Abstracts

Numerical and Experimental Studies of Current Distributions on Thin Metallic Posts Inside Rectangular Waveguides

S. Hashemi-Yeganeh and C.R. Birtcher. "Numerical and Experimental Studies of Current Distributions on Thin Metallic Posts Inside Rectangular Waveguides." 1994 Transactions on Microwave Theory and Techniques 42.6 (Jun. 1994 [T-MTT]): 1063-1068.

A fast converging and stable Moment Method solution for the current distribution on arbitrary size rectangular obstacles mounted transversely inside the rectangular waveguide has been developed. A special arrangement of piecewise sinusoidal and pulse basis functions has been utilized to determine the transverse current distributions on the obstacles and their scattering in the waveguide. The method has been compared well with the Marcuvitz's results for the inductive and capacitive posts and the experimental data of an arbitrary size rectangular obstacle.

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