Abstract

“A 200MHz 7th-order Equiripple Continuous-Time Filter

by design of nonlinearity suppression in 0.25μm CMOS Process”

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7th order equiripple filter with cutoff frequency of 200MHz is developed in CMOS 0.25μm process. A new design method has been adopted to obtain enough accuracy and linearity in high frequency operation. Optimal device sizes are determined that maximize the accuracy. Most suitable filter configuration is determined that suppresses the nonlinearity of the transconductors. Experimental results satisfy group delay variation of ±5% and THD of less than 1% for a 400mVpp differential signal.