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Abstract

In this paper, numerical analysis of the narrow microstrip transmission-line on two and three layer-substrate material at 0.5–1.0 THz frequency of the electromagnetic spectrum is presented. Various analytical results are compared with simulations which have been performed by commercially available simulators: (a) CST Microwave Studio based on the finite integral technique and (b) Ansoft HFSS based on the finite element technique. The proposed narrow microstrip transmission line with improved performance is useful as interconnect for multilayer planar components designed in the terahertz frequency regime of the electromagnetic spectrum. The analysis of the proposed structure has been validated with various reported literature.

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