

Abstracts

New Modes of Operation for Avalanche Diodes: Frequency Multiplication and Upconversion

P.-A. Rolland, J.L. Vaterkowski, E. Constant and G. Salmer. "New Modes of Operation for Avalanche Diodes: Frequency Multiplication and Upconversion." 1976 Transactions on Microwave Theory and Techniques 24.11 (Nov. 1976 [T-MTT] (Special Issue on Millimeter Waves: Circuits, Components, and Systems)): 768-775.

The nonlinear properties of avalanche diodes can be exploited for use as frequency multipliers and upconverters. Among the various possible modes of avalanche device operations, the two mentioned above evoke great interest because of their high conversion efficiency. Basic principles, theoretical predictions, and experimental results are outlined in some detail and indicate both the present state of development as well as the performance achieved using avalanche devices operated in this manner.

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