

Abstracts

A 20-GHz-band subharmonically injection-locked oscillator MMIC with wide locking range

K. Kamogawa, T. Tokumitsu and I. Toyoda. "A 20-GHz-band subharmonically injection-locked oscillator MMIC with wide locking range." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 233-235.

A monolithic subharmonically injection-locked oscillator (ILO) with wide frequency tuning range using a shunted varactor diode inserted to the oscillation loop is presented. A 20-GHz-band ILO is fabricated that achieves the wide injection locking range of more than 700 MHz at each subharmonic factor up to 32. In addition, the phase-noise degradation rate of the ILO against the subharmonic factor is close to 6 db/oct. The ILO configuration is extremely suitable for realizing low cost and low-phase-noise millimeter-wave monolithic microwave integrated circuit (MMIC) sources.

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