Abstracts

A 140-GHz Monolithic Low Noise Amplifier

H. Wang, R. Lai, D.C.W. Lo, D.C. Streit, P.H. Liu, R.M. Dia, M.W. Pospieszalski and J. Berenz.
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This paper presents the development of a 140-GHz monolithic low noise amplifier (LNA) rising 0.1-µm pseudomorphic InAIAs/InGaAs/InP low noise HEMT technology. A two-stage single-ended 140-GHz monolithic LNA has been designed, fabricated and tested. It exhibits a measured small signal gain of 9 dB at 142 GHz, and more than 5-dB gain from 138-145 GHz. This is the highest frequency monolithic amplifier ever reported using three terminal devices.

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