Abstracts

High-gain frequency-tunable low-noise amplifiers for 38-42.5-GHz band applications

A. Miras and E. Legros. "High-gain frequency-tunable low-noise amplifiers for 38-42.5-GHz band applications." 1997 Microwave and Guided Wave Letters 7.9 (Sep. 1997 [MGWL]): 305-307.

High-performance tunable low-noise amplifiers for 38-42.5 GHz applications are presented based on a fully stabilized GaAs pseudomorphic high electron mobility transistor (PHEMT) 0.2 /spl mu/m technology. A single 1.5/spl times/3 mm/sup 2/ chip, incorporating six amplifying stages, shows a measured gain of 36-42 dB depending on the center frequency. Both maximum gain frequency and input impedance of the amplifier are accurately tunable on the chip. This means that the amplifier provides a narrow-band filtering function and can be matched to a fast p-i-n photodiode as well as to a 50 /spl Omega/ load. This is the first time such performances are reported for single chip narrow-band tunable amplifiers using a GaAs PHEMT technology.

❑ Return to main document.