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of

New Oscillator Topologies Using Inverting Second-Generation Current Conveyors

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**Abstract:** In this work, new oscillator topologies based on a recently introduced active element, namely inverting second-generation current conveyor, are presented. This recently introduced unity gain based active element is suitable for integrated circuit realization and can easily be implemented with CMOS technology. Considering this fact, basic oscillator topologies employing a single, two and three conveyors are proposed. Several oscillator circuits based on these topologies are obtained. Expressions for oscillation conditions and frequencies are derived both for ideal and non-ideal cases. Some of them are single frequency and the others are variable frequency oscillators. The oscillators employing two and three active elements use only grounded passive elements. The presented oscillators are tested with SPICE simulations to verify the theoretical results.

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