Abstracts

Characterizing Waveguide T-Junctions by Three Plane Mode-Matching Techniques

X.-P. Liang and K.A. Zaki. "Characterizing Waveguide T-Junctions by Three Plane Mode-Matching Techniques." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 849-852.

A rigorous method for the solution of rectangular waveguide T-junction problems is presented. The method characterizes the waveguide discontinuity three times when the side-arm of the T-junction is terminated in a short circuit with three different lengths, and hence is called the Three Plane Mode-Matching Technique (TPMMT). Computed and measured data on both E-plane and H-plane T-junctions are compared, showing an excellent agreement, of both magnitudes and phases of the scattering matrix elements.

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