Filter Wizard

Created on 6/16/2018

**ANALOG
DEVICES**

Filter Wizard Design Report

Filter Requirements for Band-Pass, 4th order Butterworth

Specifications: Optimize for Power, +Vs= 5, -Vs= -5
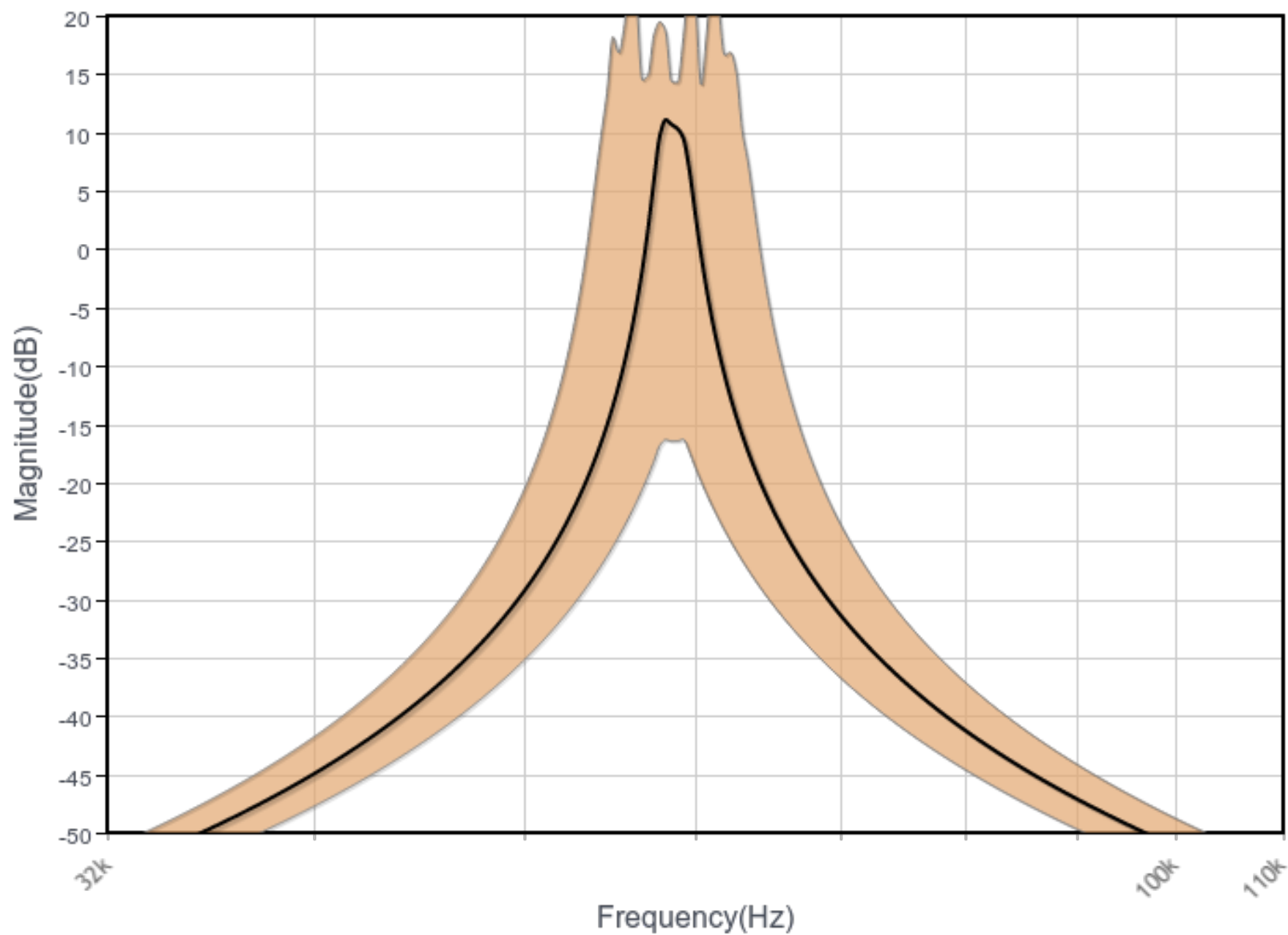
Gain: 10 dB
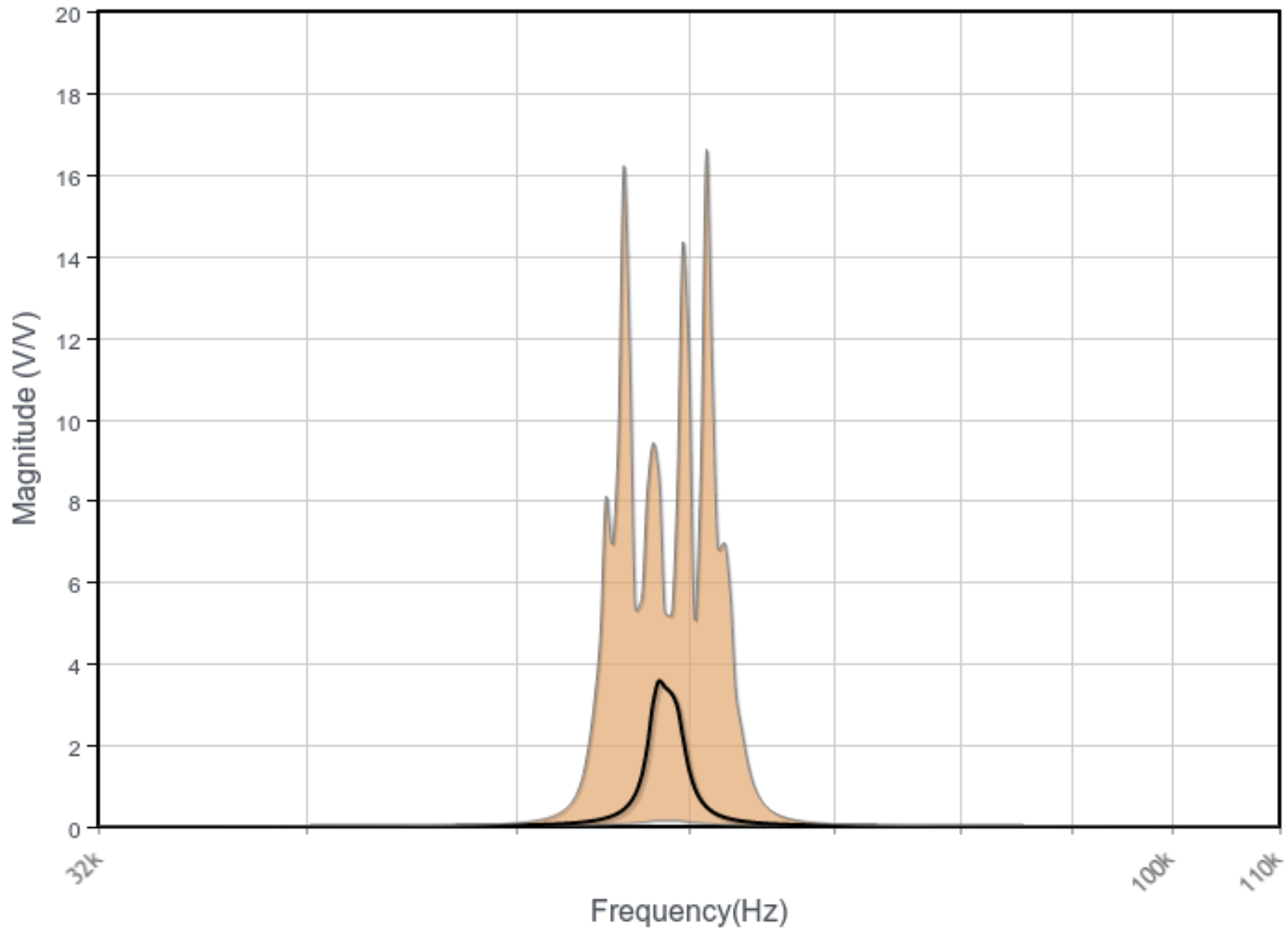
Passband: -3dB at 2kHz

