Abstracts

Calibrated Vectorial Nonlinear-Network Analyzers

T. Van den Broeck and J. Verspecht. "Calibrated Vectorial Nonlinear-Network Analyzers." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1069-1072.

The vectorial nonlinear-network analyzer concept is introduced and realized in practice. A vectorial nonlinear-network analyzer excites a nonlinear microwave device-under-test with a combination of sinewaves of different frequencies and accurately detects the phase and amplitude of all frequency components of the incident and the scattered waves. A new, statistic efficient, absolute calibration procedure is developed based on a low crest factor multisine reference generator characterized by a broadband sampling oscilloscope. This makes the calibration traceable to the accuracy of a so-called nose-to-nose measurement.

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