Abstracts

A new class of dual-mode directional couplers for compact dual-polarization beam-forming networks

F. Alessandri and R. Ravanelli. "A new class of dual-mode directional couplers for compact dual-polarization beam-forming networks." 1997 Microwave and Guided Wave Letters 7.9 (Sep. 1997 [MGWL]): 300-301.

A new class of directional couplers for the realization of compact dual-polarization beam-forming networks is presented. This component functions as two independent directional couplers for the TE/sub 01/ mode and the TE/sub 10/ mode of a rectangular waveguide. The two modes are not coupled. Different values of the coupling for the two modes can be obtained. This coupler can be used twice for two orthogonal polarizations. Therefore a considerable reduction of size and complexity of the overall network can be obtained. Experimental data for a 3-dB dual mode coupler are also presented here.

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