Abstract

The limited performance of voltage mode Op-amps such as bandwidth, slew-rate etc. led the analog designer to search for other possibilities and other building blocks. Thus the current-mode active building blocks received considerable attention due to their larger dynamic range, high frequency, lower power consumption, high slew rate, better linearity, better accuracy and higher bandwidth. In this paper, a universal filter has been designed using Differential Difference Current Conveyor (DDCC) as an active building block. The filter provide low pass, high pass and band pass responses. The filter is also tuned for Zigbee and Bluetooth standards. The filter offers high bandwidth. The circuit implemented using DDCC provide non-interactive frequency control and employ only the grounded capacitors. The performance of the circuit is confirmed from HSPICE simulation results.

References

Universal Filter Design using 45nm CMOS-based DDCC for Bluetooth/ Zigbee Applications


Index Terms

Computer Science

Circuits and Systems
Keywords

Current Mode, Differential Difference Current Conveyor (DDCC), HSPICE, Zigbee, Bluetooth.