Abstracts

A GaAs HBT 5.8 GHz OFDM transmitter MMIC chip set (2001 Vol. I [MWSYM])

A. Raghavan, E. Gebara, C.-H. Lee, S. Chakraborty, D. Mukherjee, J. Bhattacharjee, D. Heo and J. Laskar. "A GaAs HBT 5.8 GHz OFDM transmitter MMIC chip set (2001 Vol. I [MWSYM])." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 571-574 vol.1.

This paper presents a GaAs-AlGaAs HBT transmitter MMIC chip set consisting of a power amplifier, a mixer and a voltage-controlled oscillator (VCO) for 5.8 GHz OFDM applications. The performance of the transmitter in an OFDM system is investigated by means of envelope co-simulation of the circuit in an OFDM transmitter simulation platform that conforms to the IEEE 802.11a wireless LAN standard. To the best of our knowledge, this research represents the first reported implementation of an OFDM transmitter in GaAs HBT technology.

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