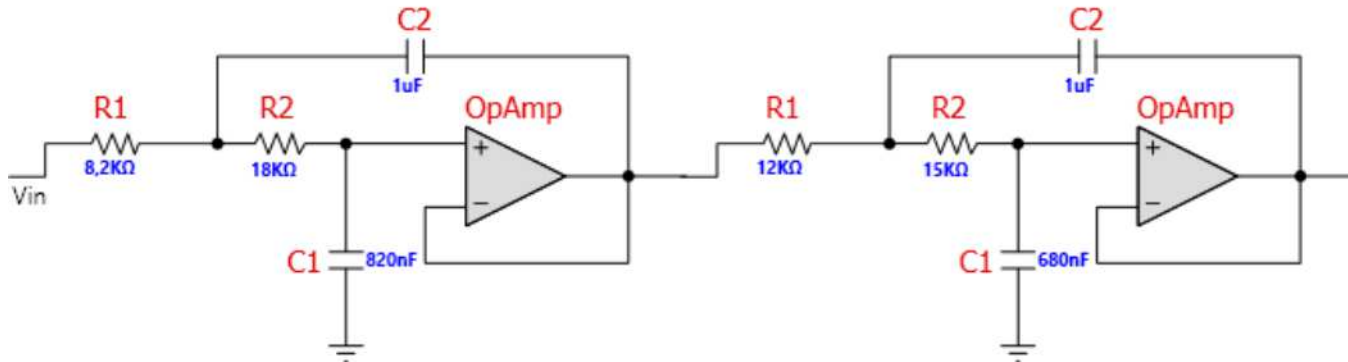


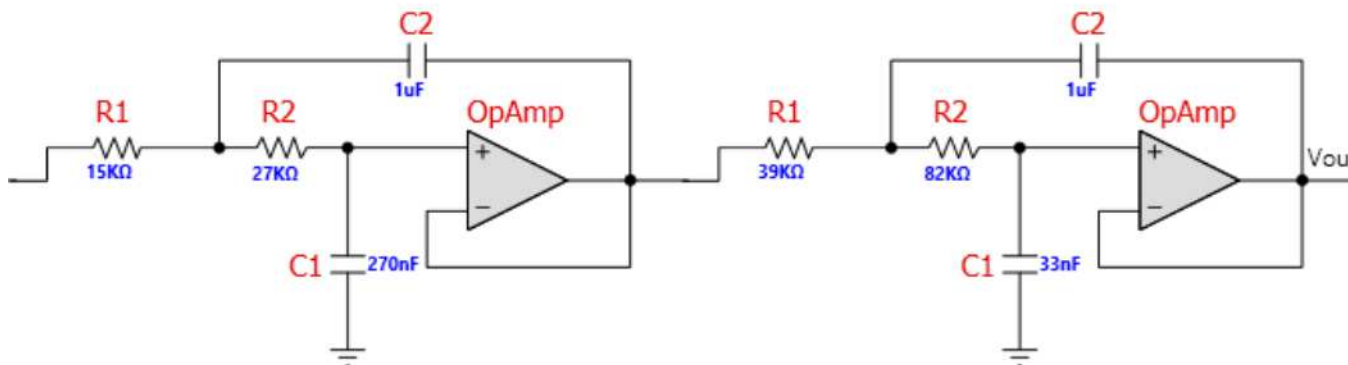
FilterPro Design Report Schematic

Design Name: Lowpass, Sallen Key, Butterworth **Part:** Ideal Opamp **Order:** 8 Stages: 4
Gain: 1 V/V (0 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 15 Hz
Corner Frequency Attenuation: -3 dB **Stopband Attenuation:** -45 dB **Stopband Frequency:** 30 Hz



Filter Stage: 1
 Passband Gain(Ao): 1
 Cutoff Frequency(fn): 15 Hz
 QualityFactor (Q): 0,51
 Filter Response: Butterworth
 Circuit Topoloav: SallenKey
 Min GBW read.: 765 Hz

Filter Stage: 2
 Passband Gain(Ao): 1
 Cutoff Frequency(fn): 15 Hz
 QualityFactor (Q): 0,6
 Filter Response: Butterworth
 Circuit Topoloav: SallenKey
 Min GBW read.: 900 Hz



