Abstracts

The Noise Behavior of an Injection-Locked Magnetron Reflection Amplifier

R.D. Weglein and H.A. Leach. "The Noise Behavior of an Injection-Locked Magnetron Reflection Amplifier." 1987 MTT-S International Microwave Symposium Digest 87.1 (1987 Vol. I [MWSYM]): 261-264.

The noise performance of a modified X-band fixed-frequency magnetron in the fractional kilowatt range is described in this paper. The magnetron was operated in the injection-locked mode via a three-port circulator. The effects of pulse length, pulse repetition frequency and phase-reversal waveforms on the close-in phase and amplitude noise up to 10 KHz from the carrier is described, With 16 db injection-locking gain at 10% duty factor, additive phase noise less than -115 dBc/Hz at 5 KHz offset frequency was measured, regardless of waveform.

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