Abstracts

Design of a Channel Diplexer for Millimeter-Wave Applications (Dec. 1972 [T-MTT])

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The design of millimeter-wave filters is, in principle, no different from the design of conventional waveguide filters. In practice, however, several factors impose limitations on the choice of the filter structure. As a result, new filter structures must be used requiring new synthesis techniques for their design. In this paper, a new channel diplexer structure is described and a synthesis technique for its design is given. The expected electrical performance of the filter, designed using the proposed technique, is verified by measuring the performance of a scaled filter model centered at 3.95 GHz. The results of these measurements are given. The design procedure is also applicable to other waveguide filter structures.

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