Abstracts

Development of Miniature Filters for Wireless Applications

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Miniature filters have been under development for wireless applications from 500 MHz to over 6 GHz using thin piezoelectric films on common substrates. Ladder filters have achieved insertion losses in the 3 dB range using aluminum nitride films for the piezoelectric and appropriate substrates such as silicon, sapphire, and glass. The ladder filters consist of interconnected series. and shunt resonators forming a monolithic structure on a single die. This paper discusses recent results in the development of miniature filters with application to cellular phone, GPS, PCN, and other wireless systems.

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