Abstracts

Millimeter Wavelength Solid State Oscillator AM and FM Noise

J.R. Ashley, F.M. Palka, P.E. Pages and J.C. Rolfs. "Millimeter Wavelength Solid State Oscillator AM and FM Noise." 1983 MTT-S International Microwave Symposium Digest 83.1 (1983 [MWSYM]): 438-439.

A comparison of difficulty for AM and FM noise measurements at millimeter and centimeter wavelengths explains why few FM noise measurements and even fewer AM noise measurements have been reported. The AM noise measurement should be made to prove that AM noise can be neglected and to learn about the oscillator diode noise measure, M. Since millimeter wavelength solid state oscillators are relatively noisy, we show that a simple transmission line discriminator is adequate for measuring both AM and FM noise. Data will be presented for several oscillators in the most used portions of the millimeter wave bands.

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