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Mixed Mode Global Filtration System using VDIBA

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Abstract: By virtue of voltage differencing inverting buffer amplifier (VDIBA), in the above paper offers a mixed mode (MM) numerous source sole output global filtration system. Without changing its circuit configuration, all filtration system functions, including low-pass, band-pass, band-reject, high-pass, as well as all-pass filtration system features, could be accomplished. With the help of its trans-conductance parameter, the tuned rate could be separately adjusted. The filtration circuit has low sensitivity figures and doesn't have to match components. By demonstrating the modeling data achieved utilizing Tanner EDA tool as well as 180nm new tech settings, the functionality of the suggested filter is confirmed.

Keywords: Adjust-ability, Global Filtration system, Mixed Mode, VDIBA

REFERENCES

- [1]. K. L. Pushkar, D.R. Bhaskar, Dinesh Prasad, 2014, "Voltage mode new universal biquad filter configuration using a single VDIBA", Circuits Syst Signal Process –springer, Vol. 33, pp. 275–285.
- [2]. Supachai Klungtong, Dusit Thanapatay, and Winai Jaikla, 2017, "Three-Input Single-Output Voltage-Mode Multifunction Filter with Electronic Controllability Based on Single Commercially Available IC" Active and Passive Electronic Components, Vol.2017, pp.1-11.
- [3]. Norbert Herencsar, Oguzhan Cicekoglu, Roman Sotner, Jaroslav Koton, Kamil Vrba, 2013, "New resistorless tunable voltage-mode universal filter using single VDIBA", Analog Integr Circ Sig Process –springer, Vol. 76 pp.251–260.
- [4]. Jetsdaporn Satansup, Tattaya Pukkalanum, Worapong Tangsrirat, 2013, "Electronically tunable single-input five-output voltage mode universal filter using VDTA and grounded passive elements", Circuits Syst Signal Process –springer, Vol. 27, pp. 673–682.
- **[5].** Abdullah Yesil, Firat Kacar, Hakan Kuntman, 2011, "New simple CMOS realization of voltage differencing Transconductance amplifier and its RF filter application", Radioengineering, Vol. 20, pp. 632-637.
- [6]. Dinesh Prasad, Data Ram Bhaskar, Mayank Srivastava, 2013, "Universal Current-Mode Biquad Filter Using a VDTA", Circuits and Systems, Vol. 4, pp.29-33.
- [7]. Jetsdaporn Satansup, Worapong Tangsrirat, 2014, "Compact VDTA based current mode electronically tunable universal filters using grounded capacitors", Miecroelectronics journal-elsevier, Vol. 45, pp.613-618.
- [8]. B. Metin, "Electronic Tunability in Analog Filters, 2007," Ph.D. Thesis, Bogazici University, Istanbul.
- [9]. Norbert Herencsar, Jaroslav Koton, Shahram Minaei, Erkan Yuce, and Kamil Vrba, 2013, "Novel Resistorless and electronically tunable realization of Dual-Output VM All-Pass Filter using VDIBA", Analog Integr Circ Sig Process –springer, Vol. 74, pp.141–154.



BIOGRAPHY

Praveen Kumar Yadav (M.Tech scholar) received the degree of B.Tech in Electronics and communication engineering from Ajay Kumar Garg Engineering College Ghaziabad affiliated to Dr. APJ AKTU Lucknow in 2018. His areas of interest are design of analog signal processing circuits and low power CMOS VLSI design pursuing M.Tech at Ganga Technical Campus) Soldha, Bahadurgarh (affiliated to M. D. University, Rohtak, Haryana) in Electronics and Communication Engineering.

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