Abstracts

Ka-band ultra low noise MMIC amplifier using pseudomorphic HEMTs (1997 Vol. I [MWSYM])

S. Fujimoto, T. Katoh, T. Ishida, T. Oku, Y. Sasaki, T. Ishikawa and Y. Mitsui. "Ka-band ultra low noise MMIC amplifier using pseudomorphic HEMTs (1997 Vol. I [MWSYM])." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. I [MWSYM]): 17-20.

A Ka-band monolithic low noise two stage amplifier has been developed using an AlGaAs-InGaAs-GaAs pseudomorphic HEMTs with a gate length of 0.15 /spl mu/m. For a superior noise figure, the MMIC was optimized by inserting a low loss resonator type stabilizing circuit without sacrificing the gain performance. The amplifier has achieved a 1.0 dB noise figure with an associated gain of 18.0 dB at 32 GHz. These results are the best of AlGaAs-InGaAs-GaAs P-HEMT MMICs ever reported to date.

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