Abstracts

Leakage suppression in coplanar waveguide circuits by patterned backside metallization

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Microwave circuits based on coplanar offer advantages compared to microstrip-based designs, but also introduce unwanted coupling or radiation effects due to the excitation of surface waves or parallel plate modes. Special measures must be introduced to suppress these modes. This paper illustrates the effect of substrate waves on coupling between parts of the circuitry. It details the influence of resonances of the substrate modes on this unwanted coupling. A method is proposed to suppress substrate modes and is supported by experimental results.

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