

FEM Modeling of Integrated passive filters



Component
École Nationale
Supérieure
d'Électrotechnique
d'Électronique

In brief

- **Code ELP:** N9EE09D
- **Open to exchange students:** Yes

Presentation

Objectives

The objective is to gain a more precise understanding of the electromagnetic functioning of these inductors and to define a methodology for virtually identifying the elements of the equivalent electrical circuit defined in the course.

Description

Students are asked to carry out a project whose objective is to simulate, using the finite element method and Comsol Multiphysics software, the electromagnetic behavior of an inductor coupled to two phases in order to identify the parameters of the classic equivalent electrical circuit. Knowledge of these parameters, as well as loss parameters, over a realistic frequency range, is necessary in order to then be able to electrically simulate the overall operation of the power supply.