

Master 2010

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Electroplated RF-MEMS Switches for Investigation into Smart Surfaces

*ABSTRACT - Masterthesis*

The aim of this thesis is to design and simulate a RF MEMS switch that can be fabricated using electroplating and can be integrated into smart surfaces or frequency selective surfaces. First a capacitive series switch is designed and simulated using CST Microwave studio. Then the result of the simulation is compared with Matlab results of an electrical equivalent circuit. The effect of changing the switch dimensions on the switch parameters was also investigated. Some work was also done towards deriving the electrostatic actuation voltage of the switch.