Abstracts

A 60GHz MMIC Stabilized Frequency Source Composed of a 30GHz DRO and a Doubler

M. Funabashi, T. Inoue, K. Ohata, K. Maruhashi, K. Hosoya, M. Kuzuhara, K. Kanekawa and Y. Kobayashi. "A 60GHz MMIC Stabilized Frequency Source Composed of a 30GHz DRO and a Doubler." 1995 MTT-S International Microwave Symposium Digest 95.1 (1995 Vol. I [MWSYM]): 71-74.

This paper presents a 60GHz highly stabilized frequency source, which is composed of a 30GHz DRO and a doubler based on 0.15µm gate AIGaAs/InGaAs HJFET MMIC technologies. The 30GHz DRO exhibited low phase noise of -102dBc/Hz at 100kHz off-carrier with the maximum output power of 7.7dBm. The 30-to-60GHz doubler showed high conversion gain of -1.5dB at the input power of 7dBm. For the 60GHz frequency source, markedly low phase noise of -93dBc/Hz at 100kHz off-carrier and better than 1.9ppm/ C frequency stability has been achieved.

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