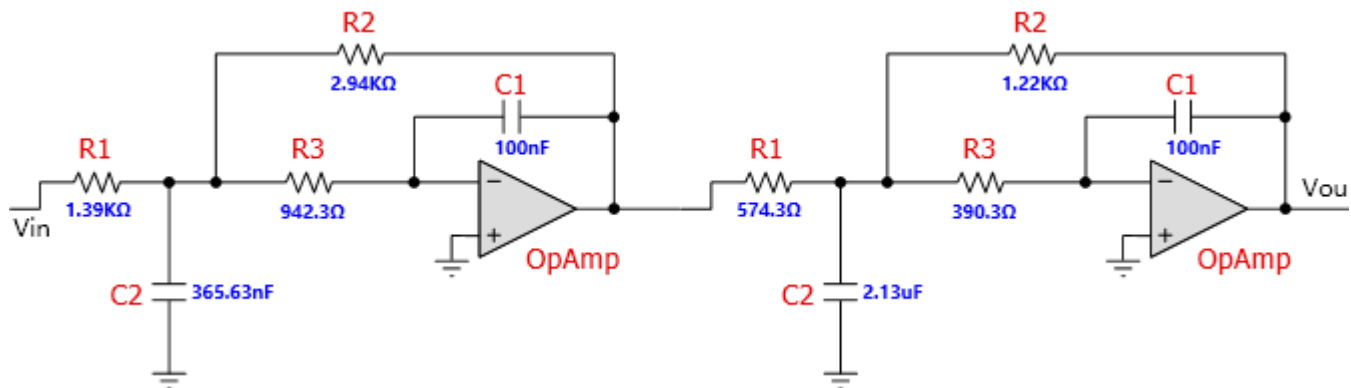


## FilterPro Design Report Schematic

**Design Name:** Lowpass, Multiple Feedback, Butterworth **Part:** Ideal Opamp **Order:** 4 **Stages:** 2  
**Gain:** 4.5 V/V ( 13.0616267406625 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 500 Hz  
**Corner Frequency Attenuation:** 10.062 dB



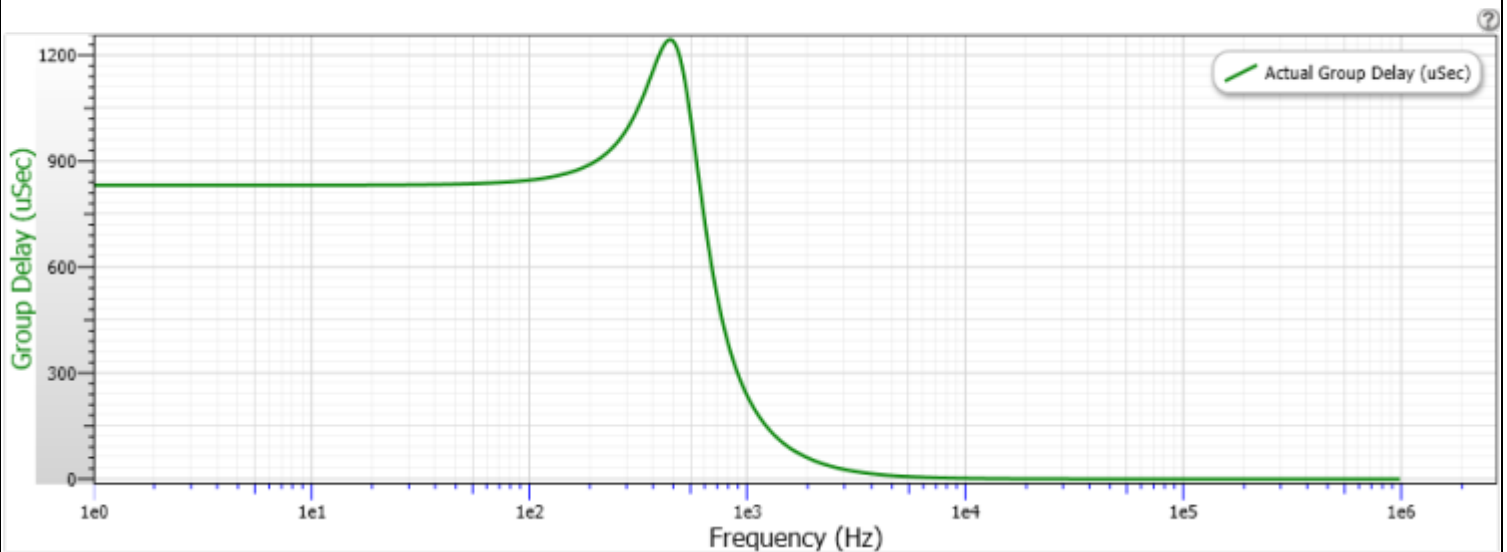
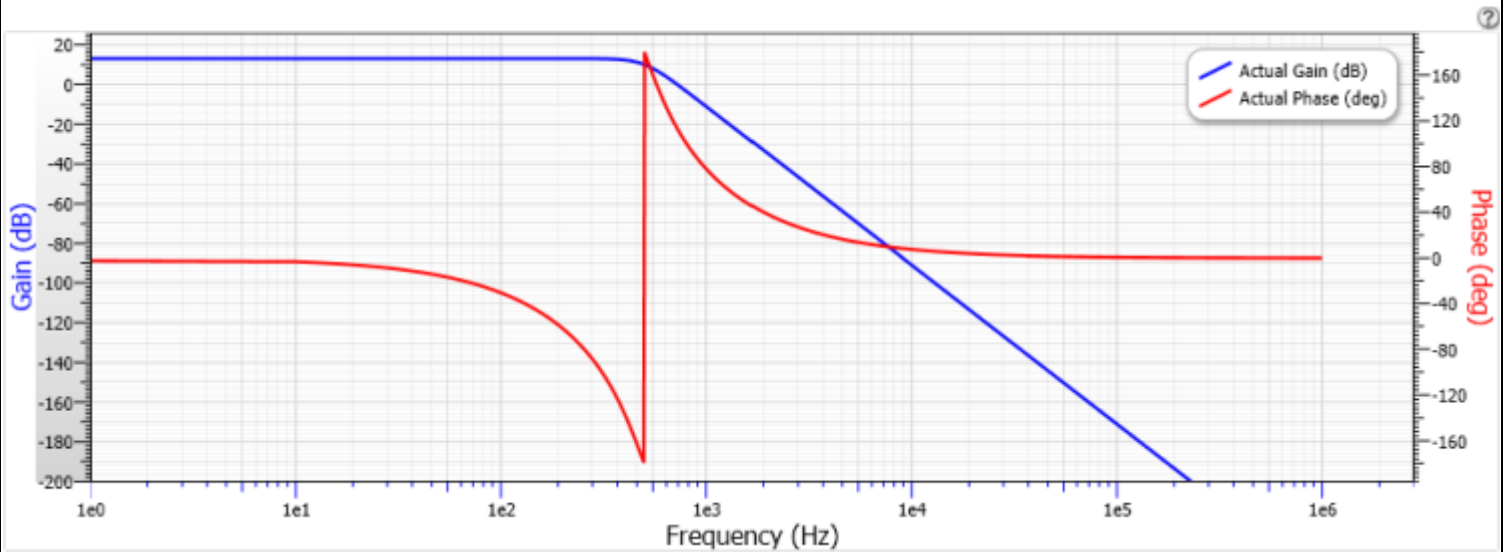
Filter Stage: 1  
Passband Gain( $A_o$ ): 2.121  
Cutoff Frequency( $f_n$ ): 500 Hz  
QualityFactor (Q): 0.54  
Filter Response: Butterworth  
Circuit Topology: MultipleFeedback  
Min GBW reqd.: 57.267 kHz

