Abstracts

Analysis and design of low-loss planar microwave baluns having three symmetric coupled lines

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The bandwidth of the Marchand balun is analyzed as a function of design parameters using a simple model, which provides the analytical design basis for the planar three-coupled-line balun. Analytical and numerical results are presented to facilitate balun design. Using this approach, a low loss planar microstrip balun was designed, fabricated and tested. The measured balun insertion loss for one example was less than 0.5 dB over a 8-13 GHz band, with 3-dB bandwidth 6.5-16 GHz.

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