



Chaotic oscillator based on class C amplifier

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GA19-22248S – Deterministic, chaotic, and stochastic phenomena in the sub-micron integrated structures

Date: 2019-11-16

Abstract – This functional example covers two coupled circuits. Both realizations provide basic class C amplifiers. Bipolar transistor considered here is modelled as two-port described by the admittance parameters with polynomial trans-conductances. Such concept allows an easy-to-be-constructed robust generator of chaotic waveforms. Discovered strange attractors can belong to either group of self-excited or hidden attractors.

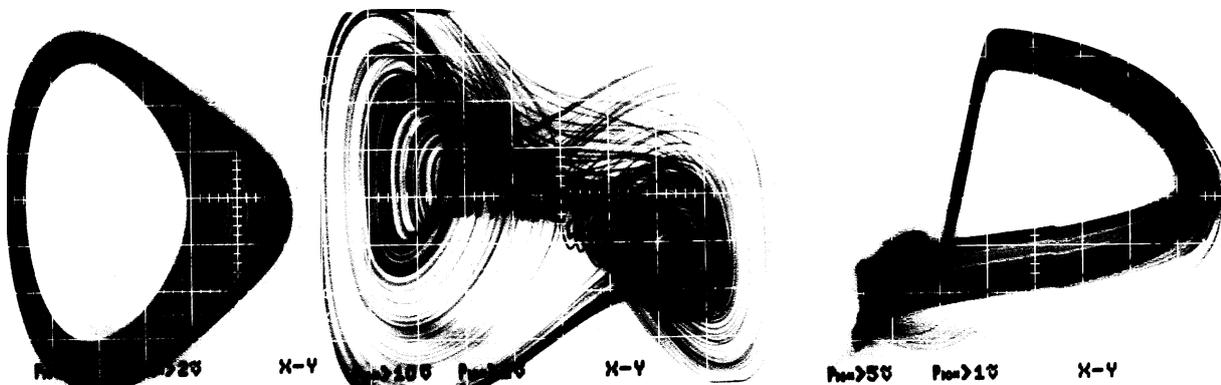
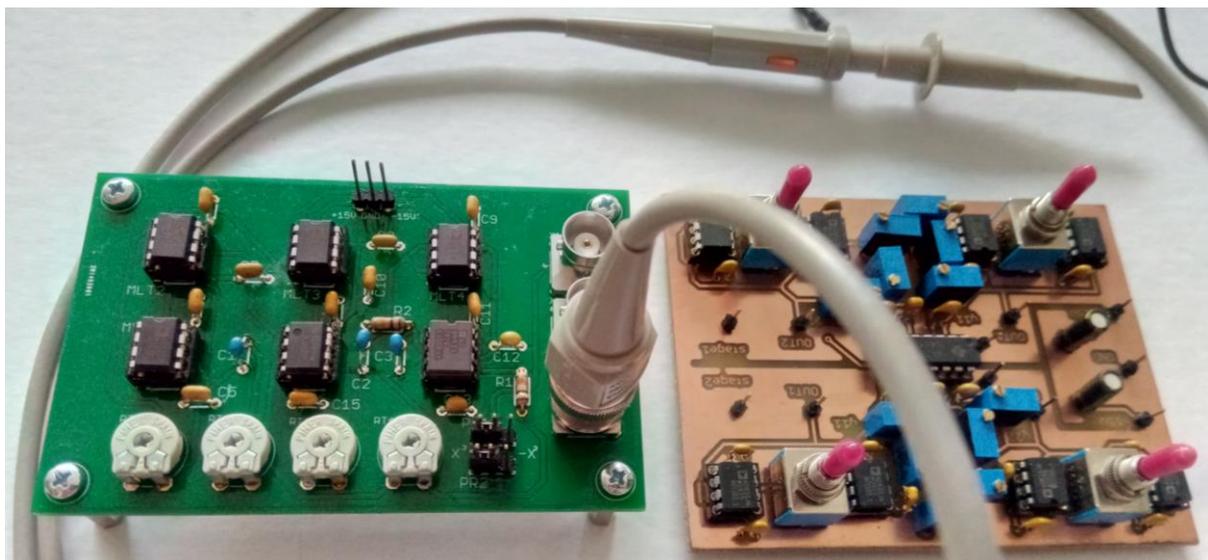


Fig. 1: Realization of chaotic oscillator having equivalent transistor cell with nonlinear forward trans-conductance (upper left), two symmetrical transistor two-ports with nonlinear both forward and backward trans-conductance (upper right), experimental evidence of structurally stable strange attractors in analyzed dynamical system (lower pictures).