Abstracts

Development of vertical planar coil inductors using plastic deformation magnetic assembly (PDMA)

Jun Zou, J.G. Nickel, D. Trainor, Chang Liu and J.E. Schutt-Aine. "Development of vertical planar coil inductors using plastic deformation magnetic assembly (PDMA)." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 193-196 vol.1.

This paper presents the results of the development of a vertical planar coil inductor. The planar coil inductor is first fabricated on a silicon substrate and then assembled to the vertical position by using a novel 3-dimensional bath-scale self-assembly process called Plastic Deformation Magnetic Assembly (PDMA). Inductors of different dimensions are fabricated and tested. The S-parameters of the inductors before and after PDMA are measured and compared, demonstrating superior performance due to reduced substrate effects and also increased substrate space savings for the vertical planar coil inductors.

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