Filter Wizard

Created on 2/13/2019

ANALOG DEVICES

Filter Wizard Design Report

Filter Requirements for Low-Pass, 3rd order Butterworth

Specifications: Optimize for Specific Components, +Vs= 12, -Vs= -12

Gain: 0 dB

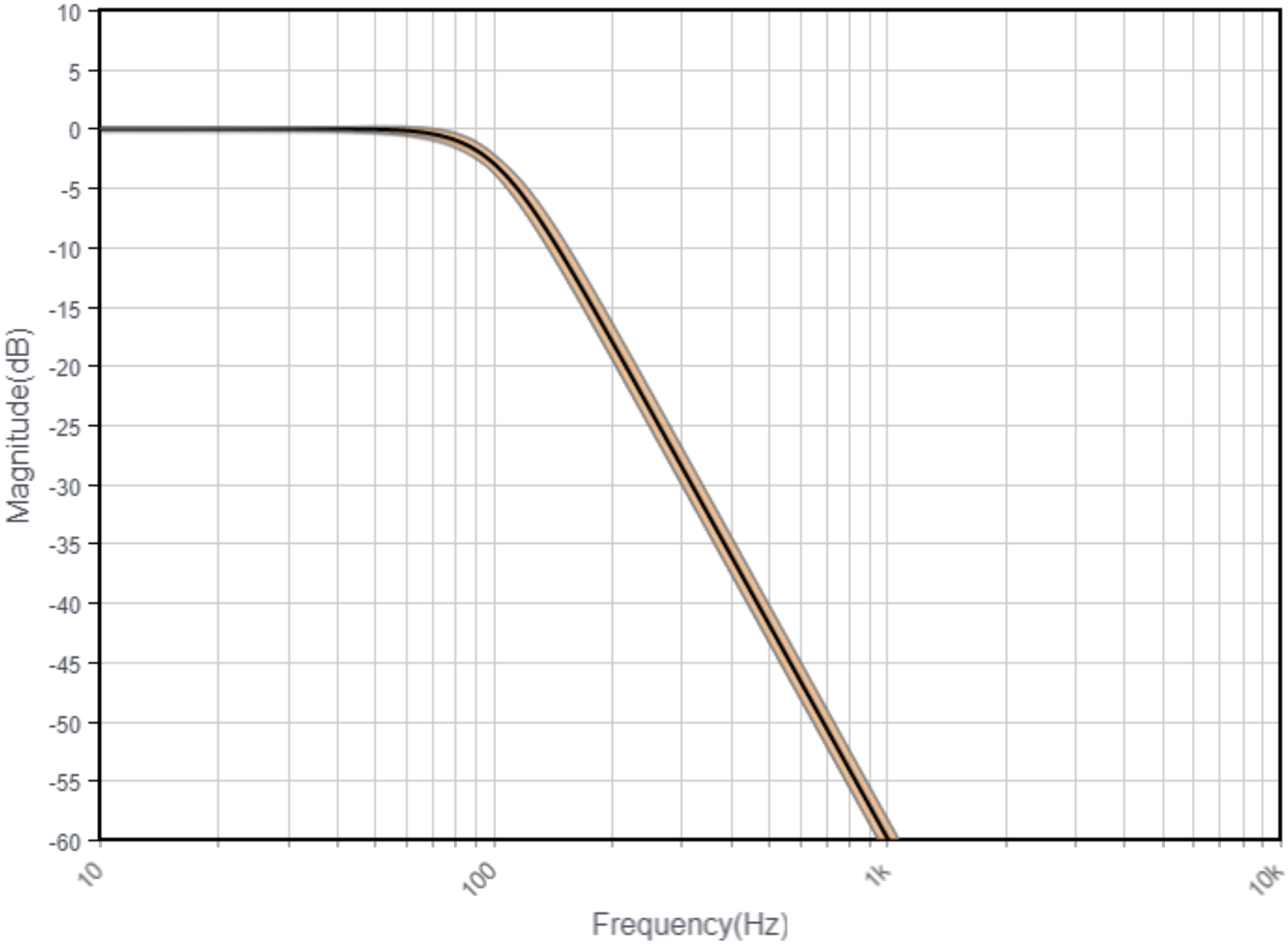
