

Stability 1

Multiple Choice Quiz

TI Precision Labs – Op Amps



Quiz: Stability 1

- 1. What are some possible signs of an unstable op amp circuit?**
 - a. Oscillations
 - b. Large overshoot and ringing
 - c. Unpredictable or Unexpected Response
 - d. All of the above.

- 2. (T/F) Many common circuits inadvertently cause delay in the feedback network resulting in stability issues.**
 - a. True
 - b. False

- 3. What are some possible causes amplifier instability?**
 - a. Capacitance on the amplifiers output.
 - b. Capacitance on the amplifiers inverting input.
 - c. Large value feedback resistors.
 - d. All of the above.

Quiz: Stability 1

4. Which common application is most likely to have a stability issues?

Photodiode Transimpedance Amplifier

- a. Low-Noise Gain Stage
- b. Summing Amplifier
- a. Integrator

5. Amplifiers with stability problems are_____.

- a. Only sensitive to transients on the input.
- b. Sensitive to transients on the input, output, and the power supplies.

6. (T/F) Amplifiers with dc inputs (e.g. reference buffer) will not have stability issues.

- a. True
- b. False

Quiz: Stability 1

7. Describe a common setup used for stability testing.

- a. Monitor the amplifier output with an oscilloscope and apply a sinusoidal input signal.
- b. Monitor the amplifier output with an oscilloscope and apply a square wave input signal.
- c. Monitor the amplifier output with an oscilloscope and apply a triangle wave input signal.

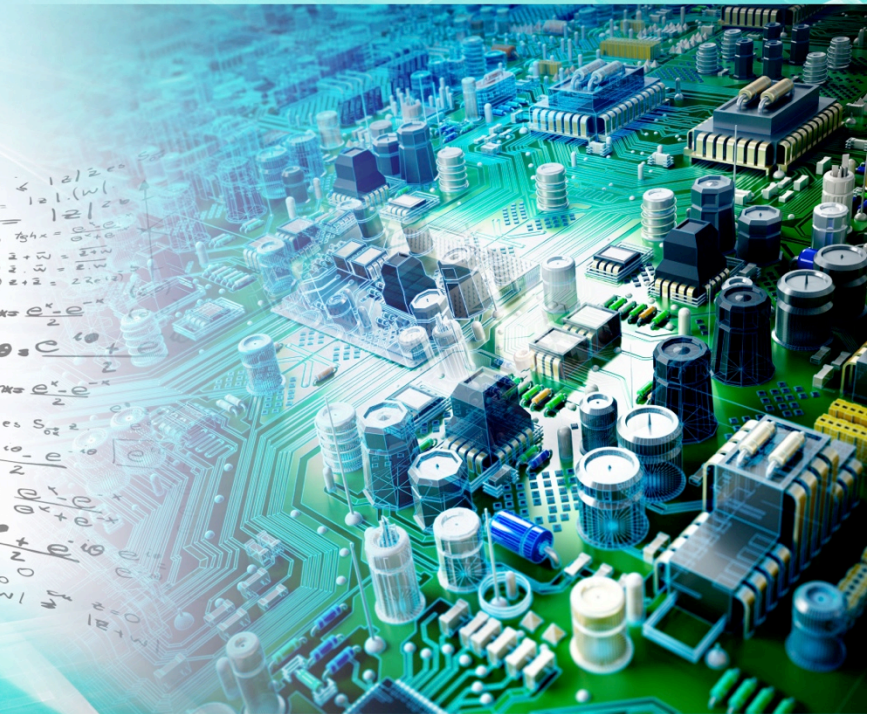
8. How can a gain / phase analyzer be used to test for stability?

- a. AC gain peaking
- b. Rapid phase shifts
- c. Unexpected gains
- d. All of the above

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Multiple Choice Quiz: Solutions

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