

Novel configurations of planar multilayer magic-T using microstrip-slotline transitions

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Novel configurations of microwave planar magic-T suitable for microwave integrated circuits (MICs) and monolithic MICs are described. They consist of microstrip and slotline T-junctions coupled by microstrip-slotline transitions. Since via-hole processing is not encountered, they are especially applicable to multilayer MICs. Derived equivalent network models are used efficiently for the design of the corresponding multilayer microstrip magic-T. Measured data and numerical simulations showing good amplitude and phase characteristics over an octave operating bandwidth validate the proposed configurations of planar magic-T.

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