Abstracts

Best combination between power density, efficiency, and gain at V-band with an InP-based PHEMT structure

S. Piotrowicz, C. Gaquiere, B. Bonte, E. Bourcier, D. Theron, X. Wallart and Y. Crosnier. "Best combination between power density, efficiency, and gain at V-band with an InP-based PHEMT structure." 1998 Microwave and Guided Wave Letters 8.1 (Jan. 1998 [MGWL]): 10-12.

In this work we report on the state-of-the-art combination at V-band between simultaneously power density (370 mW/mm), power-added efficiency (28.3%), and power gain (5.2 dB) of InP pseudomorphic HEMTs biased at a low drain voltage of 2 V. The performance of these double delta-doped pseudomorphic AlInAs-GaInAs HEMTs on InP with an original strain compensated channel was measured at 60 GHz. This demonstrates a good potentiality for low-voltage applications in order to reduce the power supply of systems.

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