

**Inductors (28:36)      CORRECTION at 21:11: nanoH NOT picoH 106 = 10000000 nH = 10mH**

Draw the schematic symbol for an inductor

Describe the right hand rule. Draw a diagram illustrating the right hand rule.

Describe how current intensity and direction influence the associated magnetic field.

Use the right hand rule to draw the magnetic field associated with a current carrying coil of wire.

Describe the advantages of an electromagnet over a permanent magnet.

Describe Faraday's Law of electromagnetic induction.

Describe methods of creating a changing magnetic field.

Describe and draw a diagram illustrating Fleming's right hand generator rule.

Describe how Fleming's right hand generator rule explains the phenomenon of an inductor experiencing increasing current. Draw a plot of current and voltage as a function of time for this process.

Describe how Fleming's right hand generator rule explains the phenomenon of an inductor experiencing decreasing current. Draw a plot of current and voltage as a function of time for this process.

Describe which events constitute storage and release of energy in an inductor's magnetic field.

Describe how a motor and flywheel is analogous to the inductor storage and release process.

Describe the units used to measure inductance.

Write the inductor construction formula.

Describe permeability. List the permeability of free space. Describe relative permeability. List the relative permeability and the permeability of iron.

Determine the inductance of an air core inductor with a diameter of 6mm, a length of 25mm, and a coil with 100 turns.

Determine the inductance of an iron core inductor with a diameter of 6mm, a length of 25mm, and a coil with 100 turns.

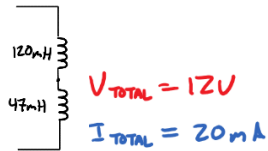
Describe the industry standard method used to identify an inductor's inductance value.

**CORRECTION at 21:11: nH NOT pH 106 = 10000000 nH = 10mH**

Describe how the internal resistance of an inductor is accounted for.

Write the formulas for calculating the total inductance of series relationship of inductors.

Determine the total inductance for this series relationship of inductors. Calculate voltage across and current through each individual inductor.



Write the formulas for calculating the total inductance of parallel relationship of inductors.

Determine the total inductance for this parallel relationship of inductors. Calculate voltage across and current through each individual inductor.

