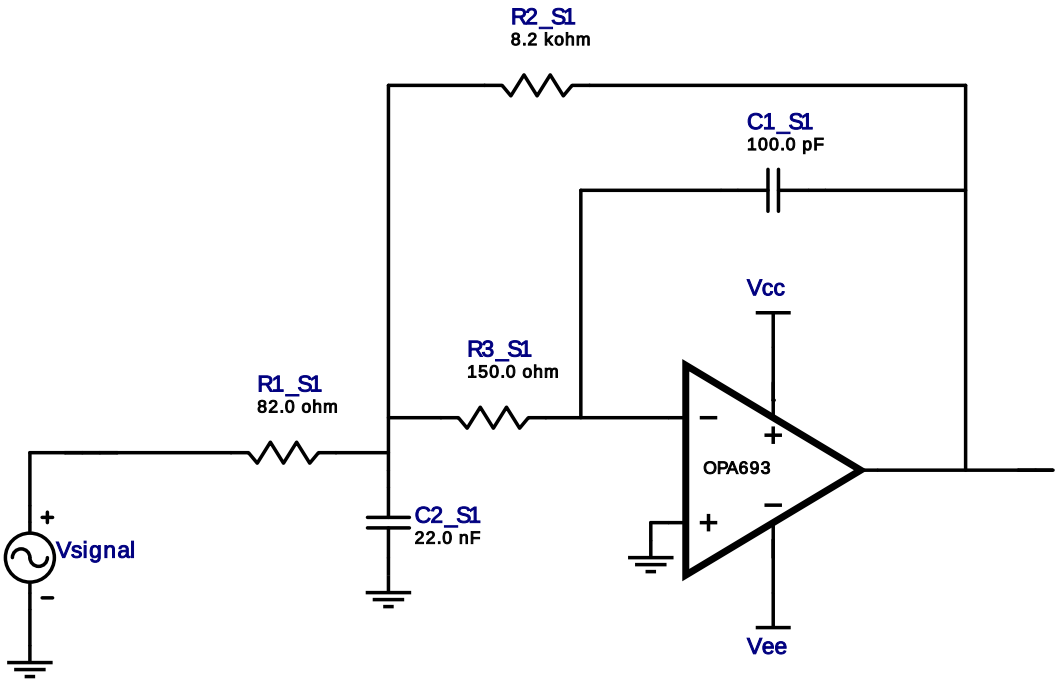
Type : Lowpass
Response : Butterworth
Order : 2
Number of Stages : 1

Filter Design Report

Design : Lowpass Filter - 2nd order Butterworth
Design ID: 11



Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty
1.	A1_S1	Texas Instruments Inc.	OPA693	GbwTyp= 1400MHz VccMax= 12V VccMin= 5V	1
2.	C1_S1	Generic	Ideal	Cap= 100.0 pF Tolerance= 20.0 %	1
3.	C2_S1	Generic	Ideal	Cap= 22.0 nF Tolerance= 20.0 %	1
4.	R1_S1	Generic	Ideal	Res= 82.0ohm Tolerance= 5%	1
5.	R2_S1	Generic	Ideal	Res= 8200.0ohm Tolerance= 5%	1
6.	R3_S1	Generic	Ideal	Res= 150.0ohm Tolerance= 5%	1

Sensitivity Analysis

#	Name	Series	Tolerance
1.	Cap	E6	20%
2.	Res	E24	5%

Design Inputs

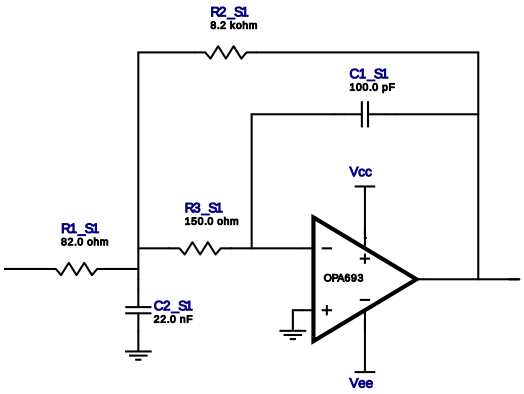
#	Name	Value	Description
1.	FilterType	lowpass	
2.	FilterResponse	Butterworth	
3.	FilterOrder	2.0	
4.	FilterTopology	Multiple Feedback	
5.	NumberOfStages	1.0	
6.	PassbandFrequency	100.0 k	
7.	StopbandAttenuation	-40.001	
8.	StopbandFrequency	1000.0 k	
9.	Gain	100.0	
10.	DualSupply	+/-5.00 V	Power supply(s) to active chips
11.	ResistorTolerance	E24	Resistor series - 5% Passive resistor tolerance
12.	CapacitorTolerance	E6	Capacitor series - 20% Passive capacitor tolerance

Design Assistance

1. **OPA693** Product Folder : http://www.ti.com/product/OPA693 : contains the data sheet and other resources.

Filter Stage :1

Cutoff Frequency	96.751 kHz
Min GBW Reqd	707.1 MHz
Stage Gain	100.0 V/V
Stage Q	704.494 m
Stage Topology	Multiple Feedback



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