Abstracts

Phase Noise Measurements in the Frequency Domain

A.L. Lance, W.D. Seal, F.G. Mendoza and N. Hudson. "Phase Noise Measurements in the Frequency Domain." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 110-113.

This paper describes two measurement systems used to measure phase noise of sources in the frequency domain at Fourier frequencies from 10 hertz to 13 megahertz from the carrier. One system measures the combined phase noise characteristics of two sources. The two source signals are applied in quadrature to a phase sensitive detector (double balanced mixer) and the voltage fluctuations analog to the phase fluctuations are measured at the detector output. One measurement system is designed to measure the phase noise characteristics of a single oscillator. The single-oscillator measurement system is designed using delay lines to form an FM discriminator. Voltage fluctuations analog to the frequency fluctuations are measured at the detector output.

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