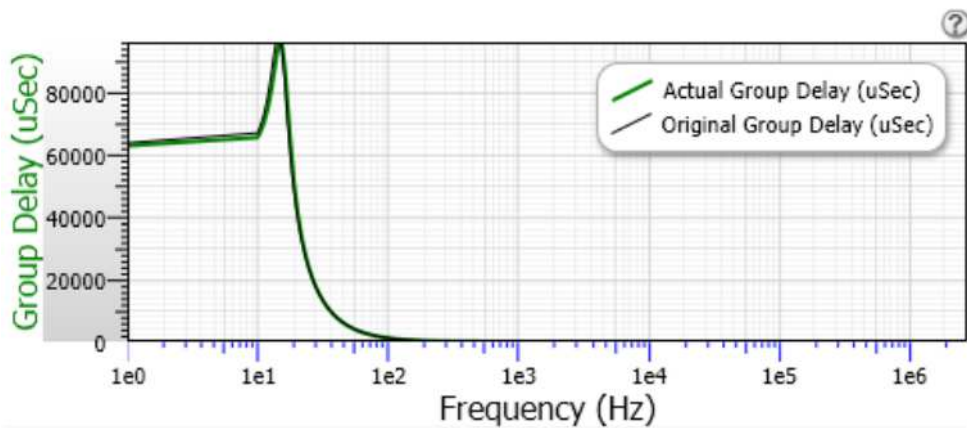
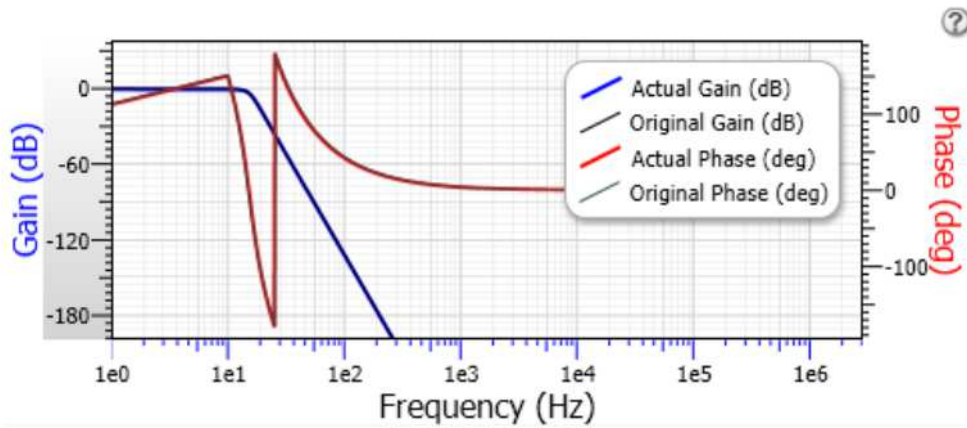
Filter Stage: 3
 Passband Gain(Ao): 1
 Cutoff Frequency(fn): 15 Hz
 QualityFactor (Q): 0,9
 Filter Response: Butterworth
 Circuit Topoloav: SallenKey
 Min GBW read.: 1,35 kHz

Filter Stage: 4
 Passband Gain(Ao): 1
 Cutoff Frequency(fn): 15 Hz
 QualityFactor (Q): 2,56
 Filter Response: Butterworth
 Circuit Topoloav: SallenKey
 Min GBW read.: 3,84 kHz

FilterPro Design Report

Frequency and Phase Responses

Design Name: Lowpass, Sallen Key, Butterworth **Part:** Ideal Opamp **Order:** 8 Stages: 4
Gain: 1 V/V (0 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 15 Hz
Corner Frequency Attenuation: -3 dB **Stopband Attenuation:** -45 dB **Stopband Frequency:** 30 Hz



FilterPro Design Report

Bill of Materials

Design Name: Lowpass, Sallen Key, Butterworth **Part:** Ideal Opamp **Order:** 8 Stages: 4
Gain: 1 V/V (0 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 15 Hz
Corner Frequency Attenuation: -3 dB **Stopband Attenuation:** -45 dB **Stopband Frequency:** 30 Hz

| Element ID | Quantity | Part Number | Value | Tolerance | Description | Manufacturer |
|-----------------|----------|-------------|-------|-----------|-------------|--------------|
| R1 (Stage 1) | 1 | Standard | 8,2KΩ | E12: 10% | Resistor | |
| R2 (Stage 1) | 1 | Standard | 18KΩ | E12: 10% | Resistor | |
| C1 (Stage 1) | 1 | Standard | 820nF | E12: 10% | Capacitor | |
| C2 (Stage 1) | 1 | Standard | 1uF | E12: 10% | Capacitor | |
| OpAmp (Stage 1) | 1 | Standard | | | Ideal OpAmp | |
| R1 (Stage 2) | 1 | Standard | 12KΩ | E12: 10% | Resistor | |
| R2 (Stage 2) | 1 | Standard | 15KΩ | E12: 10% | Resistor | |
| C1 (Stage 2) | 1 | Standard | 680nF | E12: 10% | Capacitor | |
| C2 (Stage 2) | 1 | Standard | 1uF | E12: 10% | Capacitor | |
| OpAmp (Stage 2) | 1 | Standard | | | Ideal OpAmp | |
| R1 (Stage 3) | 1 | Standard | 15KΩ | E12: 10% | Resistor | |
| R2 (Stage 3) | 1 | Standard | 27KΩ | E12: 10% | Resistor | |
| C1 (Stage 3) | 1 | Standard | 270nF | E12: 10% | Capacitor | |
| C2 (Stage 3) | 1 | Standard | 1uF | E12: 10% | Capacitor | |
| OpAmp (Stage 3) | 1 | Standard | | | Ideal OpAmp | |
| R1 (Stage 4) | 1 | Standard | 39KΩ | E12: 10% | Resistor | |
| R2 (Stage 4) | 1 | Standard | 82KΩ | E12: 10% | Resistor | |
| C1 (Stage 4) | 1 | Standard | 33nF | E12: 10% | Capacitor | |
| C2 (Stage 4) | 1 | Standard | 1uF | E12: 10% | Capacitor | |
| OpAmp (Stage 4) | 1 | Standard | | | Ideal OpAmp | |

FilterPro Design Report

Design Notes

Design Name: Lowpass, Sallen Key, Butterworth **Part:** Ideal Opamp **Order:** 8 **Stages:** 4
Gain: 1 V/V (0 dB) **Allowable PassBand Ripple:** 1 dB **Passband Frequency:** 15 Hz
Corner Frequency Attenuation: -3 dB **Stopband Attenuation:** -45 dB **Stopband Frequency:** 30 Hz