Filter Stage: 2  
Passband Gain( $A_o$ ): 2.121  
Cutoff Frequency( $f_n$ ): 500 Hz  
QualityFactor (Q): 1.31  
Filter Response: Butterworth  
Circuit Topology: MultipleFeedback  
Min GBW reqd.: 138.9255 kHz

# FilterPro Design Report

## Frequency and Phase Responses

**Design Name:** Lowpass, Multiple Feedback, Butterworth **Part:** Ideal Opamp **Order:** 4 **Stages:** 2  
**Gain:** 4.5 V/V ( 13.0616267406625 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 500 Hz  
**Corner Frequency Attenuation:** 10.062 dB



## FilterPro Design Report

### Bill of Materials

**Design Name:** Lowpass, Multiple Feedback, Butterworth   
**Part:** Ideal Opamp   
**Order:** 4   
**Stages:** 2  
**Gain:** 4.5 V/V ( 13.0616267406625 dB)   
**Allowable PassBand Ripple:** 1 dB   
**Passband Frequency:** 500 Hz  
**Corner Frequency Attenuation:** 10.062 dB

Element ID	Quantity	Part Number	Value	Tolerance	Description	Manufacturer
R1 (Stage 1)	1	Standard	1.39K $\Omega$	Exact: 0%	Resistor	
R2 (Stage 1)	1	Standard	2.94K $\Omega$	Exact: 0%	Resistor	
R3 (Stage 1)	1	Standard	942.3 $\Omega$	Exact: 0%	Resistor	
C1 (Stage 1)	1	Standard	100nF	Exact: 0%	Capacitor	
C2 (Stage 1)	1	Standard	365.63nF	Exact: 0%	Capacitor	
OpAmp (Stage 1)	1	Standard			Ideal OpAmp	
R1 (Stage 2)	1	Standard	574.3 $\Omega$	Exact: 0%	Resistor	
R2 (Stage 2)	1	Standard	1.22K $\Omega$	Exact: 0%	Resistor	
R3 (Stage 2)	1	Standard	390.3 $\Omega$	Exact: 0%	Resistor	
C1 (Stage 2)	1	Standard	100nF	Exact: 0%	Capacitor	
C2 (Stage 2)	1	Standard	2.13uF	Exact: 0%	Capacitor	
OpAmp (Stage 2)	1	Standard			Ideal OpAmp	

## FilterPro Design Report

### Design Notes

**Design Name:** Lowpass, Multiple Feedback, Butterworth **Part:** Ideal Opamp **Order:** 4 **Stages:** 2  
**Gain:** 4.5 V/V ( 13.0616267406625 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 500 Hz  
**Corner Frequency Attenuation:** 10.062 dB