Passband: -3dB at 100Hz

Stopband: -40dB at 1kHz

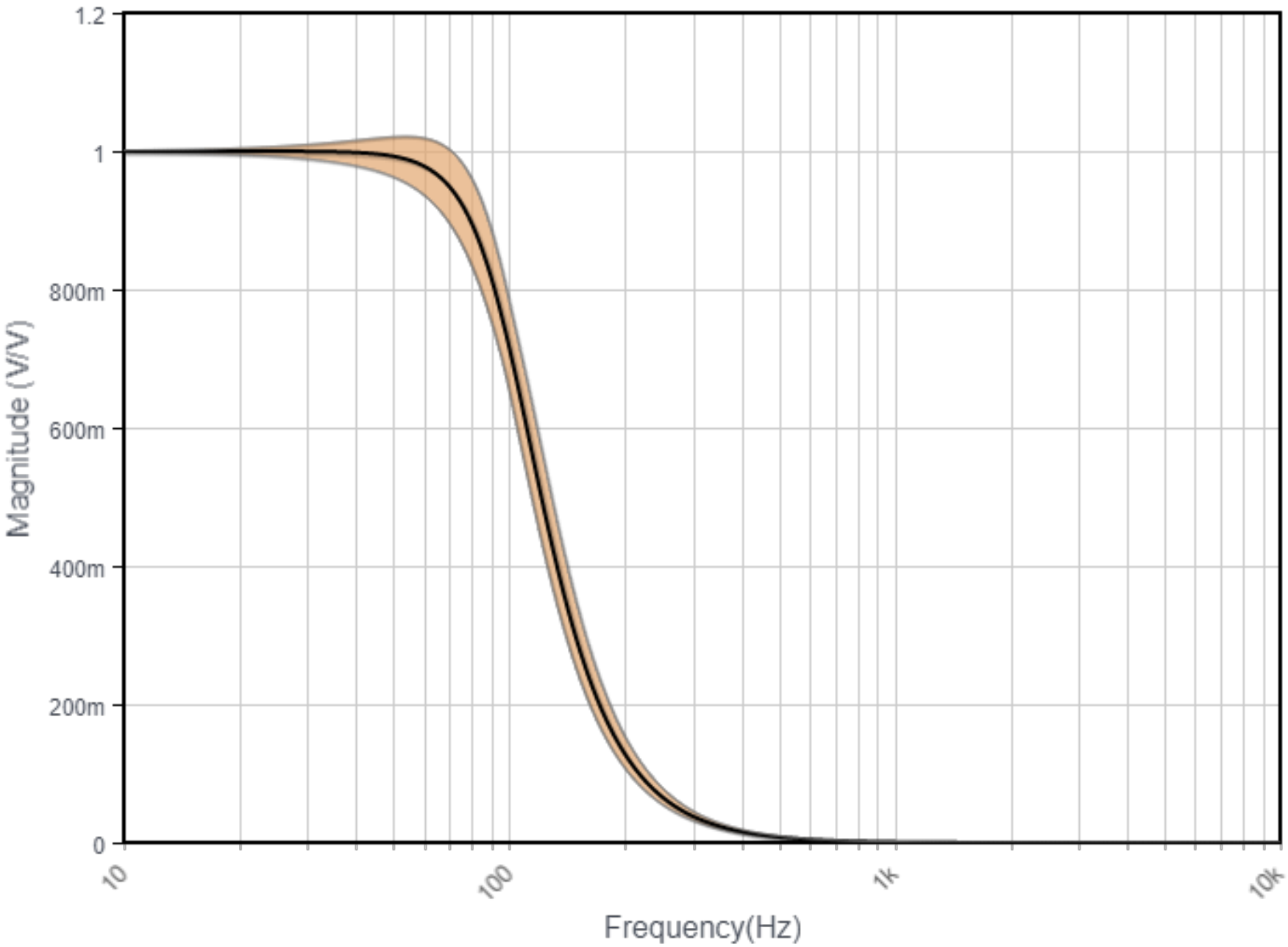
Component Tolerances: Capacitor = 5%; Resistor = 1%; Inductor = 5%; Op Amp GBW = 20%

BOM: refer to BOM.csv file

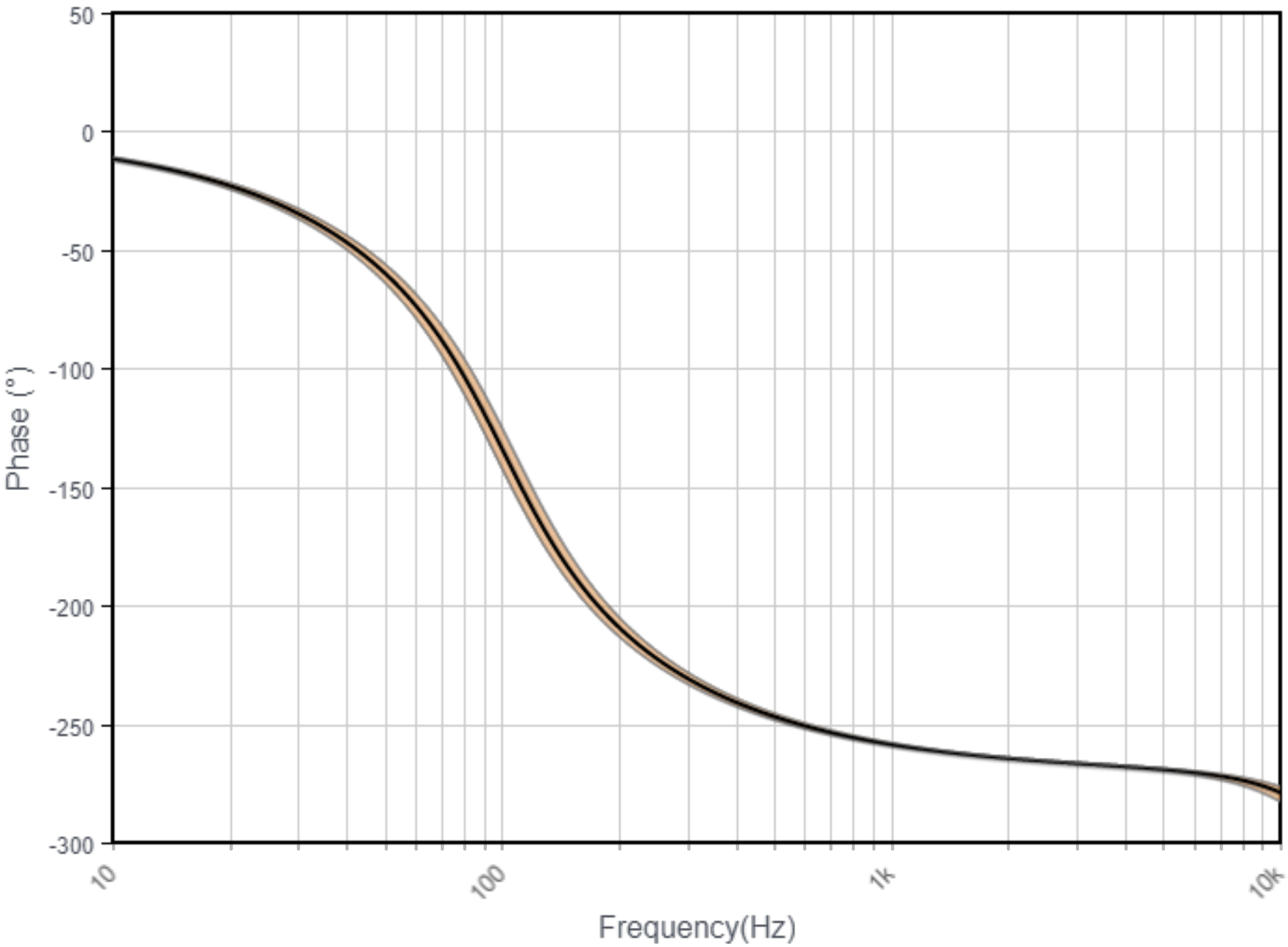
Magnitude(dB)



