Abstract

A current-mode universal biquad filter structure using two Current Follower Transconductance Amplifiers is proposed in this paper. And it contains two grounded capacitors. The proposed structure can be configured into single input multiple outputs (MIMO). Using the proposed circuit the realization of all the standard filtering responses such as low pass (LP), band pass (BP), high pass (HP), band reject (BR), and all pass (AP), can be done by choosing the output accordingly. The circuit does not require inverted current input signal(s) and it operates at lower supply voltage rails. The most important, component matching constraints are not required for the circuit. The proposed circuit offers an advantage of electronic tunability of pole-frequency independent to the quality factor. Performances of the proposed circuits were examined through P-SPICE programs on cadence tools using standard CMOS technology.
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Index Terms

Computer Science Circuits and Systems

Keywords

Biquad, CFTA, Current-mode, Universal, Filter