

Filter Wizard

Filter Wizard Design

Created on 05/30/2025



Filter Wizard Design Report

Filter Requirements for Band-Pass, 6th order Butterworth

Specifications: Optimize: Specific Parts; +Vs: 5; -Vs: -5

Gain: 0 dB

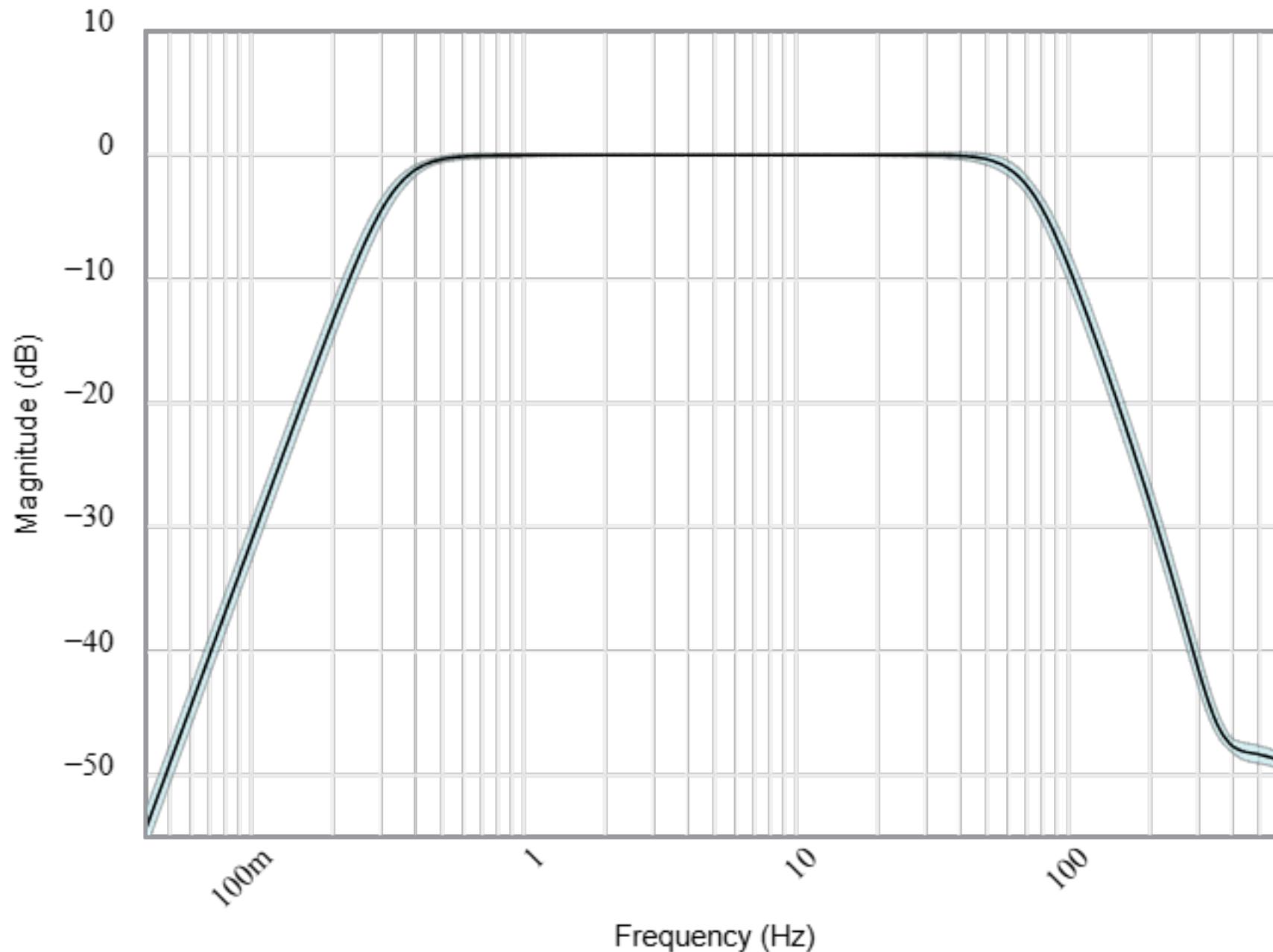