Stopband: -40dB at 40kHz

Component Tolerances: Capacitor = 5%; Resistor = 1%; Inductor = 5%; Op Amp GBW = 20%
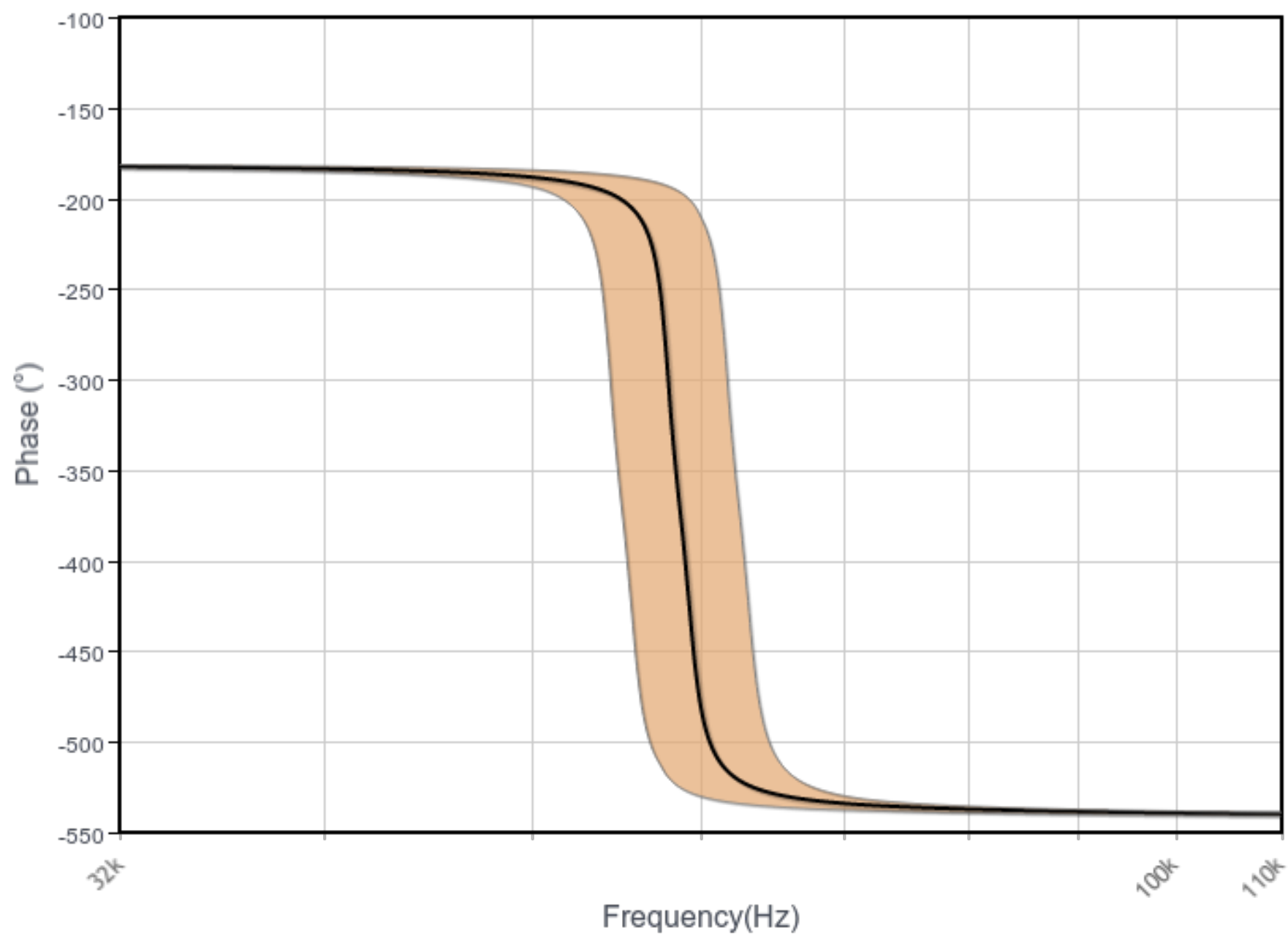
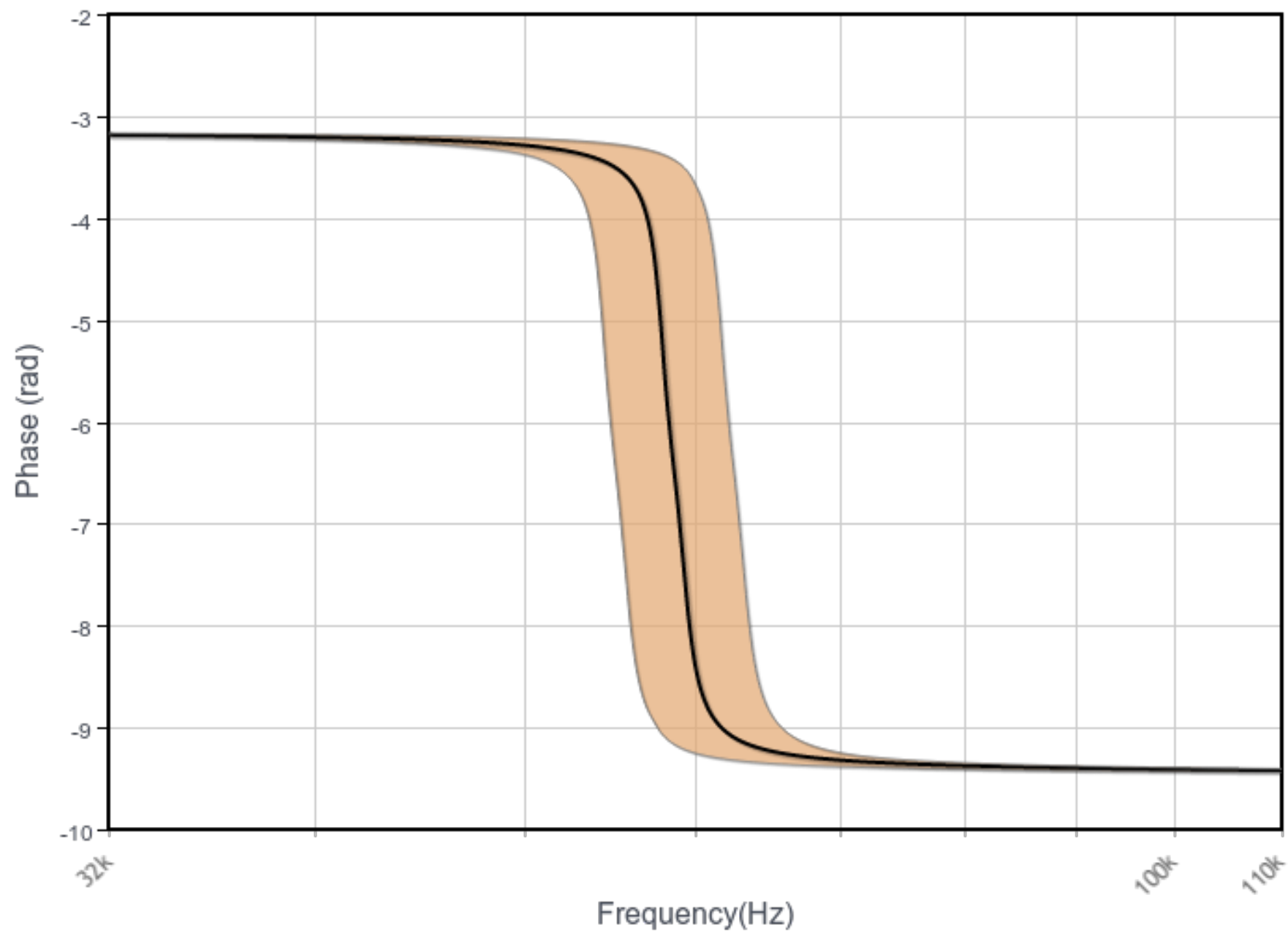BOM: refer to BOM.csv file

