Abstracts

A Monolithically Integrated 120-GHz InGaAs/InAlAs/InP HEMT Amplifier

R. Lai, H. Wang, K.L. Tan, D.C. Streit, P.H. Liu, J. Velebir, Jr., S. Chen, J. Berenz and M.W. Pospieszalski. "A Monolithically Integrated 120-GHz InGaAs/InAlAs/InP HEMT Amplifier." 1994 Microwave and Guided Wave Letters 4.6 (Jun. 1994 [MGWL]): 194-195.

We report the design and gain performance for a two-stage 120-GHz monolithically integrated amplifier using 0.1-µm gate length pseudomorphic In/sub 0 60/Ga/sub 0.40/As/In/sub 0.52/Al/sub 0 48/As/InP HEMT's. The two-stage amplifier demonstrated 10-12 dB gain measured between 119.5 to 123.5 GHz. To the best of our knowledge, this is the first demonstration of a monolithically integrated InP HEMT amplifier reported at D-band.

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