Abstracts

The Impedance and Scattering Properties of a Perfectly Conducting Strip Above a Plane Surface-Wave System (Short Papers)

E.S. Gillespie and F.J. Kilburg. "The Impedance and Scattering Properties of a Perfectly Conducting Strip Above a Plane Surface-Wave System (Short Papers)." 1973 Transactions on Microwave Theory and Techniques 21.6 (Jun. 1973 [T-MTT]): 413-419.

The impedance and scattering properties of a perfectly conducting strip above a dielectric-coated conducting plane is investigated both theoretically and experimentally. An integral equation for the induced current is presented and solved numerically using a point-matching technique. The values of the reflection and transmission coefficients are calculated from the computed current distributions. The results of the computations are compared to the measured values and the agreement is quite good. In addition the impedance and fractions of power reflected, radiated, and transmitted are computed and displayed graphically.

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