Abstracts

Millimeter-Wave High Power Amplifiers Using Pseudomorphic HEMTs

A.K. Sharma, G. Onak, D. Yamauchi, D.I. Stones, J. Goel, R. Lai and K.L. Tan. "Millimeter-Wave High Power Amplifiers Using Pseudomorphic HEMTs." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 813-816.

Millimeter wave high power amplifier modules operating at V-band have been developed utilizing monolithic amplifiers as building blocks. The two stage amplifiers used in this module provide better that 370 mW output power with compressed gain of 7 dB and greater that 11% power-added-efficiency over the frequency range of 59.5 to 63.5 GHz. These high yielding amplifier utilize 0.15µm passivated T-gate pseudomorphic HEMT fabrication technology. With low loss planar combiners, these modules produced an output power of 740 mW with a power gain of 11.68 dB. These state-of-the-art results represent the highest output power and power gain reported using monolithic amplifiers as building blocks.

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