Passband: -0.1dB at 40Hz

Stopband: -35dB at 300Hz

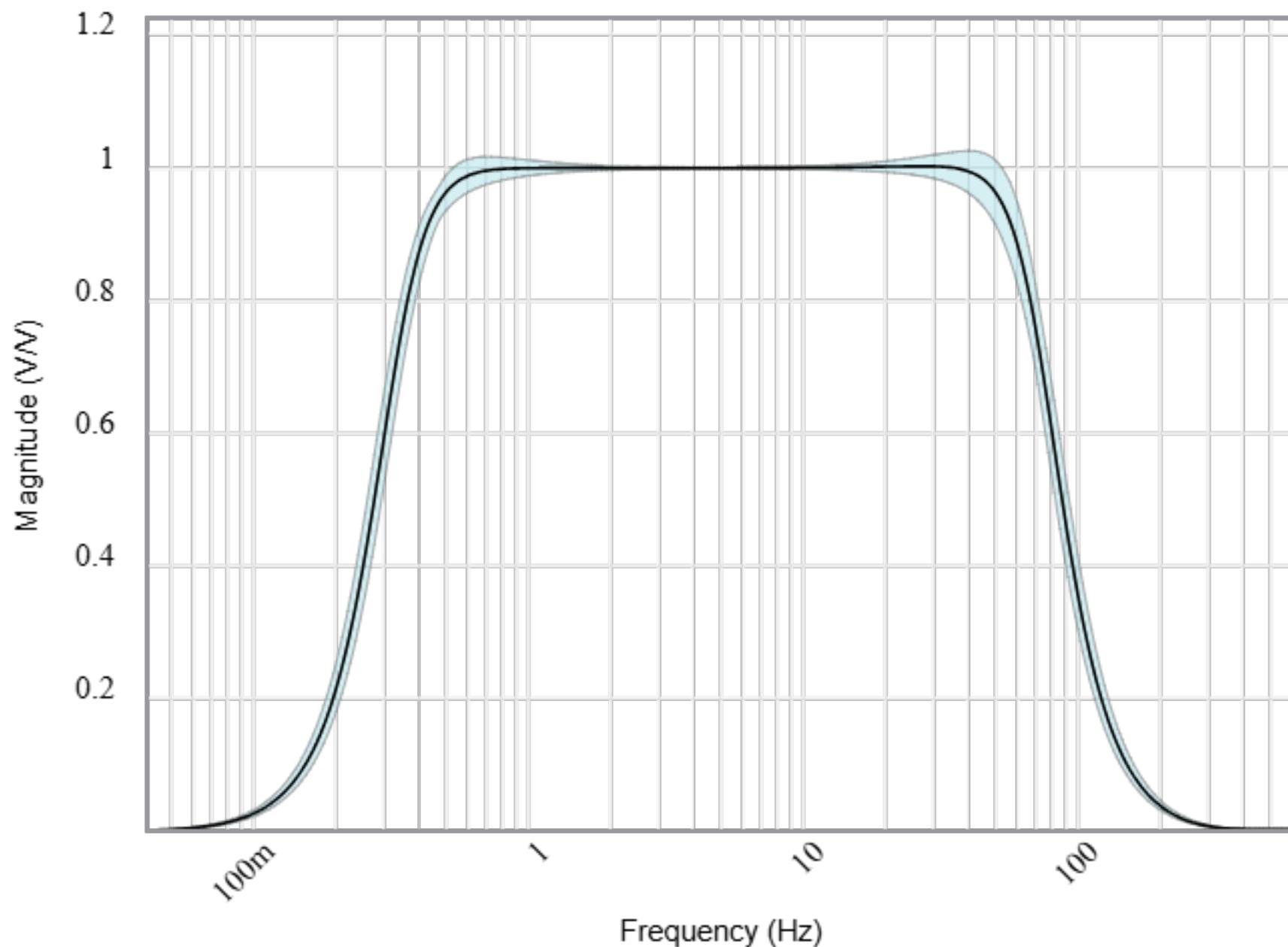
Component Tolerances: Capacitor = 5%; Resistor = 1%; Inductor = 5%; Op Amp GBW = 20%

BOM: refer to BOM.csv file

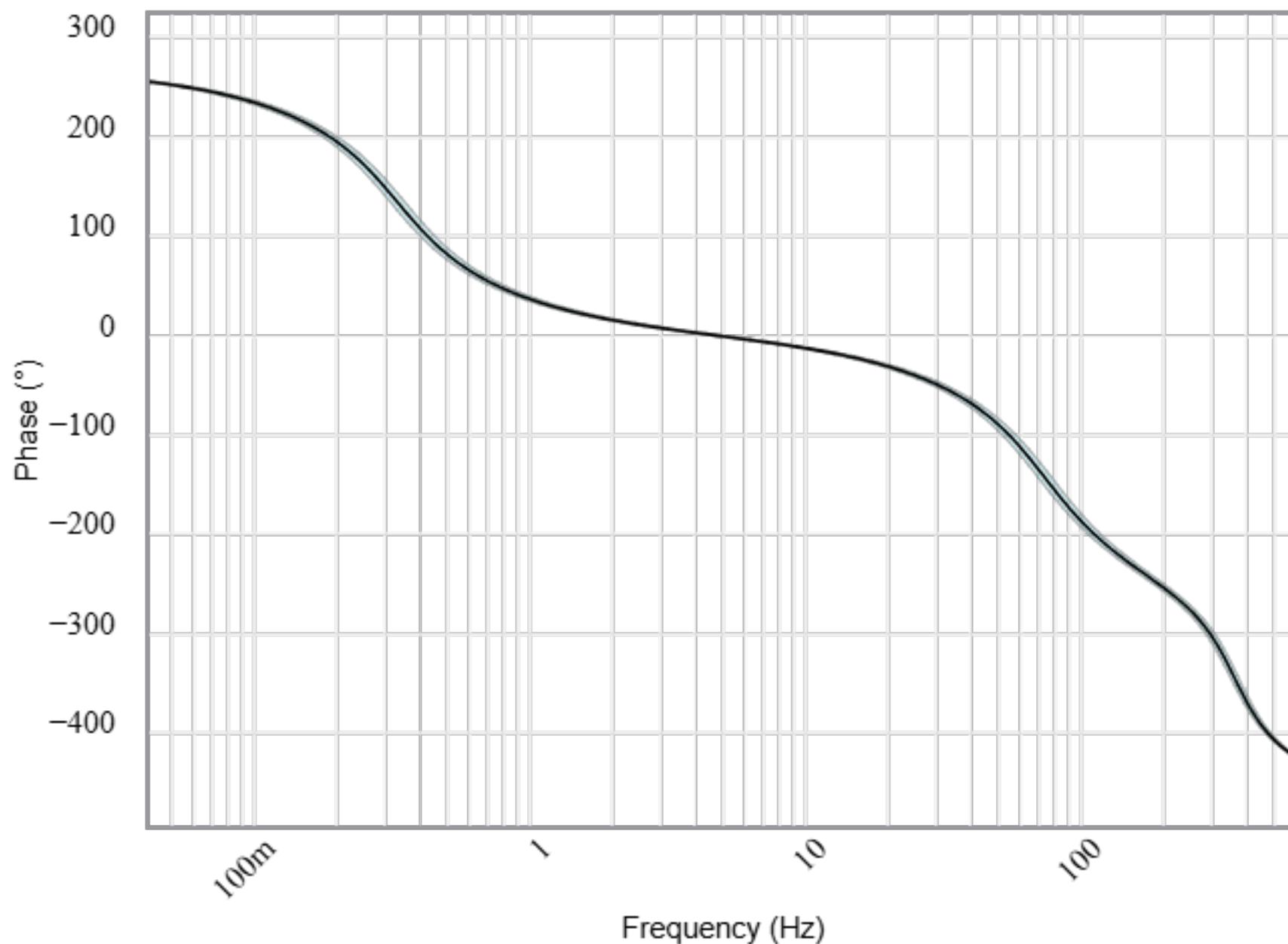
Magnitude(dB)