Magnitude(dB)
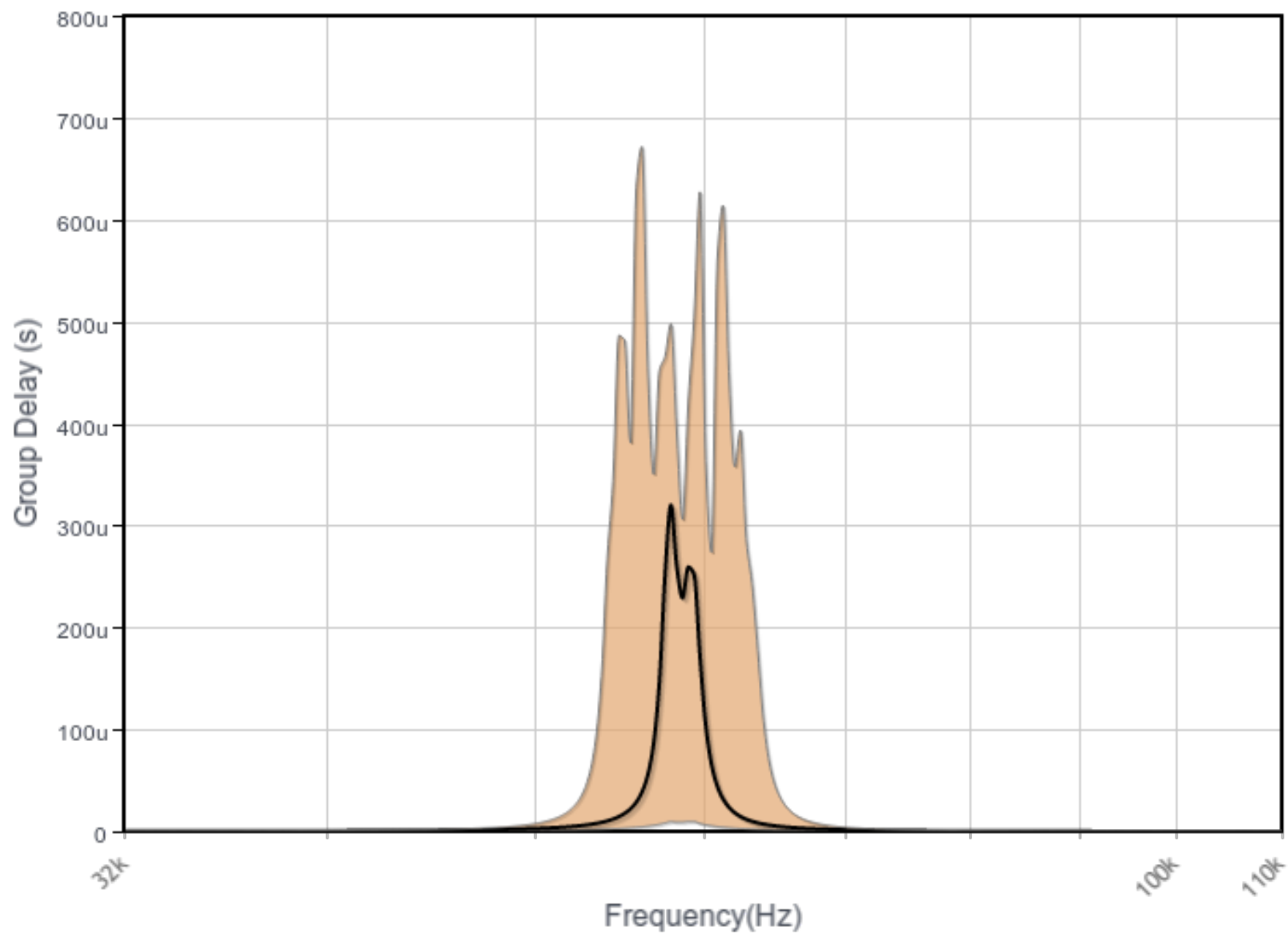
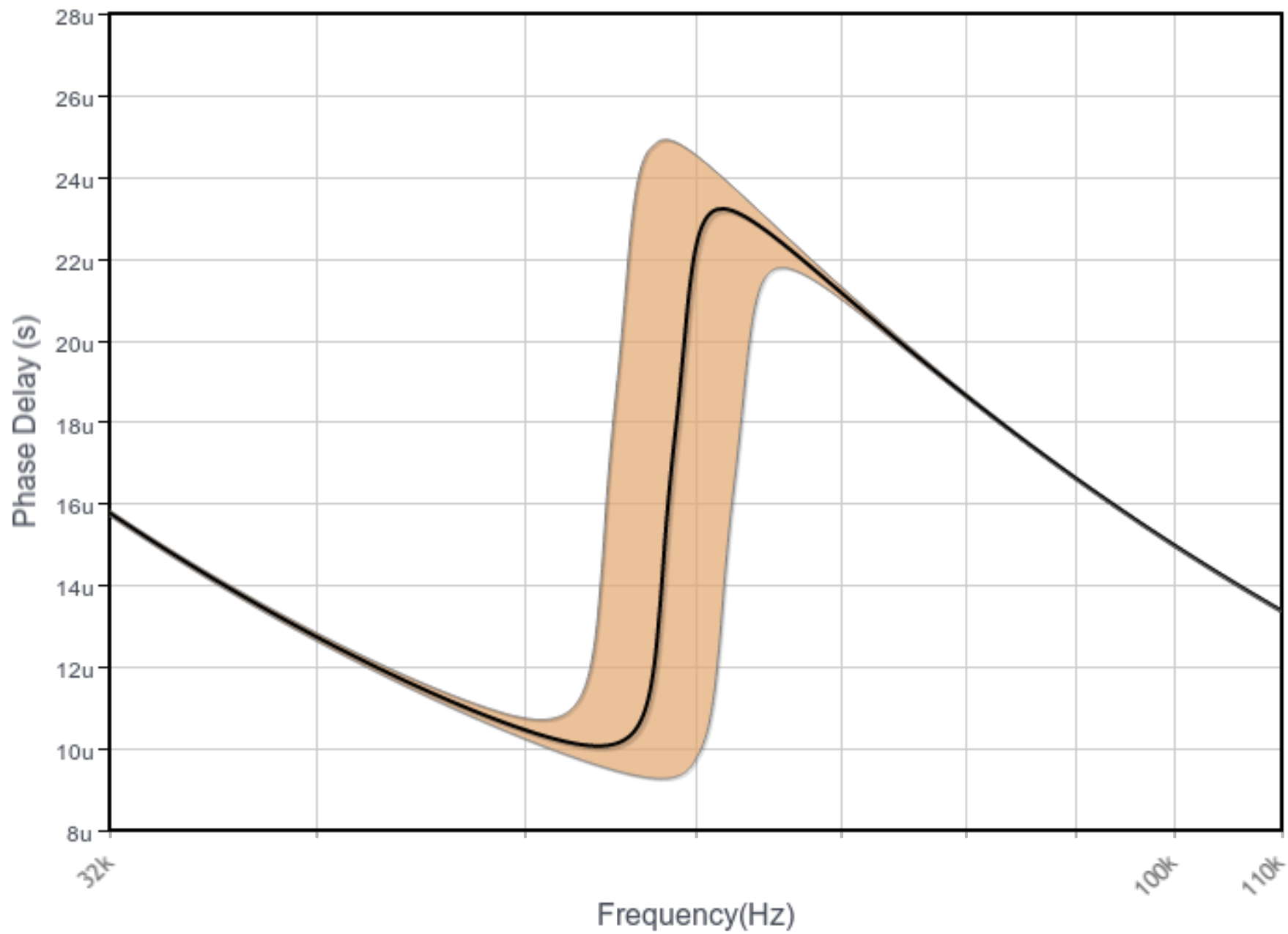