Abstracts

Semiconductor Antenna: A New Device in Millimeter- and Submillimeter-Wave Integrated Circuits (Short Papers)

F.C. Jain, R. Bansal and C.V. Valerio, Jr.. "Semiconductor Antenna: A New Device in Millimeter- and Submillimeter-Wave Integrated Circuits (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.2 (Feb. 1984 [T-MTT]): 204-208.

A new approach in realizing millimeter- and submillimeter-wave antennas using semiconductor materials is described. The characteristics of these antennas can be controlled during fabrication and/or during operation by modulating the conductivity of the semiconductor. Theoretical computations are presented to evaluate the performance of some typical antenna structures. The physical layout of a monolithic semiconductor antenna with its associated control elements is also described.

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