Abstracts

Millimeter-Wave Monolithic Gain Block Amplifiers Using Pseudomorphic HEMT

H. Yoshinaga, B. Abe, K. Shibata, H. Kawasaki, M. Ohtomo and I. Tokaji. "Millimeter-Wave Monolithic Gain Block Amplifiers Using Pseudomorphic HEMT." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 583-586.

Monolithic gain blocks for millimeter-wave amplifiers have been developed using 0.1 µm-gate planar-doped pseudomorphic HEMTs and successfully applied to U- and W-band single-stage amplifiers. The gain block consists of the HEMT and input/output matching circuits integrated in a single chip. The U-band amplifier exhibits a gain of 5.0±0.7 dB and a noise figure of less than 2.8 dB over 45-55 GHz. The W-band amplifier shows a gain of 3.1±0.3 dB and a noise figure of 4.5±0.5 dB over 94-98 GHz.

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