

Effect of Fabrication Errors on High Frequency Filter Circuits

Authors : Wesam Ali

Abstract : This paper provides useful guidelines to the circuit designers on the magnitude of fabrication errors in multilayer millimeter-wave components that are acceptable and presents data not previously reported in the literature. A particularly significant error that was quantified was that of skew between conductors on different layers, where it was found that a skew angle of only 0.1° resulted in very significant changes in bandwidth and insertion loss. The work was supported by a detailed investigation on a 35GHz, multilayer edge-coupled band-pass filter, which was fabricated on alumina substrates using photoimageable thick film process.

Keywords : fabrication errors, multilayer, high frequency band, photoimageable technology

Conference Title : ICECECE 2015 : International Conference on Electrical, Computer, Electronics and Communication Engineering

Conference Location : Singapore, Singapore

Conference Dates : January 08-09, 2015