Abstracts

Advances in Millimeter-Wave Subsystems in Japan

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With the increase in demand for communication system capacity, the millimeter-wave frequency band has become a valuable resource because of its bandwidth, extending from 30 GHz to 300 GHz, nine times the presently developed communications bands. As a result, research and development on millimeter-wave systems have been promoted in several organizations in Japan (NTT, CRL, NASDA, SCR). This paper describes the development trends and results of millimeter-wave systems in Japan in such fields as communication, radar, and measurement systems. Also, it describes the development of devices such as high-power FET amplifiers, TWTA's, IMPATT amplifiers, low-noise amplifiers, and MMIC devices used in constructing the millimeter-wave systems.

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