Abstracts

Transverse Segmentation: A Novel Technique for the Efficient CAD of 2 N-Port Branch-Guide Couplers

F. Alessandri, M. Mongiardo and R. Sorrentino. "Transverse Segmentation: A Novel Technique for the Efficient CAD of 2 N-Port Branch-Guide Couplers." 1991 Microwave and Guided Wave Letters 1.8 (Aug. 1991 [MGWL]): 204-207.

Two novel field-matching techniques, the cellular technique (CT) and the transverse segmentation technique (TST), for the CAD of 2N-port branch-guide couplers have been developed and are compared with the bifurcation technique (BT) already adopted by other authors. By comparison with experimental data on 6- and 8-port couplers, all techniques exhibit excellent accuracy, but different numerical efficiency. The TST is shown to be eight times faster than the BT and five times faster than the CT. All methods can also be applied to other wave-guide components.

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