

FET Noise Model and On-Wafer Measurement of Noise Parameters

M.W. Pospieszalski and A.C. Niedzwiecki. "FET Noise Model and On-Wafer Measurement of Noise Parameters." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 1117-1120.

The recently published noise model of a microwave FET is verified for the first time with on-wafer S-parameters and noise parameters measurement data. An excellent agreement between the model prediction and measurement results is obtained for a wide range of FET bias. It is shown that the equivalent drain temperature is a very strong function of the drain current, while the equivalent gate temperature is a very weak function of the drain current and, within the measurement error, it is equal to the ambient temperature for small drain currents.

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