Abstracts

Methods for Measuring the Power Linearity of Microwave Detectors for Radiometric Applications (1994 Vol. III [MWSYM])

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This paper discusses and presents experimental results on methods for measuring the power linearity of microwave power detectors to the levels required for radiometric applications. Three methods for measuring detector power linearity are discussed: the two-tone method, the amplitude modulation method, and the constant ratio method. The theory of determining coefficients which characterize the nonlinearity of the detector from experimental data is presented. Experimental results are presented showing that the two-tone method and the constant ratio method agree within experimental error. The difficulties encountered in implementing each of these methods are also discussed.

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