Abstracts

Conductor Loss in Hollow Waveguides Using a Surface Integral Formulation (1991 Vol. II [MWSYM])

M. Swaminathan, T.K. Sarkar and P. Petre. "Conductor Loss in Hollow Waveguides Using a Surface Integral Formulation (1991 Vol. II [MWSYM])." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 699-702.

The power-loss method along with a surface integral formulation has been used to compute the attenuation constant in hollow waveguides of arbitrary cross-section. An E-field integral equation has been developed for the surface electric currents which has been transformed into a matrix equation using method of moments. An iterative technique, i.e. Muller's method has been used to obtain the relation between the propagation constant and frequency. The attenuation constants have been calculated and formulated for various waveguides and are in good agreement with published data.

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