Abstracts

44 GHz Hybrid Low Noise Amplifiers Using Ion-Implanted In/sub X/Ga/sub 1-x/As MESFETs

C.L. Lau, M. Feng, G.W. Wang, T. Lepkowski, Y. Chang, C. Ito, V. Dunn, N. Hodges and J. Schellenberg. "44 GHz Hybrid Low Noise Amplifiers Using Ion-Implanted In/sub X/Ga/sub 1-x/As MESFETs." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 431-433.

Hybrid low noise amplifiers using ion-implanted In/sub x/Ga/sub 1-x/As MESFETs with 0.25-micron T-gates have been developed at 44 GHz. The hybrid two-stage amplifier using these ion-implanted In/sub x/Ga/sub 1-x/As MESFETs achieved a noise figure of 3.6 dB with an associated gain of 14.4 dB at 44 GHz. When two of these amplifiers were cascaded, the four-stage amplifier demonstrated a gain of 30.5 dB at 44 GHz and 37 dB at 40 GHz. These results, achieved using low cost ion-implantation techniques, rival the best HEMT results.

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