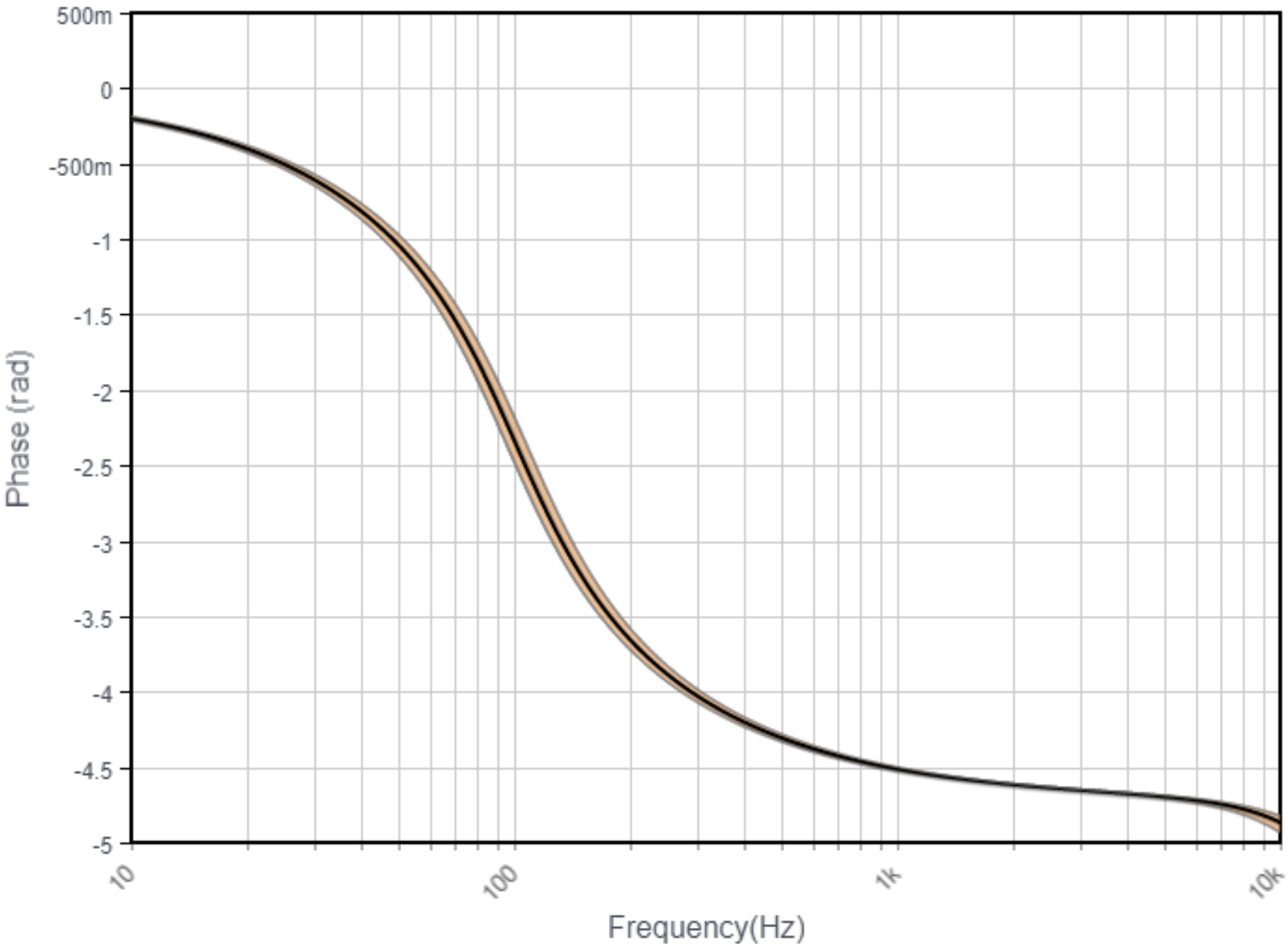
Magnitude(Volts per Volt)



