Abstracts

GaAs/AIGaAs Multiquantum Well Structures Applied to High Frequency IMPATT Devices

C.C. Meng, H.R. Fetterman, D.C. Streit, T.R. Block and Y. Saito. "GaAs/AIGaAs Multiquantum Well Structures Applied to High Frequency IMPATT Devices." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 539-542.

The first CW operation of GaAs/AIGaAs multiquantum well IMPATT devices at 100 GHz has been achieved. Multiquantum wells were used to generate the avalanche injection current since these structures improve the non-linearity of the avalanche process and reduce the ionization rate saturation limitations. The operation and design principle, fabrication procedure and experimental results are presented in this paper. A 6.4 mW CW power output was achieved at 100.3 GHz.

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