Abstracts

A K/Ka-Band Distributed Power Amplifier with Capacitive Drain Coupling (1988 [MCS])

M.J. Schindler, J.P. Wendler, M.P. Zaitlin, M.E. Miller and J.R. Dormail. "A K/Ka-Band Distributed Power Amplifier with Capacitive Drain Coupling (1988 [MCS])." 1988 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 88.1 (1988 [MCS]): 5-8.

A 14 to 37 GHz MMIC distributed power amplifier has been demonstrated. The amplifier has three FETs of varying periphery, all capacitively coupled to the gate line. A new circuit concept has been used to increase output power, the drain of the last FET is capacitively coupled to the drain line. 4 dB gain has been achieved from 14 to 37 GHz. Output power of 20 dBm or greater has been demonstrated at frequencies up to 33 GHz at 1 dB compression. A maximum 1 dB compressed output power of 23.5 dBm (220mw) has been measured at 26 GHz. The circuit is truly monolithic, with all bias and matching circuitry included on the chip.

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