Abstracts

A Modulated Scattering Technique for Measurement of Field Distributions

J.H. Richmond. "A Modulated Scattering Technique for Measurement of Field Distributions." 1955 Transactions on Microwave Theory and Techniques 3.4 (Jul. 1955 [T-MTT]): 13-15.

Electric field distributions can be measured accurately by passing a short metal dipole through the field and recording the wave scattered by the dipole. Ordinarily the method is difficult to use since the scattered signal is small, critical tuning adjustments are required, and careful attention to stability is necessary. However, by placing a nonlinear impedance at the center of the dipole and applying an audio voltage though slightly conducting threads, the scattered wave can be modulated. This makes it possible to relax the tuning and stability requirements and at the same time to increase the sensitivity of the measurements.

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