Abstracts

A novel coplanar transmission line to rectangular waveguide transition

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Waveguides (WG) are often utilised for antenna or filter design. This paper presents a new, easy to build transition from a coplanar line to a WG, which is often needed to embed WGs into MMIC designs or vice versa. In contrast to the well known E-plane probe-transitions and ridged waveguide-transitions, the proposed waveguide transition does not require modifications of the waveguide and the planar design. The transition was optimised for a low radiation pattern on the top side and for a broadband transmission using the Finite Difference Time Domain Method (FDTD). Measurements for verification are also presented.

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