Abstracts

185 GHz monolithic amplifier in InGaAs-InAlAs transferred-substrate HBT technology

M. Urteaga, D. Scott, T. Mathew, S. Krishnan, Y. Wei and M.J.W. Rodwell. "185 GHz monolithic amplifier in InGaAs-InAlAs transferred-substrate HBT technology." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1713-1716 vol.3.

We report a single-stage tuned amplifier that exhibits a peak small signal gain of 3.0 dB at 185 GHz. To the best of our knowledge, this is the first reported HBT result for a tuned amplifier at this frequency, and the gain-per-stage compares favorably with results from HEMT technologies. The amplifier was designed in a transferred-substrate HBT technology that has exhibited record values of extrapolated f/sub max/ (>1 THz).

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