Abstracts

A Mixed Spectral Domain Method Applied to the Analysis of Generalized Dielectric-Loaded Ridged Waveguides

K.T. Ng and C.H. Chan. "A Mixed Spectral Domain Method Applied to the Analysis of Generalized Dielectric-Loaded Ridged Waveguides." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 715-717.

A new mixed spectral domain method is applied for the analysis of generalized dielectric-loaded ridged waveguides. Auxillary structures are constructed for formulating the spectral Green's functions and applying the spectral immittance method. Magnetic surface currents at apertures are identified as unknowns. Mixing different spectral domains existing on the two sides of an aperture in a spectral Galerkin approach leads to the characteristic equations required for the dispersion analysis. Representative results are obtained to illustrate the application of the method.

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