Abstracts

Monolithic Circuits for 12 GHz Direct Broadcasting Satellite Reception

C. Kermarrec, P. Harrop, C. Tsironis and J. Faguet. "Monolithic Circuits for 12 GHz Direct Broadcasting Satellite Reception." 1982 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 82.1 (1982 [MCS]): 5-10.

This paper describes the design, fabrication and performances of gallium arsenide monolithic circuits of each of the principal microwave functions of a 12 GHz DBS receiver. The technology includes the use of Czochralski grown semi-insulating substrates, ion implanted active layers and localised growth of lines and interdigital capacitances. The low noise amplifier presents a 3,6 dB noise figure with 7,3 dB gain in the r.f. band. A dual gate mixer is presented with 6,5 dB noise figure and 2 dB conversion gain. The stable local oscillator has 32 mW output power and a stability of ± 0,3 ppm/K.

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