$$f_0 := 6.22 \text{kHz}$$
 $C1 := 0.015 \mu\text{F}$

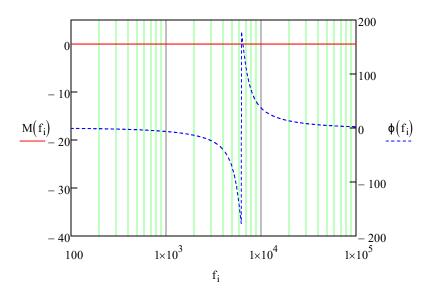
$$\omega_0 := 2 \cdot \pi \cdot f_0$$
 $j := \sqrt{-1}$ $Q := 3$ $K := 1$

$$\mathbb{R} := \frac{1}{2 \cdot \pi \cdot f_0 \cdot C1}$$

$$T(f) := K \cdot \frac{\left(j \cdot \frac{f}{f_0}\right)^2 - \frac{1}{Q} \cdot j \cdot \frac{f}{f_0} + 1}{\left(j \cdot \frac{f}{f_0}\right)^2 + \frac{1}{Q} \cdot j \cdot \frac{f}{f_0} + 1}$$

$$f_{\text{start}} \coloneqq 100 \text{Hz} \qquad f_{\text{stop}} \coloneqq 100 \text{kHz} \qquad \underset{\text{W}}{N} \coloneqq 1024 \quad i \coloneqq 0.. \, N-1 \quad f_i \coloneqq f_{\text{start}} \cdot \left(\frac{f_{\text{stop}}}{f_{\text{start}}}\right)^{\frac{1}{N-1}}$$

$$M(f) \coloneqq 20 \cdot \log(\left|T(f)\right|) \, \phi(f) \coloneqq \frac{180}{\pi} \cdot \arg(T(f))$$





 $\label{lem:charge_prop} $$ \Client\C\subseted 000\Documents\Y3S1\ECE3043\meimage.jpg" $$$