Abstract

A current mode low pass filter is presented, using current mirror active element. In proposed scheme time constant is increased by increasing capacitance & resistance. Capacitance is increased by capacitance multiplier. Resistance is increased by very low trans-conductance which is achieved through linear compression of input signal. To preserve gain of the system, expansion is done at the output level. To increase current gain and output impedance cascode stage is used at the output branch. All the results are simulated using ANALOG DESIGN ENVIRONMENT OF THE CADENCE SOFTWARE at 180nm CMOS technology.

References

2. Laoudias C, Psychalinos C. Integrated filters for short range wireless and biomedical
  3. Solís-Bustos S, Silva-Martínez J, Maloberti F, Sánchez-Sinencio E. A
60-dB dynamic-range CMOS sixth-order 2.4-Hz low-pass filter for medical applica-
Programmable capacitance scaling scheme based on operationaltransconductance amplifiers.
  6. Kafe F, Psychalinos C. Realization of companding filters with large time-constants for

Index Terms

Computer Science  Circuits and Systems

Keywords

Gain, BW, power, THD, input referred noise.