Abstracts

A 0.5-Watt 47-GHz Power Amplifier Using GaAs Monolithic Circuits

G. Hegazi, K. Pande, F. Phelleps, E. Chang, A. Cornfeld, P. Rice, M. Ghahremani and P. Pages. "A 0.5-Watt 47-GHz Power Amplifier Using GaAs Monolithic Circuits." 1992 Microwave and Guided Wave Letters 2.2 (Feb. 1992 [MGWL]): 61-62.

47-GHz Monolithic microwave integrated circuit (MMIC) power amplifier chips have been developed using 0.35mm gate-length molecular beam epitaxial (MBE) MESFET technology. The amplifier chips have been assembled in a waveguide package to constitute a 47 GHz power amplifier with nominal output power of 0.4 Watt and 15 dB of gain. The saturated output power of this amplifier exceeded 0.5 Watt. These power and gain results might represent the highest reported to date at this frequency from an MMIC amplifier utilizing 0.35-mm gate-Iength MESFET. This amplifier has an application as a driver for a monolithic doubler circuit to reliably produce greater than 80 mW of output power at 94 GHz for missile seeker application.

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