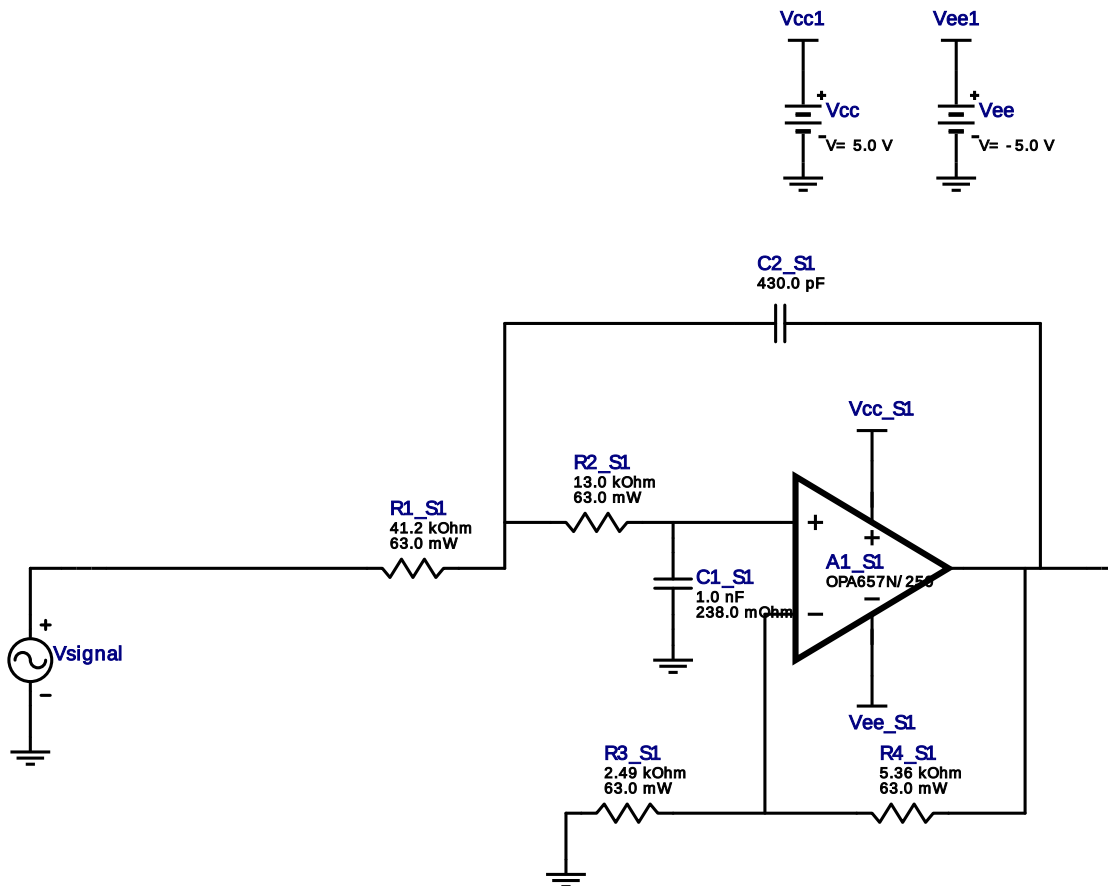


WEBENCH[®] Design Report

Design : 3583925/4 OPA657N/250
Lowpass, Sallen Key, Chebyshev 1 dB



My Comments

No comments

Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	A1_S1	Texas Instruments, Inc.	OPA657N/250	GbwTyp= 1600.0MHz VccMin= 7.0 V VccMax= 13.0 V	1	\$6.70	 DBV0005A 15 mm ²
2.	C1_S1	AVX	12061A102FAT2A Series= C0G/NP0	Cap= 1.0 nF ESR= 238.0 mOhm VDC= 100.0 V Tolerance= 1.0 %	1	\$0.14	 1206 11 mm ²
3.	C2_S1	MuRata	GRM1555C1E431JA01D Series= C0G/NP0	Cap= 430.0 pF VDC= 25.0 V Tolerance= 5.0 %	1	\$0.01	 0402 3 mm ²
4.	R1_S1	Vishay-Dale	CRCW040241K2FKED Series= CRCW..e3	Res= 41.2 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
5.	R2_S1	Vishay-Dale	CRCW040213K0FKED Series= CRCW..e3	Res= 13.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
6.	R3_S1	Vishay-Dale	CRCW04022K49FKED Series= CRCW..e3	Res= 2.49 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3 mm ²
7.	R4_S1	Vishay-Dale	CRCW04025K36FKED Series= CRCW..e3	Res= 5.36 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3 mm ²

Design Inputs

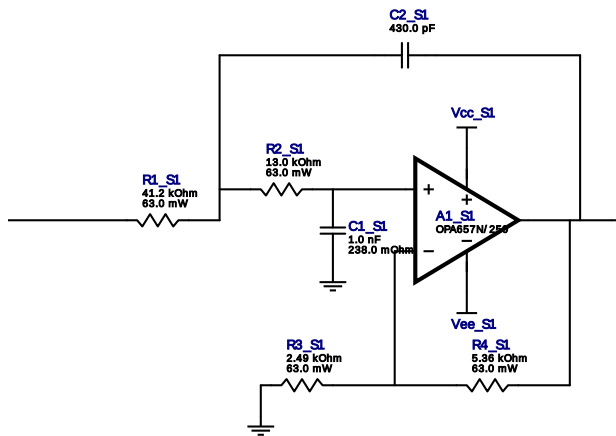
#	Name	Value	Description
1.	DualSupply	+/-5.0 V	DualSupply
2.	FilterType	Lowpass	
3.	FilterResponse	Chebyshev_1dB	
4.	FilterOrder	2.0	
5.	FilterTopology	Sallen_Key	
6.	NumberOfStages	1.0	
7.	PassbandFrequency	10.0 k	
8.	StopbandAttenuation	-45.0	
9.	StopbandFrequency	150.0 k	
10.	Gain	3.162	
11.	ResistorTolerance	E96	Resistor series - 1% Passive resistor tolerance
12.	CapacitorTolerance	E24	Capacitor series - 5% Passive capacitance tolerance
13.	SeedCapacitance	1.0 n	Seed Capacitance to start design of filter

Design Assistance

1. **OPA657N/250** Product Folder : <http://www.ti.com//product/OPA657> : contains the data sheet and other resources.

Filter Stage :1

Cutoff Frequency 10.5 kHz
 Min GBW Req'd 3.177 MHz
 Stage Gain 3.162 V/V
 Stage Q 957.0 m
 Stage Topology Sallen_Key



Electrical BOM

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