Abstracts

Performance of low-loss RF MEMS capacitive switches

C.L. Goldsmith, Zhimin Yao, S. Eshelman and D. Denniston. "Performance of low-loss RF MEMS capacitive switches." 1998 Microwave and Guided Wave Letters 8.8 (Aug. 1998 [MGWL]): 269-271.

'This letter details the construction and performance of metal membrane radio frequency MEMS switches at microwave and millimeter-wave frequencies. These shunt switches possess a movable metal membrane which pulls down onto a metal/dielectric sandwich to form a capacitive switch. These switches exhibit low loss (<0.25 dB at 35 GHz) with good isolation (35 dB at 35 GHz). These devices possess on-off capacitance ratios in the range of 80-110 with a cutoff frequency (figure of merit) in excess of 9000 GHz, significantly better than that achievable with electronic switching devices.

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