Abstracts

A High-Yield, 3-7-GHz, 0.5-W Push-Pull GaAs MMIC Amplifier

S.B. Moghe and R. Genin. "A High-Yield, 3-7-GHz, 0.5-W Push-Pull GaAs MMIC Amplifier." 1986 Transactions on Microwave Theory and Techniques 34.12 (Dec. 1986 [T-MTT] (1986 Symposium Issue)).

A high-yield, 3-7-GHz, 0.5-W MMIC GaAs amplifier has been successfully designed and tested. The amplifier features small chip size (1.2 mm sq.), high gain (12±1.5 dB), high power-added efficiency (20 percent), good RF yield (57 percent), and high tolerance to process variations. Packaged amplifiers were built with this chip for both the 2-6-GHz and the 5.9-6.4-GHz bands. Saturated output power of 25 dBm was achieved in the 2-6-GHz band, and 27 dBm in the 5.9-6.4-GHz band. Infrared measurements show that the device has low FET channel temperatures when operated at full bias power over the full range of military ambient temperatures.

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