Abstracts

High Performance Monolithic Power Amplifier Using a Unique Ion Implantation Process (1986 [MWSYM])

S.K. Wang, K.G. Wang and C.D. Chang. "High Performance Monolithic Power Amplifier Using a Unique Ion Implantation Process (1986 [MWSYM])." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 803-805.

State-of-the-art X-band power FETs and monolithic amplifiers have been fabricated by a high yield planar process using a unique double-peaked implant profile. A 1-mm FET has achieved 40 percent power added efficiency with 720 mW output power and 6.3 dB gain at 10 GHz. A two-stage monolithic amplifier has delivered 2.2 W output power at 9.5 GHz for a record 0.6 W/mm power density. The monolithic amplifier chips have also achieved 20 percent dc-yield and 5 percent uniformity in I/sub DSS/ and V/sub PO/.

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