Abstracts

Performance of Multiple-Epitaxial Avalanche Diodes at X and Ku Bands

M.M. Blouke, D.D. Khandelwal, N.J. Tolar and H.M. Leedy. "Performance of Multiple-Epitaxial Avalanche Diodes at X and Ku Bands." 1970 G-MTT International Microwave Symposium Digest of Technical Papers 70.1 (1970 [MWSYM]): 295-299.

Two types of avalanche diodes are presently being used for microwave generation and amplification, the Read diodes, which have either n+-p-i-p+ or p+-n-i-n+ structure, and IMPATT and high-efficiency diodes which are simple p-n junctions usually with p+-n-n+ or n+-p-p+ structure. These devices are conventionally fabricated by diffusion techniques with the first layer epitaxially deposited on the substrate. Two other fabrication techniques which promise better device characteristics for junction devices are the ion-implantation and multiple-epitaxial techniques. This paper describes the fabrication, characteristics and performance of both Read and IMPATT diodes fabricated by the multiple-epitaxial technique.

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