Abstracts

Low-Phase-Noise Gunn Diode Oscillator Design (Short Papers)

R.A. Strangeway, T.K. Ishii and J.S. Hyde. "Low-Phase-Noise Gunn Diode Oscillator Design (Short Papers)." 1988 Transactions on Microwave Theory and Techniques 36.4 (Apr. 1988 [T-MTT]): 792-794.

Low-phase-noise Gunn diode oscillators with an operating frequency of 35 GHz and an output power of 100 mW are designed, fabricated, and tested. The phase noise is -132 dBc/Hz to -125 dBc/Hz at 100 kHz offset from the center frequency. This low phase noise is obtained by closely coupling the stabilizing transmission cavity resonator and the Gunn diode oscillator coaxial line while loosely coupling the transmission cavity to the output waveguide following van der Heyden's approach.

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