



## Active Components Based on Dynamic Negatrons

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The active elements based on dynamic transistor negatrons (circuits with negative active differential resistance) are introduced. The principles of dynamic transistor negatrons simulation has been developed on the basis of non-linear charge model. Parameters, which characterize non-linear mode of dynamic transistor negatrons, are derived. Nonlinear equivalent circuit and Volterra series are used to calculate parameters of negatrons. Particular attention is devoted to the frequency mixers and frequency switches. An experimental frequency mixer has been described, that has confirms the theoretical predictions.

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