

Abstracts

All Automatic System for Simultaneous Measurement of Amplitude and Phase of Millimeter-Wave Fields (Short Papers)

N.A. Mathews and H. Stachera. "All Automatic System for Simultaneous Measurement of Amplitude and Phase of Millimeter-Wave Fields (Short Papers)." 1974 Transactions on Microwave Theory and Techniques 22.2 (Feb. 1974 [T-MTT]): 140-142.

A measuring system for the simultaneous determination of amplitude and phase distributions of EM fields is described. The system employs the vibrating-dipole technique, which is based on the principle of modulated scattering. The phase-modulated wave scattered by the vibrating dipole contains information about the amplitude and phase of the EM field at the midpoint of the dipole's vibration. The system has been made automatic by the inclusion of a servo loop. The measured free-space distributions compare well with those calculated from theory.

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