Abstracts

Analysis and design of impedance-transforming planar Marchand baluns

Kian Sen Ang and I.D. Robertson. "Analysis and design of impedance-transforming planar Marchand baluns." 2001 Transactions on Microwave Theory and Techniques 49.2 (Feb. 2001 [T-MTT]): 402-406.

A technique for designing impedance-transforming baluns is presented in this paper. It is based on the Marchand balun with two identical coupled lines. By varying the coupling factor of the coupled sections, a wide range of impedance transforming ratios can be achieved. In addition, a resistive network added between the balun outputs is proposed to achieve balun output matching and isolation. Microstrip baluns, matched at all ports, for transforming from a 50-/spl Omega/ source impedance to 40-/spl Omega/ as well as 160-/spl Omega/ load terminations are realized to demonstrate the technique.

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