Abstracts

Monolithic 155 GHz and 215 GHz Quasi-Optical Slot Oscillators

B.K. Kormanyos, S.E. Rosenbaum, L.P. Katehi and G.M. Rebeiz. "Monolithic 155 GHz and 215 GHz Quasi-Optical Slot Oscillators." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 835-838.

We report on the design and measurement of monolithic 155 GHz and 215 GHz quasi-optical slot oscillators. These oscillators verify the high frequency capability of an InP based HFET developed by Hughes Malibu Research laboratory and are suitable for spatial power combining. The output signals were detected with an interferometer in front of an InSb hot electron bolometer and accurate frequency measurements were obtained by heterodyne detection using a wideband quasi-optical harmonic mixer-receiver. These circuits represent the highest frequencies achieved to date for a fundamental source using a three terminal device.

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