Abstracts

A Metal-to-Dielectric Waveguide Transition with Application to Millimeter-Wave Integrated Circuits

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In this paper we describe the development of an efficient, low-loss transition from a conventional metal waveguide to a planar dielectric guide of rectangular cross section. Such a transition finds important application in millimeter-wave integrated circuits. We show that for a given length of the flared horn used for launching energy into the dielectric waveguide, the insertion loss of the transition can be reduced to a very low figure by choosing the flare angle of the horn appropriately.

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