Abstracts

Efficient simulation of NPR for the optimum design of satellite transponders SSPAs

J. Lajoinie, E. Ngoya, D. Barataud, J.M. Nebus, J. Sombrin and B. Rivierre. "Efficient simulation of NPR for the optimum design of satellite transponders SSPAs." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 741-744.

It is now well known that the prediction of intermodulation distortions at the system level using the AM-AM and AM-PM characteristics of power amplifiers may be of very poor accuracy if amplifiers exhibit nonlinear low frequency dispersion effects (memory effects). This paper presents a new cost effective method for computing the noise power ratio (NPR) of power amplifiers at the circuit level, hence providing a more accurate prediction and the possibility to include the NPR as a direct optimisation objective in the design of amplifiers. The method is particularly well suited to the design of high efficiency solid state power amplifiers.

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