Abstracts

CAD and electrical performance of new compact power divider suitable for use in M(H)MICs

J. Benbrahim, H. Kobeissi and K. Wu. "CAD and electrical performance of new compact power divider suitable for use in M(H)MICs." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1595-1598.

This paper presents a class of new compact power dividers suitable for use in microwave and millimeter-wave integrated circuits (ICs). Compared to the classical structure, the new topology of the power divider is made with a sinusoidally taped circuit shape attached with multiple output ports that are co-linearly located along one plane. The phase and magnitude balance of a signal for the output ports are achieved with diffractive hole(s) etched in the middle of the circuit contour. An efficient field-theoretical CAD procedure is applied to accurate design of this irregularly shaped circuit with a mixed waveguide model and boundary integral method. Electrical performance of the power divider shows a good agreement with theoretical prediction.

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