Abstracts

New MIC Power Dividers Using Coupled Microstrip-Slot Lines: Two-Sided MIC Power Dividers

H. Ogawa, T. Hirota and M. Aikawa. "New MIC Power Dividers Using Coupled Microstrip-Slot Lines: Two-Sided MIC Power Dividers." 1985 Transactions on Microwave Theory and Techniques 33.11 (Nov. 1985 [T-MTT]): 1155-1164.

New microwave integrated circuit (MIC) power dividers have been proposed. These power dividers utilize both substrate surfaces and employ coupled microstrip-slot lines, microstrip lines, and slotlines; therefore, we make use of the two-sided MIC technique. The out-of-phase-type power dividers, as well as the in-phase-type circuits, can be constructed by the circuit configuration method described in this paper. Coupled microstrip slot lines, an important component of the power dividers, have been analyzed by the spectral-domain method, and their characteristics have been calculated and the numerical results shown for several different structural parameters for the purpose of designing power dividers. The out-of-phase-type power divider was fabricated at the 26-GHz band and good performance achieved, confirming the calculated accuracy through experimental results. The new two-sided MIC power dividers are expected to have wide applications at the millimeter-wave band.

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