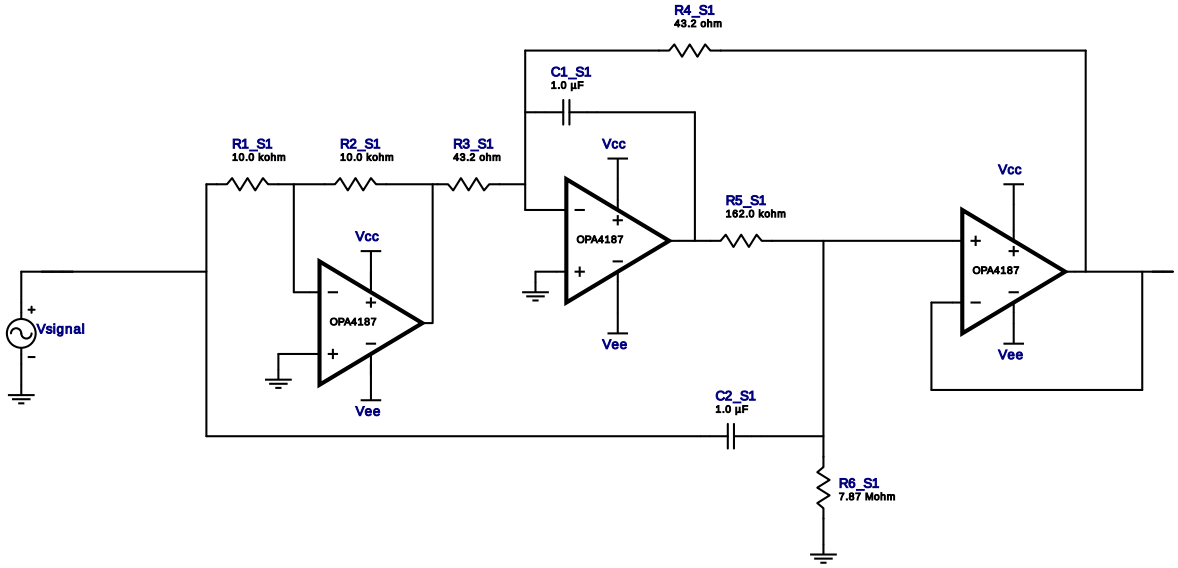
Type : Bandstop
Response : Butterworth
Order : 2
Number of Stages : 1

