Abstracts

Octave Band Eleven Watt Power Amplifier MMIC

J.J. Komiak. "Octave Band Eleven Watt Power Amplifier MMIC." 1990 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 90.1 (1990 [MCS]): 35-38.

The design and performance of a two-stage 3.0 to 6.0 GHz MMIC power amplifier that has established a new standard for power output and bandwidth in MMIC form is reported. The amplifier produces 11 Watts ± 1 dB from 3.0 to 6.0 GHz, with maximum power outputs of 13.5 Watts and 10.5 Watts at the respective S and C radar bands, and a minimum power of 9 Watts. This benchmark eclipses the best power levels reported for both two-stage (8 Watts at S-band) and single-stage (10 Watts at C-band) narrowband MMIC power amplifiers with a continuous bandwidth coverage of 67%. The yield of this MMIC, based upon 0.5 µm gate-length selective-implant MESFET technology, averaged 43%, with a 57% yield from the best wafer.

❑ Return to main document.