Abstracts

Automatic Microwave Q Measurement for Determination of Small Attenuations

A. Uhlir, Jr.. "Automatic Microwave Q Measurement for Determination of Small Attenuations." 1972 Transactions on Microwave Theory and Techniques 20.1 (Jan. 1972 [T-MTT] (Special Issue on Automated Microwave Measurements)): 38-41.

The Q's of a waveguide transmission cavity with and without insertion of a length of waveguide give the insertion loss. Least-squares fitting of transmission versus frequency data have been used to determine Q and resonant frequency f/sub r/ with computer-controlled equipment in an iterative process. Preliminary values of Q and f/sub r/ are used to calculate an improved set of test frequencies, and so on. A rapid least-squares method is described which minimizes truncation errors.

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