

Abstracts

Microwave acoustic materials, devices, and applications

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This paper surveys applications of acoustic waves in microwave devices. After a general and historical introduction to bulk acoustic waves (BAWs), surface acoustic waves (SAWs), practical wave types, and acoustoelectric transducers, a review is given of technologically important materials for microwave acoustic applications. Following this, we discuss BAW and SAW microwave devices and their technologies. Specifically reviewed are thin-film resonators and filters, transversal filters, and filters for correlative analog signal processing. Finally, an overview of the most important microwave applications is given, along with manufacturing and packaging issues.

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