

NPR and co-channel distortion ratio: a happy marriage?

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This paper investigates the disagreement that exists between Noise Power Ratio (NPR) measurements and a recently published statement that those measurements always underestimate the real nonlinear in-band distortions. This disagreement is only a matter of definition of what one considers to be a distortion. The properties of the input signal are the criterion for using the classical NPR method or the alternative. A general measurement technique (using a nonlinear vectorial network analyzer) is presented that is valid in both cases. Next, measurement are performed to validate the theory.

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