Abstracts

Integrated microstrip and rectangular waveguide in planar form

D. Deslandes and K. Wu. "Integrated microstrip and rectangular waveguide in planar form." 2001 Microwave and Wireless Components Letters 11.2 (Feb. 2001 [MWCL]): 68-70.

Usually transitions from microstrip line to rectangular waveguide are made with three-dimensional complex mounting structures. In this paper, a new planar platform is developed in which the microstrip line and rectangular waveguide are fully integrated on the same substrate, and they are interconnected via a simple taper. Our experiments at 28 GHz show that an effective bandwidth of 12% at 20 dB return loss is obtained with an in-band insertion loss better than 0.3 dB. The new transition allows a complete integration of waveguide components on substrate with MICs and MMICs.

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