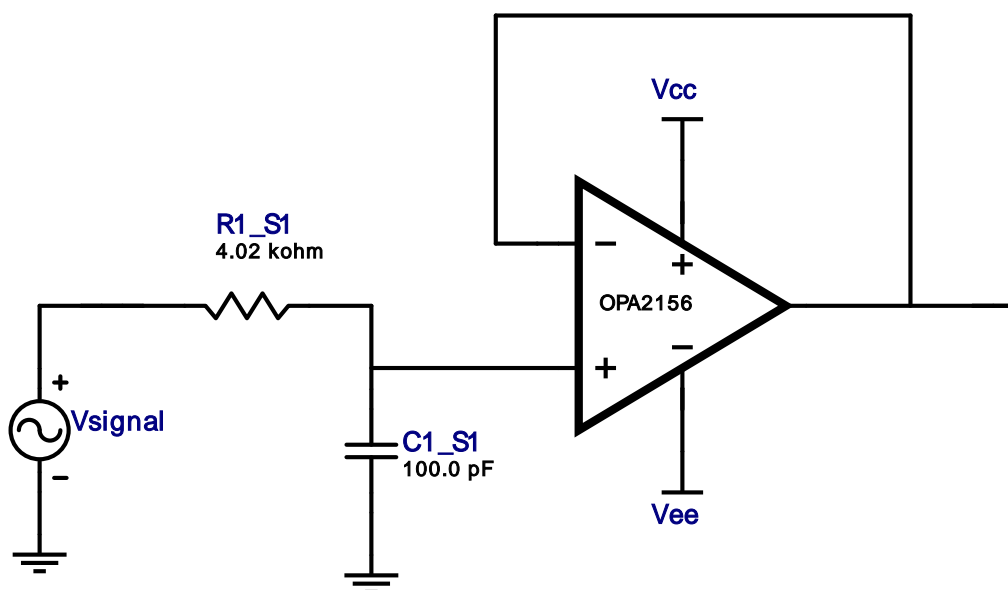


Filter Design Report

Design : Lowpass Filter - 1st order First Order
Design ID: 37



Electrical BOM

| # | Name | Manufacturer | Part Number | Properties | Qty |
|----|-------|------------------------|-------------|--|-----|
| 1. | A1_S1 | Texas Instruments Inc. | OPA2156 | GbwTyp= 25MHz VccMax= 36V VccMin= 4.5V | 1 |
| 2. | C1_S1 | Generic | Ideal | Cap= 100.0 pF Tolerance= 2.0 % | 1 |
| 3. | R1_S1 | Generic | Ideal | Res= 4020.0ohm Tolerance= 1% | 1 |

Sensitivity Analysis

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

Design Inputs

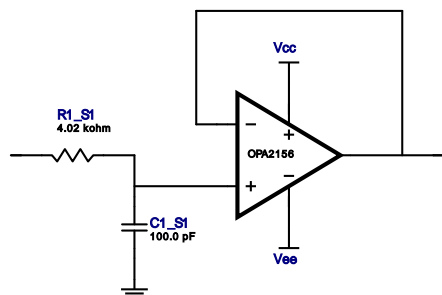
| # | Name | Value | Description |
|-----|---------------------|-------------|---|
| 1. | FilterType | lowpass | |
| 2. | FilterResponse | First Order | |
| 3. | FilterOrder | 1.0 | |
| 4. | FilterTopology | Single Pole | |
| 5. | NumberOfStages | 1.0 | |
| 6. | PassbandFrequency | 400.0 k | |
| 7. | StopbandAttenuation | -29.816 m | |
| 8. | StopbandFrequency | 33.2 k | |
| 9. | Gain | 1.0 | |
| 10. | DualSupply | +/-5.00 V | Power supply(s) to active chips |
| 11. | ResistorTolerance | E96 | Resistor series - 1% Passive resistor tolerance |
| 12. | CapacitorTolerance | E48 | Capacitor series - 2% Passive capacitor tolerance |

Design Assistance

1. **OPA2156** Product Folder : <http://www.ti.com/product/OPA2156> : contains the data sheet and other resources.

Filter Stage :1

| | |
|------------------|-------------|
| Cutoff Frequency | 395.908 kHz |
| Min GBW Req'd | 20.0 MHz |
| Stage Gain | 1.0 V/V |
| Stage Q | 500.0 m |
| Stage Topology | Single Pole |



Electrical BOM

| # | Name | Manufacturer | Part Number | Properties | Qty |
|----|-------|------------------------|-------------|--|-----|
| 1. | A1_S1 | Texas Instruments Inc. | OPA2156 | GbwTyp= 25MHz VccMax= 36V VccMin= 4.5V | 1 |
| 2. | C1_S1 | Generic | Ideal | Cap= 100.0 pF Tolerance= 2.0 % | 1 |
| 3. | R1_S1 | Generic | Ideal | Res= 4020.0ohm Tolerance= 1% | 1 |

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