

Noise 4

Multiple Choice Quiz

TI Precision Labs – Op Amps



Quiz: Noise 4

1. When adding two noise sources it is permissible to ignore the smaller source if the larger source is _____ times greater than the smaller.

- a. Two
- b. Three
- c. Five
- d. Ten

2. It is important to keep _____.

- a. Op amp noise at least three times greater than resistor noise.
- b. Op amp noise at least three times smaller than resistor noise.

3. (T/F) Current noise from CMOS amplifiers is rarely a factor in determining the total noise.

- a. True
- b. False

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4. How do you determine if current noise is a factor in determining the total noise?

- a. Compare current noise to bias current
- b. Convert current noise to voltage noise and compare to op amp voltage noise.
- c. Current noise is only a factor at low temperature
- d. Current noise is only a factor if low source impedance is used.

5. The equivalent feedback impedance for an op amp is 100 ohms. Assuming a bipolar op amp is used, will current noise be a factor in determining total noise?

- a. It is very unlikely that current noise will be a factor.
- b. It is likely that current noise will be a factor.

6. How can you quickly find the 1/f noise corner on a noise spectral density plot?

- a. Use the gain bandwidth product and closed loop gain.
- b. Look for the bend in the curve.
- c. This information is normally given in the specification table.
- d. Integrate the noise over frequency and divide by Avogadro's number

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7. Assume the bandwidth of an amplifier is 10kHz and the noise corner is 200Hz. Can you ignore 1/f noise?

- a. Yes
- b. No
- c. This depends on the input resistance.

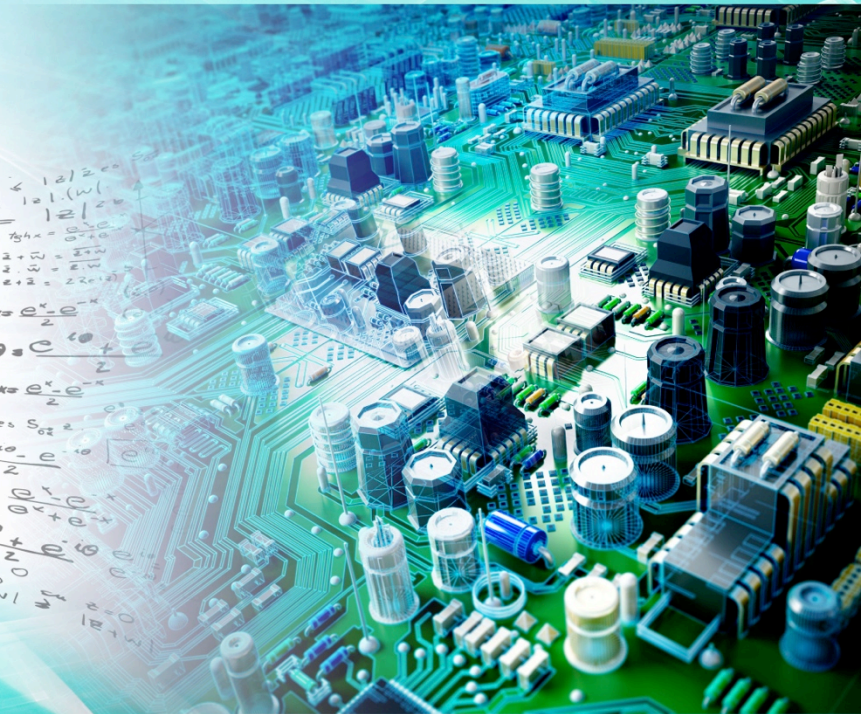
8. For a multiple stage amplifier, it is recommended that you have the highest gain in the ____.

- a. Input stage
- b. Output stage

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Multiple Choice Quiz: Solutions

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