Abstracts

Design and performance of a SAW ladder-type filter at 3.15 GHz using SAW mass-production technology [wireless LANs]

A. Springer, F. Hollerweger, F.H. Weigel, S. Berek, R. Thomas, W. Ruile, C.C.W. Ruppel and M. Guglielmi. "Design and performance of a SAW ladder-type filter at 3.15 GHz using SAW mass-production technology [wireless LANs]." 1999 Transactions on Microwave Theory and Techniques 47.12 (Dec. 1999 [T-MTT] (Special Issue on 1999 International Microwave Symposium)): 2312-2316.

To meet the increasing demand for high-performance filters in gigahertz radio-communication systems, we have improved the design techniques and fabrication processes for surface-acoustic wave (SAW) devices. The standard optical projection printing technique based on i-line lithography used for mass-production was optimized, thus attaining a linewidth of 0.3 /spl mu/m. As a first SAW device prototype, we designed and fabricated a ladder-type bandpass filter from LiTaO/sub 3/ substrates, at 3.15 GHz having a 3 dB-bandwidth of 128 MHz and a minimum insertion loss of 1.7 dB.

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