Abstracts

The Full Hybrid Fields and Network Parameters of Transverse and Longitudinal Metallic Strips in Inset Dielectric Guide, (I.D.G.)

P. Sewell and T. Rozzi. "The Full Hybrid Fields and Network Parameters of Transverse and Longitudinal Metallic Strips in Inset Dielectric Guide, (I.D.G.)." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 941-944.

Arrays of metallic strips on the air-dielectric interface of an Inset Dielectric Guide, I.D.G., allow the simple fabrication of planar arrays that demonstrate pure polarisation and good efficiency and input match. This contribution presents, for the first time, a full hybrid characterisation of both transverse and longitudinal strips, producing vertical and horizontal polarisation respectively, investigating both the frequency and dimensional sensitivity of the near and far fields. In particular, we demonstrate the significant near field contribution of the radiation modes, which has important consequences for accurate design of arrays.

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