Filter Design Report

Design : Bandstop Filter - 2nd order Butterworth
Design ID: 8

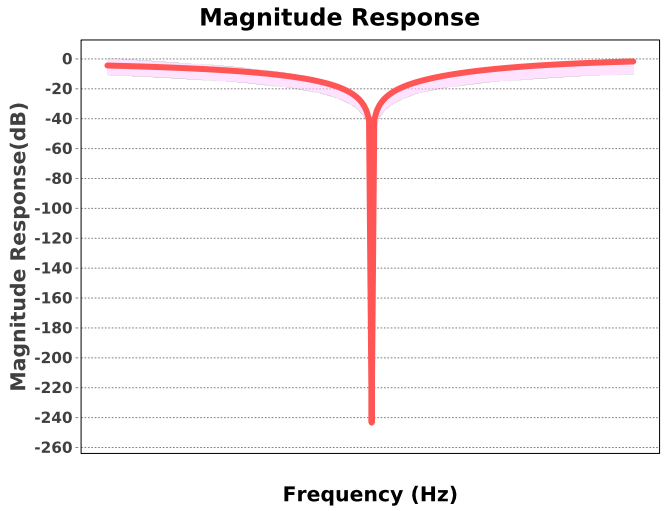


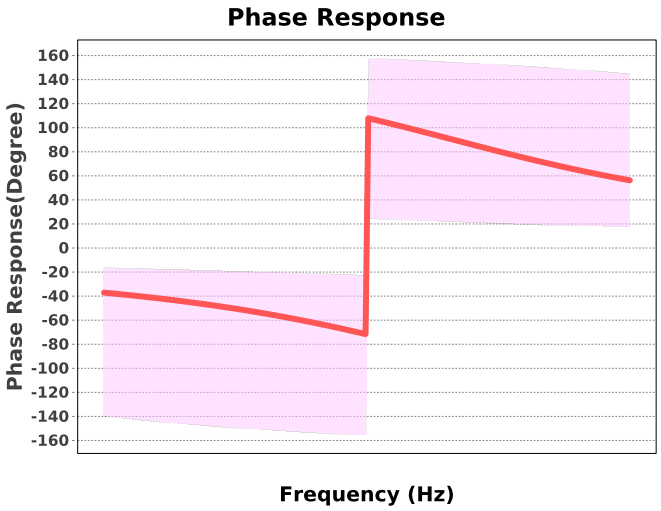
Electrical BOM

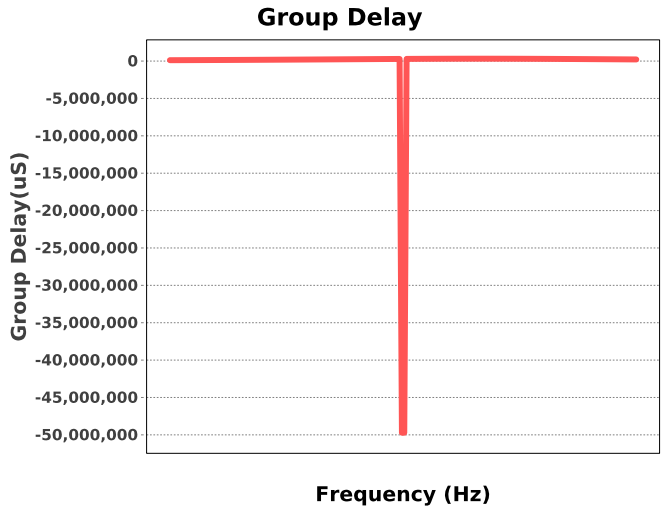
#	Name	Manufacturer	Part Number	Properties	Qty
1.	A1_S1	Texas Instruments Inc.	OPA4187	GbwTyp= 0.55MHz VccMax= 36V VccMin= 4.5V	1
2.	A2_S1	Texas Instruments Inc.	OPA4187	GbwTyp= 0.55MHz VccMax= 36V VccMin= 4.5V	1
3.	A3_S1	Texas Instruments Inc.	OPA4187	GbwTyp= 0.55MHz VccMax= 36V VccMin= 4.5V	1
4.	C1_S1	Generic	Ideal	Cap= 1.0 uF Tolerance= 2.0 %	1
5.	C2_S1	Generic	Ideal	Cap= 1.0 uF Tolerance= 2.0 %	1
6.	R1_S1	Generic	Ideal	Res= 10000.0ohm Tolerance= 1%	1
7.	R2_S1	Generic	Ideal	Res= 10000.0ohm Tolerance= 1%	1
8.	R3_S1	Generic	Ideal	Res= 43.2ohm Tolerance= 1%	1
9.	R4_S1	Generic	Ideal	Res= 43.2ohm Tolerance= 1%	1
10.	R5_S1	Generic	Ideal	Res= 162000.0ohm Tolerance= 1%	1
11.	R6_S1	Generic	Ideal	Res= 7870000.0ohm Tolerance= 1%	1

Sensitivity Analysis

#	Name	Series	Tolerance
1.	Cap	E48	2%
2.	Res	E96	1%







Design Inputs

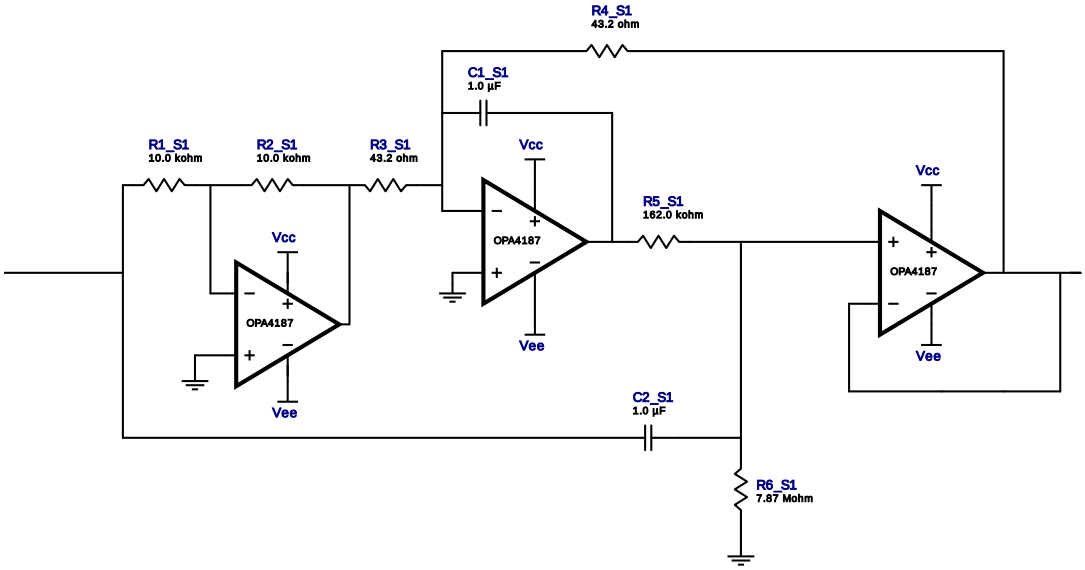
#	Name	Value	Description
1.	FilterType	bandstop	
2.	FilterResponse	Butterworth	
3.	FilterOrder	2.0	
4.	FilterTopology	Bainter	
5.	NumberOfStages	1.0	
6.	CenterFrequency	60.0	
7.	StopbandAttenuation	-20.043	
8.	PassbandBandwidth	1.0	
9.	StopbandBandwidth	100.0 m	
10.	Gain	1.0	
11.	DualSupply	+/-3.00 V	Power supply(s) to active chips
12.	ResistorTolerance	E96	Resistor series - 1% Passive resistor tolerance
13.	CapacitorTolerance	E48	Capacitor series - 2% Passive capacitor tolerance

Design Assistance

1. **OPA4187** Product Folder : http://www.ti.com/product/OPA4187 : contains the data sheet and other resources.

Filter Stage :1

Cutoff Frequency	60.162 Hz
Min GBW Reqd	360.0 kHz
Stage Gain	1.0 V/V
Stage Q	60.002
Stage Topology	Bainter



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