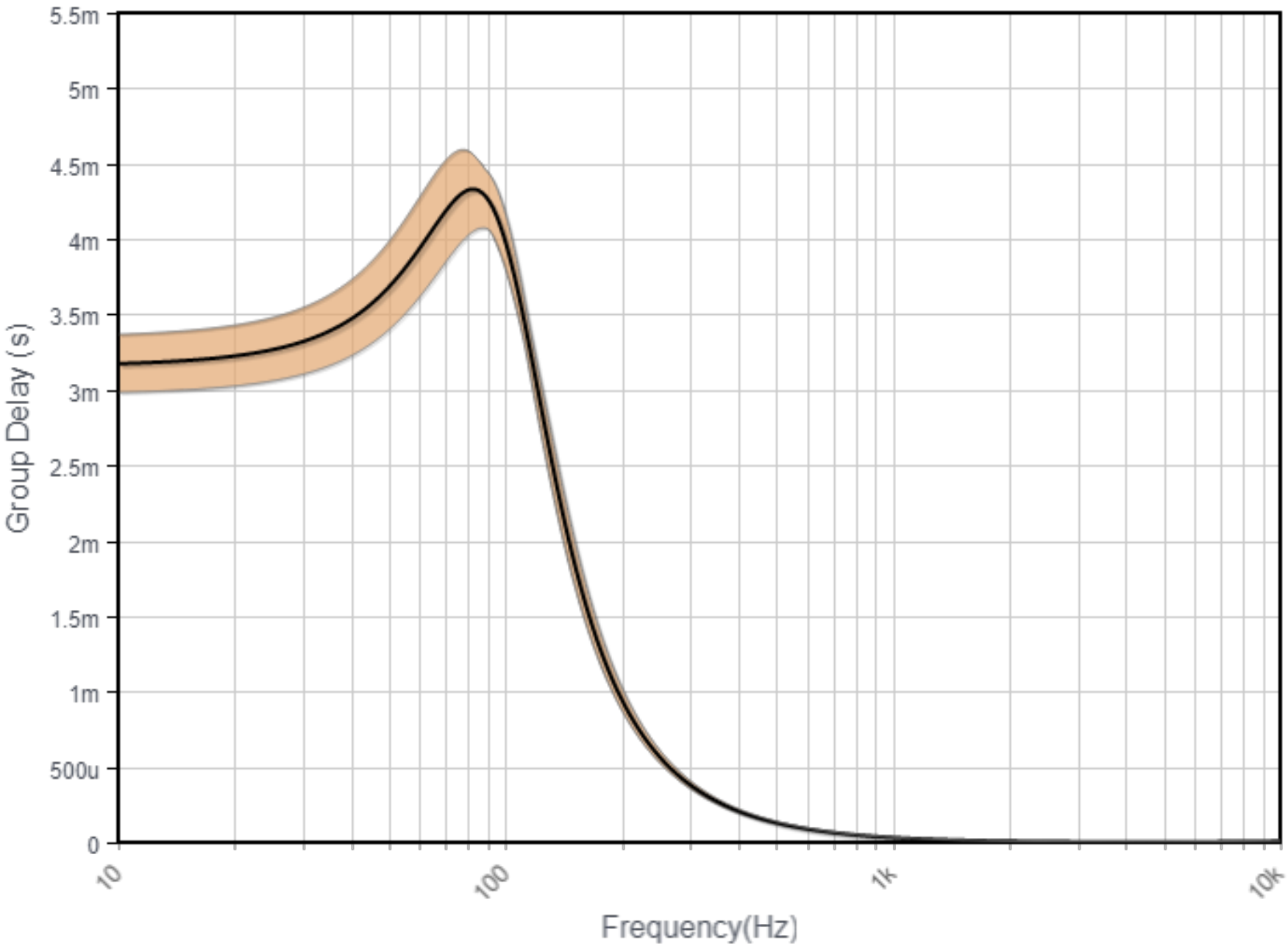
Phase(degrees)



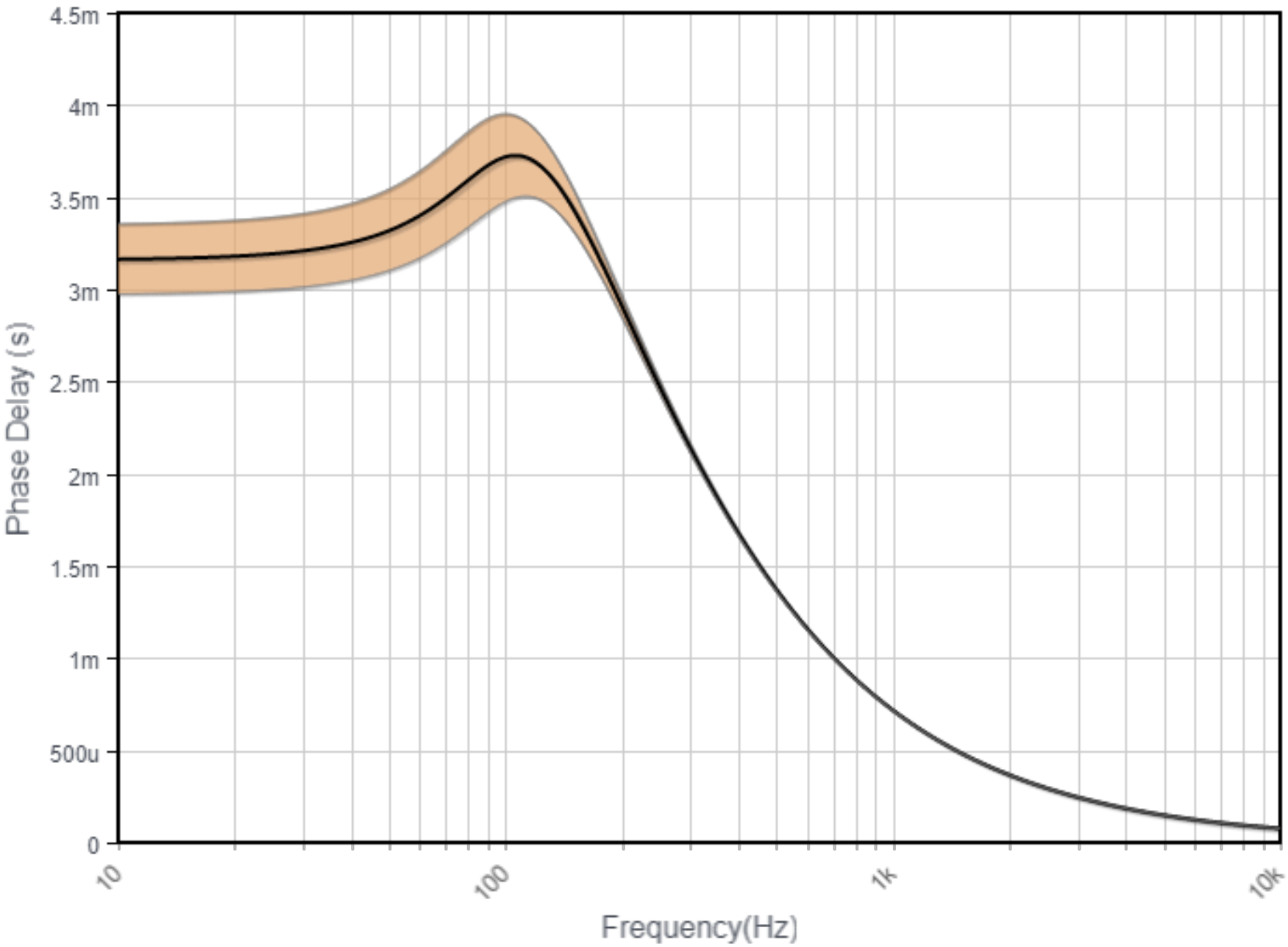
Phase(radians)