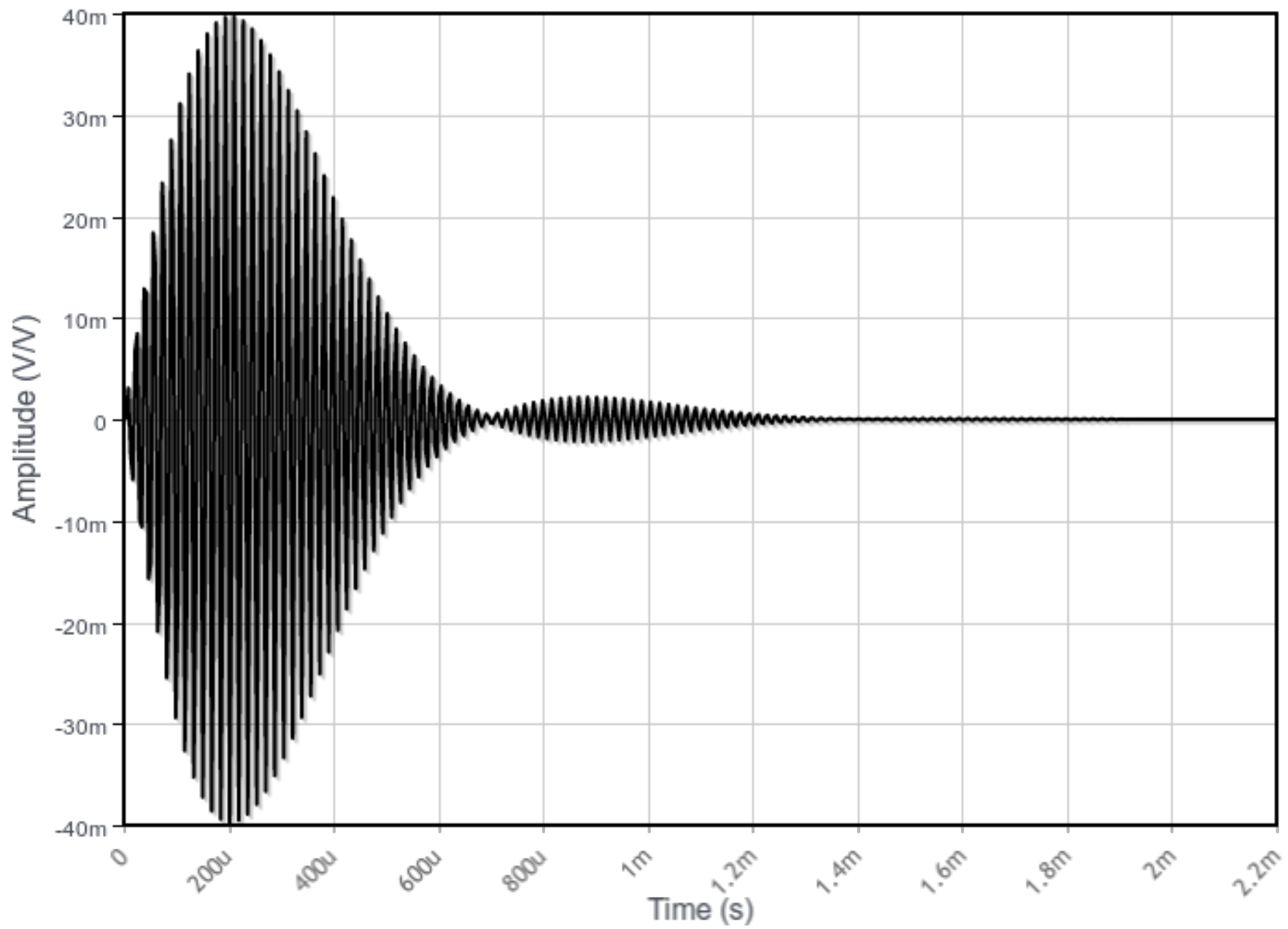Magnitude(Volts per Volt)

