Abstracts

Nonlinear modeling and design of bipolar transistors ultra-low phase-noise dielectric-resonator oscillators

M. Regis, O. Llopis and J. Graffeuil. "Nonlinear modeling and design of bipolar transistors ultra-low phase-noise dielectric-resonator oscillators." 1998 Transactions on Microwave Theory and Techniques 46.10 (Oct. 1998, Part II [T-MTT] (Special Issue on New Developments in the Design of Microwave and Millimeter-Wave Oscillators)): 1589-1593.

This paper presents a design methodology for low phase-noise dielectric-resonator oscillators (DRO's) with applications examples at 4 GHz. Different oscillators topologies are investigated and, finally, three oscillators' configurations have been simulated, realized in discrete elements, and characterized. The best measured phase-noise magnitude is -133 dBc/Hz at 10-kHz offset frequency.

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