# Abstracts

## A 427 mW, 20% compact W-band InP HEMT MMIC power amplifier

*D.L. Ingram, Y.C. Chen, J. Kraus, B. Brunner, B. Allen, H.C. Yen and K.F. Lau. "A 427 mW, 20% compact W-band InP HEMT MMIC power amplifier." 1999 Radio Frequency Integrated Circuits (RFIC) Symposium 99. (1999 [RFIC]): 95-98.*

Presented is the development of a 2-stage 427 mW (26.3 dBm), 19% PAE compact W-band InP monolithic microwave integrated circuit (MMIC) power amplifier with an associated power gain of 8.9 dB. 20% PAE with output power of 407 mW (26.1 dBm) was achieved when the amplifier was biased for optimal efficiency. These MMIC amplifiers were fabricated with a 2-mil thick substrate using 0.15-/spl mu/m InGaAs/InAlAs/InP HEMT technology. InP amplifier, though operates at lower drain voltage, but it delivers compatible power with double the PAE of its GaAs counter-part.

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