

# Abstracts

## A 1-W High-Efficiency Q-Band MMIC Power Amplifier

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*J.C.L. Chi, J.A. Lester, Y. Hwang, P.D. Chow and M.Y. Huang. "A 1-W High-Efficiency Q-Band MMIC Power Amplifier." 1995 *Microwave and Guided Wave Letters* 5.1 (Jan. 1995 [MGWL]): 21-23.*

Recent development on MMIC power amplifier has pushed the power-added efficiency (PAE) of 1-W amplifier to 29.4%. The power amplifier, using 0.15- $\mu$ m InGaAs T-gate PHEMT devices, can deliver 1.2 W with 25% efficiency at 40 GHz when the drain is biased at 5 V. When the drain voltage drops to 4 V the output power is 1 W with 9-db associated gain and 29.4% PAE. The measured linear gain is averaged to be 12.5 db from 38-44 GHz.

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