

Transistor Noise Parameter Extraction Using a 50 Omega Measurement System

P.J. Tasker, W. Reinert, B. Hughes, J. Braunstein and M. Schlechtweg. "Transistor Noise Parameter Extraction Using a 50 Omega Measurement System." 1993 MTT-S International Microwave Symposium Digest 93.3 (1993 Vol. III [MWSYM]): 1251-1254.

A "50 Omega" noise figure measurement system has been integrated into a fully automated s-parameter measurement system allowing for fast determination of transistor noise parameters as well as s-parameters, as a function of both frequency and bias. This functionality from such a simple measurement system is achieved using a new analysis technique, based on the "Noise Temperature Model", that allows, after s-parameter measurements and analysis, for the direct extraction of all four transistor noise parameters from a single noise figure measurement.

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