Abstracts

Analysis of Dispersion in Arbitrarily Configured Dielectric-Loaded Transmission Structures

A.K. Ganguly and B.E. Spielman. "Analysis of Dispersion in Arbitrarily Configured Dielectric-Loaded Transmission Structures." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 459-462.

An accurate solution to the problem of wave propagation along arbitrarily-configured transmission media composed of conductors and/or inhomogeneous dielectrics is presented. The solution is available in the form of a digital computer program, which yields computed cutoff frequencies and dispersion characteristics for both fundamental and higher-order modes. Sample calculations are presented for shielded microstrip, to illustrate the validity of the analysis, and channelized suspended microstrip. The solution approach presented is distinctive in its ability to easily treat complicated, salient features of arbitrary cross sections, as is typified by the channel in the suspended-microstrip example.

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