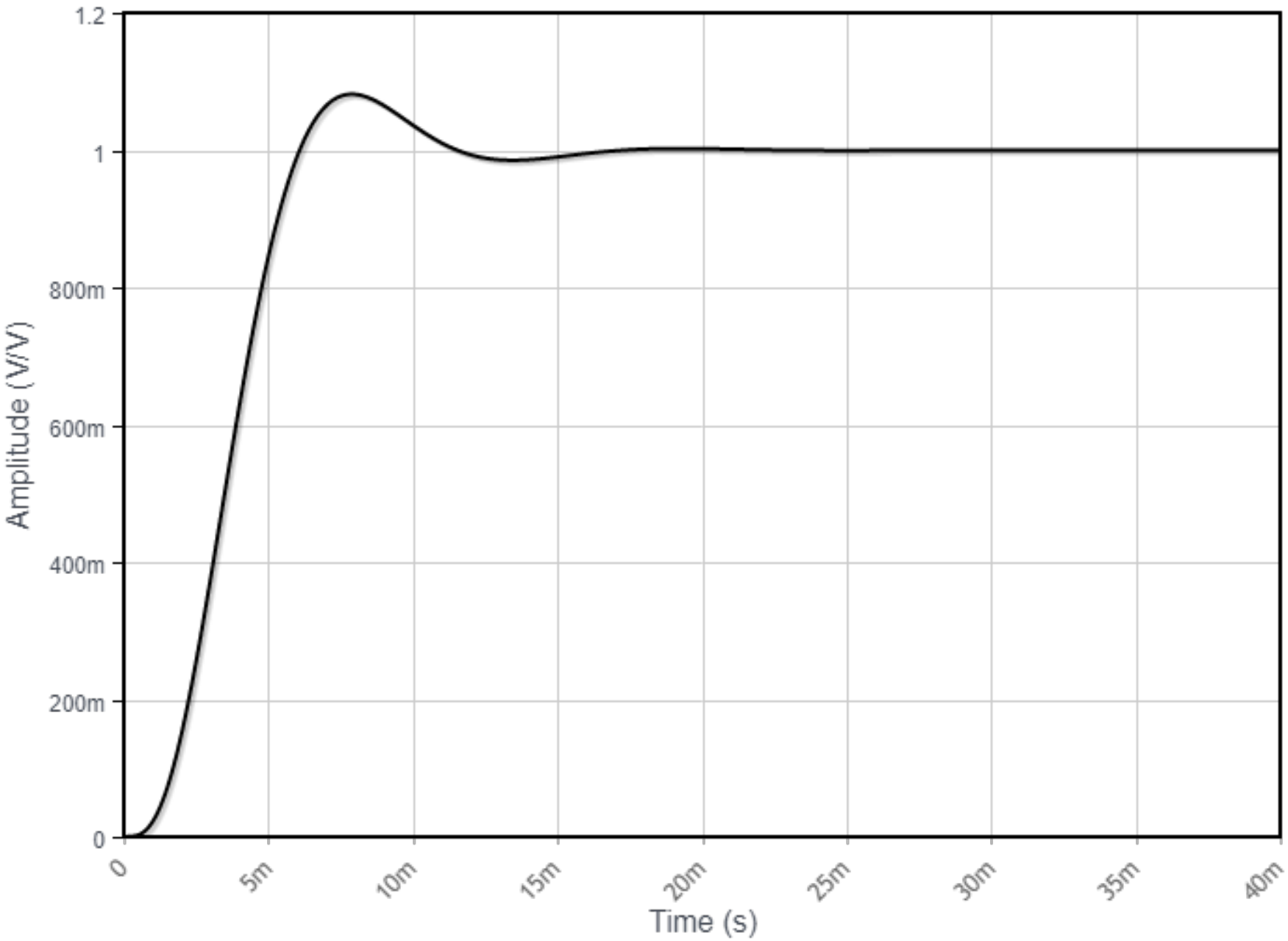


Group Delay

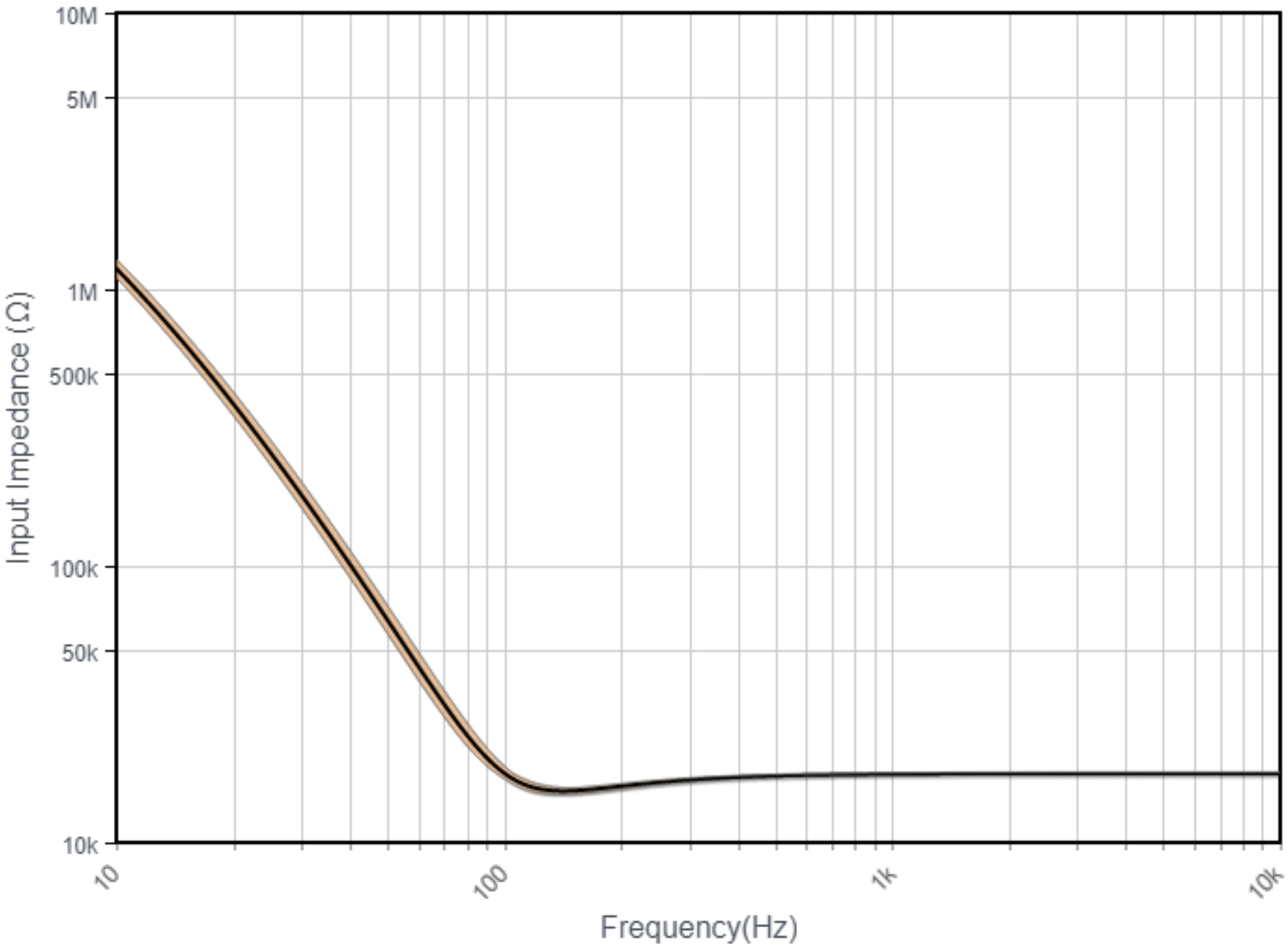

5.5m
5m
4.5m
4m
3.5m
3m
2.5m
2m
1.5m
1m
500u
0
Group Delay (s)
10
100
1k
10k
Frequency(Hz)

