Abstracts

Optimised Design of Eight-Port Branch-Waveguide Directional Couplers

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An optimised design method for eight-port branch-waveguide directional couplers with arbitrary output power distribution is presented. This component is suitable for beam forming networks (BFN's) applications. In fact the proposed device yields a more compact design of BFN's. An eight-port coupler prototype in WR75 waveguide has been manufactured. Comparing scattering parameter measurements with the computed frequency performance shows that the design procedure is verified very satisfactorily. Moreover these couplers can be used as multiport power dividers with four input and four output ports. An example of 4-way power divider suitable for multiport amplifier applications is presented.

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