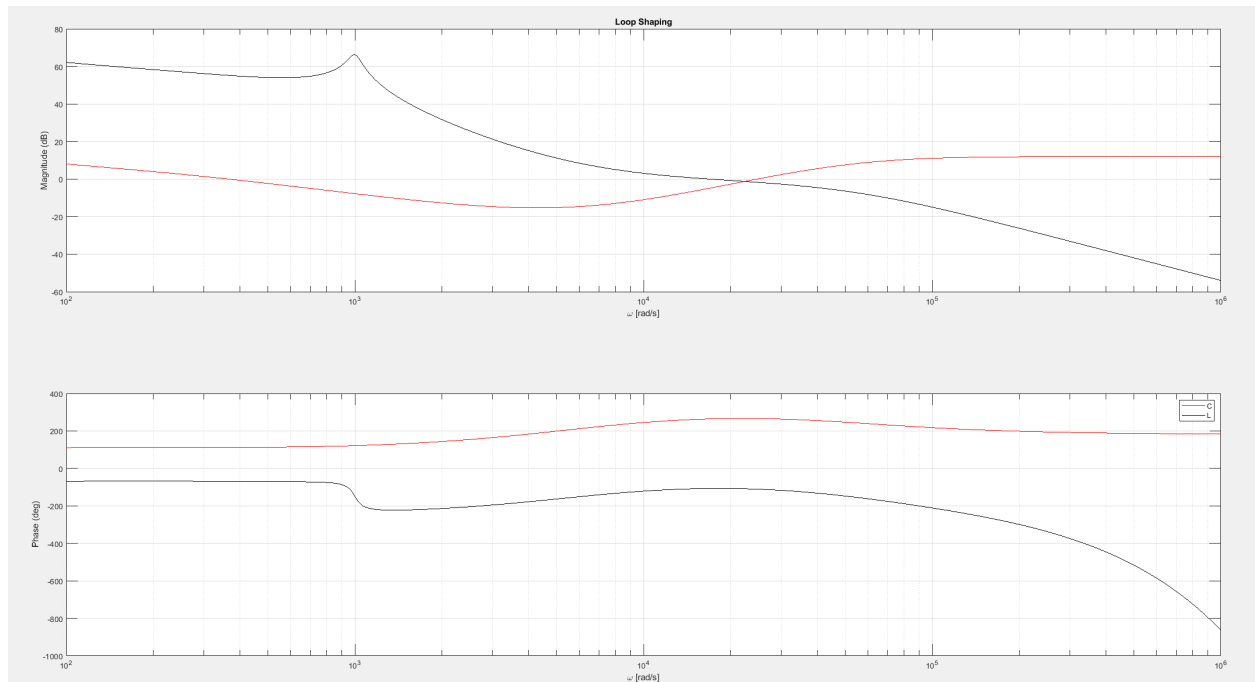


**Figure 1:** Bode plots of Plant, Compensator, and Loop Transfer Function

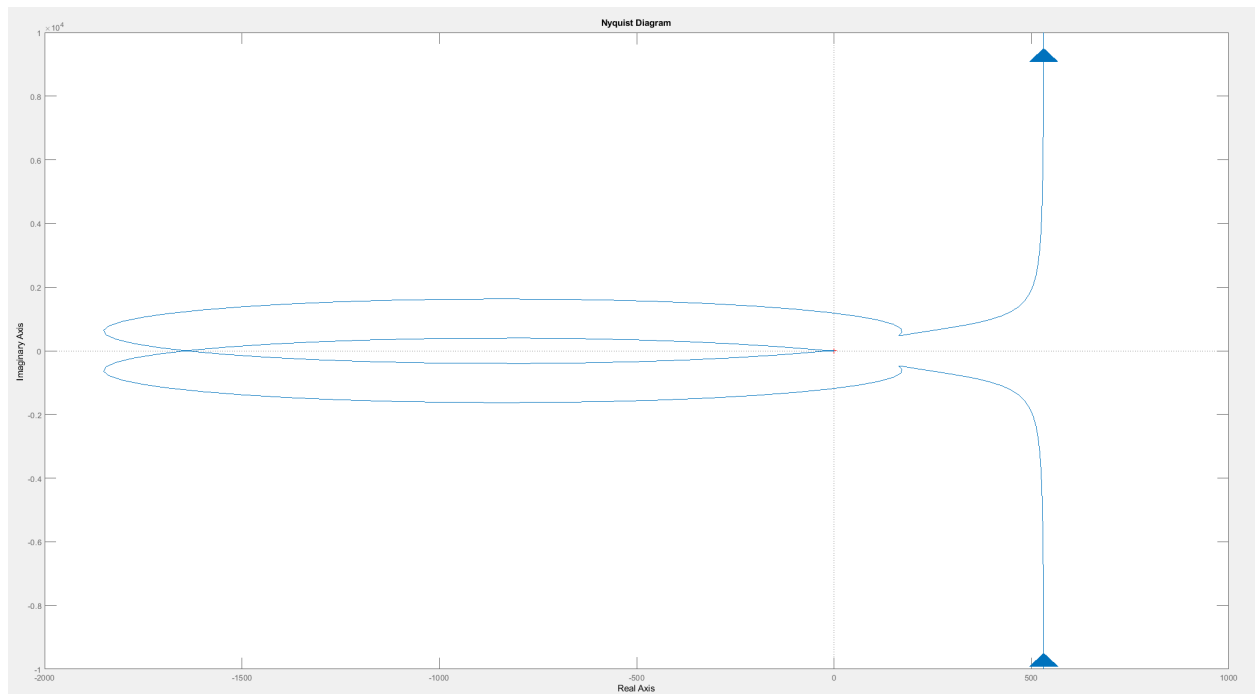
b)



