Abstracts

High-performance three-dimensional on-chip inductors fabricated by novel micromachining technology for RF MMIC

Jun-Be Yoon, Chul-Hi Han, Euisik Yoon and Choong-Ki Kim. "High-performance three-dimensional on-chip inductors fabricated by novel micromachining technology for RF MMIC." 1999 MTT-S International Microwave Symposium Digest 99.4 (1999 Vol. IV [MWSYM]): 1523-1526 vol.4.

Using novel micromachining technology, various three-dimensional (3D) on-chip inductors have been fabricated to achieve high performance and small area occupation for GHz applications. We have obtained 14 nH, a peak Q of 38 at 1.8 GHz with area occupation of 500 /spl mu/m by 500 /spl mu/m excluding pads (56 nH/mm/sup 2/) from a stacked spiral inductor on a glass substrate. Also, 1.75 nH and a peak Q of 57 at 10 GHz have been obtained from a levitated spiral inductor.

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