Abstracts

An improved network modeling of slot-coupled microstrip lines

This paper proposes an analytical method for slot-coupled microstrip lines with a view to developing an improved network model, which reflects the effects of inclination angles and offset distances. The network model consists of two ideal transformers and an extended slotline. The turn ratios are calculated by applying the reciprocity theorem with the spectral-domain immittance approach. The corresponding network models for several different configurations of these slot-coupled microstrip lines are then explored and shown to yield accurate scattering parameters.

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