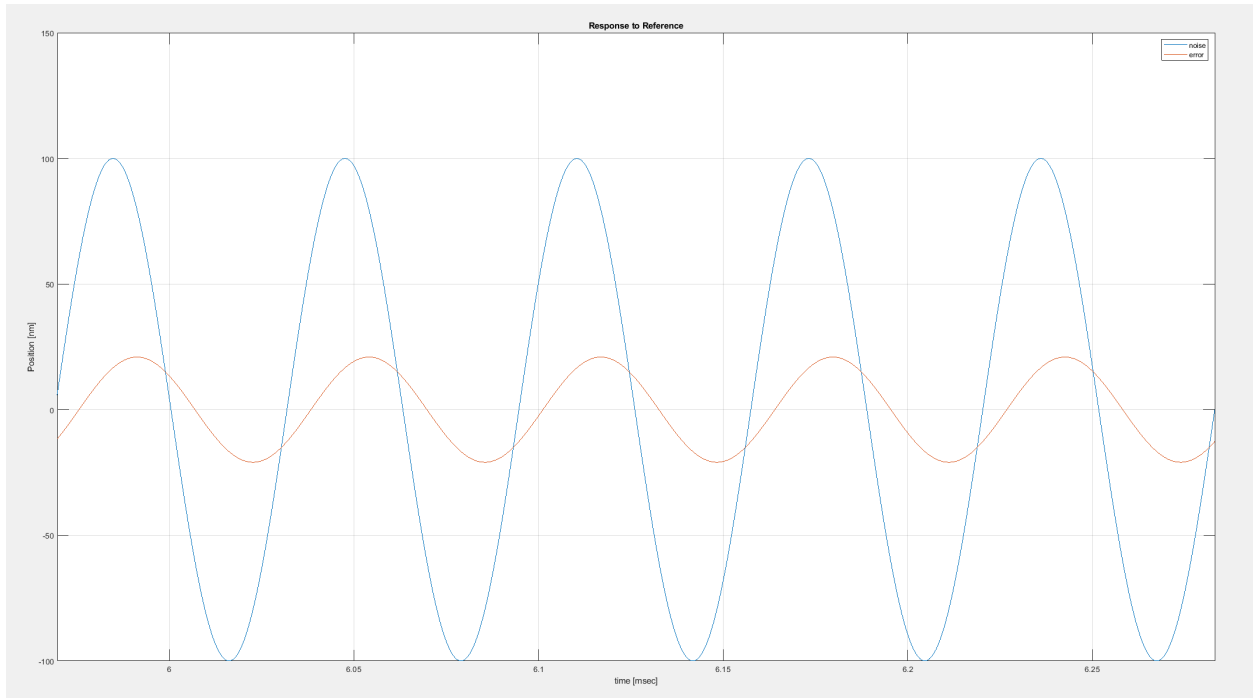
**Figure 2:** Comparison of actual  $G_p$  with the estimation we calculated



