Abstracts

Investigation of mode coupling due to ohmic wall losses in overmoded uniform and varying-radius circular waveguides by the method of cross sections

J. Shafii and R.J. Vernon. "Investigation of mode coupling due to ohmic wall losses in overmoded uniform and varying-radius circular waveguides by the method of cross sections." 2002 Transactions on Microwave Theory and Techniques 50.5 (May 2002 [T-MTT]): 1361-1369.

The effect of ohmic wall losses on mode coupling in overmoded varying-radius circular waveguides is investigated. Mode coupling and multimode propagation in uniform lossy-wall circular waveguides is also discussed. The expressions for the coupling coefficients are given by line integrals of the power-normalized fields of the normal modes along the boundary of the waveguide cross section. Numerical results are presented for the case of propagation of an HE/sub 11/-like mode excitation in a uniform smooth lossy-wall circular waveguide.

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