Abstracts

Full-Wave Analysis of Aperture Coupled Shielded Microstrip Lines

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A full-wave space-domain integral equation analysis of aperture coupled shielded microstrip lines is presented based on Pocklington's integrals and the equivalence principle. The derivation of the associated dyadic Green's functions in the form of waveguide LSE and LSM modes is described. The line currents and slot voltage are expanded in terms of subsectional basis functions and the method of moments, together with even and odd mode transmission line analysis, is applied to determine the two-port scattering parameters. A particular case is illustrated which demonstrates the behavior of the coupler as a bandpass interconnect.

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