

Abstracts

A 5-watt, 37-GHz monolithic grid amplifier

B. Deckman, D.S. Deakin, Jr., E. Sovero and D. Rutledge. "A 5-watt, 37-GHz monolithic grid amplifier." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 805-808.

A 5-Watt Ka-band amplifier has been demonstrated. The area of the grid amplifier is 1 cm² and there are 512 transistors. The small-signal gain of the grid is 8 dB at 37.2 GHz, with 1.3 GHz bandwidth. At 5 Watts output, the gain is 5 dB with 15% power-added efficiency. An aluminum-nitride heat spreader allows continuous operation with an estimated gate temperature of 70/spl deg/C.

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