Abstracts

Highly Stabilized, Ultra-Low Noise FET Oscillator with Dielectric Resonator

G. Lan, D. Kalokitis, E. Mykietyn, E. Hoffman and F. Sechi. "Highly Stabilized, Ultra-Low Noise FET Oscillator with Dielectric Resonator." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 83-86.

A highly stabilized ultra-low noise GaAs FET oscillator, using a temperature stabilized dielectric resonator in the feedback circuit, has been developed. A key factor for achieving high stability and low noise is a very high loaded Q (8000). The oscillator operates at 4 GHz with a power output of 11.5 dBm, a frequency temperature coefficient of ± 0.02 ppm/°C, and a SSB N/C ratio of -130 dBc/Hz and -146 dBc/Hz at 10 KHz and 100 KHz off carrier, respectively. The oscillator is varactor tunable over a 1500 KHz bandwidth.

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