Phase Delay

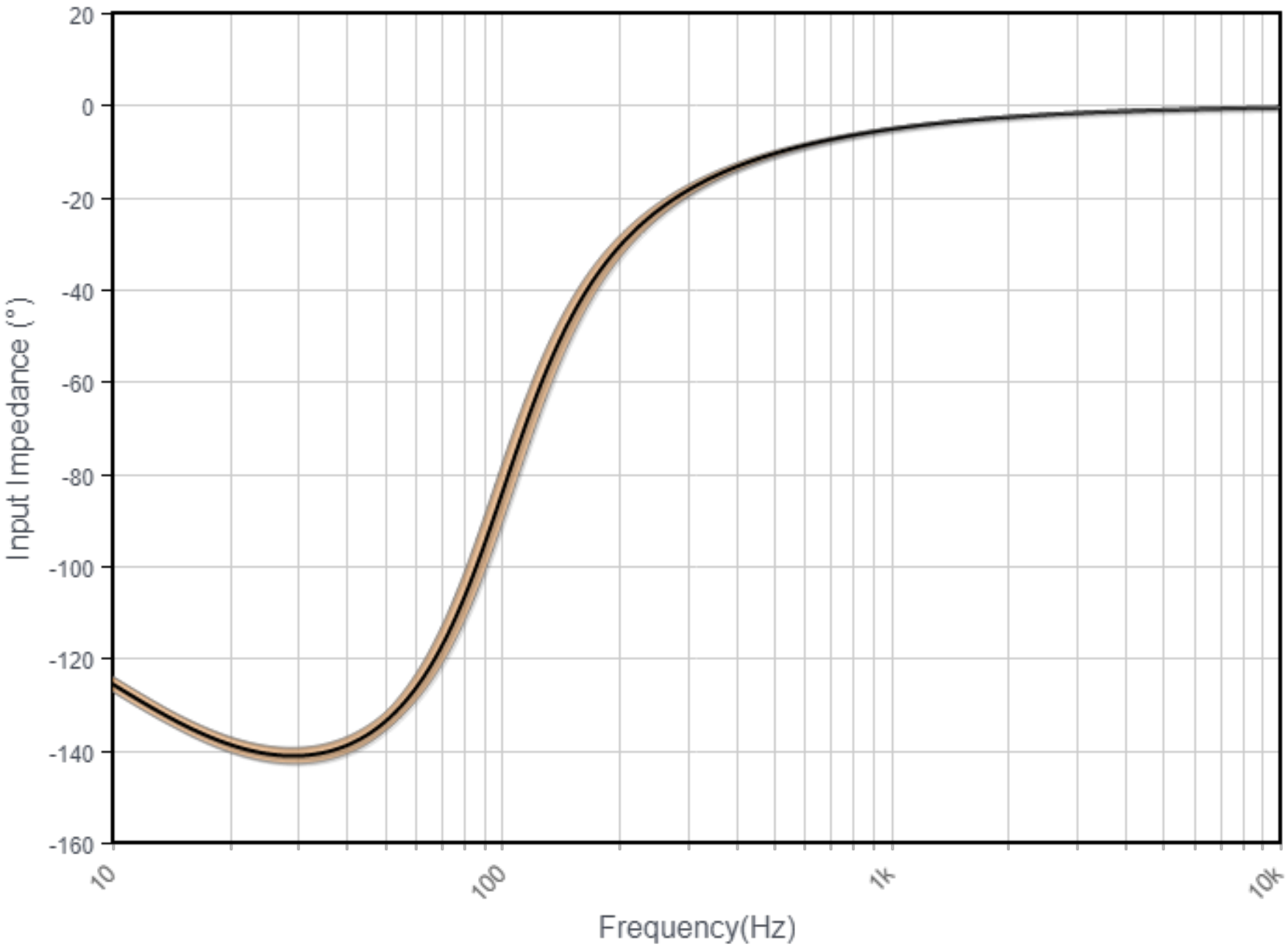

4.5m
4m
3.5m
3m
2.5m
2m
1.5m
1m
500u
0
Phase Delay (s)
10
100
1k
10k
Frequency(Hz)


Step Response
1.2
1
800m
600m
400m
200m
0
Amplitude (V/V)
0
5m
10m
15m
20m
25m
30m
35m
40m
Time (s)

