Abstracts

A parametric model of MEMS capacitive switch operating at microwave frequencies

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This paper is focused on the creation of an efficient electromagnetic model of MEMS switches which operates at microwave frequencies. The switches are first characterized using a full wave analysis based on finite element method aiming to extract the S-parameters of the switches for different geometrical dimensions. From the S-parameter data base, a scalable lumped circuit model is extracted to allow easy implementation of the switch model into available microwave CAD software. The simulated results are compared with published measured data as validation of our model.

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