Abstracts

Novel Directional Couplers Using Broadside-Coupled Coplanar Waveguides for Double-Sided Printed Antennas

F. Tefiku, E. Yamashita and J. Funada. "Novel Directional Couplers Using Broadside-Coupled Coplanar Waveguides for Double-Sided Printed Antennas." 1996 Transactions on Microwave Theory and Techniques 44.2 (Feb. 1996 [T-MTT]): 275-282.

Two types of tight-coupling, broadband directional couplers employing open broadside-coupled coplanar waveguides (BC CPW's) are proposed which can easily be integrated with printed strip antennas. The first type uses the BC CPW's with dielectric overlays above and below the center substrate, while the second type uses the nonuniform BC CPW's. The scattering parameters of these directional couplers are derived with the even-odd mode analysis method based on the quasi-TEM wave approximation. Two 3-dB directional couplers, one for each type, are designed and measured characteristics are compared with theoretical results.

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