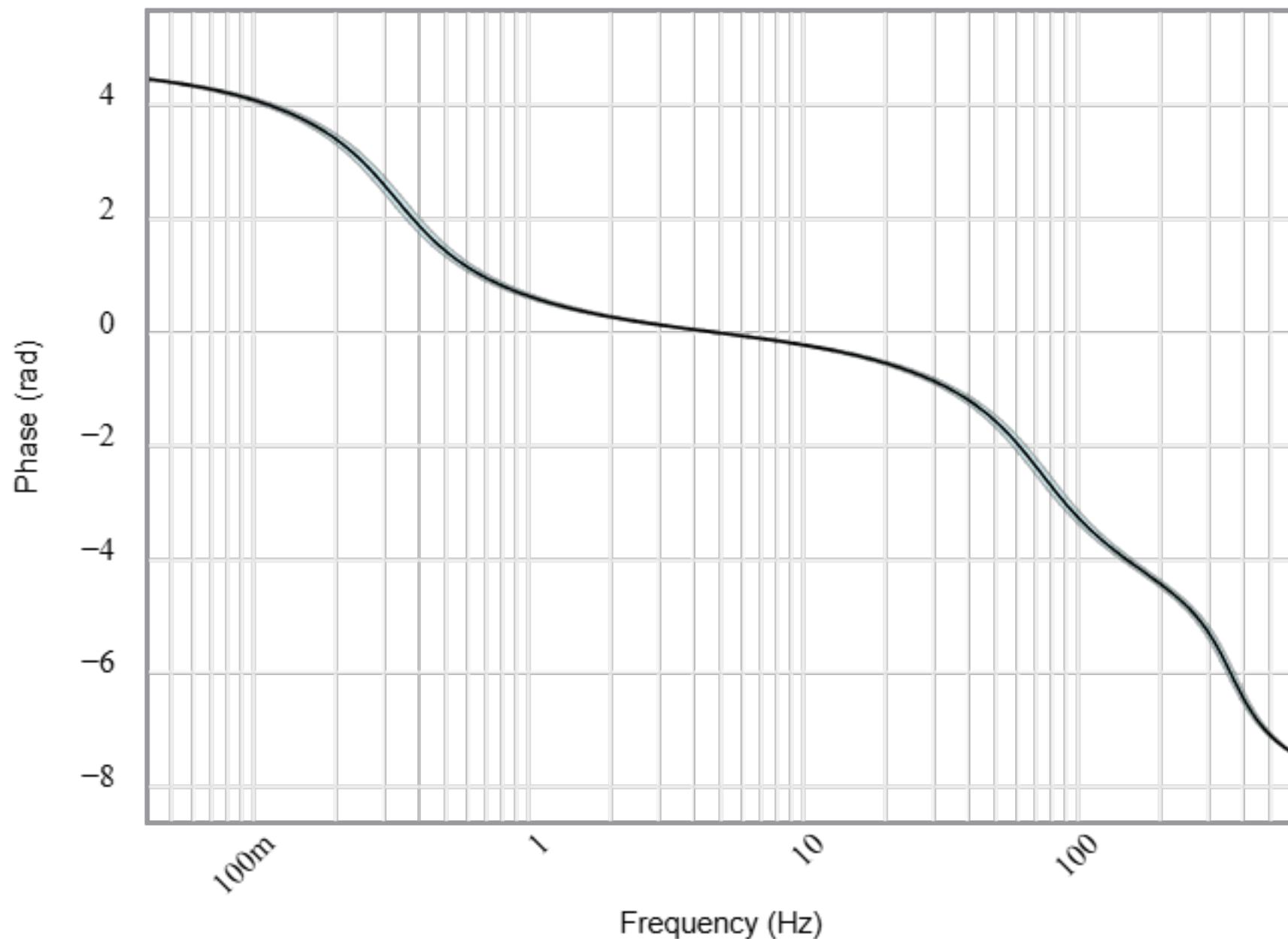
Magnitude(Volts per Volt)



