Abstracts

On-Wafer Testing of a W-Band HEMT Image-Rejection Downconverter MMIC

E.W. Lin, D.C.W. Lo, H. Wang, T.W. Huang, M. Biedenbender, G.S. Dow and B. Allen. "On-Wafer Testing of a W-Band HEMT Image-Rejection Downconverter MMIC." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1479-1482.

This paper describes the first successful on-wafer conversion gain and noise figure measurements taken on a downconverter MMIC at W-band. On-wafer and in-fixture measured results are consistent for a 0.1 mu-m AlGaAs-InGaAsGaAs HEMT-based W-band image-rejection downconverter MMIC which has attained good RF yield. With an LO drive of 5 dBm at 94 GHz, the downconverter chip has achieved an USB conversion gain of 7.5-8.5 dB and noise figure of 6.5-7.5 dB for an IF signal in the range of 40 to 400 MHz.

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