Abstracts

Design of Acoustic Surface-Wave Devices Using an Admittance Formalism

A.S. Burgess and P.H. Cole. "Design of Acoustic Surface-Wave Devices Using an Admittance Formalism." 1973 Transactions on Microwave Theory and Techniques 21.10 (Oct. 1973 [T-MTT]): 611-618.

The advantages of an admittance formalism for the derivation of performance characteristics of transversal filters and one-port information stores using acoustic surface-wave delay lines are described. An expression for the transadmittance between transducer pairs in the weak-coupling approximation is derived using a normal mode theory. The formulation is found to give good agreement with measurements of the passband response of a wide-band logarithmically frequency-tapered transducer pair on YX-quartz. A brief discussion of the limitations of the model is included.

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