Abstracts

A 95-GHz InP HEMT MMIC amplifier with 427-mW power output

Y.C. Chen, D.L. Ingram, R. Lai, M. Barsky, R. Grunbacher, T. Block, H.C. Yen and D.C. Streit. "A 95-GHz InP HEMT MMIC amplifier with 427-mW power output." 1998 Microwave and Guided Wave Letters 8.11 (Nov. 1998 [MGWL]): 399-401.

We have established a state-of-the-art InGaAs-InAlAs-InP HEMT MMIC fabrication process for millimeter-wave high-power applications. A two-stage monolithic microwave integrated circuit (MMIC) power amplifier with 0.15-/spl mu/m gate length and 1.28-mm output periphery fabricated using this process has demonstrated an output power of 427 mW with 19% power-added efficiency at 95 GHz. To our knowledge, this is the highest output power ever reported at this frequency for any solid-state MMIC amplifier.

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