

## Supplementary Information for

### Multiplexed Actuation Using Ultra Dielectrophoresis for Proteomics Applications: A Comprehensive Electrical and Electrothermal Design Methodology

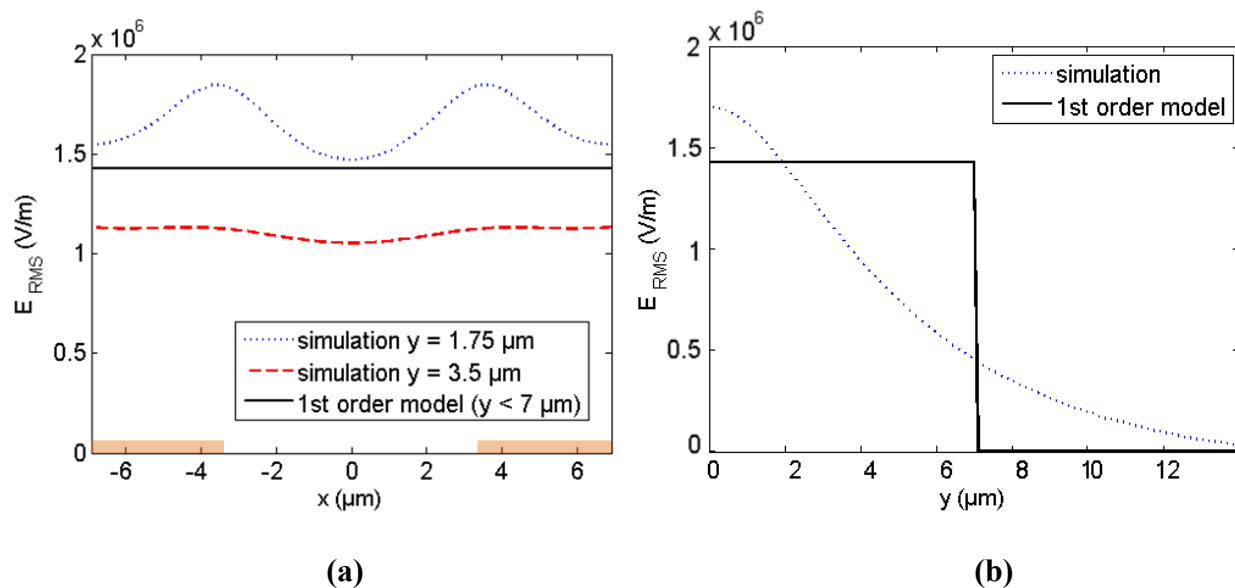
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#### Comparison of the COMSOL simulation vs. 1<sup>st</sup> order model of the electric field



**Figure S1:** Simulated vs. 1<sup>st</sup> order model of the magnitude of electric field for two neighboring electrodes in the IDE (a) along x-axis (half of each electrode is shown) (b) along y-axis at the mid-plane between the two electrodes (assumed the electrodes are  $7 \mu\text{m}$  wide and  $7 \mu\text{m}$  spaced and  $10 V_{RMS}$  is applied at the electrodes).