Abstracts

Radiation from a microstrip amplifier

Tzyy-Sheng Horng and Sung-Mao Wu. "Radiation from a microstrip amplifier." 2002 Transactions on Microwave Theory and Techniques 50.8 (Aug. 2002 [T-MTT]): 2005-2010.

A full-wave method is presented to investigate radiation from a microstrip amplifier. The spectral-domain dyadic Green's function, which takes into account both radiation and surface waves, is used to formulate an integral equation. The method of moments is then employed to find the current densities in microstrips and, subsequently, the scattering parameters of the amplifier. The radiated space and surface waves that are launched from the amplifier can be further expressed in terms of the dyadic Green's function and current densities. To verify the numerical results of scattering parameters and far-field radiation patterns, a UHF-band microstrip amplifier matching with single stubs has been implemented and measured. The comparison between simulation and measurement shows excellent agreement.

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