Abstracts

High-Efficiency, Class-B, S-Band Power Amplifier

M.A. Khatibzadeh and B. Bayraktaroglu. "High-Efficiency, Class-B, S-Band Power Amplifier." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 993-996.

A class-B, high-efficiency, S-band heterojunction bipolar transistor (HBT) amplifier has been developed for potential applications in phased-array radar and mobile communication systems. The amplifier achieves an output power level of 1.1 W with an associated power-added efficiency of 61% and 12.3 dB power gain at 3.0GHz (10% bandwidth). The amplifier is turned ON with the input RF signal and dissipates no DC power when idle even though it is biased at all times. This feature which is characteristic of true class-B operation is a significant requirement for high-efficiency T/R module and portable radio systems.

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