

Design Active Filter Based on Genetic Algorithm

Abstract

The lossy-FDNR based active filter has an important property among many design realizations. This includes a significant reduction in component count particularly in the number of OP-AMP which consumes power. However the problem of this type is the large component spreads which affect the filter performance.

In this paper Genetic Algorithm is applied to minimize the component spread (capacitance and resistance spread). The minimization of these spreads allow the filter structure to be integrated since the minimum component spread mean minimum chip area required for fabrication.