

## Parasitic Capacitance Modeling in Pulse Transformer Using FEA

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**Abstract :** Nowadays, specialized software is vastly used to verify the performance of an electric machine prototype by evaluating a model of the system. These models mainly consist of electrical parameters such as inductances and resistances. However, when the operating frequency of the device is above one kHz, the effect of parasitic capacitances grows significantly. In this paper, a software-based procedure is introduced to model these capacitances within the electromagnetic simulation of the device. The case study is a high-frequency high-voltage pulse transformer. The Finite Element Analysis (FEA) software with coupled field analysis is used in this method.

**Keywords :** finite element analysis, parasitic capacitance, pulse transformer, high frequency

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