Abstracts

Reduced Phase Noise in Microwave Oscillators Due to Optical Signal Injection

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Optical injection of MESFET oscillators shifts the circuit's operating frequency, locks the microwave frequency to the optical carrier, and reduces the frequency noise of the oscillator. The main result is the phase noise is decreased -110 dBc/Hz when locked to the modulated lasers. Phase noise is measured with no optical injection, with a single modulated laser injected and with a heterodyned injection locked laser signal.

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