Abstracts

Monolithic Microwave Integrated Circuits: An Historical Perspective

D.N. McQuiddy, Jr., J.W. Wassel, J.B. LaGrange and W.R. Wisseman. "Monolithic Microwave Integrated Circuits: An Historical Perspective." 1984 Transactions on Microwave Theory and Techniques 32.9 (Sep. 1984 [T-MTT] (Special Centennial Issue Historical Perspectives of Microwave Technology)): 997-1008.

Monolithic microwave integrated-circuit (MMIC) technology as it exists today has evolved from events that occurred during the middle-to-late 1950's and early 1960's. These events are reconstructed through a review of the published literature, government contract reports and proposals, U.S. patents, and private communications with individuals directly involved in early MMIC development. No single point in time can be viewed as that historical moment when the idea of an MMIC was formalized; rather, the idea evolved over a period of time as a direct result of the successful development of analog and digital IC's and the push by the military services (primarily the Air Force at Wright Patterson) to apply semiconductor technology in defense systems, the evolutionary period is presented in chronological order and includes a discussion of the role played by the Molecular Electronics for Radar Applications program. Early development activities were pursued, with both silicon and GaAs used as the monolithic material. These activities, the early problems encountered with both materials, and the influence the problems had in molding today's technology are described.

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