Abstracts

A Q-factor enhancement technique for MMIC inductors (1998 [RFIC])

M. Danesh, J.R. Long, R.A. Hadaway and D.L. Harame. "A Q-factor enhancement technique for MMIC inductors (1998 [RFIC])." 1998 Radio Frequency Integrated Circuits (RFIC) Symposium 98. (1998 [RFIC]): 217-220.

An increase of 50% in the peak Q-factor and a wider operating bandwidth for monolithic inductors is achieved by exciting a microstrip structure differentially. Conventional excitation of a 8 nH spiral inductor fabricated in a production silicon IC technology resulted in a peak (measured) Q-factor of 6.6 at 1.6 GHz, while the differential connection showed a maximum Q-factor of 9.7 at 2.5 GHz. These experimental results compared favorably with the behaviour predicted from simulation.

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