Abstracts

A High-Performance W-Band Integrated Source Module Using GaAs Monolithic Circuits

T.C. Ho, S. Chen, S. Tadayon, K. Pande, P. Rice and M. Ghahremani. "A High-Performance W-Band Integrated Source Module Using GaAs Monolithic Circuits." 1994 Microwave and Guided Wave Letters 4.7 (Jul. 1994 [MGWL]): 241-243.

A high-performance integrated source module using a U-band MMIC HBT DRO and a U-band MMIC MESFET power amplifier in conjunction with a W-band MMIC high-efficiency varactor doubler has been developed for millimeter-wave system applications. This paper describes the development and performance of this W-band integrated source module. Measured results of the complete integrated source module show an output power of 10.6 dBm at 92.6 GHz and less than -126 dBc/Hz phase noise at 5 MHz offset from the carrier. These results represent the highest reported power and phase noise achieved at W-band using HBT, MESFET, and varactor frequency-doubling technologies.

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