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Abstract

A new systematic method for designing Sinh-Domain linear transformation (LT) filters is introduced in this article. For this purpose, a substitution scheme containing the Sinh-Domain LT equivalent of each passive prototype has been introduced. The proposed equivalents have been realized by employing appropriate Sinh-Domain building blocks with low-voltage operation capability. As an example, a third-order Sinh-Domain elliptic LT filter has been designed and its performance has been evaluated through simulation results. In addition, a detailed comparison with the corresponding Sinh-Domain and log-domain counterparts has been performed and the obtained results have been further discussed