

High performance D-band (118 GHz) monolithic low noise amplifier

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This paper presents the results of 118 GHz amplifier designs with state of art low noise performance using 0.1- μm pseudomorphic InGaAs/InAlAs/InP HEMT technology. A single ended fixtured 118 GHz LNA demonstrated 3.8-4.5 dB NF with an associated gain of greater than 14.5 dB from 112.5 to 119.5 GHz. A on-wafer balanced LNA with gain of 12 dB, return loss of 9 dB from 110 to 130 GHz was also demonstrated.

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