

IMPACT OF RECEIVER NOISE ON MICROWAVE AND MILLIMETER WAVE COMMUNICATIONS LINK PERFORMANCE

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Abstract

The measure of quality of the back to back performance of a microwave or millimeter wave communications link is not the least of which is noise introduced in the receiver prior to demodulation. This paper will characterize the impact of receiver front-end noise temperature on predetection carrier-to-noise ratio, as well as the critical effect of down converter LO noise on the demodulation process itself for a variety of modulation formats.