Abstracts

Applications of the Finite Difference Techniques to the Compensated VIP 3 dB Directional Coupler

C. Zhao and I. Awai. "Applications of the Finite Difference Techniques to the Compensated VIP 3 dB Directional Coupler." 1996 Transactions on Microwave Theory and Techniques 44.11 (Nov. 1996 [T-MTT]): 2045-2052.

A new and simple compensated structure for a vertically installed planar (VIP) 3 dB directional coupler has been studied theoretically as well as experimentally by combining an improved 2-D-general finite difference (2-D-GFD) design procedure with a three-dimensional finite difference time domain (3-D-FDTD) method. The obtained full wave analysis results agree well with the measured ones. The investigations have shown that with this planar compensated structure, a better performance of the VIP coupler in the L-band can be realized by only using the same kind of dielectric substrate for its vertical and horizontal one.

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