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Linear Circuits



An introduction to linear electric circuit elements and a study of circuits containing such devices.

Transformers



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Present transformers, a circuit device commonly used in power applications.

Previous Lesson

- ◎ Maximum power transfer in AC systems

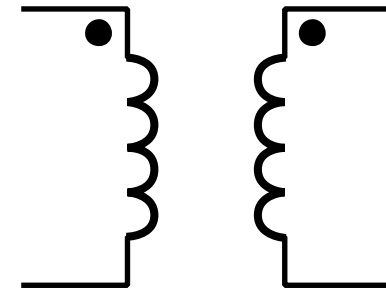
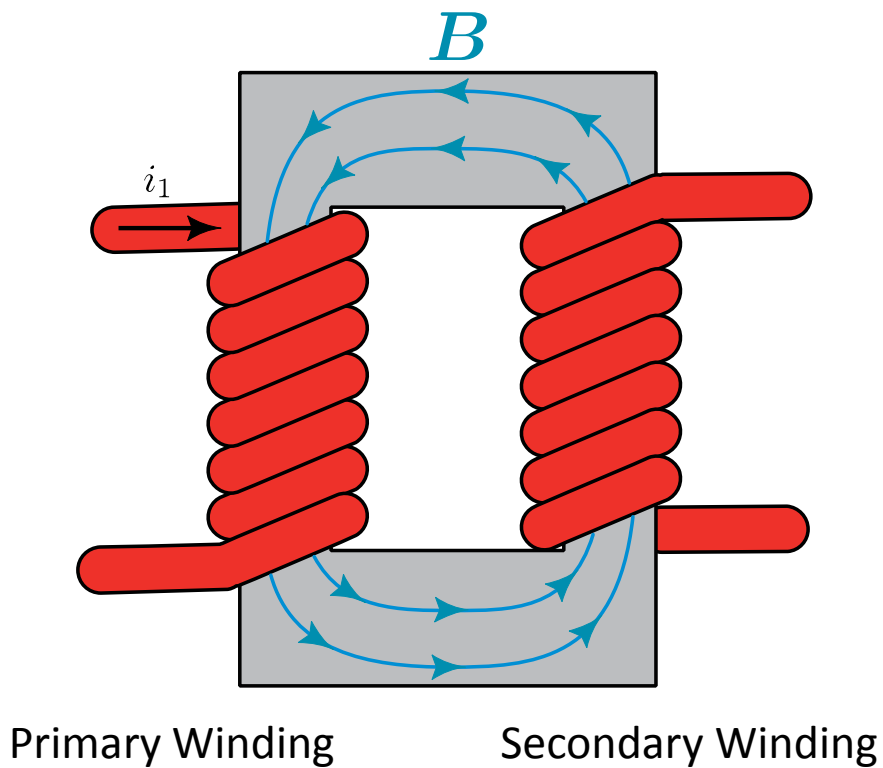
Module 5: Power

- ◎ Root-Mean Square
- ◎ Power Factor and Power Triangles
- ◎ Maximum Power Transfer
- ◎ Transformers

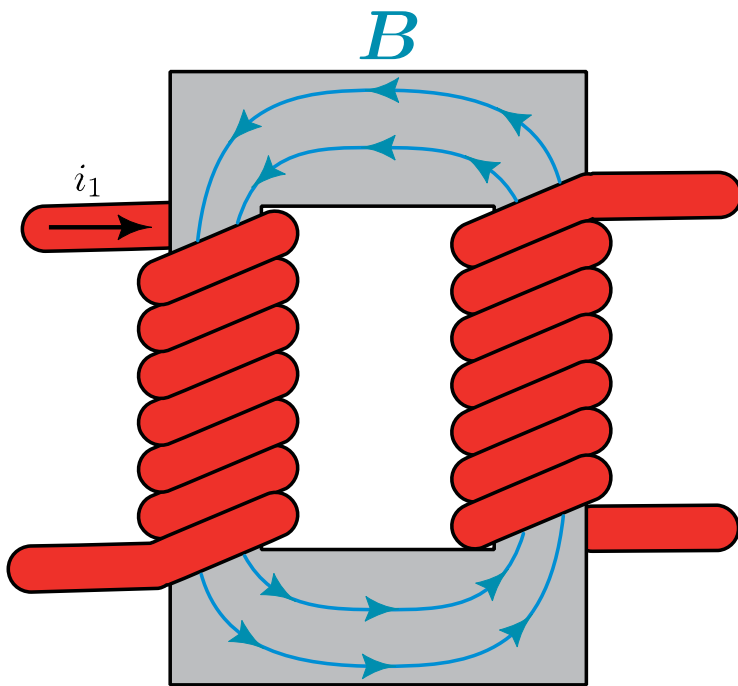
Lesson Objectives

- ◎ Identify physical transformers and their circuit representations
- ◎ Describe the physical function of transformers

Transformer



Relationship of Magnetic Field and Current



- ⊙ Ampere's Law
- ⊙ Faraday's Law of Induction

Transformers are AC devices

Two Transformer Models

◎ Linear Transformer Model

- Used primarily for communications applications
- Uses impedances for analysis

◎ Ideal Transformer Model

- Used primarily for power transfer
- Uses voltages and number of coil turns

Summary

- ◎ Introduced transformers as a circuit device
- ◎ Described the physical behavior of these devices
- ◎ Introduced two analysis models

Next Lesson

- ◎ Describe in detail the linear transformer model