Abstracts

A High Power and High Efficiency Power Amplifier for Local Multipoint Distribution Service

M.K. Siddiqui, A.K. Sharma, L.G. Callejo, C.-H. Chen, K. Tan and H.-C. Yen. "A High Power and High Efficiency Power Amplifier for Local Multipoint Distribution Service." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 701-704.

This paper presents a high power and high efficiency MIC power amplifier using 0.2 µm lnGaAs/AIGaAs/GaAs pseudomorphic HEMT (PHEMT) devices. The average performance of the power amplifier is 8.75 dB small signal gain, 39.6% power-added-efficiency, and 37 dBm (5.0 W) from 27.5 to 29.5 GHz. At these power levels, the output power density was 780 mw/mm including output circuit losses. This represents the highest output power and efficiency ever reported at Ka-band using MIC amplifiers.

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