Abstracts

New formulae for the initial design in the optimization of T-junction manifold multiplexers

A. Morini, T. Rozzi and M. Morelli. "New formulae for the initial design in the optimization of T-junction manifold multiplexers." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 1025-1028.

We present an effective criterion for the choice of the starting point in the optimization of T-manifold multiplexers. Given N separately designed channel filters, the method provides the expressions for their locations with respect to the manifold as well as the spacings between the junctions forming the manifold itself. By inspection of the results it is seen that the proposed formulae perform considerably better than the standard ones based on stub models. In fact, in the non-contiguous case, the design is almost complete when the junctions forming the manifold have certain characteristics. In the contiguous case, a further optimization is required but the initial choice is very close to the final solution.

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