

How to measure the inductance of a base station power supply

What is the measurement of inductance?

In this section, we will discuss the measurement of inductance, which is a fundamental property of electrical circuits. Inductance is a measure of an object's ability to store electrical energy in a magnetic field, and it is expressed in henries (H).

How do you determine a power supply inductor value?

Power supply designers often use simulation techniques to determine the appropriate inductor value for a design. After manufacturing the inductor, it is common practice to verify the inductance using an LCR Meter.

How to measure inductance with a higher degree of precision?

However, the best way to measure inductance with a higher degree of precision, set the frequency in the aforementioned frequency range in which the inductance is consistent. The measurement current can be calculated from the open-terminal voltage, the instrument's output impedance, and the measurement target's impedance.

Why is inductance measurement important?

Inductance measurement is essential in many areas of electrical engineering, including power transmission, signal processing, and electronic circuit design. Inductance measurement can be challenging due to various factors, including stray inductance, parasitic inductance, and measurement instrument limitations.

3.3.2. Inductors

Reviews the basic theory of inductors and transformers, especially as it relates to in-circuit measurements
Explains how to use an oscilloscope and appropriate probes to measure inductor and ...

Measuring Stray Inductance in Power Electronics Systems In power electronics systems, parasitic inductance degrades performance by contributing to voltage overshoots and ...

How To Measure Inductance By Tim Daycounter Most multimeter will measure all electrical properties of a component with the exception of inductance, so you are left to your own devices. There are several ...

Inductance is the ability of a coil to stop an electrical current from flowing through it. An inductor coil can stop one current so a different one is able to flow. TVs and radios, for instance, use ...

Measuring Inductance With a Multimeter and a Resistor: Background From a very young age I was always interested in reusing, recycling, and re-inventing the ways things are utilized and in ...

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Measuring Power Inductors | Elektor Magazine With this circuit, a benchtop power supply, and a digital oscilloscope, you'll be able to measure the most important characteristics of power inductors.

So, why is this way of measuring an unknown inductance with a DC source preferred? I performed another simulation to justify my points: Below simulation is a clear example of the voltage ...

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Inductance is a property of an inductor that describes its ability to store energy in a magnetic field when current flows through it. Measuring the value of an inductor is an important step for designing circuits, ...

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