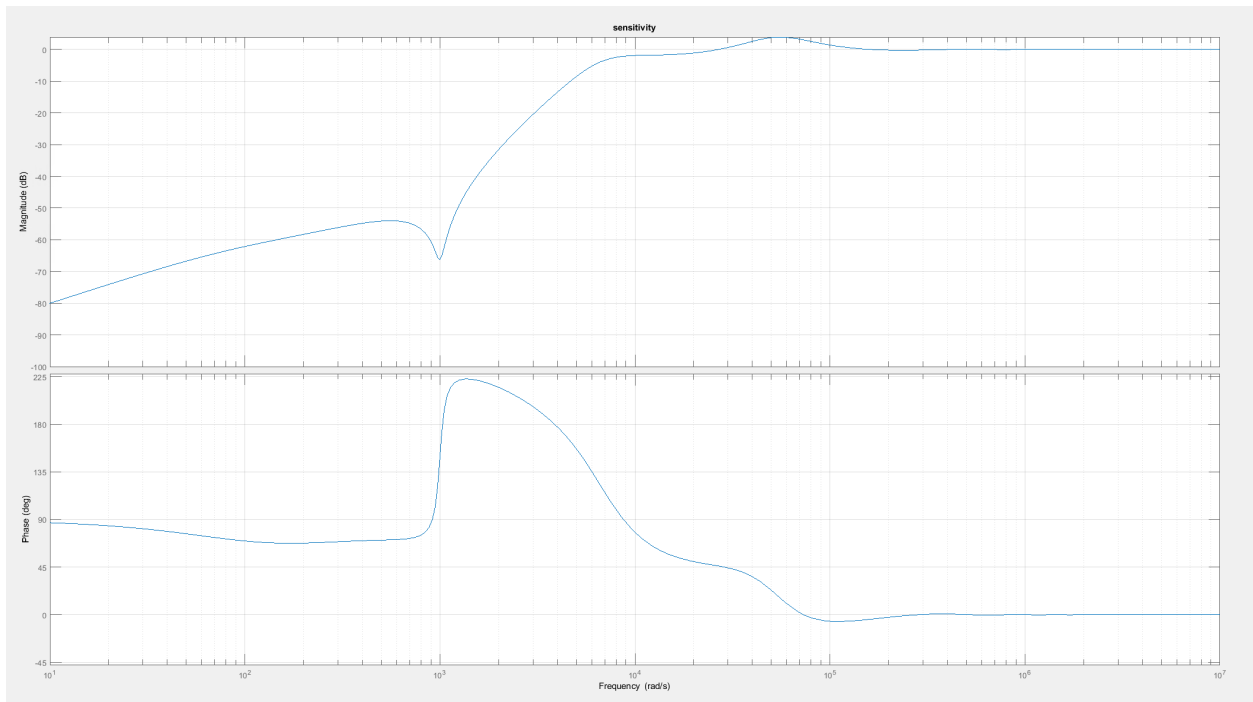
**Figure 3: Bode plots of the loop shaping**



