Abstracts

A monolithic 24-GHz frequency source using InP-based HEMT-HBT integration technology

H. Wang, E. Lin, D.C.W. Lo, R. Lai, L. Tran, J. Cowles, Y.C. Chen, T. Block, P.H. Liu, H.C. Yen and K. Stamper. "A monolithic 24-GHz frequency source using InP-based HEMT-HBT integration technology." 1997 Radio Frequency Integrated Circuits (RFIC) Symposium 97. (1997 [RFIC]): 79-81.

This paper presents the development of a 24-GHz monolithic frequency source using InP-based HEMT-HBT integration technology. This frequency source consists of a 24-GHz HBT voltage controlled oscillator (VCO) and a HEMT buffer amplifier, and was fabricated on a single 3-mil thick InP substrate. It exhibits a measured oscillation frequency of 24.6 GHz with an output power of 4.2 dBm. This is the first successful demonstration of MMIC using InP-based HEMT-HBT integration technology.

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