Abstracts

A 43-GHz AlInAs/GaInAs/InP HEMT grid oscillator

P. Preventza, M. Matloubian and D.B. Rutledge. "A 43-GHz AlInAs/GaInAs/InP HEMT grid oscillator." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 1057-1060.

A 36-element hybrid grid oscillator has been fabricated. The active devices are InP-based High Electron Mobility Transistors (HEMT's). The grid oscillates at 43 GHz with an effective radiated power of 200 mW. Measurements show the E and H-plane radiation patterns have side lobes 10 dB below the main beam. These results are a significant improvement over a previous millimeter-wave grid oscillator, which had a divided beam because of substrate modes.

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