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APPLICATION OF WINDINGS SHIFTING FOR THE OPTIMIZATION OF PLANAR STRUCTURES

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Abstract

The use of planar electromagnetic technology led to the improvement of high frequency characteristics of the structures and the decrease of their size and profile, which made them easier to integrate in different devices. In order to improve these planar structures, it is known that the parasitic capacitance (EPC) must be decreased. Another method to achieve a better functionality is to increase or decrease the high frequency losses, according to their use. Because the previous studies were made on an EMI filter, it is known that in this case the HF losses must be increased. Because both of the mentioned methods are influenced by the shifting of the windings, this paper presents a study made in order to determine an optimum shifting which will lead to higher losses and lower EPC.

Key words: HF losses, optimization, planar structures, parasitic capacitance, shifted winding

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