Abstracts

A monolithic LSB rejection up converter for PCS

J.A. Torres and J.C. Freire. "A monolithic LSB rejection up converter for PCS." 1999 MTT-S International Microwave Symposium Digest 99.2 (1999 Vol. II [MWSYM]): 835-838 vol.2.

A monolithic LSB (lower side band) rejection up converter from 300 MHz to 2.15 GHz for an RF front end of a short range personal communication system (PCS) demonstrator is presented. The GaAs MESFET technology MMIC includes an active power splitter, a balanced mixer, a passive power combiner and a RF power amplifier drive. A 10 dB gain and -1 dB bandwidth of 200 MHz was achieved. The balanced topology together with the matching networks of the power amplifier drive lead to a LSB rejection of 22 dB and LO to RF port isolation greater than -1 dB. Nominal local oscillator power is 5 dBm, and the -1 dB input compression point of -2 dBm was obtained.

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