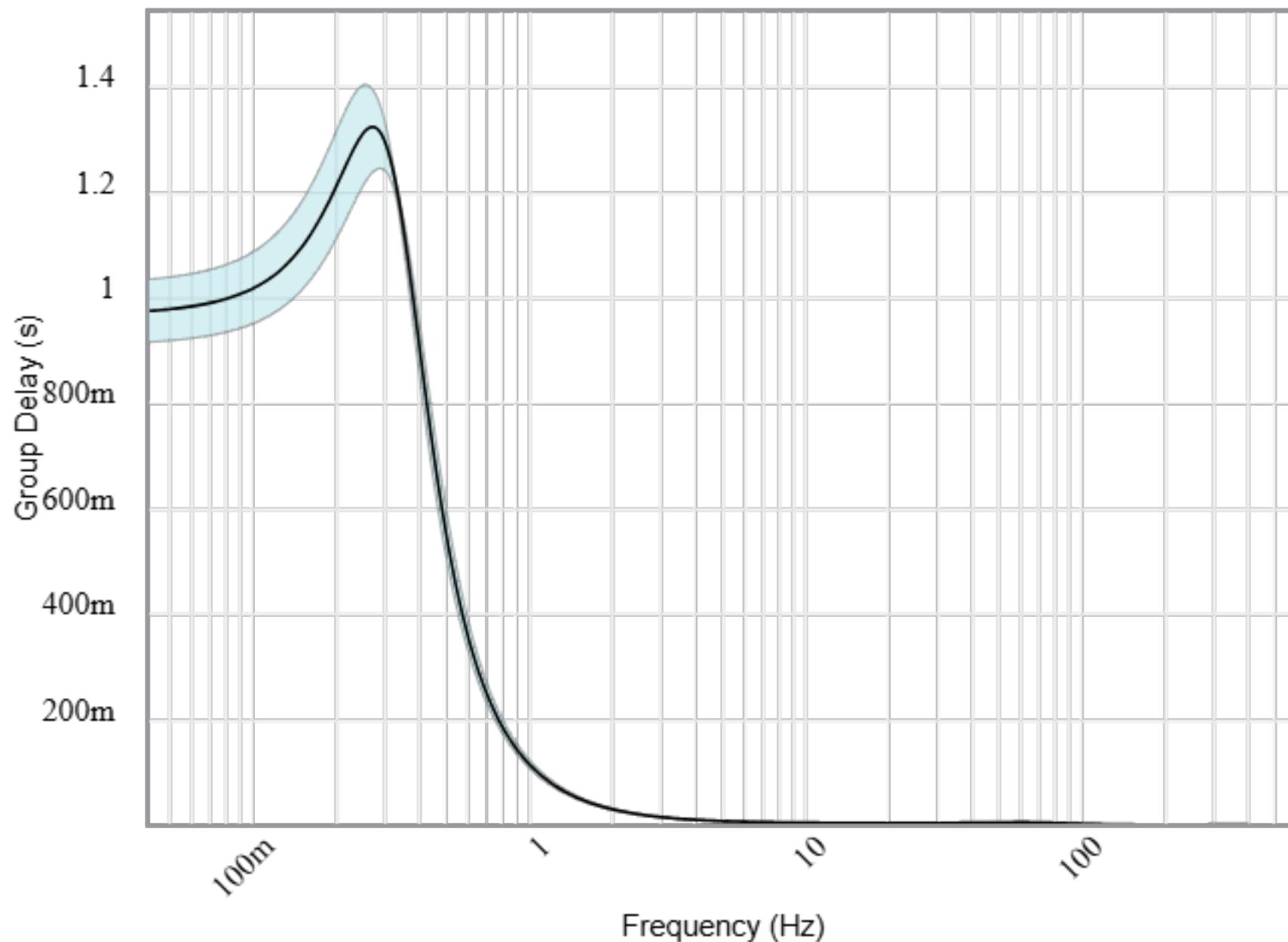
Phase(degrees)



