Abstracts

A Single Barrier Varactor Quintupler at 170 GHz (Short Papers)

A.V. Raisanen, T.J. Tolmunen, M. Natzic, M.A. Frerking, E. Brown, H. Gronqvist and S.M. Nilsen. "A Single Barrier Varactor Quintupler at 170 GHz (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.3 (Mar. 1995 [T-MTT]): 685-688.

InGaAs/InAlAs single-barrier varactor (SBV) diodes are tested as frequency quintuples. The diodes were tested in a crossed-waveguide structure and provided output frequencies between 148 and 187 GHz. The highest observed flange-to-flange efficiency was 0.78% at an output frequency of 172 GHz. This is nearly four times greater than the best quintuple efficiency obtained for previous SBV varactors made from the GaAs/AlGaAs materials system.

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