

# Abstracts

## A 43 GHz-Band Balanced Low-Noise Amplifier

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*M. Ishizaki, T. Hamabe, Y. Oohashi, S. Asai, T. Kasuga and K. Miyazawa. "A 43 GHz-Band Balanced Low-Noise Amplifier." 1988 MTT-S International Microwave Symposium Digest 88.1 (1988 Vol. I [MWSYM]): 461-464.*

We have developed a 43 GHz-band balanced low-noise amplifier using HEMTs with a gate length of 0.25  $\mu$ m. To reduce the loss, a 3-dB hybrid circuit formed by waveguide branch lines was used for the input/output sections of the amplifier. The amplifier has a gain of 9 dB, a noise figure of 5 dB or less, and an input/output VSWR of 1.5 or less from 40 to 45.5 GHz. It has a gain of 10 dB and a noise figure of 4.3 dB or less at -30°C (ambient temperature).

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