Abstracts

Ka-Band High Efficiency 1 Watt Power Amplifier

G.S. Dow, K. Tan, N. Ton, J. Abell, M. Siddiqui, B. Gorospe, D. Streit, P. Liu and M. Sholley. "Ka-Band High Efficiency 1 Watt Power Amplifier." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 579-582.

This paper describes the design and performance of a miniaturized 35 GHz power amplifier. The two-stage amplifier has achieved an output power of 1 watt with an associated gain of 10 dB and a power-added efficiency of 25.1%. The design is based on TRW 0.25 µm T- gate Pseudomorphic InGaAs HEMT device technology. The amplifier is designed using a 1 mm device driving a 2 mm device. The complete amplifier mounted on a carrier measures 0.26" x 0.16" x 0.02". The amplifier results reported here represent the best power gain and efficiency performances achieved from a single amplifier at 35 GHz.

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