Abstract

In this paper, current-mode based solution suitable for sinusoidal, triangular and square wave generator using second generation current conveyor (CCII) is designed. This is based on current mode trans-linear scheme, with independent control of frequency are presented in this paper. The configuration consists of a second-generation conveyor (CCII), a schmitt trigger, a current mode integrator and a capacitor that is responsible for better linearity. The proposed oscillator, which utilizes a second generation current conveyor (CCII) as a active element, The frequency of the function generators can be adjusted with bias current of current conveyor (CCII) circuit. The performance of the circuit is checked through spectre simulation tool of cadence with 180nm technology. The measured results included in the paper show better linear variation of frequency as compared with existing reported configurations over the range from 112 to 376 MHz.

Index Terms
Computer Science
Power Electronics

Keywords
Current mode oscillator, Current conveyor (CCII), Schmitt trigger, Current mode integrator.