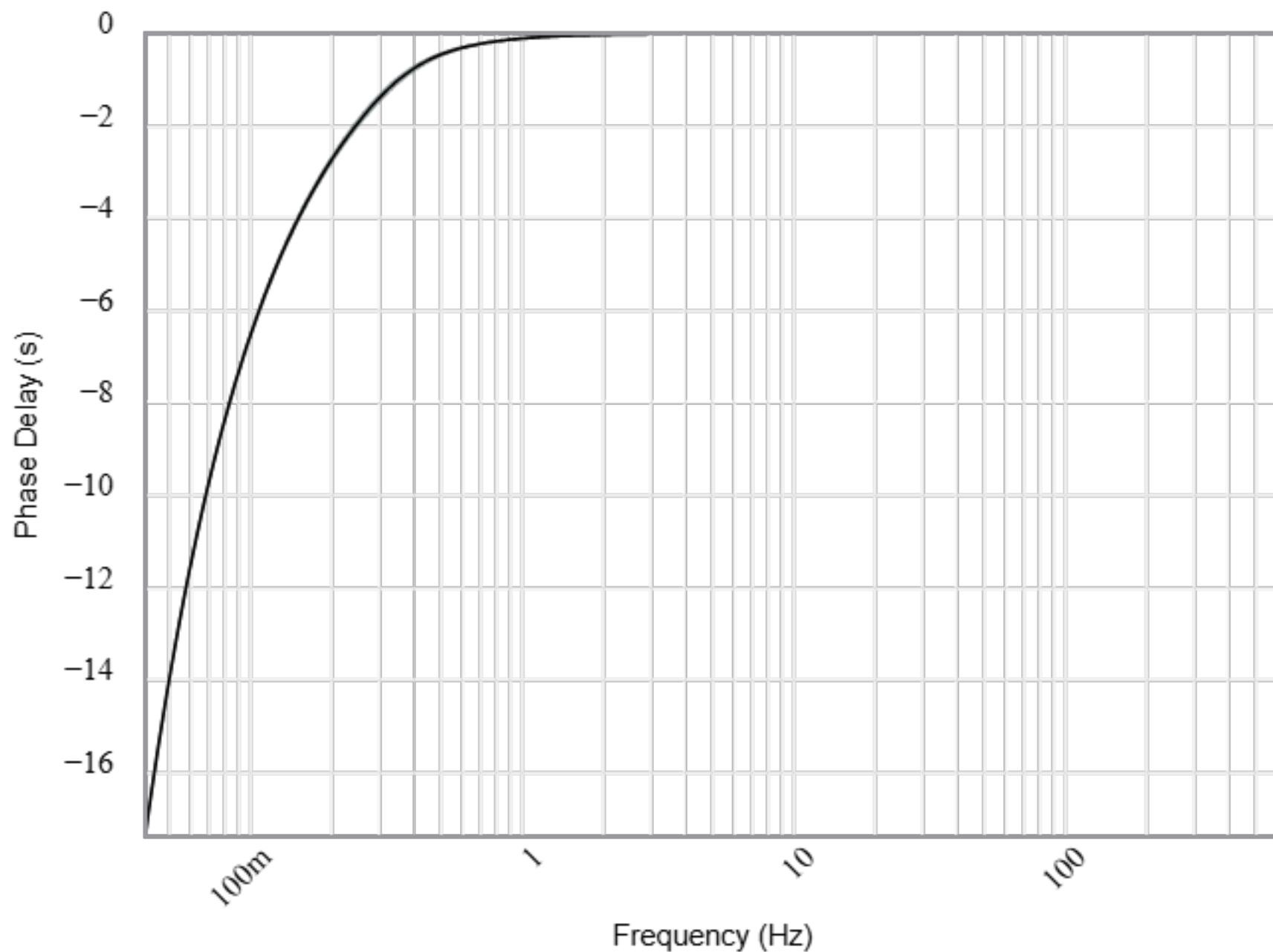
Phase(radians)



