

ANSYS AIM - Eddy Current / Magnetic Frequency Response

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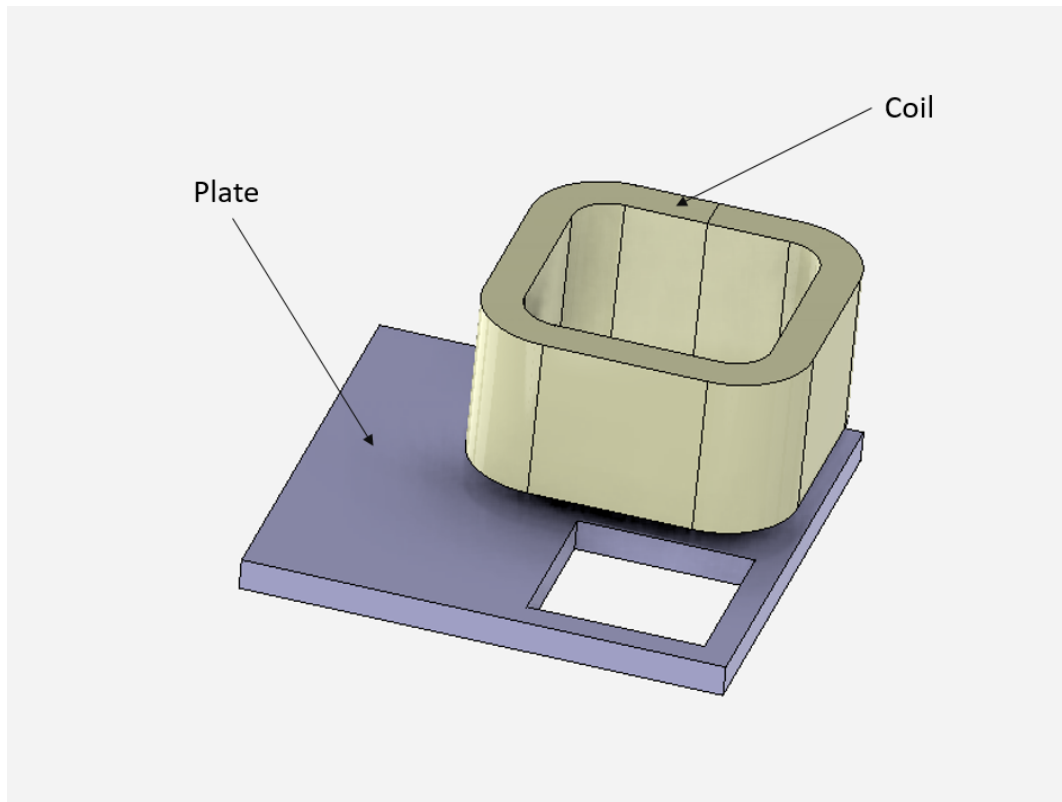
Eddy Current / Magnetic Frequency Response

Created using ANSYS AIM 18.2

Problem Specification

In this tutorial we will consider a sinusoidally varying magnetic field, which is generated from a sinusoidally varying current in a stranded coil. We will obtain the solution by solving the problem in frequency domain using a magnetic frequency response solution in ANSYS AIM.

The model consists of a stranded copper coil with a sinusoidally varying current of 2,742 Amp-turns operating at a frequency of 200 Hertz. The sinusoidally varying magnetic field created by the coil will generate Eddy currents in the conductive aluminum plate, which sits below the coil as shown below. We will investigate the resulting induced Eddy currents in the aluminum plate and the resulting Ohmic loss.



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