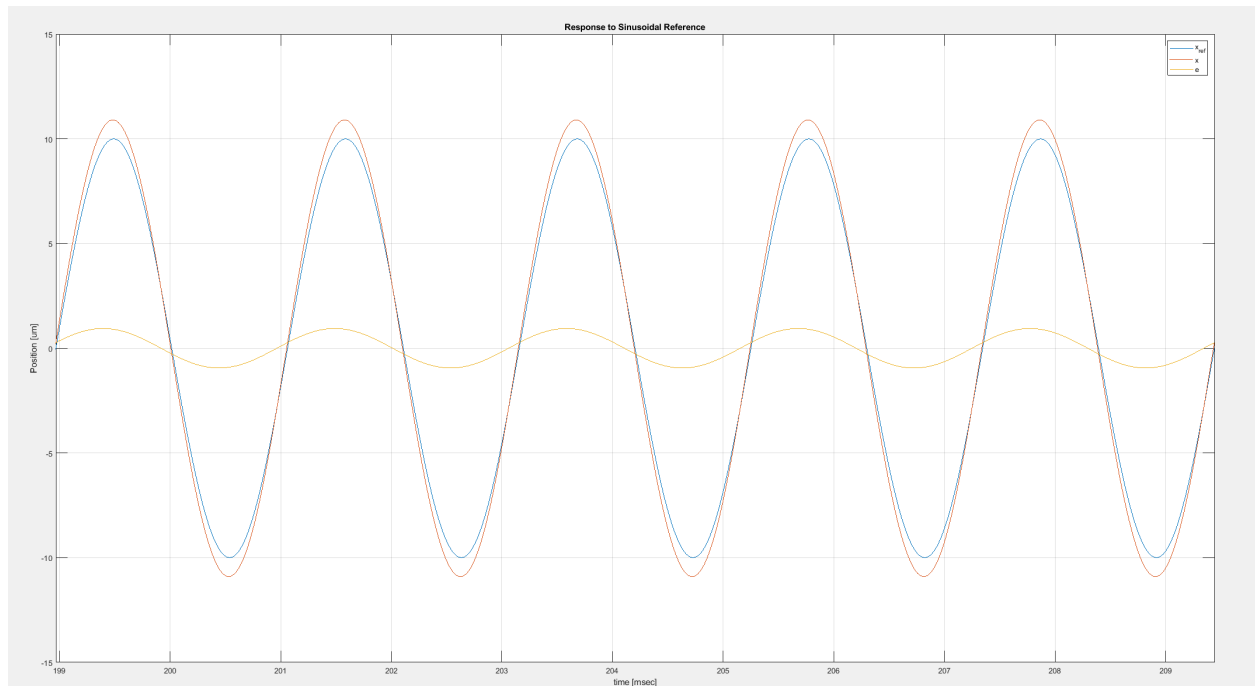
**Figure 4: Nyquist Diagram of Loop**



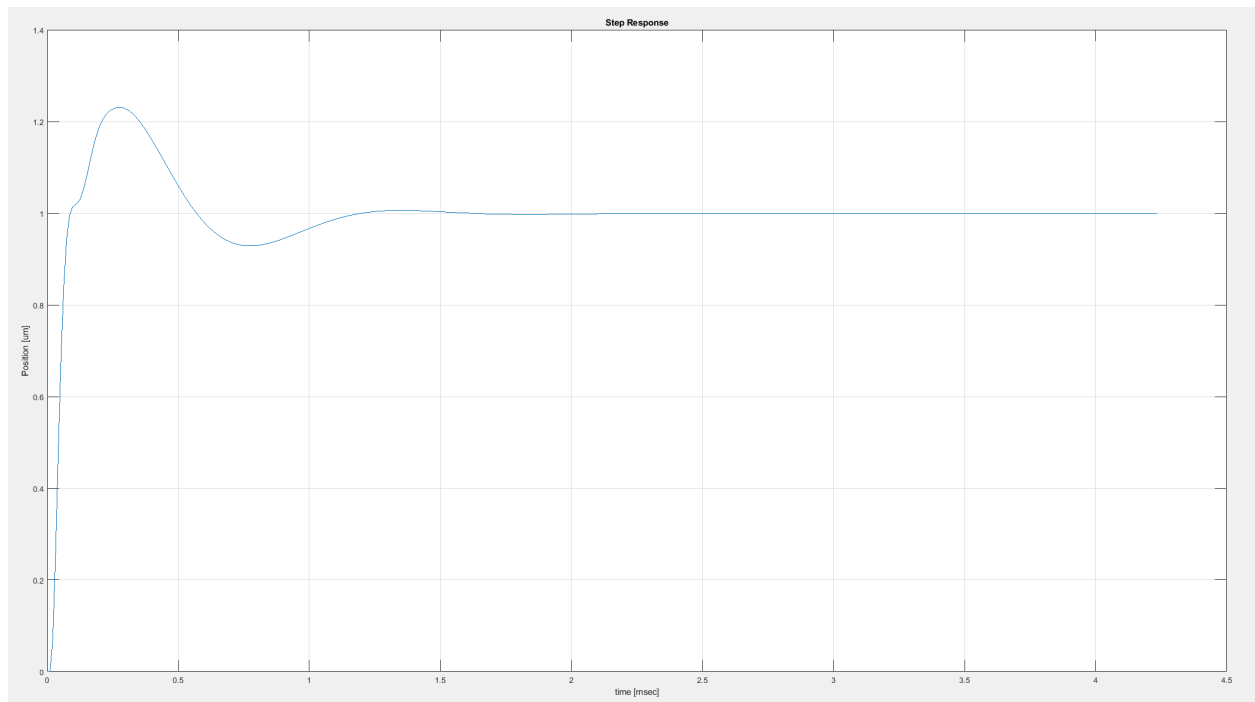
**Figure 5: Response to Reference**



**Figure 6: Sensitivity**



**Figure 7: Sinusoidal Response**



**Figure 3: Step Response**