Abstracts

InP HEMTs with 39% PAE and 162-mW output power at V-band

R. Grundbacher, M. Nishimoto, T.P. Chin, Y.C. Chen, R. Lai, D. Yamauchi, G. Schreyer, T. Block, V. Medvedev and D. Streit. "InP HEMTs with 39% PAE and 162-mW output power at V-band." 1999 Microwave and Guided Wave Letters 9.6 (Jun. 1999 [MGWL]): 236-238.

We report state-of-the-art V-band power performance of 0.15-/spl mu/m gate length InGaAs-InAlAs-InP HEMTs. The 500-/spl mu/m periphery InP HEMTs were measured in fixture at 60 GHz and demonstrated an output power of 162 mW (22.1 dBm) with 39% power-added efficiency (PAE) and 6.1-dB power gain at an input power of 16 dBm. These results represent the best combination of power and PAE reported to date at this frequency for any solid state device.

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