Abstracts

Low distortion and high efficiency 17 W power GaAs FETs for satellite communication system applications

H. Tsutsui, I. Takenaka, H. Takahashi, K. Asano, J. Morikawa, K. Ishikura and M. Kuzuhara. "Low distortion and high efficiency 17 W power GaAs FETs for satellite communication system applications." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 715-718.

We have developed a GaAs FET power amplifier that demonstrated a high power-added efficiency of 68% with 17.1 W output power and a 16 dB linear gain at 1.5 GHz. The developed 17 W amplifier also exhibited state of the art low distortion characteristics of less than -21 dBc NPR (Noise Power Ratio) at the 5 dB-output power back-off point from 2 dB-gain compression point. These excellent results are performed by optimizing the drain bias circuit as well as the internal matching network.

❑ Return to main document.