Abstracts

Monolithic and Discrete MM-Wave InP Lateral Transferred-Electron Oscillators

S.C. Binari, R.E. Neidert and K.E. Meissner. "Monolithic and Discrete MM-Wave InP Lateral Transferred-Electron Oscillators." 1988 MTT-S International Microwave Symposium Digest 88.2 (1988 Vol. II [MWSYM]): 683-686.

We have investigated a lateral lnP transferred-electron device structure and demonstrated its application to mm-wave monolithic integrated circuits (MMICs). From cavity-tuned discrete devices, the highest CW power output (29.1 mW) and conversion efficiency (6.7%) of any lateral transferred-electron device has been obtained at 29.9 GHz. These devices also had a CW power output of 0.4 mW at 98.5 GHz and a CW power output of 0.9 mW at 75.2 GHz. In addition, the first monolithic oscillator incorporating a lateral transferred-electron device has been demonstrated at 79.9 GHz.

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