Charge Distribution and Capacitance Calculation for Generalized Periodic SAW Transducers

Outline

1. Phased Array Transducer: Properties and Equations
   1.1. Statement of the problem
   1.2. Basic analytic equations

2. Periodic SAW Transducers
   2.1. Calculation of the surface charge density distribution
   2.2. Integral equations
      2.2.1. Interrelation of electrode voltages and charges
      2.2.2. Capacitance and potential matrices
   2.3. Static capacitance

3. Mixed electrostatic problem
   3.1. Statement of the problem
   3.2. General solution
   3.3. Transducers with floating fingers

4. End effect modeling

5. Conclusions