

Abstracts

An improved prediction of series resistance in spiral inductor modeling with eddy-current effect

Ban-Leong Ooi, Dao-Xian Xu, Pang-Shyan Kooi and Fu-jiang Lin. "An improved prediction of series resistance in spiral inductor modeling with eddy-current effect." 2002 Transactions on Microwave Theory and Techniques 50.9 (Sep. 2002 [T-MTT]): 2202-2206.

Based on an earlier study by Kuhn and Ibrahim (see IEEE J. Trans. Microwave Theory Tech., vol. 49, no. 1, p. 31-38, 2001) on current crowding, an improved expression incorporating the skin effect for the prediction of series resistance in spiral inductor modeling has been derived. A modified model for the spiral inductor, which accounts for the eddy-current effect, is thus proposed. Relatively good agreements between the measured data and the results generated from the model are obtained.

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