Abstracts

The Measurement of Oscillator Noise at Microwave Frequencies

J.R. Ashley, C.B. Searles and F.M. Palka. "The Measurement of Oscillator Noise at Microwave Frequencies." 1968 Transactions on Microwave Theory and Techniques 16.9 (Sep. 1968 [T-MTT] (Special Issue on Noise)): 753-760.

Improved measurement methods are presented for measuring both AM noise and FM noise from microwave oscillators, The Schottky barrier diode detector is used to measure AM noise 170 dB below the carrier in a 1 Hz bandwidth. A new discriminator is presented that has a measurement threshold below 0.001 Hz rms in a 1 Hz bandwidth. The use of a storage oscilloscope and wave analyzer to study noise modulation is discussed. The new discriminator and storage oscilloscope can be used for short-term stability measurements for intervals up to 100 seconds.

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