Abstracts

Phase Corrections for Weighted Acoustic Surface-Wave Dispersive Filters (Correspondence)

H.M. Gerard, G.W. Judd and M.E. Pedinoff. "Phase Corrections for Weighted Acoustic Surface-Wave Dispersive Filters (Correspondence)." 1972 Transactions on Microwave Theory and Techniques 20.2 (Feb. 1972 [T-MTT]): 188-192.

Phase errors incurred by a surface acoustic wave propagating through or generated by an apodized interdigital array have been found to cause severe distortions of the filter response. The amount of error is a function of the piezoelectric coupling constant of the delay material and it is found that the distortions are most severe in high-coupling materials. A simple modification to the current method of array design is presented which corrects this phase error. Experimental results for a pulse-compression loop using apodized lithium-niobate surface-wave filters are presented which demonstrate the effectiveness of this method of phase correction.

❑ Return to main document.