Abstracts

A high efficiency GaAs power amplifier module with a single voltage for digital cellular phone systems

M. Nishida, S. Murai, H. Uda, H. Tominaga, T. Sawai and A. Ibaraki. "A high efficiency GaAs power amplifier module with a single voltage for digital cellular phone systems." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 443-446.

This work describes a two-stage 0.2 cc power amplifier (PA) module with single voltage operation for digital cellular phone system terminals. A new GaAs FET structure enables this operation. To increase power-added efficiency, it is found to be advantageous to use heat spreading with a Cu plate in the cavity and second-order harmonic suppression with the trap capacitor built into the drain bias circuit. Output power of 30.5 dBm with power added efficiency of 54% has been obtained at 1.45 GHz and 3.5 V.

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