Abstracts

High Power Distributed Amplifier Using MBE Synthesized Material

B. Kim, H.Q. Tserng and H.D. Shih. "High Power Distributed Amplifier Using MBE Synthesized Material." 1985 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 85.1 (1985 [MCS]): 35-37.

The main limitations of the output power of a distributed amplifier are the gate line loss and the gate-to-drain breakdown voltage. A novel circuit concept to reduce the gate loss using series capacitors on the gate feeding lines has been implemented. The device breakdown voltage has been improved by using an MBE grown material with two layers (low doped gate buffer layer and usual active layer). A monolithic GaAs distributed amplifier using 6 x 300 µm FETs has achieved an output power of 800 mW with 4dB gain. The power added efficiency was about 15%.

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