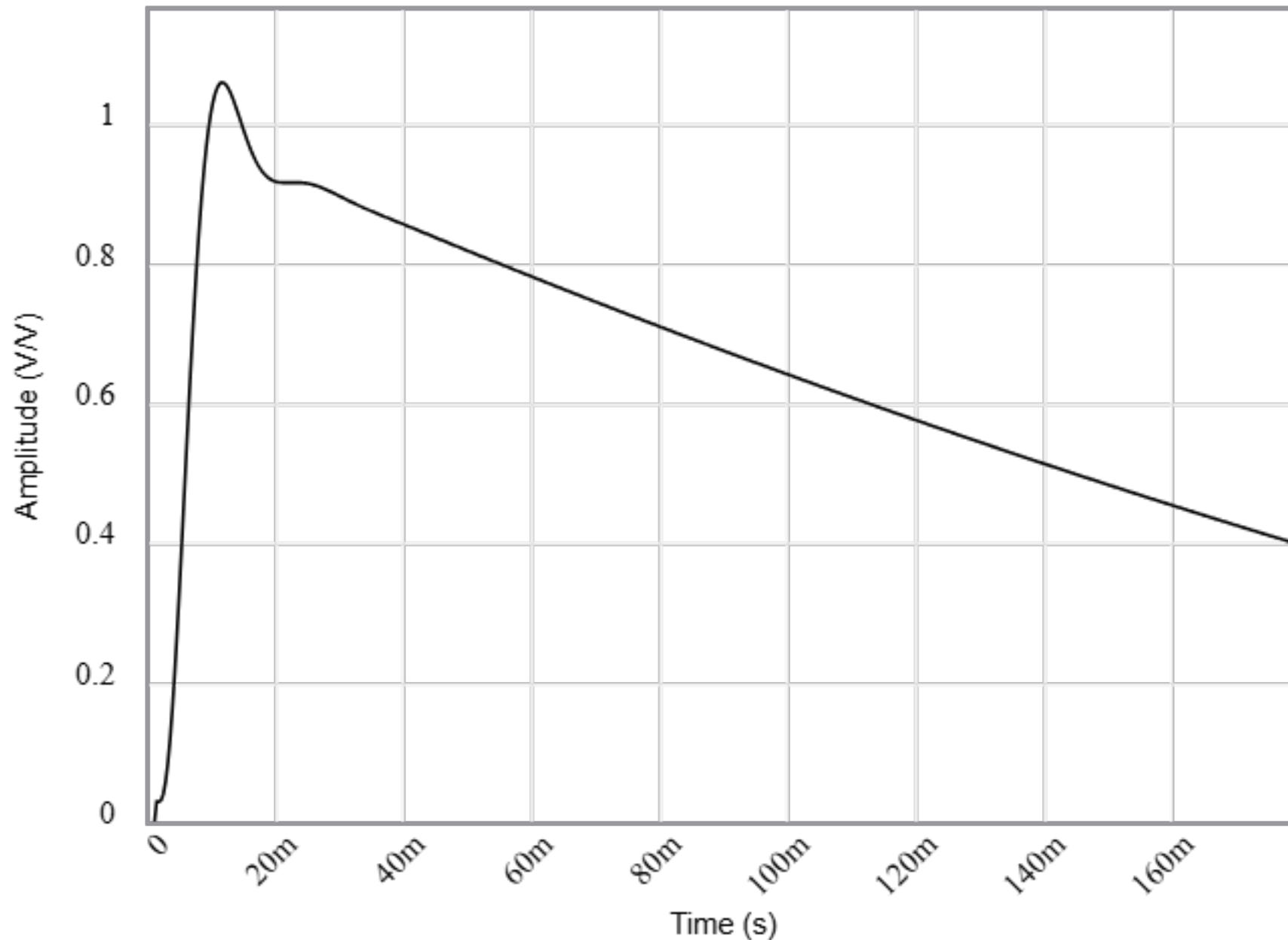
Group Delay



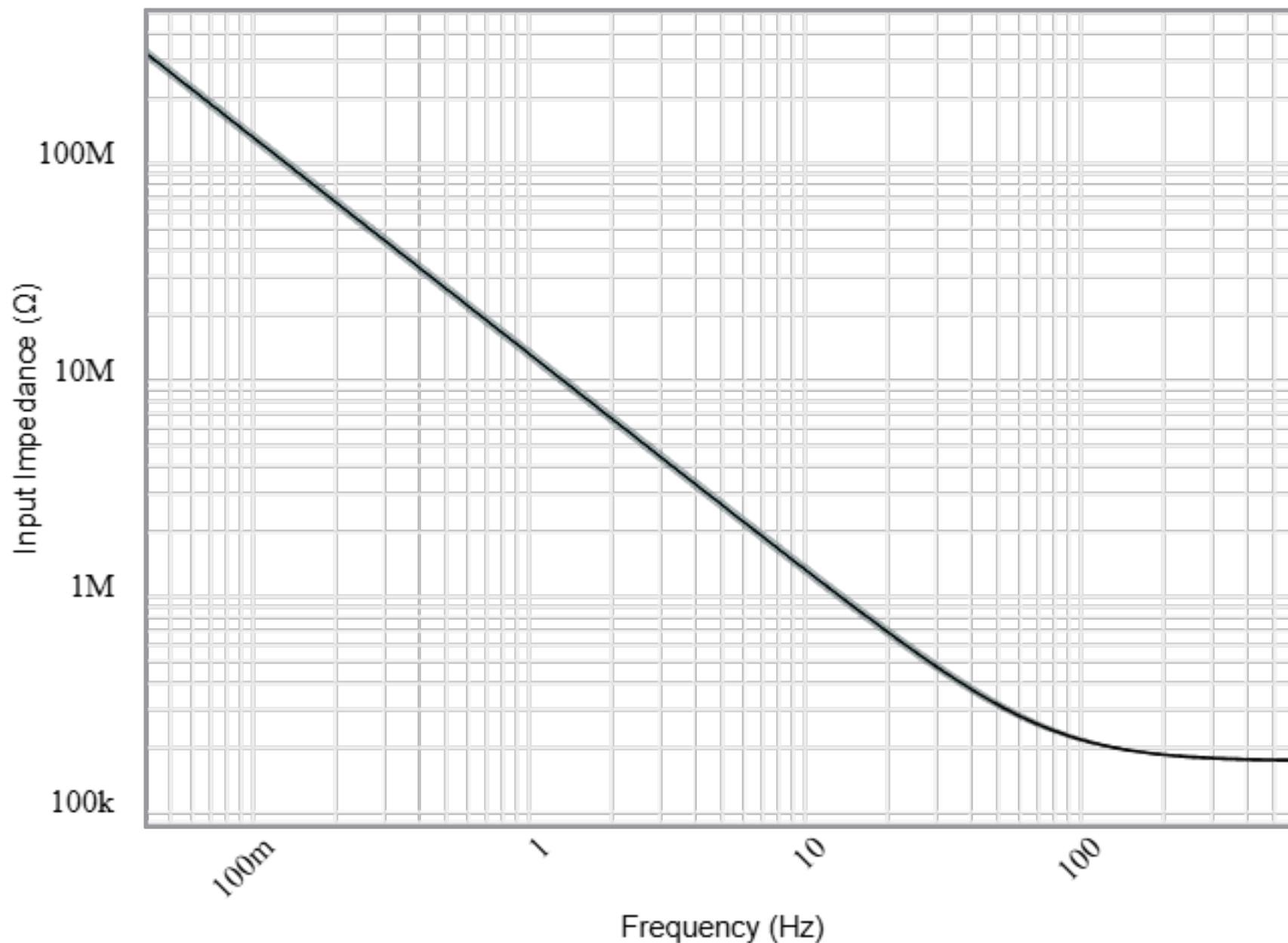
Phase Delay



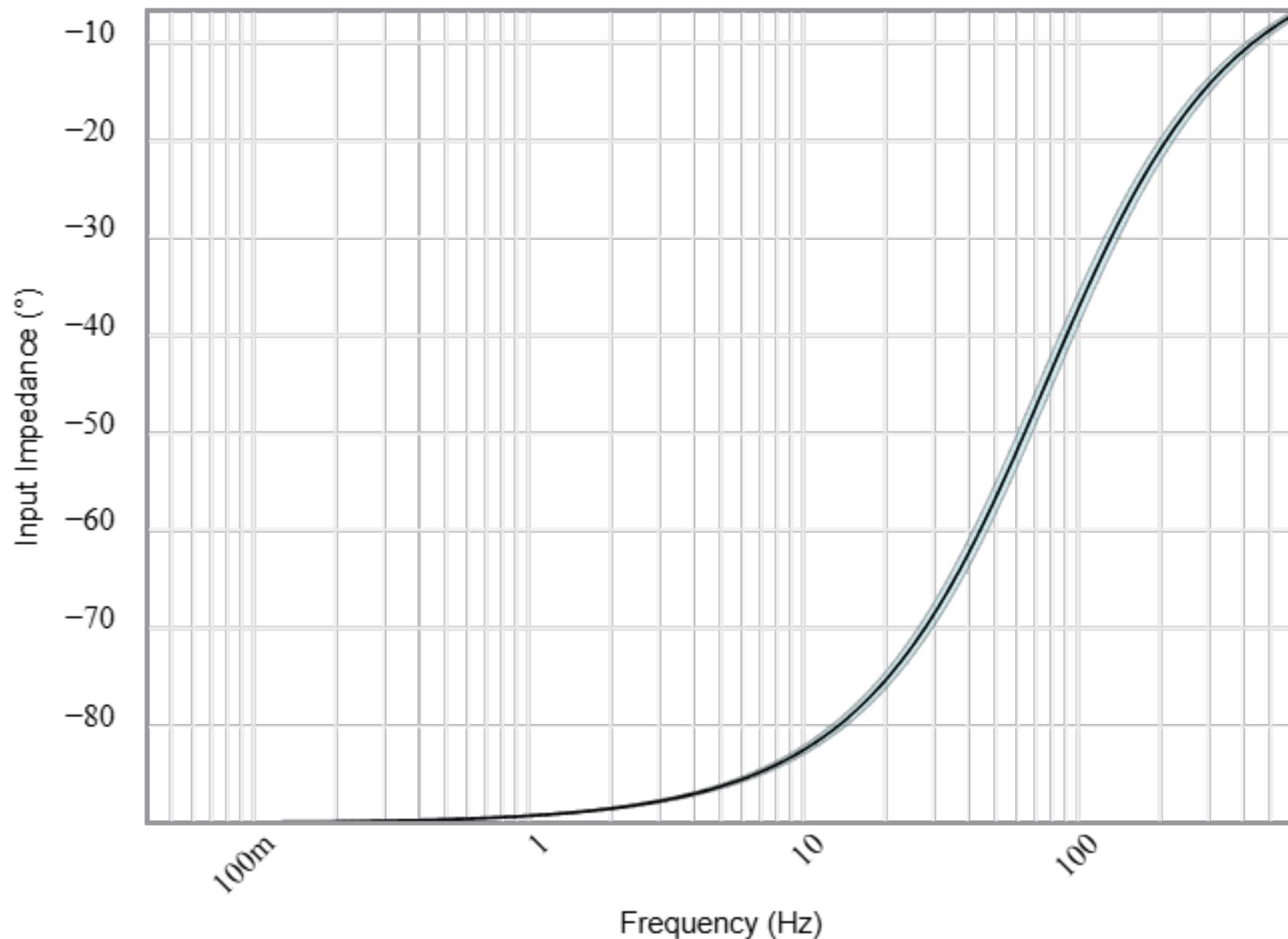
Step Response



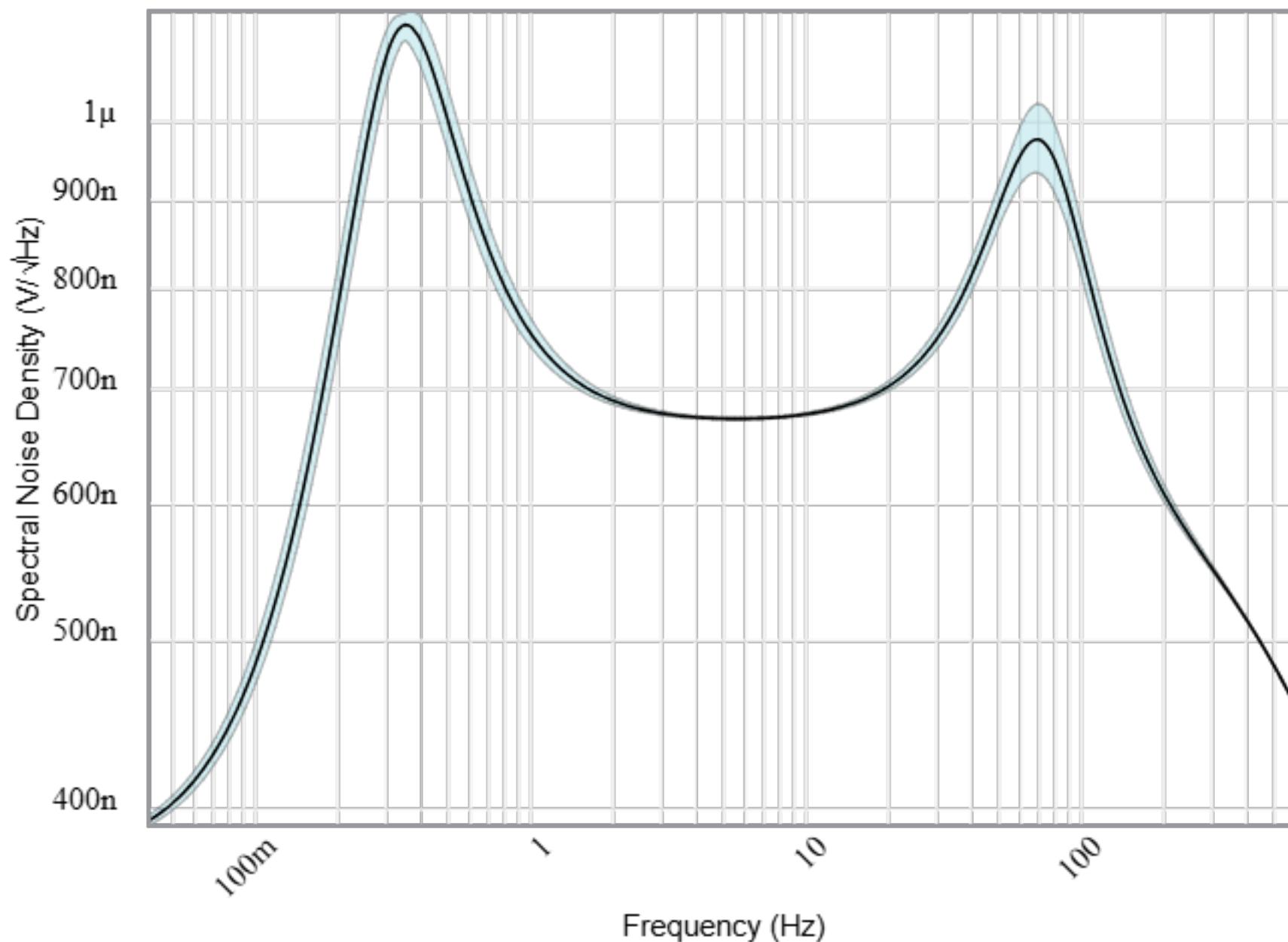
Input Impedance Magnitude



Input Impedance Phase

