

$$G_c(freq) := \frac{1.25 \cdot 10^7 \cdot (1j \cdot 2 \cdot \pi \cdot freq) + 3.125 \cdot 10^{11}}{153 \cdot (1j \cdot 2 \cdot \pi \cdot freq)^2 + 575000 \cdot (1j \cdot 2 \cdot \pi \cdot freq) + 1.25 \cdot 10^{10}}$$

$$Gain(freq) := 20 \cdot \log(|G_c(freq)|) \quad \theta(freq) := \arg(G_c(freq))$$

$freq := \text{logspace}(100, 10^5, 100)$ $i := 0 \dots 99$

Matlab

Transfer function:

$1.25e007 s + 3.125e011$

 $153 s^2 + 575000 s + 1.25e010$

>> num = [1.25e7 3.125e11];

>> denum = [153.0 575000.0 1.25e10];

>> margin(tf(num, denum))

Figure 1

File Edit View Insert Tools Desktop Window Help

