Abstracts

Subharmonically injection locked 94 GHz MMIC HEMT oscillator using coplanar technology

S. Kudszus, W.H. Haydl, M. Neumann, A. Bangert and A. Hulsmann. "Subharmonically injection locked 94 GHz MMIC HEMT oscillator using coplanar technology." 1998 MTT-S International Microwave Symposium Digest 98.3 (1998 Vol. III [MWSYM]): 1585-1588.

A coplanar subharmonically injection locked VCO for 94 GHz with a tuning range of 4.5 GHz was developed, using 0.15 /spl mu/m AlGaAs-InGaAs-GaAs PM-HEMTs. A phase noise of -71 dBc/Hz at 1 MHz offset from the carrier was measured for the unlocked VCO. Using 3/sup rd/ subharmonic injection locking, a phase noise of -106 dBc/Hz at 1 MHz offset (-91 dBc/Hz at 100 KHz offset) for the locked VCO with a locking range of 1 GHz was achieved.

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