Abstracts

Phase noise improvement in a loop configuration of oscillating antennas

L. Dussopt and J.-M. Labeurte. "Phase noise improvement in a loop configuration of oscillating antennas." 2000 Microwave and Guided Wave Letters 10.3 (Mar. 2000 [MGWL]): 111-113.

Phase noise in a four-element array of oscillating antennas is analyzed for a loop configuration and a unilateral coupling topology. It is demonstrated that this structure, basically designed for circular polarization (CP) applications, also yields a 75% reduction of the near-carrier phase noise compared to a single oscillator. Experimental validation is made at 4 GHz. For this structure, deviation of the coupling phase from its nominal value has no influence on the phase noise performance.

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