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Stability Analyses of Electrostatic Torsional RF MEMS Switch

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The stability analyses of the electrostatic torsional RF MEMS (radio frequency micro-electro-mechanical systems) Switch are presented in the paper with the consideration of van der Waals (vdW) force. The critical applied voltage and tilting angle are calculated by static equilibrium equations. Furthermore, the dynamic behavior of RF MEMS switch is studied by the qualitative analysis of nonlinear equation of motion.

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