Abstracts

Comparison of coplanar 60-GHz low-noise amplifiers based on a GaAs PM-HEMT technology

A. Bessemoulin, L. Verweyen, H. Massler, W. Reinert, G. Alquie, A. Hulsmann and M. Schlechtweg. "Comparison of coplanar 60-GHz low-noise amplifiers based on a GaAs PM-HEMT technology." 1998 Microwave and Guided Wave Letters 8.11 (Nov. 1998 [MGWL]): 396-398.

For use in low-noise receivers of communication or radar systems, three different two-stage amplifiers for 60 GHz, using a 0.15-/spl mu/m PM-HEMT technology on GaAs, have been compared in terms of gain and noise figure. The amplifiers realized in coplanar waveguide technology (CPW) differ in the matching networks of the two stages, optimized either for low-noise or maximum gain bias condition. At 59 GHz, a minimum noise figure of 3.0 dB with an associated gain of 9.3 dB and a maximum gain of 12.2 dB with a noise figure of 3.8 dB were achieved.

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