Abstracts

12GHz-Band Low-Noise GaAs Monolithic Amplifiers (1983 [MCS])

H. Itoh, T. Sugiura, T. Tsuji, K. Honjo and Y. Takayama. "12GHz-Band Low-Noise GaAs Monolithic Amplifiers (1983 [MCS])." 1983 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 83.1 (1983 [MCS]): 85-89.

One- and two-stage 12GHz-band low-noise GaAs monolithic amplifiers have been developed for use in direct broadcasting satellite receivers. The one-stage amplifier provides a less than 2.5dB noise figure with more than 9.5dB associated gain in the 11.7 to 12.7GHz band. In the same frequency band, the two-stage amplifier has a less than 2.8dB noise figure with more than 16dB associated gain. A 0.5 µm gate closely-spaced electrode FET with an ion implanted active layer is employed in the amplifier in order to achieve a low noise figure without reducing reproducibility. Chip size is 1 mm x 0.9 mm for the one-stage amplifier and 1.5 mm x mm for the two-stage amplfiier.

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