

$\omega := 10, 15 \dots 100000$

$$\text{tfunction}(\omega, H_{PB}, k_1, k_2, k_3, \omega_0, Q) := H_{PB} \cdot \frac{k_1 \cdot (j \cdot \omega)^2 + k_2 \cdot \left(\frac{\omega_0}{Q} \right) \cdot j \cdot \omega + k_3 \cdot (\omega_0^2)}{(j \cdot \omega)^2 + \left(\frac{\omega_0}{Q} \right) \cdot j \cdot \omega + (\omega_0^2)}$$

$$\text{dBMagTa}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 0.1, 0, 1, 0, 1000, .577)|)$$

$$\text{dBMagTb}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 1, 1, 0, 1, 1000, 0.707)|)$$

$$\text{dBMagTc}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 0.2, 1, -1, 1, 2000, 0.5)|)$$

$$\text{dBMagTd}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 1, 0, 0, 1, 1000, 2)|)$$

$$\text{dBMagTe}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 10, 0, 0, 1, 3000, 0.707)|)$$

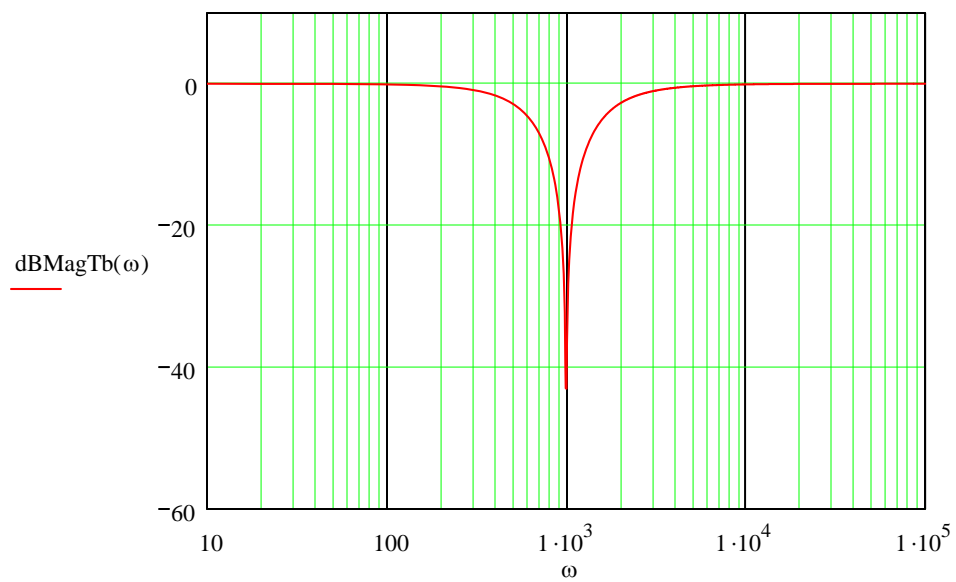
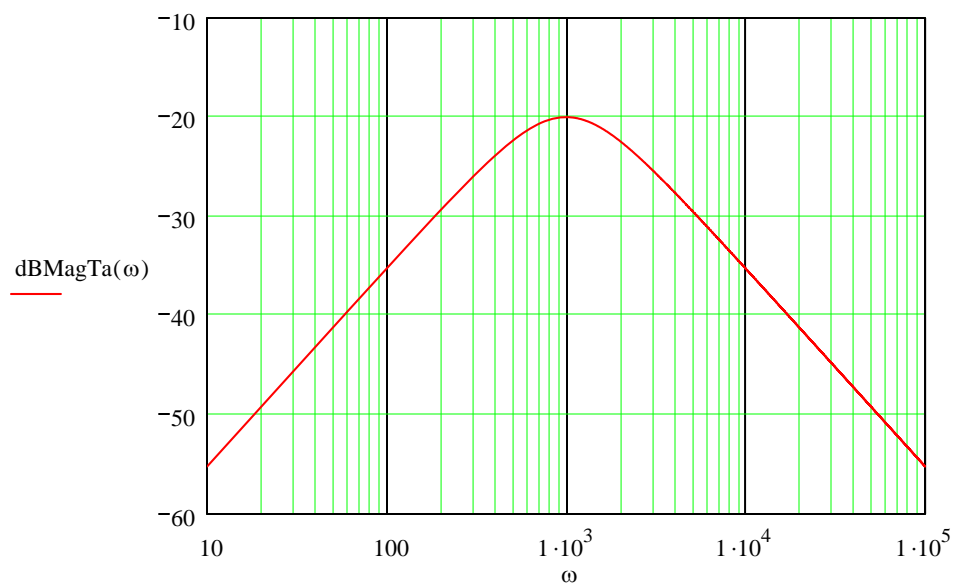
$$\text{dBMagTf}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 4, 1, 0, 0, 500, 2.5)|)$$

$$\text{dBMagTg}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 0.5, 1, 0, 0, 2000, 0.707)|)$$

$$\text{dBMagTh}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 4, 0, 1, 0, 500, 5)|)$$

$$\text{dBMagTi}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 2, 1, 0, 1, 2000, 0.5)|)$$

$$\text{dBMagTj}(\omega) := 20 \cdot \log(|\text{tfunction}(\omega, 10, 1, -1, 1, 300, 0.577)|)$$



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ECET 4320
Lab #4
Prelab Work