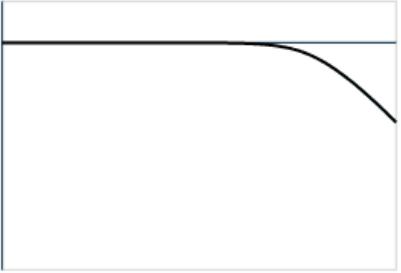
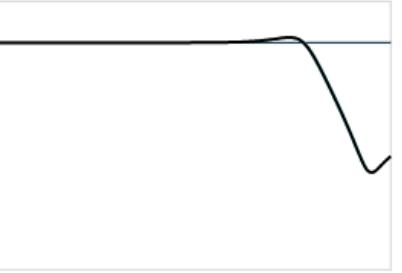
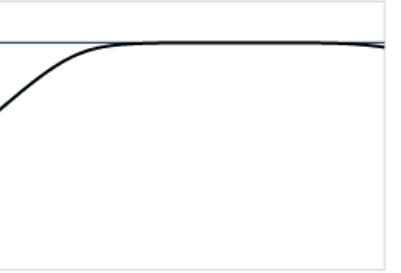
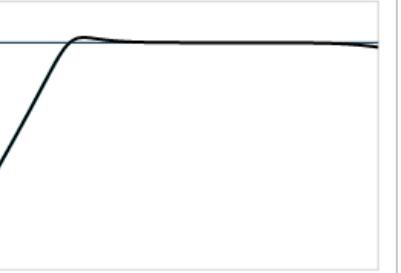


Noise



Stages

Your filter requires 4 op amp stage(s) with the following characteristics

	A	B	C	D
Gain (V/V):	1st order Low-Pass Buffered RC	2nd order Low-Pass Sallen Key	1st order High-Pass Buffered RC	2nd order High-Pass Sallen Key
f _p (Hz):	Target	Simulated	Target	Simulated
1	1 to 1	0.999 to 0.999	1	0.988 to 0.989
76	70.7 to 79.5	67.5 to 75.6	329m	303m to 342m
N/A	N/A to N/A	1	N/A	1
				

Circuit

