Abstracts

Low-cost 38 and 77 GHz CPW MMICs using ion-implanted GaAs MESFETs

D.C. Caruth, R.L. Shimon, M.S. Heins, H. Hsia, Z. Tang, S.C. Shen, D. Becher, J.J. Huang and M. Feng. "Low-cost 38 and 77 GHz CPW MMICs using ion-implanted GaAs MESFETs." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 995-998.

Oscillators, amplifiers, and frequency doublers at 38 and 77 GHz have been fabricated using direct ion-implanted GaAs MESFETs and CPW. The 38-GHz VCO delivers 12 d8m of power and the 77-GHz amplifier has 7.5 dB of gain. The various circuit results demonstrate that the direct ion-implanted GaAs MESFET process is a low-cost alternative to more expensive epitaxial device technologies for a wide variety of existing and emerging millimeter-wave circuit applications.

❑ Return to main document.