Abstracts

On the Radiation from Microstrip Discontinuities

M.D. Abouzahra. "On the Radiation from Microstrip Discontinuities." 1981 Transactions on Microwave Theory and Techniques 29.7 (Jul. 1981 [T-MTT]): 666-668.

The method of an earlier paper by Lewin is used to calculate, more accurately, the radiated power from a microstrip termination. The substrate dielectric constant epsilon is used instead of the effective dielectric constant epsilon/sub e/ in the polarization term. The open-circuit, short-circuit, and matched coaxial terminations are deduced as particular cases of the general termination. On comparison with Lewin's results, differences of up to 30 percent have been found, but the differences are much smaller for the larger values of the actual relative dielectric constant epsilon. Curves show that the short-circuit termination radiates less than a quarter that of the open circuit, and can be considered as a means of reducing losses in microstip resonators. The parallel post configuration is also considered.

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