Abstracts

Production Technology for High-Yield, High-Performance GaAs Monolithic Amplifiers

S.-K. Wang, C.-D. Chang, M. Siracusa, L.C.T. Liu, R.G. Pauley, P. Asher and M. Sokolich. "Production Technology for High-Yield, High-Performance GaAs Monolithic Amplifiers." 1985 Transactions on Microwave Theory and Techniques 33.12 (Dec. 1985 [T-MTT] (1985 Symposium Issue)): 1597-1602.

A production technology for GaAs MMIC's has been developed. In a six-month period, seventy 2-in wafers have been processed for X-band monolithic power and low-noise amplifiers and more than 2000 working chips have been produced. The two-stage power amplifiers have achieved a typical performance of 1.6-w output power with 8-dB associated gain and 20-percent power-added efficiency at 9.5 GHz. The two-stage low-noise amplifiers have consistently achieved 3-dB noise figure with 20-dB associated gain at the same frequency. Improvement of MMIC processing technology implemented in this work has resulted in an average dc chip yield of 15 percent.

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