

Abstracts

Low phase noise Ka-band VCOs using InGaP/GaAs HBTs and coplanar waveguide (1997 [RFIC])

M.S. Heins, D.W. Barlage, M.T. Fresina, D.A. Ahmari, Q.J. Hartmann, G.E. Stillman and M. Feng. "Low phase noise Ka-band VCOs using InGaP/GaAs HBTs and coplanar waveguide (1997 [RFIC])." 1997 Radio Frequency Integrated Circuits (RFIC) Symposium 97. (1997 [RFIC]): 215-218.

Ka-band voltage controlled oscillators (VCOs) have been designed using InGaP/GaAs HBT technology. The best measured VCO shows a phase noise of -95 dBc/Hz at 100 kHz offset and -112 dBc/Hz at 1 MHz offset, delivering 5.3 dBm output power at 40.8 GHz. Variations of circuit topology and resonator type were fabricated to evaluate their contribution to phase noise and tuning range.

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