Abstracts

Microstrip Transmission-Line Transitions to Dielectric-Filled Waveguide (Correspondence)

J.C. Hoover and R.E. Tokheim. "Microstrip Transmission-Line Transitions to Dielectric-Filled Waveguide (Correspondence)." 1967 Transactions on Microwave Theory and Techniques 15.4 (Apr. 1967 [T-MTT]): 273-274.

The highly asymmetrical electric fields of microstrip transmission lines have been found to make an ideal TEM (coaxial) transition to reduced height dielectric-filled waveguide. Such a transition from an OSM connector has been designed and optimized to provide a better than 1.5 to 1 VSWR over a 2.0 to 4.0 GHz frequency band into a slab of metalized dielectric of K=15. The transition takes the form of a microstrip transformer cut into the metalized surface of the dielectric-filled guide. Figure 1 shows an experimental transition. In use, the top surface of the transition would be shielded by a shallow cavity.

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