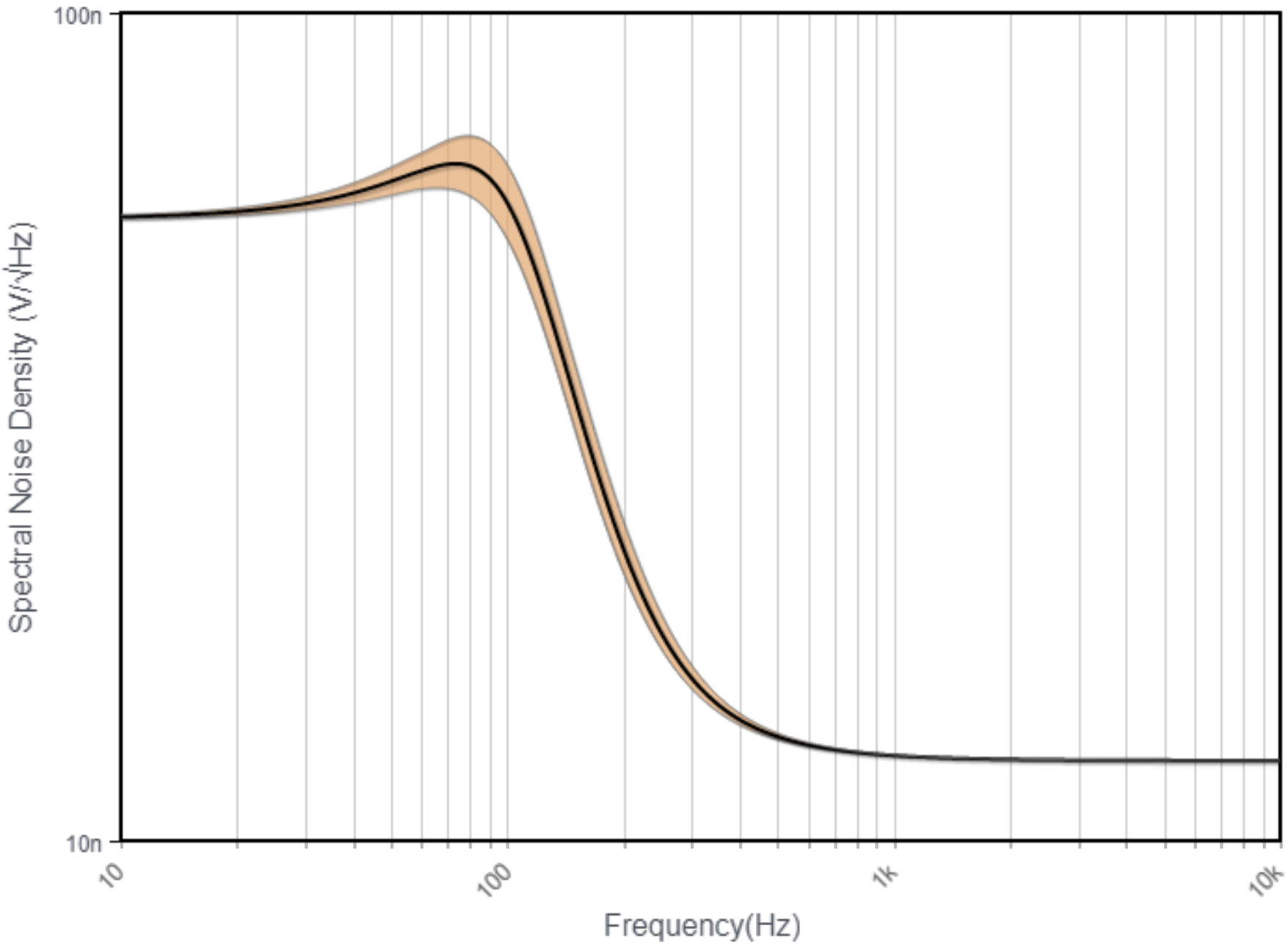
Input Impedance Magnitude



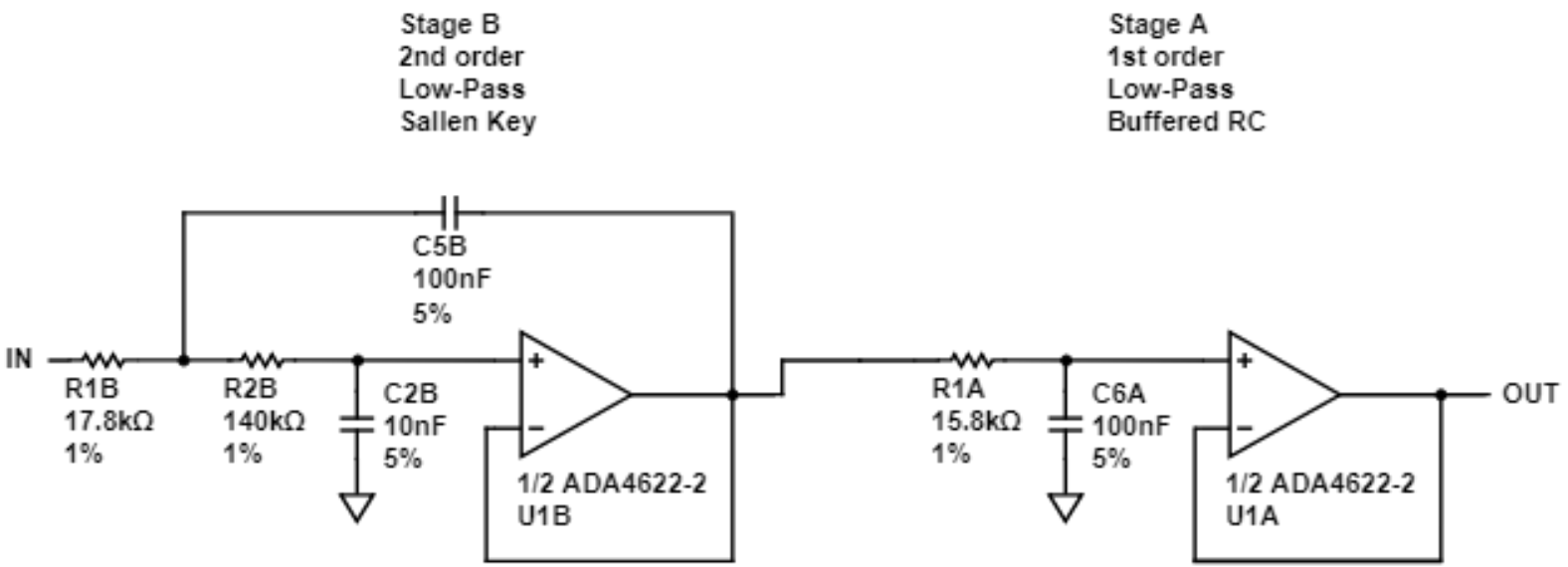
Input Impedance Phase

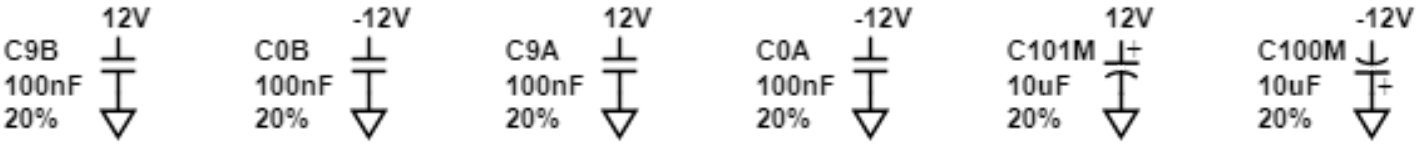


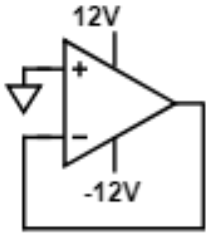
Noise


100n
10n
Spectral Noise Density (V/√Hz)
10
100
1k
10k
Frequency(Hz)

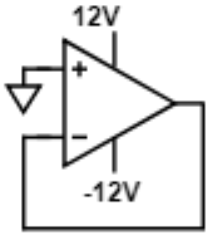
Circuit







1/2 ADA4622-2
U1B



1/2 ADA4622-2
U1A