Abstracts

Millimeter Wave Heterojunction MITATT Diodes

N.S. Dogan, J.R. East, M.E. Elta and G.I. Haddad. "Millimeter Wave Heterojunction MITATT Diodes." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 973-976.

This paper presents a design theory, fabrication procedure and experimental results for heterojunction millimeter wave transit time devices operating in the IMPATT, MITATT or TUNNETT mode. The results show that significant improvements in the efficiency can be achieved by heterojunction structures. The diodes were operated as oscillators between 65 and 93 GHz. A pulsed power output of 50mw and RF conversion efficiency of 2.4 percent was achieved at 72 GHz.

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