

Abstracts

Rigorous Analysis of Compensated E-Plane Junctions in Rectangular Waveguide

F. Alessandri, M. Dionigi and R. Sorrentino. "Rigorous Analysis of Compensated E-Plane Junctions in Rectangular Waveguide." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 987-990.

A rigorous full wave analysis of compensated E-plane junctions has been developed using a segmentation technique associated with an admittance matrix representation. The structures are divided into rectangular and right-angled isosceles triangular regions for which the admittance matrix is expressed in closed form. The properties of compensated T-junctions, bifurcations and stubs are investigated showing significant improvements of the electrical performances over the uncompensated counterpart. The computer analysis of any structure requires less than one second per frequency point on 486-50 MHz IBM compatible personal computer.

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