Abstracts

Two-terminal millimeter-wave sources

H. Eisele and G.I. Haddad. "Two-terminal millimeter-wave sources." 1998 Transactions on Microwave Theory and Techniques 46.6 (Jun. 1998 [T-MTT]): 739-746.

Basic principles of operation, fundamental power-generation capabilities, and fabrication technologies are reviewed for three groups of two-terminal devices, i.e., resonant-tunneling diodes (RTDs), transferred-electron devices (TEDs), and transit-time diodes. The paper focuses on devices for frequencies above 30 GHz, and an overview of recent research in this area and of various state-of-the-art laboratory results is given. As an outlook, the potential of some new material systems for high-power devices is discussed.

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