Abstracts

A True Off-Set Self-Aligned Process for High Efficiency Ku-Band Power FETs

K. Wakamoto, K. Imura, M. Yamamoto, S. Shimoyama, T. Kameyama, M. Isomae, Y. Okubo, M. Ohoka, T. Nagashima, D.A. Figueredo, L.H. McCarty, C.Y. Su, M. Yam and S. Kakihana. "A True Off-Set Self-Aligned Process for High Efficiency Ku-Band Power FETs." 1989 MTT-S International Microwave Symposium Digest 89.3 (1989 Vol. III [MWSYM]): 1023-1026.

A new off-set self-aligned process has been used to fabricate a 2 x 3000 µm gate width internally matched power FET which at 14 GHz has produced 34.4 dBm output power, 6 dB gain and 32% added efficiency at the -1 dB gain compression point with a power combining efficiency of = 96%. The high combining efficiency is attributed to the close parameter match of the self-aligned power FETs.

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