Phase(degrees)

Phase(radians)
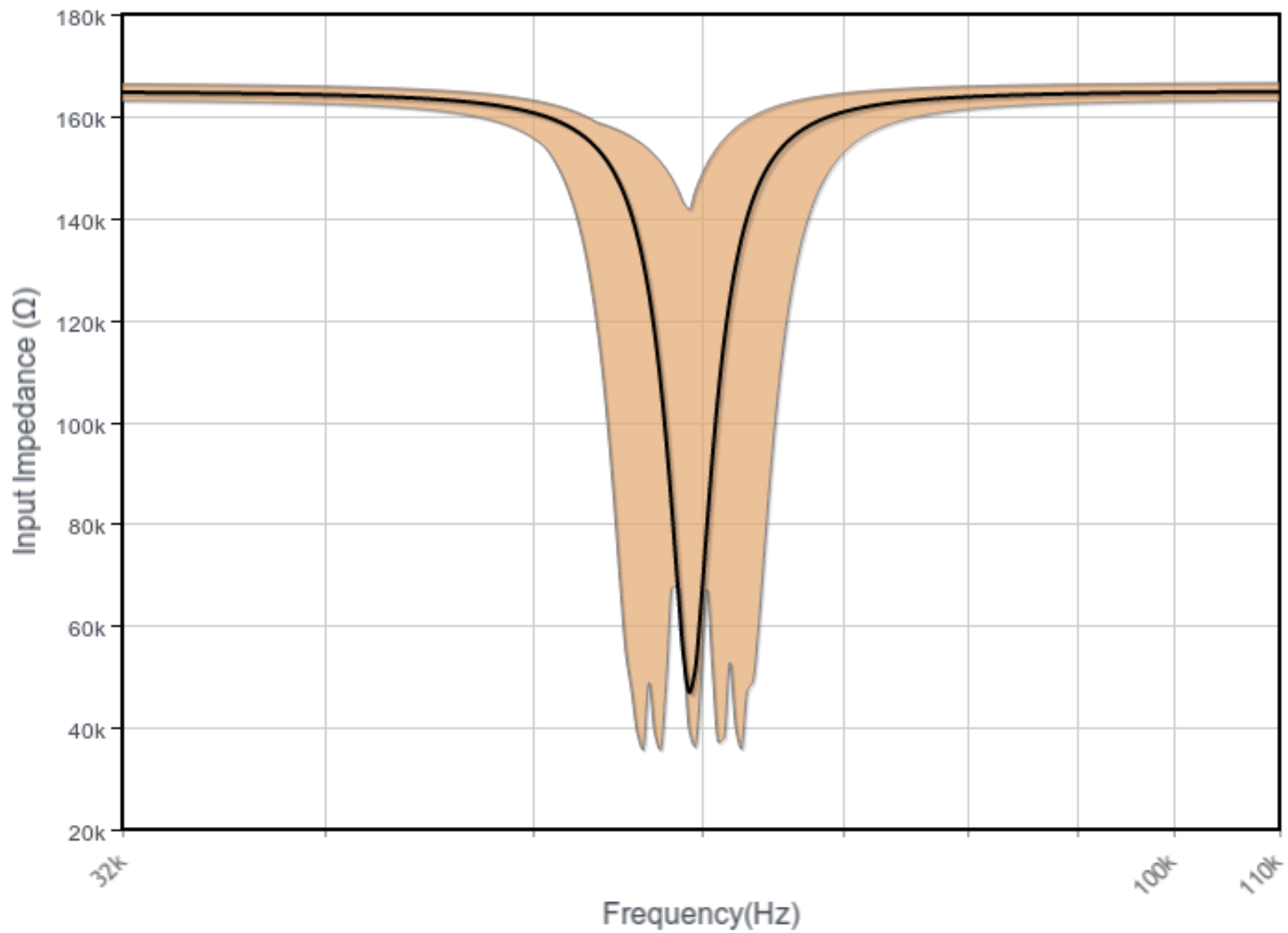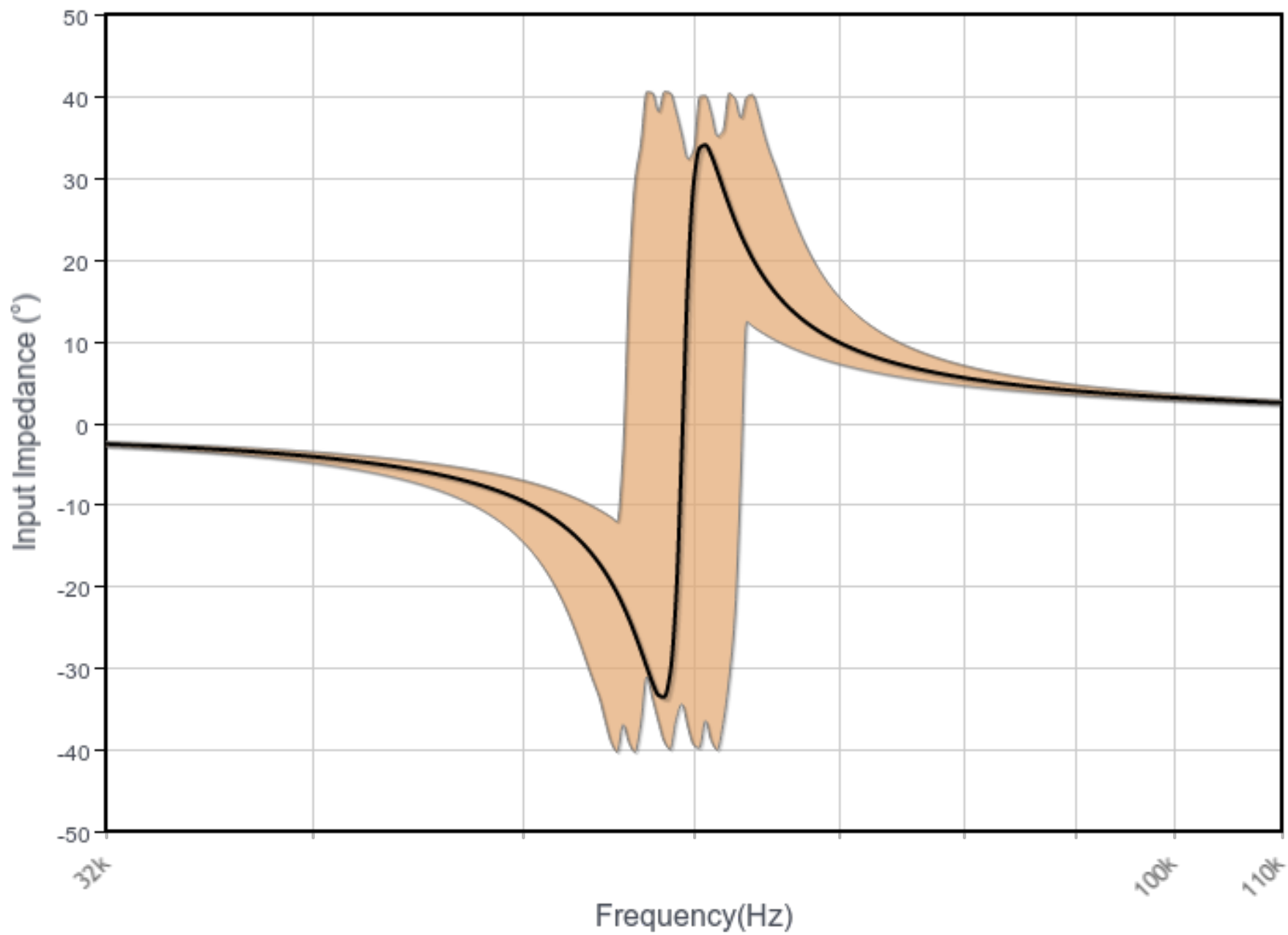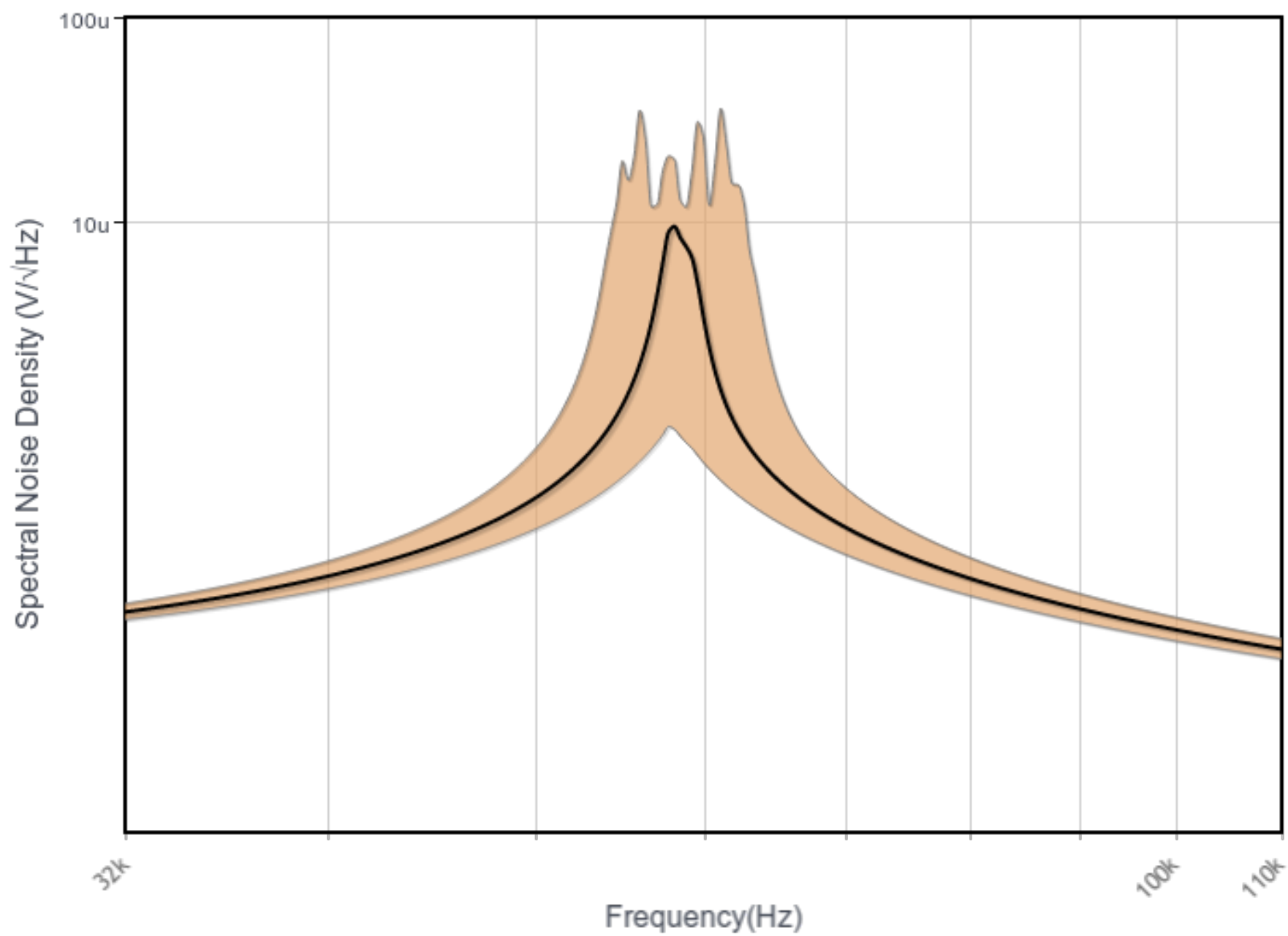
Group Delay

Phase Delay

Step Response

Input Impedance Magnitude

Input Impedance Phase

Noise

Circuit

Stage A
2nd order
Band-Pass
Multiple Feedback

Stage B
2nd order
Band-Pass
Multiple Feedback

C1A
270pF
5%

R5A
97.6kΩ
1%

R1A
165kΩ
1%

IN

C2A
270pF
5%

R2A
976Ω
1%

R4A
12.7kΩ
1%

OP162
U1A

R3A
221Ω
1%

R1B
169kΩ
1%

C1B
270pF
5%

R5B
100kΩ
1%

C2B
270pF
5%

R2B
1kΩ
1%

OUT

R4B
12.7kΩ
1%

OP162
U1B

R3B
226Ω
1%

5V

C9A
100nF
20%

-5V

C0A
100nF
20%

5V

C9B
100nF
20%

-5V

C0B
100nF
20%

5V

C101M
10uF
20%

-5V

C100M
10uF
20%