

Abstracts

A Fully Passivated Ultra Low Noise W-Band Monolithic InGaAs/InAlAs/InP HEMT Amplifier

G.I. Ng, R. Lai, Y. Hwang, H. Wang, D.C.W. Lo, T. Block, K. Tan, D.C. Streit, R.M. Dia, A. Freudenthal, P.D. Chow and J. Berenz. "A Fully Passivated Ultra Low Noise W-Band Monolithic InGaAs/InAlAs/InP HEMT Amplifier." 1995 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 95.1 (1995 [MCS]): 63-66.

A W-band 3-stage monolithic low noise amplifier has been developed based on InGaAs/InAlAs/InP HEMT MMIC technology. Both wafer passivation and stabilization bakes have been introduced for the first time to the MMIC process to make it more suitable for production. A minimum noise figure of 3.3 dB and 20 dB associated gain has been achieved at 94 GHz and represents the best reported performance to date for any passivated multi-stage MMIC LNA's operating at W-band.

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