Abstracts

A 7.4 to 8.4 GHz high efficiency PHEMT three-stage power amplifier

S.L.G. Chu, A. Platzker, M. Borkowski, R. Mallavarpu, M. Snow, A. Bowlby, D. Teeter, T. Kazior and K. Alavi. "A 7.4 to 8.4 GHz high efficiency PHEMT three-stage power amplifier." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 947-950.

This paper describes the design, fabrication, and performance of a 7.4 GHz to 8.4 GHz 3-stage PHEMT power amplifies. To the best of our knowledge, this amplifier has achieved the highest efficiency, power, and gain ever for a three-stage power amplifier at X-band. At a drain voltage of 6 volts, measured power added efficiency was between 50% to 60% with a CW power output of 35 dBm and an associated gain of 24 dB. The amplifier was stable over all measured biases and all drive levels.

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