Abstracts

A new reduced-order model of SAW interdigital transducers

O.A. Peverini, R. Orta and R. Tascone. "A new reduced-order model of SAW interdigital transducers." 2001 Transactions on Microwave Theory and Techniques 49.10 (Oct. 2001, Part I [T-MTT] (Mini-Special Issue on Electrical Performance of Electronic Packaging (EPEP))): 1785-1791.

The Green's function method is generally agreed to be the most satisfactory technique for the rigorous analysis of surface-acoustic-wave interdigital transducers (IDTs). However, its direct application to response investigations or optimization-based design activities is limited by its computational complexity. In this paper, we present a new reduced-order model of IDTs based on a moment-matching technique and on the singular value decomposition. Several numerical and experimental examples demonstrate the accuracy and the efficiency of the method.

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